

# **1 A SELECTED BIBLIOGRAPHY OF EBT HYPNOTHERAPY**

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# 1 ABSTRACTS ON EFFICACY OF HYPNOSIS IN DISCRETE AREAS

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The research studies cited above are some of the thousands of clinical trials that have utilized solid experimental technique and report reliable, valid, general findings on effectiveness. The following abstracts and comments highlight some significant results therein. (References are in the Bibliography).

## 1.1.1 “Efficacy of Hypnosis in the Treatment of Human Papillomavirus (HPV) in Women: Rural and Urban Samples”

Barabasz, A., Higley L., Christensen C., Barabasz, M. *Int. Jnl. Clin. Hypn.* 2010, Jan; 58(1), pp: 102-121.

### **Abstract**

This article investigates the effect of hypnosis on immunity and whether this is the key mechanism in the hypnotic treatment of the genital infection caused by human papillomavirus (HPV). HPV is the most common sexually transmitted disease and can lead to cervical and other cancers. Current medical treatments are aimed at tissue assault (acids, freezing, and surgery). Medical wart clearance rates are only 30% to 70% and recurrence is common. Our research contrasted hypnosis-only with medical-only therapies, using both urban hospital and rural community samples. Both hypnosis and medical therapy resulted in a statistically significant ( $p < .04$ ) reduction in areas and numbers of lesions. **Yet, at the 12-week follow-up, complete clearance rates were 5 to 1 in favour of hypnosis.**

## 1.1.2 “Hypnosis and irritable bowel syndrome: a review of efficacy and mechanism of action.”

Tan G, Hammond DC, Joseph G. **Source:** Michael E. DeBakey VA Medical Center, Baylor College of Medicine, Houston, TX 77030, USA. tan.gabriel@med.va.gov

### **Abstract**

Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder characterized by abdominal pain, distension, and an altered bowel habit for which no cause can be found. Despite its prevalence, there remains a significant lack of efficacious medical treatments for IBS to date. In this paper we reviewed a total of 14 published studies (N=644) on the efficacy of hypnosis in treating IBS (8 with no control group and 6 with a control group). **We concluded that Hypnosis consistently produces significant results and improves the cardinal symptoms of IBS in the majority of patients, as well as positively affecting non-colonic symptoms.** When evaluated according to the efficacy guidelines of the Clinical Psychology Division of American Psychological Association, the use of hypnosis with IBS qualifies for the highest level of acceptance as being both efficacious and specific. In

reviewing the research on the mechanism of action as to how hypnosis works to reduce symptoms of IBS, some evidence was found to support both physiological and psychological mechanisms of action.

### 1.1.3 “The Effectiveness of Adjunctive Hypnosis with Surgical Patients: A Meta-Analysis”

1. Guy H. Montgomery, PhD\*,
2. Daniel David, PhD\*,
3. Gary Winkel, PhD\*,
4. Jeffrey H. Silverstein, MD† and
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#### **Abstract**

Hypnosis is a non-pharmacologic means for managing adverse surgical side effects. Typically, reviews of the hypnosis literature have been narrative in nature, focused on specific outcome domains (e.g., patients’ self-reported pain), and rarely address the impact of different modes of the hypnosis administration. Therefore, it is important to take a quantitative approach to assessing the beneficial impact of adjunctive hypnosis for surgical patients, as well as to examine whether the beneficial impact of hypnosis goes beyond patients’ pain and method of the administration. We conducted meta-analyses of published controlled studies ( $n= 20$ ) that used hypnosis with surgical patients to determine: 1) overall, whether hypnosis has a significant beneficial impact, 2) whether there are outcomes for which hypnosis is relatively more effective, and 3) whether the method of hypnotic induction (live versus audiotape) affects hypnosis efficacy. Our results revealed a significant effect size ( $D= 1.20$ ), indicating that surgical patients in hypnosis treatment groups had better outcomes than 89% of patients in control groups. No significant differences were found between clinical outcome categories or between methods of the induction of hypnosis. **These results support the position that Hypnosis is an effective adjunctive procedure for a wide variety of surgical patients.**

The research literature on Hypnosis is extensive. The endorsements of Hypnosis for its healing effectiveness continue to mount. In a recent report, it was revealed that a panel of the National Institutes of Health has endorsed the wider use of Hypnosis for use in conjunction with conventional medical care. Numerous clinical studies have been conducted substantiating the effectiveness of the Hypnotic state in changing individuals' lives. Some of these experimental studies have utilized poor controls for supporting generalization of results beyond the specific experimental trial reported.

### 1.1.4 PAIN, MISCELLANEOUS:

1. Ernest Hilgard (1977) and coworkers: in extensive investigations, using experimental

paradigms to induce pain (typically either a tourniquet cutting off the circulation to a limb or plunging the limb into cold water), they have demonstrated that various types of pain can be reduced by hypnotically induced analgesia. In these studies, 66% of the high susceptibility group, but only 13% of the lower and 17% of the medium susceptibility groups, were able to reduce their pain by 1/3 or more. Twenty-six percent of the high, 57% of the medium, and 31% of the low susceptibility groups were able to reduce their pain by 10-32% when compared to controls.

2. Experimentally induced pain, while undeniably noxious, is different from the experience of patients in the clinical setting. Whereas experimental pain is brief, undergone voluntarily, and can be terminated at any time by the subject, in the clinical setting, pain is often long-term, comes against the wishes of the individual and is usually experienced as being outside of personal control. Moreover, it is a part of a disease process that directly alters both physical and mental functioning.

3. In a neurochemical study of Hypnotic control of pain conducted by Domangue (1985), patients suffering arthritic pain showed a correlation among levels of pain, anxiety and depression. Anxiety and depression were inversely related to plasma norepinephrine levels. Depression was correlated with dopamine levels and negatively correlated with levels of serotonin and beta endorphin. Following Hypnotherapy, there were clinically and statistically significant decreases in depression, anxiety and pain, and increases in beta endorphin-like substances.

4. The relationship between pain and endorphins is a complicated one. In his study, Guerra (1982) found that only particular forms of the beta endorphins found in peripheral blood during painful experience are associated with the Hypnotic response.

5. Hilgard (1982) studied children with cancer. He found Hypnosis to be effective in reducing the pain and discomfort associated with repeated unpleasant medical interventions.

6. Stam (1986) reports that patients with chronic facial pain show a greater responsiveness to suggestion as measured by the Carleton University Responsiveness to Suggestion Scale (CURSS) than do normal controls. These patients had higher Hypnotic susceptibility scores than did controls, showing a high susceptibility score to be a good predictor of response to Hypnotic treatment among such patients.

7. Domangue (1985) conducted a study of 19 patients with a variety of musculoskeletal disorders. He reported significant reductions of pain and dysphoria following Hypnosis. The reductions were associated with significant increases in plasma beta endorphin.

8. Barabasz and Barabasz (1989) studied sample of 20 patients with a variety of chronic pain syndromes. They utilized an Hypnotic technique known as Restricted Environmental Stimulation Therapy (REST). All of the patients were initially rated as having low Hypnotic susceptibility on the Stanford Hypnotic Susceptibility Scale (SHSS). Following exposure to the training technique, the subjects demonstrated significant increases in both SHSS scores and in pain reduction when compared to controls.

### **1.1.5 HEADACHE PAIN:**

9. Evidence accumulated to date suggests that a number of Hypnotherapeutic approaches are highly effective in the treatment of patients with chronic migraine headaches. Although no one Hypnotherapeutic technique has been demonstrated to be most effective, all the methods appear to be superior to a standard treatment relying on pharmacological approaches alone.

10. In a study conducted by Anderson (1975), migraine patients treated with Hypnosis had a significant reduction in the number of attacks and in their severity compared to a control group who were treated with traditional medications. The difference did not become statistically significant until the second six-month follow-up period. In addition, at the end of one year, the number of patients in the Hypnosis group who had experienced no headaches for over three months was significantly higher.

11.12 In a research conducted by Schlutter (1980), Hypnosis was also found to be effective in dealing with the relief of tension headache.

13. Alladin (1988) reviewed the literature on Hypnosis, identifying fully a dozen different Hypnotic techniques that have been used in the treatment of chronic migraine headaches. Of these, Hypnotic training emphasizing relaxation, hand warming (which, according to Anderson, 1975) seems the simplest method of establishing increased voluntary control of the sensitive vasomotor system) and direct Hypnotic suggestions of symptom removal have all been shown to be effective in reducing the duration, intensity and frequency of migraine attacks during a ten-week treatment course and at thirteen-month follow-up when compared to controls.

14. A study (Gutfeld, G. and Rao, L., 1992) was conducted on 42 patients suffering from chronic headaches. These patients, all of whom had responded poorly to conventional treatments, were split into two groups. One received Hypnotherapy to relieve their daily headaches; the rest acted as a comparison group. The Hypnotherapy group experienced reduced frequency and duration of headaches, cutting the intensity by about 30%. "These results are impressive in such a difficult, hard-to-treat group of patients," commented Egilius Spierings, M.D., Ph.D. director of the headache section, division of neurology at Brigham and Women's Hospital.

### **1.1.6 CANCER:**

15. Spiegel and Bloom (1983b) reported that a study of women with metastatic breast cancer showed that patients who received group therapy with training in Hypnosis over a one-year period were able to reduce their pain experience by 50% when compared to a control group.

16. In addition, at a 10-year follow-up of these same women, the Hypnosis treatment group had a mean survival rate of 36.6 months compared to 18.9 months for the controls. This suggests that the intervention may be both important quantitative and important qualitative effects (Spiegel 1989a).

17-18. Both adolescent and adult cancer patients undergoing chemotherapy were reported

by Cotanch (1985) and by Zeltzer (1984), in separate research, to have fewer symptoms of anticipatory nausea and vomiting following Hypnotic interventions.

#### **1.1.7 CARDIOVASCULAR CONDITIONS, GENERAL:**

19. In research by Bernardi (1982), hypertensive patients showed themselves to be significantly more effective at controlling cardiovascular responses to stressors in Hypnosis than they were in the normal waking state. This was particularly true for subjects with more marked Hypnotic ability.

20. In a study by Sletvold (1986), normotensive subjects were shown able to either increase or decrease their blood pressure significantly with Hypnosis.

21. In a 1979 research study by Jackson, subjects with Hypnotic ability were shown to improve their aerobic performance significantly in response to posthypnotic suggestion. In addition, subjects with high Hypnotic susceptibility significantly improved their performance in physical exercise using posthypnotic suggestion.

#### **1.1.8 HYPERTENSION & STRESS:**

22. Kuttner (1988) found that a Hypnotic approach emphasizing storytelling and imagery was significantly more effective than behavioural techniques or standard medical practice in alleviating distress during bone marrow aspirations in young children with leukemia.

23. Hypertensive subjects were found to have characteristic patterns of increased cerebral blood flow that were most marked in the left hemisphere. During Hypnosis, they could reduce cerebral blood flow more dramatically than could normotensive controls. The changes noted in this research by Galeazzi (1982) were associated with decreases in vascular resistance and diastolic blood pressure in the rest of the body.

**24-25.** Friedman and Taub (1977, 1978) reported the results of a trial comparing Hypnosis with biofeedback or a combination of both in essential hypertension. At the end of four weeks of treatment, all groups showed a significant reduction in blood pressure. But at six-month follow-up only the patients receiving Hypnosis had maintained the reduction.

**26-27.** Generally speaking, literature review supports the value of Hypnosis in analgesia and stress reduction in a number of disorders, whether following the dissociative formulation (Miller, 1986) or a social psychology approach (Noland, 1987).

#### **1.1.9 RESPIRATORY CONDITIONS:**

**28-29.** In studies by Maher-Loughnan (1962, 1970), Hypnosis was shown to alleviate the subjective distress of patients with asthma. This change was measured either by the number of attacks or the amount of medication that was needed when compared to supportive therapy.

30. In further study by Maher-Loughnan (1970) asthmatic subjects were randomly assigned to either Hypnosis or relaxation therapy. The results showed both treatment modalities of benefit to the patients, but the improvement in the Hypnotherapy group was significantly greater. There was a peak of improvement between the seventh and twelfth weeks of

treatment. In addition, only the Hypnotic subjects showed improvement in physiologic measures of respiration (forced expiratory volume).

31. Ewer and Stewart (1986) reported a randomized control trial of Hypnosis in patients with moderate asthma. Patients with a high Hypnotic susceptibility showed a 74.9% improvement in bronchial hyper-responsiveness (to methacholine challenge), a 5.5% increase in peak expiratory flow rate, a 26.2% decrease in the use of bronchodilator and a 41% improvement in daily ratings outside of the clinic. Twelve patients with a high Hypnotic susceptibility score showed a 75% improvement. However, a control group of 17 patients and a second group of 10 patients with a low level of Hypnotic susceptibility showed no change in either objective or subjective measures.

32. A study by Olness (1985) showed that children trained in self-Hypnosis could significantly alter their tissue levels of oxygen as measured by transcutaneous PO<sub>2</sub> measures.

#### **1.1.10 STRENGTHENING THE IMMUNE SYSTEM:**

33. Hypnosis strengthens the disease-fighting capacity of two types of immune cells, reports Patricia Ruzyla-Smith and her co-workers at Washington State University in Pullman. Thirty-three college students who achieved a Hypnotic trance easily and 32 students who had great difficulty doing so were recruited for the study. Students who underwent Hypnosis displayed larger jumps in two important classes of white blood cells than participants who received relaxation or no method. The greatest immune enhancement occurred among highly hypnotizable students in the Hypnosis group.

#### **1.1.11 INTESTINAL CONDITIONS:**

**34-35.** Whorwell (1984) reported successful treatment of Irritable Bowel Syndrome using Hypnosis in a controlled study of a group of patients who had a severe chronic form of the disorder and had not responded to conventional therapies. Patients were randomly allocated to either psychotherapy or Hypnotherapy groups. The psychotherapy patients showed a significant improvement in measures of pain, distension and in general well-being despite a lack of change in bowel habit. In contrast, the Hypnotherapy patients showed a dramatic improvement in all measures which persisted at a two-year follow-up. (Whorwell, 1987). Hypnotherapy, including suggestions for improved gastrointestinal function and pain reduction, was significantly better than Hypnosis for simple deep muscle relaxation.

36. Harvey (1989) reported a similar improvement following Hypnotherapy in 20 of the 33 patients with refractory Irritable Bowel Syndrome at three-month follow-up.

37. Colgan (1988) reported a randomized trial of 30 patients with frequently relapsing duodenal ulcer disease. The subjects were treated for ten weeks with either Hypnotherapy or ranitidine or the drug alone. At a twelve-month follow-up, all of the drug-only patients, but only half of the drug-plus-Hypnotherapy patients, had relapsed.

#### **1.1.12 HEMOPHELIA:**

38. Swirsky-Saccetti (1986) reported on research with hemophiliacs. Over an eighteen-week

follow-up, a group of hemophiliac patients who were taught self-Hypnosis significantly reduced both their level of self-reported distress and the amount of the factor concentrate they required to control bleeding when compared with a control group of patients who did not undergo Hypnosis.

39. A 30-month follow-up by LaBaw (1975) with hemophiliac patients demonstrated the effectiveness of group procedures for self-Hypnosis in reducing distress and the amount of blood products required when compared to control groups in patients ranging from five to forty-eight years of age.

#### **1.1.13 SURGERY:**

40. Patients undergoing head and neck surgery who were trained with preoperative Hypnosis had significantly shorter postoperative hospitalizations than did matched controls (Rapkin, 1988).

41. Swedish researchers studied 50 women prior to surgery. Twenty-five of the women were assigned to the experimental group who were briefly Hypnotized each day for several days before their scheduled operations. Twenty-five were assigned to a control group who were not Hypnotized. While in a Hypnotic state, the women in the experimental group heard suggestions to relax and feel hungry. After surgery only 10 had nausea (15 experienced no nausea), compared to 17 in the no-Hypnosis control group (8 experienced no nausea).

#### **1.1.14 CHILDBIRTH:**

42. In 1963, Schwartz reported on a study in which Hypnotherapy was used successfully to prolong pregnancy and prevent premature delivery.

43-45. Omer (1986a, 1986b, 1987a) found that frequency of physical complaints and the general level of anxiety were correlated with premature labour and premature contractions. A brief technique emphasizing the use of self-Hypnosis was employed as an adjunct to pharmacological treatment. The prolongation of pregnancy was significantly higher for this group than for the medication-along control group, and infant weight was also significantly greater.

#### **1.1.15 MISCELLANEOUS CONDITIONS:**

46. In a careful single-case controlled study of a patient with Raynaud's disease, Conn (1984) showed a rapid and dramatic vasodilatation in response to Hypnotic suggestion.

47. In research reported by Spanos (1988), a pair of randomized, carefully designed studies were conducted with a group of people who had warts. Subjects who were given Hypnotic or nonhypnotic suggestions were significantly more likely to achieve wart regression than placebo or no-treatment groups.

48-49. In a report by David Spiegel in the Harvard Mental Health Letter, the following research was cited: a) Several controlled experiments have shown that Hypnosis can be effectively used to eliminate warts; and b) Studies have been done on persons suffering from pseudoseizures, in which they lose consciousness or motor control and make jerking movements typical of epilepsy (but without the associated brain damage). Such patients

have been taught to limit or eliminate these symptoms by using Hypnosis.

## **PSYCHOLOGICAL APPLICATIONS**

### **1.1.16 ANXIETY:**

50. In a report by David Spiegel in the Harvard Mental Health Letter, the research was cited that Hypnosis methods have been used successfully for anxiety associated with medical procedures.

51. Two hundred forty-one patients who were undergoing percutaneous vascular and renal procedures were randomly tested on three testing regimens, one of which was Hypnosis. Patients rated their pain and anxiety on 1-10 scales before, every 15 minutes during, and after the procedures. Pain remained flat over the duration of procedure time in the Hypnosis group; pain increased linearly with procedure time in both other groups. Anxiety decreased over time in all three groups; the sharpest decrease was in the group that was hypnotized. Procedure times were significantly shorter in the Hypnosis group. In addition, Hypnosis showed itself to be superior in improving hemodynamic stability.

### **1.1.17 PHOBIC REACTIONS:**

52. In a report by David Spiegel in the Harvard Mental Health Letter, the following research was cited: One seven-year study showed that 50% of patients afraid of flying were improved or cured after Hypnosis treatment for a fear of flying.

### **1.1.18 DEPRESSION:**

53. In a neurochemical study of Hypnotic control of pain conducted by Domangue (1985), patients suffering arthritic pain showed a correlation among levels of pain, anxiety and depression. Anxiety and depression were inversely related to plasma norepinephrine levels. Depression was correlated with dopamine levels and negatively correlated with levels of serotonin and beta endorphin. Following Hypnotherapy, there were clinically and statistically significant decreases in depression, anxiety and pain, and increases in beta endorphin-like substances.

## A RESEARCH

### ABUSE

1995

Barber, Joseph (1995, November). When hypnosis causes trouble. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES: Sexual acting out occurs, even with highly trained and responsible clinicians. But other problems occur, and it is the same qualities of hypnosis that make it useful that also make for problems. I found 20 publications that exhibited problems in therapy, and they all discussed only the mental illness of the patients.

Bryant, Richard A. (1995). Fantasy proneness, reported childhood abuse, and the relevance of reported abuse onset. International Journal of Clinical and Experimental Hypnosis, 43 (2), 184-193.

This study investigated the relationship between fantasy proneness and the age at which reported childhood sexual abuse occurs. Seventeen adult females who reported having been sexually abused before the age of 7 years, 20 females who reported having been abused after the age of 7 years, and 20 females who reported having never been abused were administered two measures of imaginative involvement (Tellegen Absorption Scale [TAS] and Inventory of Childhood Memories and Imaginings [ICMI]). Participants who were reportedly abused early in childhood obtained higher scores on the TAS and ICMI than participants who were reportedly abused later in childhood, who in turn obtained higher scores than the control participants. Findings are discussed in terms of factors that mediate fantasy proneness and reports of childhood abuse

Eisen, Mitchell L.; Henn-Haase, Clare (1995, November). Memory and suggestibility for events occurring in and out of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES: Resistance to misinformation uses two paradigms: 1. Elizabeth Loftus - expose Subject to slides or videotape, give misinformation with leading or misleading questions 2. Martin Orne - pseudomemory, i.e. age regress people in hypnosis and suggest events occurred.

Each approach yields mixed results. Misinformation is accepted more readily in context of hypnosis; but there is no relationship to hypnotizability. Spanos found that highs were more responsive to social pressure. In general, in the absence of social pressure, when presented subtly and outside the context of hypnosis, the relationship diminishes. Other factors play a more prominent role: source of information, type of information, salience of information, etc.

They examined whether events occurring in context of hypnosis were more prone to distortion when assessed in biased fashion with use of misleading information, than outside hypnosis. Also, form of questions (dichotomous or with 'I don't remember' option).

They gave the Harvard and asked afterwards 3 misleading items (e.g. did you clench your fist, when they didn't do it). Also asked them to circle items if they had no memory of it. Tellegen Absorption Scale and Dissociation scale (DES) were administered a week later. Also a week later asked about events that occurred, including confederate items. Half of Ss had 2 choices, half had also 'I don't remember' as a third option.

In a previous study, resistance to misleading information was related to the strength of the initial memory and not to hypnotizability (article published in AJCH).

**RESULTS.** When given 3 choices, the number of misleading items endorsed dropped from .7 to 0.4 which is the most robust finding in the study and affects the rest of the study. Many Ss who endorsed the items reported minutes later that they had no memory for the event (on the check list). While many Ss given only two choices wrote in the margin that the event had never occurred.

Offering an 'I don't know' third option decreased endorsement of the Harvard items also, from 6.4 to 5.2 which is significant. The relationship between hypnotizability and endorsement of misleading items became much weaker when accounting for this.

Scoring high on DES is significantly related to accepting misinformation. Tellegen Absorption Scale also related to accepting misleading information. Harvard Hypnotizability Scale was not related to accepting misinformation.

Total memory on the Harvard (before cue plus after cue) did not correlate with resistance to misleading information. History of abuse was related to hypnotizability. Have to evaluate whether it was traumatizing, multiple abuse, etc.

Ganaway, George K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. International Journal of Clinical and Experimental Hypnosis, 43 (2), 127-144.

It is contended that prevailing exogenous trauma theory provides in most cases neither a sufficient nor a necessary explanation for the current large number of diagnosed cases of dissociative identity disorder (multiple personality disorder) and related dissociative syndromes purported to have arisen as a response to severe early childhood physical and sexual abuse. Relevant aspects of instinctual drive theory, ego psychology, object relations theory, self psychology, social psychological theory, sociocultural influences, and experimental hypnosis findings are drawn on to demonstrate the importance of adopting a more integrative theoretical perspective in the diagnosis and treatment of severe dissociative syndromes. Further cooperative experimental and clinical research on the etiology, prevalence, and clinical manifestations of the group of dissociative disorders is strongly encouraged.

Guyer, Charles G. II; Van Patten, Isaac T. (1995). The treatment of incest offenders -- a hypnotic approach: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 266-273.

Incest has become more prominent in public awareness over the past 15 years. The major focus of this interest has been on the incest survivor. The incest offender has received less attention. A hypnotic approach to treating incest offenders is outlined that involves a seven-stage approach. A case example is presented and future research directions suggested.

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

Levitt, Eugene E.; Pinnell, Cornelia Mare (1995). Some additional light on the childhood sexual abuse-psychopathology axis. International Journal of Clinical and Experimental Hypnosis, 43 (2), 145-162.

This exposition is an attempt to unravel the complexities of the relationship between childhood sexual abuse and adult psychopathology. Four facets of the relationship are examined in some detail: (a) the extent of childhood sexual abuse; (b) the probability that sexual abuse in childhood will result in psychopathology in the adult; (c) the reliability of early life memories in later life; and (d) the role of recovered memory of trauma in the healing process. The conclusions of this logico-empirical analysis are that first, government statistics tend to underestimate the extent of childhood sexual abuse, whereas independent surveys tend to overestimate it. Estimating prevalence is further complicated by variations in the definitions of key terms. Possibly the only safe conclusion is that true prevalence cannot be reliably determined. Second, empirical investigations of childhood sexual abuse conclude that not all victims are emotionally injured. A substantial number of these investigations find that a majority of victims suffer no extensive harm. Other variables such as family dynamics are involved; there may be only a few cases in which emotional harm results from sexual abuse as a single factor. Third, memory research suggests that memory in general is a dynamic, reconstructive process and that recall of childhood events is particularly vulnerable to distortion. Memory cannot dependably produce historical truth. Last, there is some clinical evidence that abreaction of a traumatic event in adulthood may have a remediative effect. Similar evidence for childhood trauma is lacking. The belief in the healing effect of recalling and reliving a childhood trauma depends on the therapist's orientation.

**Nagy, Thomas F. (1995). Incest memories recalled in hypnosis -- a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (2), 118-126.**

Accuracy of repressed memories recovered in hypnosis cannot be reliably determined with any greater certainty than non-hypnotically recalled events. Therefore, the practice of therapists' accepting hypnotically enhanced memories as veridical, absent corroborating evidence, is not advocated. A 52-year-old woman with a 27-year history of panic attacks and sleep disorder inadvertently recovered incest memories in hypnosis. Photographs and remembered events by other family members were thought by the patient to provide general support although they did not constitute actual proof of abuse. Implications are discussed.

**1994**

**Bloom, Peter B. (1994). Clinical guidelines in using hypnosis in uncovering memories of sexual abuse: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 42 (3), 173-178.**

"Joan," a clinical psychologist, requested a psychiatric consultation to determine whether hypnosis could recover accurate memories of suspected child abuse by her still living father. Are there clinical guidelines in using hypnosis in uncovering such possible memories of sexual abuse? We asked Dr. Peter B. Bloom to share his views with us.

**NOTES: Gives case example and clinical guidelines for using hypnosis in uncovering memories of sexual abuse. 1. In medical practice, "Primum non nocere," i.e. "First do no harm." 2. "No therapist should ever, either directly or indirectly, suggest abuse outside of a specific therapeutic context--certainly not to a client who is on the phone making a first appointment!" 3. "A therapist must not jump quickly to the conclusion that abuse occurred simply because it is plausible." 4. "A therapist should never simply assume that a client who cannot remember much from childhood is repressing traumatic memories or is in denial." 5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'" 6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families." 7. "Therapists should reconsider the 'no pain, no gain' philosophy of treatment." 8. "The context of therapy is as important as the content." 9. "Tolerate ambiguity." (Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."**

**COMMENT:** The tenet that insight is necessary for change and growth is not true. Change can occur without insight, although insight may be helpful in maintaining change once it has occurred.

**SUMMARY:** These guidelines are presented to enhance safe practice, however, clinicians should use their own judgement to determine the best path to follow with each patient.

**NOTE:** Guidelines 1, 8, 9, 10, 11, 12, and 13 are those of Peter B. Bloom. Those labeled as Guidelines 2, 3, 4, 5, 6, and 7 were taken with permission from Yapko, M. (1993 September/October). "The seductions of memory. The false memory debate." *Family Therapy Networker*, 17, pp. 30-37. All discussions, however, are those of Peter B. Bloom.

**Bowers, Kenneth S. (1994, October). Bringing balance to controversy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**NOTES:** Skeptics argue that concept of "repression" has no scientific merit, though even if a valid concept, it wouldn't validate all memories recovered. Skeptics regard laboratory evidence as essential, while clinicians are impressed by case reports. See Polonyi, Personal Knowledge.

It is not reasonable to say there is no evidence for fugue states, when seeing one, if it has not been demonstrated in the laboratory. But you can investigate some of the phenomena in the laboratory.

Most of the time it is an affectively loaded idea that is repressed; in contrast, trauma usually lead to intrusions into consciousness. So repression of a traumatic event may be a rare way to deal with the event.

Claims for repression and ESP differ in that there are probably observable mechanisms in the former (e.g. thought avoidance). If a person ejects thoughts about a topic frequently enough, the ejections become automatic. Freud's original description of repression used the word "intentional" and it was a footnote that took out that idea. (See Erdelyi's publications).

Recent research we conducted on intuition and on problem solving is relevant to this problem.

[The remainder of Bowers' presentation is not summarized here.]

**Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**NOTES:** The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual.]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question?

Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

NOTES: "A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

Loftus, Elizabeth; Polonsky, Sara; Fullilove, Mindy Thompson (1994). Memories of childhood sexual abuse: Remembering and repressing. Psychology of Women Quarterly, 18, 67-84.

Women involved in out-patient treatment for substance abuse were interviewed to examine their recollections of childhood sexual abuse. Overall, 54% of the 105 women reported a history of childhood sexual abuse. Of these, the majority (81%)

remembered all or part of the abuse their whole lives; 19% reported they forgot the abuse for a period of time, and later the memory returned. Women who remembered the abuse their whole lives reported a clearer memory, with a more detailed picture. They also reported greater intensity of feelings at the time the abuse happened. Women who remembered the abuse their whole lives did not differ from others in terms of the violence of the abuse or whether the violence was incestuous. These data bear on current discussions concerning the extent to which repression is a common way of coping with childhood sexual abuse trauma, and also bear on some widely held beliefs about the correlates of repression.

**NOTES:** In previous research, it was reported that violent or incestuous abuse is particularly susceptible to repression. This study differs from previous investigations in the definition of violence. In the present study, 'violence' is defined as any act involving vaginal, oral, or anal sex. Earlier research defined 'violence' as involving sexual assault with physical injury or fear of death.

Depending on the definition of repression, a sizeable minority (31% or almost 1/5) of this sample forgot their earlier abuse for a period of time. The authors state that this suggests there is little 'robust repression' in this sample. They cannot rule out the possibility that some women who were abused still, to this day, do not recall the experience; or that some who continue to have memory loss based on organic causes, including blackouts.

The authors suggest that future research in this area use more specific questions, including assessing whether Subjects respond to statements like: "There was a time when I would not have been able to remember the abuse, even if I had been directly asked about it," or "There was a time when I would not have been able to report the abuse because I had no idea that it had even happened to me." Also, when Subjects report that a memory had emerged after a period in which they had no recall, the Experimenter should enquire about how and when the recovered memory occurred. The authors conclude that remembering abuse is more common than forgetting it.

**Lynn, Steven Jay; Myers, B.; Sivec, H. (1994). Psychotherapists' beliefs, repressed memories of abuse, and hypnosis: What have we really learned?. [Comment/Discussion] .**

The authors are responding to an article by Michael D. Yapko in the same issue of AJCH, "Suggestibility and repressed memories of abuse: A survey of psychotherapists' beliefs." They are of the opinion that "Yapko's research and data analysis do not justify the conclusion that many, if not virtually all, therapists are naive, credulous, and out of touch with the scientific literature, although it is evident that certain therapists can be so described" (p. 184). They state that "Yapko's research is important insofar as it suggests that unfounded stereotypes of hypnosis persist even among Ph.D.- and M.D.-level clinicians" (p. 184).

**Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

## NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

RESULTS. Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also,

involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Mulhern, Sherrill (1994). Satanism, ritual abuse, and multiple personality disorder: A sociohistorical perspective. International Journal of Clinical and Experimental Hypnosis, 42 (4), 265-288.

During the past decade in North America, a growing number of mental health professionals have reported that between 25% and 50% of their patients in treatment for multiple personality disorder (MPD) have recovered early childhood traumatic memories of ritual torture, incestuous rape, sexual debauchery, sacrificial murder, infanticide, and cannibalism perpetrated by members of clandestine satanic cults. Although hundreds of local and federal police investigations have failed to corroborate patients' therapeutically constructed accounts, because the satanic etiology of MPD is logically coherent with the neodissociative, traumatic theory of psychopathology, conspiracy theory has emerged as the nucleus of a consistent pattern of contemporary clinical interpretation. Resolutely logical and thoroughly operational, ultrascientific psychodemonology remains paradoxically oblivious to its own irrational premises. When the hermetic logic of conspiracy theory is stripped away by historical and socio/psychological analysis, however, the hypothetical perpetrators of satanic ritual abuse simply disappear, leaving in their wake the very real human suffering of all those who have been caught up in the social delusion.

Nash, Michael R. (1994). Memory distortion and sexual trauma: The problem of false negatives and false positives. International Journal of Clinical and Experimental Hypnosis, 42 (4), 346-362.

Logically, two broad types of mnemonic errors are possible when adult psychotherapy or hypnosis patients reflect on whether they were sexually abused or not as a child. They may believe that they were not abused when in fact they were (false negative error), or they may believe they were abused when in fact they were not (false positive error). The author briefly reviews the empirical evidence for the occurrence of each of these types of errors, and illustrates each with a clinical case. Further, in considering the incidence, importance, and clinical implications of these errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea is made for theorists and

researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

Nash, Michael R. (1994, October). Reports of early sexual trauma: The problem of false negatives and false positives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES The problem of false positives and problem of false negatives are distinct and should be treated differently. The question involves pseudomemories vs repression.

Evidence for false positives: 1. Memory research 2. Developmental psychopathology 3. Contemporary psychoanalytic theory 4. Clinical field studies

No laboratory researcher has produced false memories that are as vivid, or as emotionally loaded as early abuse.

Evidence for repression: 1. "Repressor Personality" research (Weinberger & Schwartz, who view it as a trait rather than a state). 2. Implicit memory research 3. Hypnosis research on memory (see Nash chapter in Fromm & Nash book on research in hypnosis) 4. Clinical field studies

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimate the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

Spence, Donald P. (1994). Narrative truth and putative child abuse. International Journal of Clinical and Experimental Hypnosis, 42 (4), 289-303.

Memories of early child abuse can be read in at least two distinct ways -- as true accounts of an unspeakable event or as metaphors for a wide range of boundary violations which belong to both past and present. An actual memory of an early experience tends to fade unless repeatedly rehearsed; because abuse memories are inherently shameful, it seems reasonable to be skeptical of this kind of repetition and to be suspicious of their sudden emergence. An actual memory of an early experience would be told from the child's point of view and would probably contain many false starts, internal contradictions, and all the other earmarks of a confused

memory that refer to an early happening; by contrast, a seamless account with a tight narrative structure and an almost total absence of doubt or irrelevant detail is almost certainly false. An actual memory would tend to have its own flavor and style; by contrast, a memory of child abuse that sounds too much like other memories is more likely a metaphor for something else. Therapists, lawyers, and other professionals need to be trained to listen metaphorically to these accounts, to be on guard against hearing them as concrete references to a particular time and place, and to beware of reinforcing them prematurely.

Spiegel, David (1994, October). On patients not remembering abuse when it in fact may have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES:

False memories and false non-memories may be two sides of the same coin. What is the evidence for repression?

If people are abducted by extraterrestrials, why don't they just keep them? [Joke!] It seems counter-intuitive that people would forget important, arousing things that happen.

The three main components of hypnosis (suggestibility, absorption, and dissociation) are also aspects of memory: 1. Absorption relates to encoding (narrowing attention); also happens during traumatic events (Loftus' "gun memory" which is so clear, while they don't encode what gunman's face looks like). 2. Dissociation relates to memory storage (compartmentalization of information). Traumatized people have symptoms of dissociation, depersonalization. If you are in an unusual mental state, you may watch the event; the memory is stored without the usual network of associations. 3. Suggestibility relates to retrieval. The way questions are asked influences one's response. But hypnosis is not an infinite influencer; the main damage to memory contributed by hypnosis is "confident errors" (McConkey).

We did research one week after the Loma Prieta earthquake, and found significant cognitive alterations, memory alterations, etc. In our sample, 1/4 of the people felt detached from their body or from the ground right after the earthquake.

Memory alterations were compared with data from other studies after other traumas. Difficulties with memory occurred in 29% of our sample.

The disorganization of memory can follow even just witnessing trauma (e.g. the recent slaying of 8 people in the law office in San Francisco) And people who witnessed the execution of Harris. They were in no danger themselves, yet the level of dissociative symptoms were as high in the former.

The Briere & Cone and Herman & Shatzow studies are based on self report of earlier trauma, and that is a problem in research. But Williams' study does have the age of people when they were abused as children; see her article in Journal of Consulting and Clinical Psychology.

#### COMMENTS FROM THE AUDIENCE:

Dabney Ewin: Sex abuse trauma differs from earthquakes because the abuser says, "If you tell anybody I'll kill you." This is like a post hypnotic suggestion, which is carried out compulsively when given to the victim during fear.

**Dale:** How do we account for the vigor in the attempts of each side to convince the other. The people who have been real victims of sexual abuse need to be able to talk with the people who are victims of False Memory Syndrome. The impact on a family is just as traumatic as the sexual abuse itself.

**Response by D. Spiegel:** I wouldn't recommend that combination, but the point you make about damage to the falsely accused is relevant. Their lives are shattered but remember the damage done throughout life by sexual abuse.

**Stewart, James (1994).** Hypnotherapy with dental patients. [Lecture] UCLA Hypnosis Seminar.

**NOTES:** [Dr. James Stewart is both a dentist and a clinical psychologist.] Among dental patients, 15% of patients are anxious; 75% of those patients could associate that fear to early childhood experiences, and showed signs of post traumatic stress disorder (PTSD) but only when they have to go for dental treatment. Those 75% respond well to hypnosis (respond quickly, short-term; it is even great to do the therapy in the dental chair, e.g., relieving trauma in trance).

It is important to diagnose PTSD because treatment will be different if the patient has an anxiety disorder. The disorders are not "simple phobias" because the trauma does not meet the criterion of "silly and unreasonable."

In hypnosis I routinely use the suggestion, "find a safe place," and may tell them they can go through a videotape or a filing cabinet to find a safe place. If the patient cannot remember a safe place, it is diagnostic of serious problems, more than dental anxiety. The exploration, verbalization of a safe place enhances rapport. A dentist should not accept a referral for hypnosis when the dental work has to be done next week; better to use sedation, and schedule hypnosis Rx later.

For anxiety or pain, do not try to relax it away; better to go where it is, define it (size, density, etc.) How does it feel? Can you put your finger on it? Like vapor? Soft, like steel?

**PTSD.** During World War I they called it malingering and gave shock (not ECT). During World War II the psychoanalytic view was that PTSD was pre-Oedipal. Viet Nam used phenothiazines for "delayed stress reactions." Almost all the variance in the number and severity of symptoms can be explained by the length of time the patients were in battle. During World War II, they did a lot of age regressions under sodium pentathol (a "catharsis") which was often very successful, but there was no theoretical understanding. After that the patient got psychoanalysis.

These days in doing desensitization for phobias I do not bother with developing a hierarchy [of feared situations] and I let the patient go through the anxiety more often. Also, one can have the patient walk away from the scene until they subjectively feel far enough away not to feel anxiety.

**Yapko, Michael D. (1994).** Suggestions of abuse: True and false memories of childhood sexual trauma. New York, NY: Simon & Schuster.

**NOTES:** From the section titled "A Note to Therapists:"

"I would encourage you not to (1) preclude open communication at all times among family members; (2) act as your client's 'hired gun'; (3) act as if

corroboration of allegations of abuse were unnecessary; (4) jump quickly to the conclusion abuse occurred simply because it is plausible; (5) suggest a history of abuse to someone who is not your client; (6) refer a client out for hypnotic confirmation or disconfirmation on the false premise that hypnosis is some kind of lie detector; (7) ask leading or suggestive questions; (8) assume repression is in force when someone does not have much memory from childhood; (9) rely on your memory of the interaction. Tape your investigative sessions and review them later for any evidence of possible unintentional contamination of your client's recollections" (p. 217).

### 1993

Eisen, Mitchell (1993). Assessing the hypnotizability of college students from addictive families. Contemporary Hypnosis, 10, 11-17.

**ABSTRACT:** The present study examined the relation between hypnotizability and the report of growing up in an addictive family where one or both parents were addicted to drugs and/or alcohol. A sample of 113 college students (47 male, 66 female) were studied for measure of childhood abuse, addiction history, dissociation and hypnotizability. As predicted, subjects from an addictive family were more hypnotizable than subject from a nonaddictive family. However, no relation between family addiction and dissociation was secured. Whereas abuse was found to be related to dissociation, it was not related to hypnotizability. The findings are discussed in terms of the effects of child abuse and neglect on dissociation and hypnotizability as it relates to the addictive family.

### NOTES

Author reviews the literature in area of abuse and hypnotizability as well as dissociation. Subjects were unaware of purposes of the experiment when they volunteered. Of 113 Ss, 18% were reared in an addictive family; 13 Ss reported being abused, of whom 6 reported sexual abuse and seven physical abuse. Five of the 21 Ss who reported being reared in addictive families also reported being abused (3 physical, two sexual). Only one S reported both physical and sexual abuse.

Used HGSHS:A, Children of Alcoholics Screening Test, and Dissociative Experiences Scale of Carlson and Putnam (1986). Those with addiction in the family had Harvard scale mean score of 8.05, compared to those who didn't have it with mean of 6.95. No significant effect was found for ABUSE or the interaction of ABUSE and family addiction. The abuse question was, "Before the age of 12 parent punishment of you resulted in your physical injury (bruises, scarring, broken bones, etc.). Second question was, "Before the age of 12, did you participate in sexual behaviors (either with or without coercion) with a much older person?"

The Discussion thoroughly explores the possible reasons why their results differ from those of others.

Hawkins, Russell (1993). An analysis of hypnotherapist-client sexual intimacy. International Journal of Clinical and Experimental Hypnosis, 41, 272-286

While sexual interaction between psychologists, physicians, and other health therapists of all kinds and their clients is typically condemned by professional bodies as unethical, the controversy regarding the potential for hypnosis to produce compliant behavior in unwilling or nonconsenting subjects suggests that hypnotherapist-client sex may warrant special attention. Because the experiments required to clarify the potential for hypnosis to potentiate nontrivial compliance are themselves unethical and/or inconclusive, experimental methods cannot be adequately used to clarify this issue. Instead, the matter can be addressed by reference to other forms of evidence, such as the responses of therapists and clients to anonymous surveys and the analysis of cases, that have reached the courts. Consideration of this qualitatively deficient evidence suggests that even if the use of hypnotic suggestion can lead to compliance to sexual demands, overt coercion is seldom used in practice. Social psychological and situational factors are particularly salient in understanding therapist-client sex. The question of whether there are special properties of the dynamics of the hypnotic experience, other than specific coercive suggestion and beyond those typically found in other forms of therapy, is considered. Comparisons are drawn with other examples of socially condemned sex, such as teacher-student sex, sexual harassment in the workplace, incest, and extramarital sex.

Litwin, R. G.; Cardena, E. (1993, August). Dissociation and reported trauma in organic and psychogenic seizure patients. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Early detection and differential diagnosis of non-epileptic seizures (NES) versus epileptic seizures (ES) is a major clinical issue in comprehensive epilepsy centers. Recent research suggests that differences in dissociative experiences between NES and ES patients may prove useful for diagnostic purposes. Non-epileptic seizures are frequently conceptualized as a dissociative response to past emotional trauma or abuse; dissociation in ES occurs as a result of electrophysiological abnormalities, most often associated with the temporal lobes. The purpose of this study was to evaluate the effectiveness for the differential diagnosis of NES from ES of several measures of dissociation and of a self-report measure for physical and sexual abuse. Four quantitative measures of dissociation were utilized in this study: the dissociative disorders interview schedule (DDIS), dissociative experience scale (DES), Tellegen absorption scale (TAS) and the Stanford Hypnotic Clinical Scale (SHCS). The incidence of sexual and physical abuse was obtained from structured questions in the DDIS. Forty-one patients being evaluated for intractable seizures participated in this study; 13 ES patients with non-temporal lobe involvement (ES/NTL), 18 ES patients with temporal lobe focus (ES/TLE) and 10 patients with NES spells of psychiatric origin. The main researcher was blind to these diagnoses until the study was completed. Results show a trend toward greater incidence of dissociative experiences in the NES versus ES group on the DDIS, TAS and DES, although these differences tended to be modest and not statistically significant, perhaps given the small N of the study. There were no significant trends or differences in dissociative experiences reported by ES/NTL patients versus ES/TLE patients. Contrary to the study's hypothesis, ES patients were slightly more

susceptible to being hypnotized than NES patients. As hypothesized, a significant difference was that NES patients reported physical and sexual abuse of higher incidence and longer duration than did ES patients. Logistic regression analysis for prediction of NES using the DES, TAS and SHCS instruments correctly predicted only 10% of NES patients. However, exploratory logistic regression analysis using the demographic variables of gender, months of sexual abuse and years of recurrent seizures suggest that these characteristics may be specific and sensitive in the prediction of NES. Being a female, having a higher incidence and longer duration of abuse and fewer years of recurrent seizures all predicted significantly the existence of non-epileptic seizure events, allowing for a 95% accuracy in diagnostic prediction. Our findings reinforce prior research indicating that dissociation is an important symptom component of both ES and NES events. The trend toward more prevalent dissociative experiences in the NES group suggests that in depth examination of these differences and of key demographic variables may help differentiate between these two groups.

From Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)  
London, Ray William (1993, October). Refreshed adult memories: Abuse survivor or therapeutic victim?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES: The author addresses four areas: 1. public policy 2. psychological issues 3. legal issues (evidence) 4. how to properly deal with it

A definition of sexual abuse is being applied to behaviors that for years were not considered out of bounds (e.g. entering a bathroom where someone else is). Furthermore, using the word "survivor" for abused people equates patients with survivors of concentration camps, who do not present with repressed memories typically. National incidence of child abuse remains unclear estimates are 6 to 60% of females. In Florida, only 13% of cases reported are confirmed.

Some therapists who specialize in this area in surveys indicate that they have false beliefs regarding memory and effects of trauma.

[These represent only partial notes on a lengthy and substantial paper.]

Rhue, Judith W.; Lynn, Steven Jay (1993, October). Dissociation, childhood sexual abuse, and fantasy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES: We are reporting on part of an ongoing study, with results still being analyzed. We are looking at imagination, fantasy, and dissociation in abused and non-abused children. This focuses on the relationship between dissociation and fantasy and imagination.

For Janet, dissociation was the primary defense against trauma. [Quotes D. Spiegel also.] There is a body of research on trauma associated with the development of dissociation. 1. NIH found 97% of multiple personality patients reported trauma in childhood; 83% were sexually abused; 75% were repeatedly physically abused; 68% had both types of abuse. 2. Bliss - studied 70 MPDs and found same results. 3.

Ross, Norton, and Noosney [?name] - found same results 4. Coombs & Milstein - same

The incidence of retrospective reports of abuse is much lower in other types of patients.

So, what is going on during child abuse? We wanted to look at children experiencing or who recently experienced abuse. Also looked at a children's scale of dissociation symptoms and validated other studies.

We studied 39 children referred to Ohio University College of Osteopathic Medicine; 12 had primary problem as sexual abuse (8 of whom were female). Non-abused Ss were either behavioral or adjustment disorders. 8 reported severe physical abuse. Parents concurred in presence of abuse. Physical abuse consisted of broken bones, burns, etc. Average age 9-10.

Ss were given the Beck Depression Scale, Children's Fantasy Inventory, Meyers' Children's Creative Imagination Scale, Children's Perception Alteration Scale, Figure Drawings, WISC-R, and 2-3 other measures. Research assistants administering the scales didn't know the children's diagnoses.

We found no support for the hypothesis that sexual abuse in childhood is associated with imagination, fantasy, or dissociative tendencies--not surprising considering that only 4 Ss were abused by their father or stepfather, 2/3 of Ss had fondling as the most severe abuse they had experienced; only 2 had intercourse; 2/3 were abused only 1-3 times. Sexual abuse that is not violent, severe, prolonged, or perpetrated by a parent may not lead to the same problems.

In a sample of women whose assaults were rape, only 25% reported it as rape.

On other hand, physical punishment was more reliably associated with dissociation (.47), imagination and fantasy in absorption scale (.41-.51 with question about using imagination to block awareness of punishment). Physical punishment was associated with increased dissociation.

Sample size is small and the trend is in the predicted direction, so later results may be significant.

Conclusion: measures of fantasy, dissociation, and imagination were correlated. Children's Perception Alteration Scale and the measures of fantasy and imagination were validated. Diverse measures of fantasy were highly correlated with one another.

We need a non-abused sample to add to this research.

The clinical sample had a higher dissociation score than Evers, Sanders, and Shostick's cutting score. We use 60 as a cutting score (for an abused sample) while they used 55.

#### COMMENTS FROM THE AUDIENCE:

Jack Watkins: the sexual abuse for the most part was not painful. Answer by Rhue: The group of sexual abuse cases includes very wide varieties of experiences; we need to examine that in our research. Also, trauma and the perception of trauma is an individual matter.

Etzel Cardena: We presented a paper at APA in which sexual abuse was a predictor of psychogenic seizures, and most important, the duration of the abuse.

Phyllis Alden: In a recent study in Germany, it was length of time for the abuse that predicted [dissociative symptoms?].

Sivec, Harry; Lynn, Steven Jay (1993, October). Hypnosis and early memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES:**

The investigators hypnotized people and asked that they recall their earliest memories. Gorham & Hafner tested highs and lows in 2 sessions, one with a hypnotic induction. Ss in hypnosis reported more themes, whether high hypnotizables or not. Ss might have held back in non hypnosis condition however.

Hypothesized that early memories would have affect-laden materials.

20 Ss in hypnosis group, 20 Ss in relaxation condition, all highs (scored minimum of 9 of 12 on the Harvard Scale). Ss were told they were randomly selected from a pool and that it was a study of personality. Ss were administered a number of questionnaires and tests.

The two groups received either a Stanford Form C Scale induction or a relaxation procedure.

We used the procedure of Bloom [spelling?] for recall of two memories, and to probe the earliest memory. Also to recall two recent memories. Counterbalanced for order of presentation.

Positive affect, negative affect, affect intensity, and primary process were rated; 12 themes were rated. ANOVA was used.

Earliest memory at 3.8 yrs. Next earliest is 7.5 for hypnosis and 5.2 for relaxation groups. 4.3 is earliest for hypnosis group; there may be a basement effect. Negative affect varied by condition and by order of administration and recency of memory assessed. When early memories were elicited first, no differences were found in groups; when elicited second, negative affect was greater for [missed words]. Affect was more abundant and intense in the hypnosis group, but only when recent memories were elicited before early memories and only in the [missed words].

Early recollections were slightly more primary process (bizarre) than later, which should alert clinicians.

Themes didn't differ between groups. Early memories involved more trauma than later memories. Negative affect correlated with psychopathology measures for earliest memory but not later memory.

Used posthypnotic experiences scales. There is a decrease in unpleasant experiences, suggesting the benefit of catharsis when recalling early memories.

Watkins, Helen H. (1993). Ego-State therapy: An overview. American Journal of Clinical Hypnosis, 35, 232-240.

Ego-state therapy is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between the various "ego states" that constitute a "family of self" within a single individual. Although covert ego states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist. Any of the behavioral, cognitive, analytic, or humanistic techniques may then be employed in a kind of internal diplomacy. Some 20 years experience with

this approach has demonstrated that complex psychodynamic problems can often be resolved in a relatively short time compared to more traditional analytic therapies.

1992

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. Psychotherapy, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Darken, Rachel (1992). Hypnosis in the treatment of survivors of sexual abuse. Australian Journal of Clinical and Experimental Hypnosis, 20, 105-110.

This paper outlines the problems of child sexual abuse and its long-term sequelae, often reaching down generations. In psychotherapy with survivors of childhood sexual abuse, hypnosis offers a flexible treatment modality and the paper focuses particularly on the use of hypnosis and self-hypnosis for the "reparenting" element of psychotherapy.

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

NOTES: "Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).

Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.

The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD. Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Lynn, Steven Jay; Rhue, Judith W. (1992, October). Memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

**NOTES:** [Author presented a dramatic case report of patient who recalled specific events that subsequently he and the patient investigated and disproved. What the patient thought they saw could not possibly have been seen.]

The experimental literature on memory gives us some things to think about. Therapy relies highly on memory, and the therapist shapes the contours of the memory by validating the memories, which are rarely doubted. Tacit acceptance of memories as historical facts is part of the contract of therapy.

Memory studies challenge the idea of accurate storage. Some people are unduly confident of their memory. Bartlett's research demonstrated distortion according to schema, interpretations, embellishments, etc. Jacobi et al indicate people's theories about what happened shape memory.

One theory is that trauma leads to amnesia, repression, dissociation. But research does not show inability to recall early life events indicates presence of a traumatic history. Repression is not prima facie evidence of abuse. The *Courage to Heal* book states that merely thinking you were abused is evidence that you probably were.

How do vague ideas crystallize? Loftus finds if inability to remember isn't attributed to ordinary forgetting, the person may look for memories, thereby creating them.

Studies of persons who confess to crimes, unsure whether they did or didn't do them, indicate that these people are easily coerced. Doubt in a memory's accuracy can be reframed by a therapist.

**Hypothesis:** Therapists who confidently state a view risk implanting pseudomemories. Therapists must be cautious.

Clients can confuse sources of information that they receive. Different sources of information can be integrated into a single memory (e.g. what occurred to them and what occurred to siblings can be integrated into a pseudomemory). Some limited evidence that early life experience memories could be implanted has been presented by Loftus.

Certain client characteristics contribute to false memories: 1. Present mood state (mood congruent memory). This effect is reliable when people are clinically depressed. Though clinicians may say it indicates early childhood abuse, the memory might be selective or biased. 2. History of fantasy-proneness. In childhood this type of person might have had problems distinguishing fantasy from reality. LaBelle et al found absorption made it difficult to distinguish sounds in hypnosis from what really occurred, creating pseudo- memories. With this population it is essential to avoid suggesting abuse.

Lynn was successful in implanting an idea of abuse in an alter called Person. He used the Orne technique (from the BBC film "Hypnosis on Trial") to ask a patient what she had told him about her dog during the hypnosis; he did this to convince her of the importance of exploring her amnesic episodes.

Does hypnosis foster a literal re-experiencing of childhood events? NO. Nash, in an exhaustive review, failed to find correspondence between information from hypnotic

age regression and childhood events. He notes that literal reliving is not possible. It is possibly an expression of primary process thinking. Hypnosis doesn't ameliorate memory problems; and it may exacerbate memory problems.

Lynn views primary process thinking observed in hypnosis as due to the demand of hypnosis to fantasize and relinquish critical thinking or objectivity. This plus Therapist and Patient expectancies may foster tenacious beliefs that events occurred.

Many hypnotic suggestions may interfere with memory. The AMA 1985 report suggests that hypnosis can influence confidence in a 'memory' with no actual improvement in accuracy.

The effects aren't limited to hypnosis however. Simulators and controls also generate pseudomemories. Repeated questioning of Ss who are led to believe that questioning helps distinguish memories from fantasies, actually diminishes the accuracy of memories.

Hypnotizability is correlated with pseudomemory occurrence. We should evaluate a client's hypnotizability when evaluating for pseudomemories.

Perceived verifiability rate is important, as pseudomemories are higher where you can't verify the reported memory, it is thought. Therefore, approach with caution. Make every effort to corroborate memories.

Subjective reports may tell narrative truths even though inconsistent with the historical record, and could be useful independent of historical accuracy. I agree that those 'memories' could be important, just as age progression or past life regression material could be useful in therapy. But should we base our interpretations or conclusions on events that are not confirmed? A patient's belief in abuse by their parent has enormous implications for a family.

Therapists should understand the dynamics of a request for using hypnosis to recall forgotten memories before using uncovering techniques. Ask yourself, "Why is this being requested?" Also ask other questions: 1. Is the person fantasy prone, dissociative, suggestible, a high hypnotizable? 2. Is the person stabilized enough to focus on an abreaction? 3. Is there conscious or unconscious motivation to avoid responsibility for one's own behavior? 4. Is there a wish to arrive at a facile solution, a magic cure, the royal road to the unconscious; or is there an attempt to control the treatment hour, to avoid issues, to test the therapist? 5. Is therapy stalled, not moving forward? 6. Am I angry with the client because they expect to uncover more?

Instead of using hypnosis to retrieve memories, I may focus on the issues to which I answer 'Yes' in the forgoing list.

I do not believe current research is sufficiently persuasive to throw out hypnosis for retrieving memories. The dangers of pseudomemory are endemic to therapy. Incorporating hypnosis into a broader frame of therapy depends on the skill of the clinician. However, we must use hypnosis with great caution

**COMMENTS FROM AUDIENCE.** Joseph Dane: In 75% of cases that could be verified, they found corroborating evidence: what should you look for as an index that the memory recalled in hypnosis is more likely to be accurate?

Lynn: Many instances of abuse are corroborated. No one questions the veracity of all memories. To my knowledge there are no ways of corroborating genuine from

false memories. We know subjective conviction is not sufficient, and clients' affective experience can be very misleading. Since my experience [in the case study reported at the beginning of this presentation] I have talked with many therapists who have had similar experiences.

David Spiegel - the problem is not the hypnosis: patients go in and out of hypnosis all the time, momentarily. The problem is, how do I explore the material in psychotherapy? There is no substitute for corroboration if you can get it. But you have to be sensitive to the vulnerability of those people.

Howard Hall: What is a genuine memory? No memory is undistorted. More importantly, can we verify significant events that might have had long term consequences, like abuse? We should try to verify memories when we base treatment programs on them. The only memories in the literature that have a reputation of being accurate are highly traumatic events that stand out, and these reports are anecdotal in nature.

Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.

In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.

#### NOTES:

The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.

Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental of social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----

	False suggestion	Group A	Group B	Group C
Group D				
result (n=15)	(n=15)	(n=15)	(n=15)	
Accepted	12	6	7	3
Rejected	3	9	8	12

----- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and

the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Perry, Nancy W. (1992, Summer). How children remember and why they forget. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 1-2; 13-16.

NOTES: "'My memory is the thing I forget with.' (a child's definition, cited in Grossberg, 1985, p. 60)" (p. 1).

"Unlike the simpler forms of memory retrieval, free recall is strongly age-related... the recall skills of preschool children develop gradually" (p. 2). "...in some cases, younger children can provide more accurate information than adults (Lindberg, 1991). For example, if an event is particularly salient (as sometimes happens in cases of trauma), recall may be exceptionally good (Brainerd & Ornstein, 1991; Lindberg, 1991)" (p. 13).

"Children have limited ability to use memory strategies. For this reason, children often know more than they can freely recall" (p. 13).

"The use of rehearsal as a memory strategy is almost automatic for adults. ... Ten-year-olds also commonly use rehearsal to aid memory. Young children, however, have not mastered rehearsal (Harris & Liebert, 1991).

"Another memory strategy is imagery, which involves (1) mentally picturing a person, place, or object, or (2) visually associating two or more things that are to be remembered. Children develop imagery much later than other memory strategies. Indeed, some people never learn this memory strategy (Flavell, 1977)" (p. 13).

"... stress alone may not impair memory processes. Indeed, stress can lead to arousal, heightened attention, and improved encoding (Deffenbacher, 1983). However, stress that results from intimidation may lead to either impairment in encoding or problems in recalling or reporting memories" (p. 14).

"Because the effect of suggestion on material that has been well encoded tends not to be significantly different across age groups (Cohen & Harnick, 1980), it may be that younger children's inferior performance on suggestive tasks results from inferior encoding" (p. 15).

Putnam, Frank W. (1992). Using hypnosis for therapeutic abreactions. Psychiatric Medicine, 10, 51-65.

The dramatic reliving of traumatic events under hypnosis, is a powerful therapeutic intervention useful in the treatment of victims of trauma. First systematically applied in World War I, abreaction coupled with psychotherapeutic processing of the recovered material is increasingly being used with victims of child abuse and chronic PTSD. Abreactions are helpful in recovering dissociated or repressed traumatic material, reconnecting missing affect with recalled material and for transforming traumatic memories. Although abreactions can be induced with medications, hypnosis is the method of choice except in acute situations where it is not possible to establish rapport. A variety of hypnotic techniques for the induction and management of abreaction are discussed, together with the indications and contraindications for their use.

Summit, Roland C. (1992, Summer). Opinion: Misplaced attention to delayed memory. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 21-25.

NOTES

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NOTES: "I believe this is the time to cap a century of progress with a monumental achievement in awareness. We must cherish and develop the concept that what we don't know can hurt us. We can establish, for the first time, that our lives and even the nature of our society can be shaped by experiences so terrible that they are, in the words of Josef Breuer a century ago, 'forbidden to consciousness' (1895, p. 225). We may learn that huge chunks of oppositional thought, cruelty, perversity, helplessness, self-destruction and mental illness are derived from this hidden reservoir of suffering, and we could inspire unprecedented achievements in healing, prevention and enlightened peacemaking" (p. 21).

"We have been slow to consider the implications of dissociation for protective awareness of child sexual abuse" (p. 22).

"And we should respect the painful threat that enlightenment poses for our comforting faith in a just and fair society. We would have to consider that we may be capable as a people of hiding our most grotesque activities under the cover of dissociation, so that we don't know we're doing it, our victims can't say it's happening, and as an outer society we will insist that no such thing could possibly exist" (p. 22).

"While it is urgently important to know that dissociation is real, it is doubly important not to endorse as accurate, in fact, details or encounters that may be part of a still unknown process of distortion" (p. 22).

"The most distinguished clinicians, the people who occupy the platform of authority as scientists and educators, are joining with those who, until now, have been recognized mainly for their adversarial positions. Now those two poles are coming together in aroused opposition to the phenomenon of delayed memory, especially when acquired in therapy with young women in their 30's, especially when those therapists lack an M.D. or a Ph.D. diploma. We face, once again, an ageist, sexist, elitist professional standoff around an issue that deserves to be explored in harmony" (p. 24).

"In California and several other states the statute of limitations has been suspended for individuals who can demonstrate delayed discovery of childhood trauma" (p. 24).

"The rush to judgment is not confined to civil litigation. There is no statute of limitations on murder" (p. 24).

"How many kids have hidden the memory of unspeakable assaults which can be unearthed years later to plunge them into courtroom testimony? How many free citizens could be sued or imprisoned by such remote discoveries? What should we do as scientists in support of or in opposition to those delayed memories?" (P. 24).

"We know that skepticism can quash the emergence of dissociated memories. Can we prove that therapeutic zeal cannot enhance such memories? Survivors who gain a clear picture of sexual assault in the climactic period of discovery tend to fade out the sharp edges as they achieve resolution and healing. The most seasoned survivors may discount the intermediate memories which once provided the impetus for their recovery" (p. 25).

Yapko, Michael D. (1992). Editor's Viewpoint. Milton H. Erickson Foundation Newsletter, 12 (3), 2.

#### NOTES:

"A controversial issue is heating up, and therapists are beginning to feel the heat. The issue involves the common practice of helping clients recover apparently repressed memories of early childhood sexual trauma.

"In the second edition of my hypnosis textbook, Trancework (1990, Brunner/Mazel), I included a special section on the possibility of hypnotically implanting false memories---vivid memories of things that never actually happened that the client comes to believe as true recollections. I pointed out the risks of suggestive procedures and urged caution in suggesting memories of any sort, whether a formal hypnotic induction took place or not.

"Early this year a non-profit foundation was formed in Philadelphia called the False Memory Syndrome Foundation which serves as a clearing house for relevant information, and even publishes a newsletter. It also provides support to families broken apart by these problems. If you are interested in the complex issues regarding suggestion and memory, you can contact the FMS Foundation at 3508 Market Street, Suite 128, Philadelphia, PA 19104, telephone (215) 387-1865. David Calof's group also publishes Treating Abuse Today. They, too, are cognizant of the relevant issues. Their address is 2722 Eastlake Avenue East, Seattle, WA 98012, telephone (206) 329- 9101" (p. 2).

1991

Chu, James A.; Dill, Diana L. (1991). Dissociation, borderline personality disorder, and childhood trauma. American Journal of Psychiatry, 148 (6), 812.

Comments on the article by S. N. Ogata et al (see PA, vol 78:4681) on the high prevalence of childhood physical and sexual abuse in inpatients with borderline personality disorder. It is suggested that dissociative symptoms in borderline patients may simply be a less severe form of intrapsychic fragmentation than multiple personalities.

Cornell, William F.; Olio, Karen A. (1991). Integrating affect in treatment with adult survivors of physical and sexual abuse. American Journal of Orthopsychiatry, 61 (1), 59-69.

Presents a theoretical and technical model for affectively centered treatment of adults abused as children, focusing on the function of denial and dissociation as central defense mechanisms. The concept is introduced of working at an "affective edge." At this experiential point, a client can maintain both cognitive understanding and emotional and bodily awareness without triggering denial and dissociation. This approach fosters careful monitoring of the client's functioning both during and between therapeutic sessions. The proposed therapeutic approach uses noninvasive touch and body-centered techniques. Focus is on integrating affect and on the importance of the therapeutic relationship.

Friedrich, William N. (1991). Hypnotherapy with traumatized children. International Journal of Clinical and Experimental Hypnosis, 39 (2), 67-81.

The psychological impact of trauma can include cognitive, affective, and behavioral components. The degree to which a child is either overwhelmed by or unable to access the traumatic event can make the working through of the event in therapy difficult. Hypnotherapy is a useful modality not only for alleviating symptoms but also for uncovering the traumatic event(s) with associated affects, integrating and making sense of the experience. 4 case studies are reported to illustrate the utility of hypnotherapy with young, traumatized children.

Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginative sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

Sanders, Barbara; Giolas, Marina H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. American Journal of Psychiatry, 148, 50-54.

Tested the hypothesis that dissociation in adolescence is positively correlated with stress or abuse experienced earlier by assessing the relationship between degree of dissociation and degree of reported childhood stress, abuse, or trauma in 47 13- 17 year old disturbed adolescents. Subjects had been institutionalized for periods of 1-13 weeks. Subjects completed a Dissociative Experiences Scale (DES) and a child abuse and trauma questionnaire. Scores on the DES correlated significantly with self-reported physical abuse or punishment, sexual abuse, psychological abuse, neglect, and negative home atmosphere but not with abuse ratings made from hospital records. Findings support the view that dissociation represents a reaction to early negative experience and places multiple personality disorder at the extreme end of a continuum of dissociative sequelae of childhood trauma.

Smith, William H. (1991). Antecedents of posttraumatic stress disorder: Wasn't being raped enough? A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 129-133.

Many rape victims, like those traumatized by war, accidents, and natural disasters, are able to recover from their ordeal with supportive, crisis-oriented treatment. For others, however, symptoms may persist and require more intensive treatment. Hypnosis allows a modulated re-experiencing and abreaction of the traumatic event that can help to provide the victim with a relieving sense of mastery, and it fosters a receptive context for reassurance and interpretation regarding the irrational or exaggerated thoughts and feelings involved. 2 case examples are presented in which earlier conflicts appeared to play a role in perpetuating the patients' symptoms. Detecting and addressing these antecedents resulted in complete alleviation of long-standing problems through relatively brief treatment using hypnosis.

Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

Wielawski, Irene (1991, October 3). Unlocking the secrets of memory. Los Angeles

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NOTES: This is a newspaper article about Eileen Franklin-Lipsker of Palo Alto, who testified that her father, George T. Franklin, killed an 8-yr-old girl in 1979 and that she repressed the memory for nearly two decades.

1990

**Hoencamp, Erik (1990). Sexual abuse and the abuse of hypnosis in the therapeutic relationship. International Journal of Clinical and Experimental Hypnosis, 38, 283-297.**

**In the Netherlands, individuals charged with rape may be prosecuted only in instances in which the suspect could have known that the victim was unconscious or in a state of powerlessness. Hypnosis might be looked upon as a method by which an unscrupulous person could sustain such a state of powerlessness in a victim. As an expert witness, the present author participated in a court case against a lay hypnotist who was accused of abusing 9 women. The methods and strategy used by the lay hypnotist are presented as well as are the diverse reactions of the women involved in the case. Feelings of nonvolition appear to have been a relevant factor in the coercion, especially in women who demonstrated hypnotic phenomena such as arm levitation, catalepsy, etc. The basis for sexual coercion was established only after the interpersonal relationship had been redefined as a therapeutic relationship. Introduction within the pseudotherapeutic relationship of a sexual rationale for the presented complaints helped to provide a framework for actual sexual acts to occur. With certain individual patients, the introduction of hypnosis enhanced the subjective experience of nonvolition and with it the vulnerability for abuse. It may be hypothesized that patients with a tendency for external attribution and high hypnotizability are specifically at risk for this kind of abuse when hypnosis is used in the context of a therapeutic relationship.**

**Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.**

**NOTES: "A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).**

**"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).**

**Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears**

### **1990-1991**

Rhue, Judith W.; Lynn, Steven Jay; Henry, Stephanie; Buhk, Kerry; Boyd, Patti (1990-91). Child abuse, imagination and hypnotizability. Imagination, Cognition and Personality, 10, 53-63. to be a far cry from equating involition with coercion" (p. 243).

Research was designed to provide a rigorous test of J. R. Hilgard's hypothesis that hypnotizability is related to a history of physical punishment and to imaginative involvements. College students who reported a history of physical abuse (N = 21) and sexual abuse (N = 23) were compared with control subjects who either lost a parent by way of death or divorce (N = 20) or who were from intact homes (N = 35), under test conditions that minimized the possibility that context effects would prejudice the findings. No support was found for the hypothesis that increased hypnotizability was associated with a history of physical or sexual abuse: All of the groups are indistinguishable on measures of objective and subjective response to hypnosis. However, consistent with Hilgard's hypothesis, physically and sexually abused subjects were found to be more fantasy-prone than subjects in both nonabused control conditions.

Ross, Colin A.; Miller, Scott D.; Reagor, Pamela; Bjornson, Lynda; et al. (1990). Structured interview data on 102 cases of multiple personality disorder from four centers. American Journal of Psychiatry, 147, 596-601.

Data from 102 patients with multiple personality disorder at 4 different centers were collected using the Dissociative Disorders Interview Schedule (C. A. Ross et al, 1989; C. A. Ross, 1989) and the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders - III --- Revised (DSM-III--R) Dissociative Disorders (M. Steinberg et al; ) The presenting characteristics of Subjects at all 4 centers were very similar. The clinical profile that emerged included a history of childhood physical and/or sexual abuse in 97 (95.1%) of the cases. Subjects reported an average of 15.2 somatic symptoms, 6.4 Schneiderian symptoms, 10.2 secondary features of the disorder, 5.2 borderline personality disorder criteria, and 5.6 extrasensory experiences; their average score on a dissociative experiences scale was also meaningful. Multiple personality disorder appears to have a stable, consistent set of features.

### **1989**

Ganaway, George K. (1989). Historical versus narrative truth: Clarifying the role of exogenous trauma in the etiology of MPD and its variants. Dissociation, 2, 205-220.

The author notes a current trend toward viewing multiple personality disorder (MPD) and its variants as a form of chronic post-traumatic stress disorder based solely on exogenous childhood trauma, and cautions against prematurely reductionistic hypotheses. He focuses on Kluft's Third Etiological Factor, which includes the various developmental, biological, interpersonal, sociocultural, and psychodynamic shaping influences and substrates that determine the form taken by the dissociative defense. He hypothesizes a credibility continuum of childhood and contemporary memories arising primarily from exogenous trauma at one end, and

endogenous trauma (stemming from intrapsychic adaptational needs) at the other. The author offers alternative multidetermined explanations for certain unverified trauma memories that currently are being accepted and validated as factual experiences by many therapists. He describes some potentially deleterious effects of validating unverified trauma memories during psychotherapy, and recommends that the MPD patients' need for unconditional credibility be responded to in the same manner as other transference-generated productions.

Pillemer, D. B.; White, S. H. (1989). Childhood events recalled by children and adults. In Reese, H. W. (Ed.), Advances in child development and behavior. New York: Academic Press.

#### NOTES

1:

NOTES: Authors discuss a dual memory theory. The first memory system is prominent in early childhood, and is a system in which are organized and evoked by persons, locations, and emotions. Such memories are not easily "transportable" outside the original experience. These memories are accessed through images of face and place, actions, or feelings. The second memory system begins to develop in early childhood, is verbally mediated, and stores experiences in narrative form. Such memories are accessible through verbal interaction, and can be reviewed and shared with others verbally. For a small child, to access all of a memory one would need to tap into both memory systems. The authors suggest that the first memory system continues to be available throughout one's life, especially when strong emotion was associated so that verbal cues are not attached. [This has implications for retrieval of "lost" memories using imagery-based approaches like hypnosis.]

Sanders, B.; McRoberts, G.; Tollefson, C. (1989). Childhood stress and dissociation in a college population. Dissociation, 2, 17-23.

ABSTRACT: Two studies are reported demonstrating that individual differences in dissociation in college students are positively related to differences in self-reported stressful or traumatic experiences in youth. In Study 1, differences in the degree of stress or unpredictable physical violence experienced in childhood or early adolescence were shown to be related to scores on the Dissociative Experiences Scale (DES). Study 2 replicated these relationships and extended them to another dissociation measure, the Bliss scale. Study 2 also demonstrated that both dissociation measures correlate positively with reported physical and psychological abuse. These findings for a nonclinical population are discussed in relation to the etiology of dissociation in clinical groups.

1988

Chu, James A. (1988). Ten traps for therapists in the treatment of trauma survivors. Dissociation, 1, 24-32.

Patients who have survived trauma, particularly those who have experienced early childhood abuse, stand out in the clinical experience of many therapists as being among the most difficult patients to treat. These patients have particular patterns of relatedness, along with intense neediness and dependency which make them superb testers of the abilities of their therapists. They often push therapists to examine the rationales and limits of their therapeutic abilities, and frequently force therapists to examine their own personal issues and ethical beliefs. A conceptual framework for

understanding treatment traps is presented, along with 10 traps which these patients present, consciously and unconsciously, in the course of treatment. Included are traps around trust, distance, boundaries, limits, responsibility, control, denial, projection, idealization, and motivation.

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

Terr, Lenore C. (1988). What happens to early memories of trauma? A study of twenty children under age five at the time of documented traumatic events. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 96-104.

The verbal and behavioral remembrances of 20 children who suffered psychic trauma before age 5 were compared with documentations of the same events. Ages 28 to 36 months, at the time of the trauma, serves as an approximate cutoff point separating those children who can fully verbalize their past experiences from those who can do so in part or not at all. Girls appear better able than boys to verbalize parts of traumas from before ages 28 to 36 months. Short, single traumas are more likely to be remembered in words. At any age, however, behavioral memories of trauma remain quite accurate and true to the events that stimulated them.

Miller, Arnold (1986). Hypnotherapy in a case of dissociated incest. International Journal of Clinical and Experimental Hypnosis, 34 (1), 13-28.

This case study describes hypnotherapy with a young woman who, in the course of treatment, began to remember her incestuous relationship with her alcoholic father. Her presenting symptoms included self-assaultive masturbation, suicidal fantasies, depression, impaired sexual functioning, and inability to resume her education. Different phases of treatment entailed uncovering work, mastering the incest experience with the help of emotionally corrective experiences, the use of part-selves to assist coping, and the integration of several part-selves into a more effective personality. After 4 years of treatment she has successfully resumed her education, has normal sexual functioning, and is no longer incapacitated by depression.

1984

Nash, Michael R.; Lynn, Steven Jay; Givens, Deborah L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 6-11.

Earlier empirical and theoretical work has suggested that there is a relationship between higher hypnotic susceptibility and severity of childhood punishment. Experiment 1 surveyed the parents of 14 extremely high and 11 extremely low susceptible Ss concerning punishment. Low susceptible Ss were found to be more frequently punished than highs; no significant differences were found on the severity measure. Experiment 2 assessed the hypnotizability of 16 adult Ss who reported being physically abused before the age of 10 and compared these scores to those of 300 adult Ss who had not reported being abused. The mean hypnotizability of abused Ss was greater than that of controls, and the distribution of their scores appeared bimodal. Limitations of both experiments are discussed and suggestions are made for future investigations.

Stava, L. (1984). The use of hypnotic uncovering techniques in the treatment of pedophilia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 350-355.

This case study describes the use of the hypnotic uncovering techniques of induced dreams (Sacerdote, 1967) and the affect bridge (Watkins, 1971) in reducing inappropriate sexual arousal in a male pedophile. Treatment effects were examined through the use of both psychophysiological measures of penile tumescence and psychological tests. The hypnotherapeutic treatment regime consisted of 25 sessions over approximately 9 months. At the end of treatment, psychophysiological measures revealed a definite reduction of sexual excitation to slides of prepubescent children. Psychological testing indicated reduced defensiveness as well as reduced sexual anxiety to adult women. Various hypnotherapeutic experiences which may have contributed to the treatment effects are discussed.

Active Alert Hypnosis

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

#### NOTES

The authors suggest that any induction procedure legitimizes acceptance of primary-type suggestions that are at variance with everyday experience. Such primary (i.e. "waking") suggestions are actually accepted at a higher rate than most people think (Barber & Calverley, 1962), and passing those suggestions convinces the subject he must be "hypnotized." However, inductions with the word "sleep" tend to retard subject's response to suggestions. An induction that is more oriented to alert states would be very useful for many people and situations. "Hyperempiria" in Greek means hyper-experience or enhanced quality of experience. The hyperempiric induction contains suggestions of increased alertness, mind expansion, enhanced awareness, and enhanced sensitivity.

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

#### NOTES

1:

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

Theories of Hypnosis

Chapter:

1. An Introduction to Hypnosis

2. Hypnosis in the Management of Chronic Pain

3. Hypnosis in Conjunction with Chemical Anesthesia

4. Hypnosis in Conjunction with Regional Anesthesia

5. Hypnosis as the Sole Anesthetic

6. Hypnosis in the Intensive Care Unit

7. Hypnosis in the Emergency Unit

8. Hypnosis in Pediatric Surgery

9. Hypnosis in Obstetrics and Gynecology

10. Perspectives from Physician-Patients

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. (([available online:] <http://www.iuniverse.com/bookstore/marketplace>))

#### NOTES

1:

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

2000

Barabasz, Arreed (2000, August). EEG markers of hypnosis: The induction makes a difference. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

Rather than attempt to uncover some simplistic unidimensional EEG "signature" of the hypnotic state, this study obtained EEG Event Related Potentials (ERPs) in response to two conditions: suggestion only and an alert hypnotic induction plus the identical suggestion. The suggestion asked the ten participants to hallucinate having earplugs in their ears to attenuate a series of computer generated tone pips. Hypnotizability testing was completely separated in both time (6-9 months prior) and context from this research. Alert hypnosis (Barabasz, 1985; Barabasz & Barabasz, 1996) was used to preclude effects that might be wrought by relaxation. Only the hypnotizable participants showed statistically significant attenuation of their EEG ERPs in response to the hypnotic induction plus suggestion condition in contrast to the identical suggestion alone. An independent post-experimental inquiry revealed that the one highly hypnotizable participant who responded in an equivalent manner to both conditions spontaneously entered hypnosis in an effort to respond to the essence of the instructions. Consistent with previous research (Barabasz, Barabasz, Jensen, Calvin, Trevisan, & Warner, 1999; Barabasz & Lonsdale, 1983; Spiegel, Cutcomb, Ren, & Pribram, 1985), the data reveal that when responses are time locked to events, robust physiological markers of the hypnotic state emerge that reflect alterations in consciousness corresponding to participants' subjective experiences of perceptual alteration. These effects were not produced by suggestion alone but only by hypnosis in hypnotizable participants. It would appear that hypnotic state induced responses go beyond those wrought by suggestion alone when efforts are made to establish sufficient hypnotic depth. However, it remains important to understand that less demanding effects can also be produced by social influence, context and personal abilities (Kirsch, Council, & Mobayed, 1987; Lynn, Rhue, & Weekes, 1990). Given the leptokertic distribution of hypnotizability in the general population, social influence may account for a number of the more easily produced responses seen particularly in non-clinical university participant research situations where samples are comprised primarily of those with moderate hypnotizability. [Abstract in *Psychological Hypnosis: A Bulletin of Division 30*, Vol. 10, No. 1, Winter-Spring 2001.]

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. *American Journal of Clinical Hypnosis*, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the

induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**Elter-Nodvin, Edeltraud (2000). Computerized content analysis: A comparison of the verbal productions of high hypnotizable, low hypnotizable and simulating subjects (Dissertation). (<http://www.televid.com/elternodvin/dissertation/>)**

: This research was designed to investigate the domain of hypnosis and to explore how the ""state"" of hypnosis, along with the susceptibility to hypnosis relate to lexical choice in verbal productions as well as to primary/secondary process mentation. ... College students were screened for level of hypnotic susceptibility ... [yielding] 32 high hypnotizable subjects and 57 low hypnotizable subjects [randomly assigned to two groups] ... 29 low hypnotizable subjects and 28 low hypnotizable simulating subjects.

Responses to six Thematic Apperception Test (TAT) cards and responses to five free speech story-openings were collected and tape-recorded during [counterbalanced waking and hypnosis conditions]... verbal productions were transcribed and [computer] analyzed by ... the Dartmouth Adaptation of The General Inquirer ... and COUNT with the Regressive Imagery Dictionary ... .

To summarize, findings suggest that the changes in SECONDARY PROCESS and THOUGHT, as well as the DAGI-III-variable EMOTION and the COUNT-RID-variable EMOTION, may be a result [sic] other than hypnotic ability or the hypnotic experience. The possibility has been raised, that subjects who had been instructed to simulate hypnosis were successful in discerning the experimental, implicit demands to respond with decreased SECONDARY PROCESS and THOUGHT as measured by the DAGI-III and COUNT-RID respectively and to present the appearance of a genuinely hypnotized subject. The same was true for the increase in EMOTION as measured by the DAGI-III as well as by the COUNT-RID. The interaction between the condition (baseline vs. hypnosis) and the group (level of hypnotic susceptibility) would have provided the strongest support for the assertion that hypnosis changes a dimension (e.g. enhances primary process responding or decreases secondary process mentation) in highly hypnotizable subjects.

The likelihood that the hypnotic main-effect can be attributed at least to some extent to demand characteristics has been supported by the current results. The hypnotic state , even though it can be measured through behavioral measures such as the HGSHS and the CAH, cannot be measured by content measures of verbal productions.

Findings are discussed in regard to previous literature suggesting a link between primary process and hypnosis and suggestions for future research are made. In addition, theoretical and practical implications are discussed. - From dissertation at web site <http://www.televid.com/elternodvin/dissertation/>

Gibbons, Don (2000). Applied hypnosis and hyperempiria. New York NY: Plenum Press. ([available online:] <http://www.iuniverse.com/bookstore>)

## NOTES

The book features both traditional hypnotic procedures and hyperempiric inductions based on suggestions of increased awareness, mind expansion, and increased alertness and sensitivity. It contains sections on the use of suggestion as an instrument of personal growth in areas such as improving study skills, taking examinations, achievement motivation, artistic expression, emotional enrichment, aesthetic appreciation and enjoyment, interpersonal effectiveness, musical performance, problem solving, public speaking, salesmanship, sports performance, theatrical performance, and writing ability.

1999

Alarcsn, A.; Capafons, A.; Bayot, A.; Cardeqa, E. (1999). Preference between two methods of active-alert hypnosis: Not all techniques are created equal.. American Journal of Clinical Hypnosis, 41 (3), 269-276

In a cross-over design (N=80), we compared the differential liking and preference for two hypnotic techniques involving physical activity: active-alert and waking-alert (or alert-hand) procedures. Participants expressed significantly higher liking and preference for the waking-alert as compared to the active-alert procedure. The latter technique, which also had significantly lower suggestibility scores (Cardeqa et al., 1998) was also associated with a significantly higher attrition rate (23%). These significant differences may be explained by the greater physical effort and difficulty associated with the active-alert technique. It seems that the waking-alert method extends the advantages of active hypnosis (e.g., alertness, enhanced self-mastery) to individuals who may dislike or are unable to cope with the greater demands required by the active-alert procedure.

Anderson, Kathryn (1999, November). A test of Barabasz' alert hypnosis on EEG Beta and Theta production for children with ADHD. [Paper] Presented at Annual Meeting of the Society for Clinical and Experimental Hypnosis, New Orleans, LA.

This study tested the effects of Barabasz's Instant Alert Hypnosis (IAH), also known as Instantaneous Neuronal Activation Procedure (INAP, Barabasz and Barabasz, 1995) used as an adjunct to neurotherapy. The sixteen children who participated in this study met DSM - IV criteria for attention deficit hyperactivity disorder (AD/HD). Trials of neurotherapy alone were compared to neurotherapy combined with alert hypnosis on beta-theta ratios at five electrode sites (Fp1, Fp2, Fz, Cz and Pz). The results showed that EEG beta-theta ratio means were significantly higher (more than twice as large) in the trials of neurotherapy

combined with alert hypnosis in contrast to neurotherapy alone. Beta was significantly enhanced while theta was inhibited. The clinical implications of these findings with regard to improved treatment efficacy and reduced time in treatment are discussed. [Abstract taken from SCEH "FOCUS", Winter 2001..]

1998

Cardeqa, E.; Alarcsn, A.; Capafons, A.; Bayot, A. (1998). Effects on suggestibility of a new method of active-alert hypnosis: Alert hand.. International Journal of Clinical and Experimental Hypnosis, 46 (3), 280-294.

Research has shown that the active-alert method described by Banyai and Hilgard (1976) produces a similar increase on suggestibility as relaxation-based techniques, but it has some limitations, including the need for a stationary bicycle and a certain level of physical fitness. The authors compared that method with the new "alert hand" method, which emphasizes activity and alertness, but is simpler and less strenuous. In a repeated measures, counterbalanced design (N=80), the authors found that (a) the alert hand method produced significantly higher objective and subjective suggestibility scores than the active-alert technique, and (b) a high percentage (23%) of volunteers discontinued participation during the active-alert method but not during the the alert hand method. The alert hand method extends the benefits of active hypnosis for people who may have difficulties with the physical demands required by the active-alert method, and it seems to enhance suggestibility.

Gibbons, Don (1998). Suggestion as an art form: Alternative paradigm for hypnosis?. [Paper] Presented at annual meeting of American Psychological Association, San Francisco. ([available online:] <ftp://members.aol.com/gibbonsdon/artform.txt>)

This paper proposes a change in the manner in which we think about suggestion-induced phenomena, moving from primary reliance upon a medical/counseling model to a concurrent view of suggestion as an art form and hypnosis as an artistic medium. the rationale for such an alternative paradigm is discussed, and a procedure for scripting suggestions within the new paradigm -- the Best Me technique -- is presented, along with a specific illustration of its application, possible implications for current clinical practice, and suggestions for transition to the new paradigm.

1997

Bayot, A.; Capafons, A.; Cardeqa, E. (1997). Emotional self-regulation therapy: A new and efficacious treatment for smoking.. American Journal of Clinical Hypnosis, 40 (2), 146-156.

We described emotional self-regulation therapy, a recently-developed suggestion technique for the treatment of smoking, and present data attesting to its efficacy. Of the 38 individuals who completed treatment, 82% (47% of the initial sample) stopped smoking altogether and 13% (8% of the initial sample) reduced

their smoking. A follow-up at 6 months showed that 66% (38% of the initial sample) of those who had completed the treatment remained abstinent and reported minimal withdrawal symptoms or weight gain. In a no-treatment comparison group, only 8% reduced their smoking or became abstinent.

1996

DeBenedittis, Giuseppe De (1996). Hypnosis and spasmodic torticollis -- report of four cases: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (4), 292-306.

Dystonia and particularly spasmodic torticollis are neuromuscular disorders that are extremely resistant to most therapies (physical, medical, or surgical). Torticollis is a unilateral spasm of the neck muscles, particularly of the sternocleidomastoid, that produces violent, tonic turning of the head to one side. The etiology remains uncertain, although the role of psychogenic factors has been emphasized. This article reviews the literature and reports four cases of spasmodic torticollis treated successfully with hypnosis. In all four cases, psychogenic causes were involved. Postural hypnosis (i.e., hypnosis in the standing position) was employed to counteract and minimize muscle spasms due to postural reflexes. A hypnobehavioral approach was adopted along with hypnotic strategies that included hierarchical desensitization, sensory-imaging conditioning, ego-boosting suggestions, and hypnosis-facilitated differential muscle retraining. In two cases, a combined hypnosis and electromyographic-biofeedback approach was used to equilibrate and retrain affected neck muscles. Although the hypnotherapeutic process took several months to induce and stabilize significant changes, outcome results were good to excellent in all cases, with marked reduction of the torticollis and the hypertrophy of the neck muscles as well as a reduced interference of symptoms in daily living. -- Journal Abstract

Wark, David (1996). Teaching college students better learning skills using self-hypnosis. American Journal of Clinical Hypnosis, 38 (4), 277-287.

Reports the effects of self-hypnosis used by 51 college students enrolled in a 10-wk course on efficient learning skills. All Ss were administered the Creative Imagination Scale (CIS). Subsequently, they learned to enter and deepen alert self-hypnosis. They gave themselves personal suggestions and then studied in hypnosis. They reported their depth of hypnosis and satisfaction with each session. Grades were collected the quarter before, during and after the course. Satisfaction and depth data indicated the Ss were involved throughout the course. Statistical testing showed that Ss who scored highest on the CIS had the lowest initial GPA, improved most during the course, and significantly increased their GPA in the quarter after

1995

Capafons, A.; Amigs, S. (1995). Emotional self-regulation therapy for smoking reduction: Description and initial empirical data.. International Journal of Clinical and Experimental Hypnosis, 43 (1), 7-19.

Self-regulation therapy (Amigs, 1992) is a set of procedures derived from cognitive skill training programs for increasing hypnotizability. First, experiences are generated by actual stimuli. Clients are then asked to associate those experiences with various cues. They are then requested to generate the experiences in response to the cues, but without the actual stimuli. When they are able to do so quickly and easily, therapeutic suggestions are given. Studies of self-regulation therapy indicate that it can be used successfully to treat smoking.

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

#### 1994

Barabasz, Arreed F.; Barabasz, Marianne (1994, October). EEG responses to a reading comprehension task during active alert hypnosis and waking states. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES: Evoked potentials differ between High & Low hypnotizables during hypnosis but not during waking (Barabasz & Lonsdale, 1983; Spiegel et al, 1985; Spiegel & Barabasz, 1988). Showed critical importance of instructions. We may not be aware of the suggestions that subjects are giving themselves. Or experimental cues may lead to de facto instructions.

Freeman, M. Barabasz & I found differences in high theta during cold pressor pain (reported elsewhere in this conference).

Active alert hypnosis improves attentional processing in military pilots (Barabasz, 1985, Journal of Aviation, Space & Environmental Medicine). INAP = Instantaneous Neuronal Activation Procedure. To enhance responsiveness to cockpit cues. Didn't have way of doing in flight measures of hypnosis. INAP was used clinically with airline pilots (Rhue, Lynn, & Kurtz Handbook on Clinical Hypnosis)

Active alert focused attention hypnosis increases frontal EEG topographic energy and frequency shifts (increased beta) in highly hypnotizable normal and attention deficit disordered children (Barabasz, Crawford & Barabasz, 1993; in press). No

significant changes are found with low hypnotizables (Barabasz & Barabasz, 1993). But sample was small.

Can alert focused attention hypnosis alter EEG topography and attentional processing in subjects of average hypnotizability?

MRI type mapping shows that attention deficit kids don't have normal patterns.

Subjects: all 11 Ss (female) who volunteered for a vitamin B-6 depletion study, with EEG evaluation, also volunteered for hypnosis testing for a \$5.00 payment (SHCS score range 2-3).

Used active alert procedure during reading comprehension task, disguised as normal reading procedure. Counterbalanced waking, attentional instructions and alert focused attention hypnosis conditions were imbedded in standard EEG situation.

Nelson Denny H.S. Reading Comprehension Test. "Focus your attention to read faster than normal, paying attention to what you read."

Used an eye roll induction, and looked for signs of entering hypnosis before they roll their eyes down; were able to cut no. of sessions in neurofeedback training by 50% by using these instructions. To come out next year in Rhue and Lynn.

Reading rate and comprehension increased in alert hypnosis (and words per minute also in attentional instructions). Neurobehavioral feedback for ADD is to decrease theta and increase beta and it ordinarily takes 60 sessions; 40-80 sessions without hypnosis, 15-25 with hypnosis. Eyeball induction cuts that. (See Barabasz & Barabasz, 1996. Chapter in Lynn, Kirsch, & Rhue, "Casebook of Clinical Hypnosis." Washington, DC.: APA Press.)

### 1991

Miller, Mary Frances; Barabasz, Arreed F.; Barabasz, Marianne (1991). Effects of active alert and relaxation hypnotic inductions on cold pressor pain. Journal of Abnormal Psychology, 100 (2), 223-226.

Contrasted relaxation and active alert hypnotic inductions with or without a specific suggestion for cold pressor pain analgesia. Groups of high (n = 38) and low (n = 27) hypnotizability subjects were tested; hypnotizability had been determined from results of the Stanford Hypnotic Susceptibility Scale, Form C. Cold pressor pain data were obtained after counterbalanced exposure to relaxation and active alert inductions. Highly hypnotizable subjects demonstrated lower pain scores than did low hypnotizability ones. Pain reports did not differ between induction conditions. Highly hypnotizable subjects given an analgesic suggestion showed lower pain scores than did those exposed only to hypnosis. The findings, conceptualized within E. R. Hilgard's (1977a) neodissociation theory, show that relaxation is not necessary for hypnotic analgesia.

NOTES: The relaxation induction was the SHSS, Form B. The active alert induction used the same instructions except suggestions for alertness, invigoration, and freshness were substituted for drowsiness and relaxation. During the active alert induction, the subjects rode a bicycle ergometer at a constant load of 1-3 kg and a constant rate of 1-2 rotations per s (Banyai & Hilgard, 1976).

**1990**

**Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.**

**In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.**

**1984**

**Malott, James M. (1984). Active-alert hypnosis: Replication and extension of previous research. Journal of Abnormal Psychology, 93 (2), 246-249.**

**NOTES: Compared levels of hypnotic responsiveness resulting from 4 induction procedures: (a) verbal active-alert induction alone, (b) bicycle pedaling alone, (c) verbal active-alert induction plus bicycle pedaling and (d) traditional relaxation induction. Ss were 48 undergraduates. Stanford Hypnotic Susceptibility Scale scores indicated that the verbal induction plus pedaling procedure was significantly more effective than either the verbal- or pedaling-alone procedures. There were no significant differences in scores produced by the verbal plus pedaling and traditional relaxation inductions. Findings are consistent with A. M. Ludwig's (1966) proposal that there exists a range of stimulation necessary for the maintenance of normal waking consciousness and that levels of stimulation above or below that range are conducive to the production of altered states of consciousness. This study adds experimental controls to the research design used by Banyai for active alert induction.**

**1978**

**Raikov, V. L. (1978). Specific features of suggested anesthesia in some forms of hypnosis in which the subject is active. International Journal of Clinical and Experimental Hypnosis, 26 (3), 158-166.**

**Experiments are reported in which highly hypnotizable Ss while imagining themselves, during hypnosis, to be cosmonauts with "jammed legs" in a space**

capsule did not feel an unannounced needle prick that pierced the skin. Control experiments with nonhypnotizable, professional actors showed that imagination alone was unsuccessful in producing this result. Additional experiments using autogenic training showed that the autogenic training alone, without analgesia training, did not alleviate the pain but may have reduced the anxiety connected with the pain; further training involving analgesia reduced the felt-pain as well. Theoretical discussion stresses the importance of attention, imagination, and orientation for experiencing analgesia as well as the added and decisive role played by the modifications of consciousness brought about in deep hypnosis.

1976

**Raikov, V. L. (1976). The possibility of creativity in the active stage of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 258-268.**

Creative capacity was studied by means of suggestions given to Ss under the condition of active hypnosis. In deep hypnosis it was suggested to S that he was a famous person with a specific talent. In a series of experiments Ss performed under active hypnosis such tasks as drawing, playing musical instruments, and playing chess. The results illustrated that creative processes can be facilitated in Ss capable of deep hypnosis and there is a carry-over of the creative achievements from hypnosis to the waking state. Low hypnotic Ss and control groups did not show improvements in the tasks. A particular significant increase in creativity was observed when Ss capable of deep hypnosis performed several successive creative tasks while hypnotized. The theoretical and experimental definitions of several new approaches to active hypnosis are also discussed.

1970

**Donk, Leonard J.; Vingoe, Frank J.; Hall, Roger A.; Doty, Richard (1970). The comparison of three suggestion techniques for increasing reading efficiency utilizing a counter-balanced research paradigm. International Journal of Clinical and Experimental Hypnosis, 18, 126-133.**

Reports an experiment in which both Barber-type and alert-trance procedures significantly increased reading speed while maintaining comprehension when compared to a control group; a traditional hypnotic procedure followed by the specific suggestions failed to obtain these results. 32 volunteer undergraduates were randomly assigned to 4 groups in terms of a counterbalanced design. 2 groups were administered trance inductions (traditional and alert) followed by specific suggestions, a 3rd simply the suggestions, while the 4th served as control. Reading suggestions were to eliminate specific problems, increase speed, and increase or maintain comprehension. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**Kratochvil, Stanislav (1970). Sleep hypnosis and waking hypnosis. International Journal of Clinical and Experimental Hypnosis, 18, 25-40.**

Subjected 6 highly susceptible female students to a short-term training procedure to induce 2 different types of hypnosis: (a) a sleep hypnosis, and (b) an active waking hypnosis. Ss behavior in both types, during the carrying out of 11 standard suggestions, was rated by 2 independent Os. The behavior in both artificially induced types of hypnosis differed significantly at the 1% level in the expected direction. The failure to obtain more dramatic results is attributed to the shortness of training, to the implicit demands concerning activity, or to Ss' personality traits, which may lower the intrapersonal variability. The relevance of the results for the Pavlovian theory of hypnosis is discussed: They do not support the hypothesis that behavioral characteristics which resemble sleep are intrinsic phenomena of the hypnotic state. (Spanish & German summaries) (34 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

## ACUPUNCTURE

1991

Moret, V.; Forster, A.; Laverriere, M. C.; Lambert, H.; Gaillard, R. C.; Bourgeois, P.; Haynal, A.; Gemperle, M.; Buchser, E. (1991). Mechanism of analgesia induced by hypnosis and acupuncture: Is there a difference?. *Pain*, 45, 135-140.

Hypnosis and acupuncture can alleviate experimentally induced pain but the mechanism of analgesia remains unclear for both techniques. Experimental pain was induced by cold pressor test (CPT) in 8 male volunteers. Analgesic effect of hypnosis (HA) and acupuncture (AA) was assessed before and after double-blind administration of placebo or naloxone, in a prospective, cross-over study. We found that pain intensity was significantly lower with HA as compared with AA, both with naloxone ( $P < 0.001$ ) and placebo ( $P < 0.001$ ). Within HA or AA groups, pain scores did not differ significantly when naloxone or placebo was administered. During AA, however, pain scores were similar to control values when naloxone was given ( $P = 0.05$ ) but decreased significantly with placebo ( $P < 0.002$ ). Analog scales for pain intensity and pain relief showed a good correlation ( $r = 0.94$ ). Plasma levels of B-endorphins did not change significantly in any combination. Heart rate, peripheral arterial blood pressure and skin conductance were very insensitive indices to assess pain intensity or relief, as well as intensity of acupuncture stimulation or depth of hypnotic trance. We conclude: (1) HA and AA can significantly reduce pain from CPT, and HA is more effective than AA; (2) HA and AA are not primarily mediated by the opiate endorphin system; and (3) plasmatic levels of B-endorphins are not significantly affected by HA or AA nor by naloxone or placebo administration.

## NOTES

The authors measured blood pressure, heart rate, skin conductance, mood (Clyde Mood Scale), beta endorphin levels, and hypnotizability.

Before the experimental sessions they obtained Ss' opinions about the analgesia effectiveness of hypnosis and acupuncture. For each Subject they established a value for 'intolerable' pain (the longest duration of arm immersion in cold water). Efficacy of treatment was defined as none (0% on the efficacy scale) for this Control session..

During the experimental sessions they gave hypnosis or acupuncture analgesia for 20 minutes, then an injection of either naloxone or placebo. Double-blind controls were used. Five minutes after the injection they began CPT and the Subject was told to maintain their hand in the water for the same amount of time as in the control session. Pain intensity and treatment efficacy were scored, then the S completed a mood scale. Five blood samples were collected over the course of the procedure: (a) first rest period, (b) treatment period, (c) after injection, (d) after CPT, (e) second rest period.

Results (see Abstract). "When naloxone was administered, HA was no more effective than AA in alleviating pain ( $P = 0.109$ ). However HA was significantly more effective than AA when placebo was administered ( $P < 0.05$ ). Whichever technique was used there was no significant alteration in pain relief by either naloxone or placebo ( $P = 0.426$  within the HA group and  $P = 0.519$  within the AA group)" (p. 137).

"Compared to the control session, the pain relief was significantly better with HA, both when placebo (62.53%,  $P < 0.001$ ) and when naloxone (49.3%,  $P < 0.001$ ) was administered. This was not true with AA and placebo (15.21%,  $P = 0.1$ ) nor with AA and naloxone (13.38%,  $P = 0.5$ )" (p. 137).

"When naloxone or placebo was administered, the mean pain relief scores did not differ significantly with HA ( $P = 0.56$ ) or with AA ( $P = 0.852$ ). There was a good correlation ( $r = .94$ ) between ratings of pain and treatment efficacy" (pp. 137-138).

Outcome was not related to Subjects pre-experimental beliefs about efficacy of hypnosis or of acupuncture. During the experimental sessions, all Ss reported that hypnosis was more effective than acupuncture.

Neither hypnosis nor acupuncture affected beta endorphin plasma levels; neither naloxone nor placebo affected beta endorphin plasma levels.

Mood was somewhat affected by treatments. "When compared with the baseline value (i.e., before each session), mean scores for happiness were significantly lower after AA with placebo than after AA with naloxone ( $P = 0.05$ ). The other evaluated categories of mood (friendliness, aggressiveness, clear thought, sleepiness and dizziness) were not affected by either session" (p. 139).

In the Discussion, authors indicated that "variables such as heart rate, arterial blood pressure and skin conductance were very insensitive indices for assessing pain or pain relief as well as intensity of acupuncture stimulation or depth of hypnotic trance" (p. 139).

Why was hypnoanalgesia better than acupuncture analgesia? "Firstly, a preconceived opinion could favor hypnosis; this was not the case amongst these subjects. Secondly, the influence of what was felt to be a more pleasant experience (HA) might help to lower pain ratings. Subjective preference for hypnosis was frequently expressed informally; however, scores from the Clyde Mood Scale did not suggest mood enhancement after HA. Thirdly, the intensity of analgesia might

have been more uniform with HA than with AA. ... Interestingly, we found no difference in pain ratings between good and poor hypnotic subjects, even if theoretically poor hypnotic subjects could be expected to experience less pain relief with HA" (p. 139).

Effect of naloxone. "Although the failure to achieve statistical significance may be due to the small number of subjects, our results suggest that, if opiate receptors play a role in HA or AA, it is not of primary importance" (p. 139). The authors go on to state that the data on plasma beta-endorphin and CSF beta-endorphin are confusing, and elaborate the discussion of that variable on p. 139.

**1984**

**Lewith, G. T.; Kenyon, J. N. (1984). Physiological and psychological explanations for the mechanism of acupuncture as a treatment for chronic pain. *Social Science & Medicine*, 1367-1378.**

Many suggestions have been made about the possible mechanism of acupuncture as an analgesic therapy. This review provides a comprehensive account of the neurological, neurohumoral and psychologically-based hypotheses put forward. Although the exact mechanism of this treatment remains unclear, it is apparent that reproducible neurological and chemical changes occur in response to acupuncture, and that these changes almost certainly modify the response to, and perception of, pain. The mechanism of chronic pain is incompletely understood, but within this framework we understand acupuncture as completely as most other types of analgesic treatment.

**1981**

**Knox, V. Jane; Gekoski, W. L.; Shum, Kit; McLaughlin, Deborah M. (1981). Analgesia for experimentally induced pain: Multiple sessions of acupuncture compared to hypnosis in high- and low-susceptible subjects. *Journal of Abnormal Psychology*, 90 (1), 28-34.**

Repeated trials with cold-pressor pain were used to (a) determine whether the modest relation between hypnotic susceptibility and response to acupuncture analgesia obtained in previous experiments is enhanced over a series of treatments; (b) compare acupuncture and hypnotic analgesias; and (c) assess whether acupuncture analgesia increases with repeated treatments. Twenty high and 20 low hypnotically susceptible subjects participated on 5 different days. For half of each susceptibility group, Sessions 1- 3 consisted of a baseline trial followed by an acupuncture analgesia trial. The remaining subjects had two no-treatment trials on each of these sessions. For all subjects Session 4 was a baseline followed by a hypnotic analgesia trial, and Session 5 was a repetition of the procedures followed in Sessions 1-3. Repeated exposures to acupuncture did not alter its analgesic effect in either susceptibility group; there were no instances of significant postacupuncture pain reduction. High susceptibles, but not low susceptibles, reported marked pain reduction after hypnotic analgesia. From these and previous findings it is concluded

that the effect of acupuncture on experimentally induced pain is at best small and fragile.

NOTES

1:

NOTES: 8 of 10 highly hypnotizable subjects but only 3 of 10 low hypnotizable subjects thought hypnosis was more effective than acupuncture

1978

Mendelson, G. (1978). Acupuncture analgesia. 2. Review of current theories. Australian and New Zealand Journal of Medicine, 8, 100-105.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

Ulett, George A.; Parwatikar, Sakashiv D.; Stern, John A.; Brown, Marjorie (1978). Acupuncture, hypnosis and experimental pain: II. Study with patients. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 191-201.

The experiment was designed to explore the correlation between the protective effects of hypnosis and acupuncture on externally induced short lived pain and to evaluate various data retrospectively in relation to acupuncture treatment responders and non-responders. Twenty patients with a history of chronic pain were subjected to cold water induced pain and the data on the effect of 35 min of hypnotic suggestion and 20 min of acupuncture stimulation on the pain and other physiological variables was gathered in a controlled setting. These patients had previously had acupuncture treatment. Eleven had benefitted from it in excess of 50% and nine had reported less than 50% improvement in their condition. Findings indicate: (1) acupuncture responsive patients experience less acute pain when such pain is induced externally. (2) hypnotic susceptibility and response to acupuncture

are independent of each other and the former cannot be used as a predictor of acupuncture treatment success. (3) Hypnosis appears to have more definite and predictable protective effect than acupuncture. (4) Younger patients appear to have a better response to acupuncture treatment than do older patients. It is suggested that the research in acupuncture be furthered in view of the fact that acupuncture seems to have positive effect in certain patients.

**1977**

**Berk, Stephen N.; Moore, Mary E.; Resnick, Jerome H. (1977). Psychosocial factors as mediators of acupuncture therapy. *Journal of Consulting and Clinical Psychology*, 45 (4), 612-619.**

**This study investigated a number of psychosocial variables that have been suggested as possible mediating factors in acupuncture therapy. Forty-two volunteers with bursitis and/or tendonitis of the shoulder served as subjects. All were randomly assigned to one of four treatment groups: acupuncture - positive milieu, acupuncture - negative milieu, placebo acupuncture - positive milieu, and placebo acupuncture - negative milieu. Pretreatment and posttreatment subjective pain reports and shoulder motion studies, as well as pretreatment assessments of hypnotic susceptibility and suggestibility, were determined for each subject. Results indicated that (a) acupuncture and placebo acupuncture were equally effective in producing highly significant ( $p < .001$ ) reductions in subjective pain reports; (b) neither treatment effectively improved objective shoulder motion; (c) subjects treated in the positive milieu reported more improvement than those in the negative milieu ( $p < .053$ ); and (d) hypnotic susceptibility, suggestibility, belief in the treatment, and the satisfaction of expectations showed no relationship to treatment outcome. It is concluded that acupuncture therapy provides a powerful placebo. Treatment milieu variables warrant future study in the attempt to understand the acupuncture phenomena.**

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treatment, and the satisfaction of expectations showed no relationship to treatment outcome. It is concluded that acupuncture therapy provides a powerful placebo. Treatment milieu variables warrant future study in the attempt to understand the acupuncture phenomena.

Stern, John A.; Brown, M.; Ulett, George A.; Sletten, Ivan (1977). A comparison of hypnosis, acupuncture, morphine, Valium, aspirin, and placebo in the management of experimentally induced pain. *Annals of the New York Academy of Sciences*, 296, 175-193.

What general conclusions can we come to on the basis of these investigations? We conclude that hypnosis and suggestions of analgesia, morphine, and acupuncture stimulation (of LI 4, 14, and 15 on the arm exposed to painful stimulation) are effective in reducing experimentally induced pain. This is true for both a cold pressor pain-induction procedure and an ischemic pain-induction procedure. Hypnotic suggestibility does not account for the effectiveness of acupuncture stimulation, though good hypnotic Ss show better protection against pain with hypnotic suggestion and morphine.

"Good hypnotic Ss experience more pain than is true for Poor hypnotic Ss when exposed to the same pain-induction procedure. The effect is more marked for the cold-pressor than the ischemic pain procedure. Good hypnotic Ss are more responsive -- i.e., show greater reduction in pain perception -- to drugs and intervention procedures that produce significant subjective sensations (morphine and diazepam) than is true of Poor hypnotic Ss. This is not true for aspirin and placebo. Last, but not least, Ss low in hypnotic susceptibility tend to perceive painful stimuli as more painful when under the influence of diazepam as compared to the nondrug condition" (p. 192).

1976

Chaves, John F.; Barber, Theodore Xenophon (1976). Hypnotic procedures and surgery: A critical analysis with applications to 'acupuncture analgesia'. *American Journal of Clinical Hypnosis*, 18 (4), 217-236.

Although hypnotic procedures are useful for reducing the anxiety of surgery and helping patients tolerate surgery, they do not consistently eliminate pain. Six factors that are part of or associated with hypnotic procedures help patients tolerate surgery. These factors pertain to patient selection, the patient-physician relationship, the preoperative 'education' of the patient, the adjunctive use of drugs, and the use of suggestions of analgesia and distraction. It appears that the same factors account for the apparent successes of 'acupuncture analgesia' as well. A frequently-overlooked fact, that most internal tissues and organs of the body do not hurt when they are cut by the surgeon's scalpel, is also important in understanding how surgery can be performed with either 'hypnoanesthesia' or 'acupuncture analgesia.'

**Moore, Mary E.; Berk, Stephen N. (1976). Acupuncture for chronic shoulder pain: An experimental study with attention to the role of placebo and hypnotic susceptibility. *Annals of Internal Medicine*, 84 (4), 381-384.**

**One half of 42 Ss treated for painful shoulders received classic acupuncture, and one half received a placebo in which the needles did not penetrate the skin. Half of each of these groups was treated in a positive setting to encourage the subject, and half in a negative setting designed to keep encouragement at a minimum. All patients were independently rated for susceptibility to hypnosis. Although range of motion did not improve, the majority of patients reported significant improvement in shoulder discomfort to a blind evaluator after treatment; placebo and acupuncture groups did not differ in this respect, however. The positive and negative settings did not affect treatment outcome. In all groups, those who were not rated as highly susceptible to hypnosis tended to fail to achieve the highest levels of relief, but such differences were not statistically significant.**

**NOTES: There were 42 subjects, and they were tested with the Spiegel Hypnotic Induction Profile. "Both acupuncture and placebo proved to be effective in relieving shoulder discomfort. 69% of the total group made lower assessments of discomfort on the post-treatment rating than on the pretreatment rating" (p. 382).**

**"Acupuncture was not more effective than placebo in relieving discomfort, however. The average percentage of improvement among those who had acupuncture was not, statistically, significantly different from those who had placebo. Indeed, what little difference there was actually was in the opposite direction, the placebo group improving on the average somewhat more than the acupuncture group" (pp. 382-383).**

**"In the negative setting, however, where the subject was required to suffer in silence, acupuncture seemed to be less effective than the placebo in relieving discomfort" (p. 383).**

**"Although the subjects perceived that the treatment relieved their shoulder discomfort, there was no objective evidence of improvement in the shoulder as measured by change in the range of motion scores before and after treatment" (p. 383).**

**(The placebo was needle pricked against the skin at true site, then rapidly and lightly tapped against the surface of the skin without penetration.)**

**"Those who were not susceptible to hypnosis failed to experience as much relief from discomfort as those who were" (p. 383).**

**"The fact that acupuncture was not more successful in relieving shoulder discomfort than a sham procedure suggests that its much publicized success may be merely a powerful placebo effect" (p. 383).**

**Katz, Kao, Spiegel et al (1974) also found that low hypnotizables did not benefit much in terms of pain relief with acupuncture.**

**1975**

**Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. *Experimental Neurology*, 49, 272-280**

The reactions of 14 volunteers to electrical stimulation near the supra-orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

Saletu, B.; Saletu, M.; Brown, M.; Stern, J.; Sletten, I.; Ulett, G. (1975). Hypno-analgesia and acupuncture analgesia: A neurophysiological reality?. *Neuropsychobiology*, 1, 218-242.

The effects of hypnosis, acupuncture and analgesic drugs on the subjective experience of pain and on objective neurophysiological parameters were investigated. Pain was produced by brief electric stimuli on the wrist. Pain challengers were: hypnosis (induced by two different video tapes), acupuncture (at specific and unspecific loci, with and without electrical stimulation of the needles), morphine and ketamine. Evaluation of clinical parameters included the subjective experience of pain intensity, blood pressure, pulse, temperature, psychosomatic symptoms and side effects. Neurophysiological parameters consisted of the quantitatively analyzed EEG and somatosensory evoked potential (SEP). Pain was significantly reduced by hypnosis, morphine and ketamine, but not during the control session. Of the four acupuncture techniques, only electro-acupuncture at specific loci significantly decreased pain. The EEG changes during hypnosis were dependent on the wording of the suggestion and were characterized by an increase of slow and a decrease of fast waves. Acupuncture induced just the opposite changes, which were most significant when needles were inserted at traditional specific sites and stimulated electrically. The evoked potential findings suggested that ketamine attenuates pain in the thalamo-cortical pathways, while hypnosis, acupuncture and morphine induce analgesia at the later CNS stage of stimulus processing. Finally some clinical-neurophysiological correlations were explored.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Acupuncture analgesia: A six-factor theory. *Psychoenergetic Systems*, 1, 11-21.

The dramatic successes claimed for acupuncture suggest that Western medicine has failed to identify important factors that pertain to the nature of pain and its control. This may not be the case, as there are at least six factors which are often overlooked by writers describing the absence of pain (i.e., analgesia) during acupuncture: (a) the patients accepted for surgery under acupuncture usually believe that it will work, (b) drugs are frequently used in combination with acupuncture, (c) the pain associated with surgical procedures is less than is generally assumed, (d) the patients are prepared in special ways for surgery under acupuncture, (e) the acupuncture needles distract the patient from the pain of surgery and, (f) suggestions for pain relief are present in acupuncture treatment. It is concluded that more research is

needed to determine whether additional factors are needed to help explain the phenomenon of acupuncture analgesia.

## **ADDICTIONS**

**1993**

**Eisen, Mitchell (1993). Assessing the hypnotizability of college students from addictive families. Contemporary Hypnosis, 10, 11-17.**

**ABSTRACT: The present study examined the relation between hypnotizability and the report of growing up in an addictive family where one or both parents were addicted to drugs and/or alcohol. A sample of 113 college students (47 male, 66 female) were studied for measure of childhood abuse, addiction history, dissociation and hypnotizability. As predicted, subjects from an addictive family were more hypnotizable than subject from a nonaddictive family. However, no relation between family addiction and dissociation was secured. Whereas abuse was found to be related to dissociation, it was not related to hypnotizability. The findings are discussed in terms of the effects of child abuse and neglect on dissociation and hypnotizability as it relates to the addictive family.**

**Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.**

**An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.**

**1990**

**Suedfeld, Peter (1990). Restricted environmental stimulation and smoking cessation: A 15-year progress report. International Journal of the Addictions, 25, 861-888.**

**The first successful use of restricted environmental stimulation therapy (REST) as a method of smoking cessation was reported in this journal in 1972. Since then, close to 20 papers and articles have further investigated this application. The results have been consistently positive and have further shown that--unlike most techniques--REST combines synergistically with other effective treatment modalities. The effect of REST seems to target primarily the major problem with other known treatments in this area: It substantially reduces the relapse rate among clients who quit smoking at the end of treatment. Furthermore, REST is safe, has no known adverse**

side effects, and is easily tolerated by most participants. Nevertheless, the method has not found wide acceptance among practitioners. This paper explores and answers some of the concerns that may be involved in its relative lack of popularity.

**NOTES:** Provides a thorough review of REST (restricted environmental stimulation technique) and smoking cessation, with analysis of why the technique has not been widely adopted, how to set up a lab (including costs and equipment), and the political considerations surrounding REST research (many of which would apply to hypnosis). The author describes how sensory restriction got a bad reputation in Hebb's lab. But both "brainwashing" and intensive interrogation rely primarily on overstimulation and intense stimulus bombardment; these are occasionally interrupted for brief periods to arouse fear and uncertainty about their resumption. The optimal approach in treatment of smokers seems to be to combine an approach that maximizes immediate cessation rates, with REST which maximizes continuing maintenance rates. Tikalsky (1984) reported that combining REST with self-management training and the establishment of a social support group, there was a 6-month abstinence rate of 88%. (This was a clinical treatment study rather than a controlled experiment.)

"The estimated maintenance rates after REST converge at about 50%, about twice as high as those commonly accepted as characterizing the literature (see, e.g., Hunt and Bepalec, 1974; Shumaker & Grunberg, 1986). The unusually high maintenance rates (percentage of subjects who were abstinent at every follow-up throughout 12 months, using as the baseline those who had quit at end of treatment) are in most--although not all--cases combined with only average quit rates (using total number of followed-up subjects as the baseline), indicating that the initial impact of REST is less impressive than its effect on long-term maintenance" (p. 872).

Why is REST underutilized? Some say it is a placebo. But there is evidence that "expectancy has but little effect on objectively quantifiable (as opposed to subjective) measures in REST (Barabasz & Barabasz, 1990; Suedfeld, 1969b; Suedfeld, Landon, Epstein, & Pargament, 1971)" (p. 873). See also Suedfeld & Baker-Brown (1986).

How does REST work? "In REST, the normal flow of exogenous stimuli is suddenly and very drastically reduced. As a result, attention can be (in fact, must be, if the processing of information is a basic human need) refocused to the ongoing internal generation of physiological, cognitive, affective, memorial, imaginal, and other stimulation. This enables REST participants to concentrate on working out personal problems, including (if so desired) those related to the continuation or termination of their smoking habit" (p. 874).

Second, the removal of specific smoking-related cues interrupts automatic, overlearned response sequences so most clients report that they no longer smoke mechanically, and conditioned cravings for a cigarette are extinguished in many Ss. It appears from the literature that low-arousal treatments such as hypnosis and meditation are reinforced by REST. REST should improve conditioning or cognitive change therapies because it improves learning and memory, and research supports this assumption. REST also should facilitate the acceptance of information

('messages') because it decreases defenses against novel or dissonant information, but that has not proven true in research to date.

**1988**

Neufeld, V.; Lynn, Steven Jay (1988). A single-session group self-hypnosis smoking cessation treatment: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36 (2), 75-79.

This study was designed to assess the efficacy of a manual-based, single-session group of self-hypnosis intervention. At 3 months follow-up, 25.92% of the total number of participants (14 male, 13 females) reported continuous abstinence, and at 6 months, 18.52% of the participants reported continuous abstinence. Reported social support and motivation to quit were both associated with successful outcome. Comparison of the current data with other findings reported by the American Lung Association (Davis, Faust, & Ordentlich, 1984) suggests that treatment effects may not be solely attributable to the use of a maintenance manual, education, and attention. Limitations of the research associated with issues of experimental control, generalizability of the findings, and outcome measures are discussed.

**1987**

Gmur, M.; Tschopp, A. (1987). Factors determining the success of nicotine withdrawal: 12-year follow-up of 532 smokers after suggestion therapy (by a faith healer). International Journal of Addictions, 22, 1189-1200.

In 1973, 532 heavy smokers were questioned prior to treatment by the faith healer Hermano and requestioned 4 months, 1 year, 5 years, and 12 years after the therapeutic ritual. From the moment of treatment, 40% of the subjects remained nonsmokers (with no relapse) after 4 months, 32.5% after one year, 20% after 5 years, and 15.9% after 12 years. At the time of the follow-up, 37.5% of the Ss were nonsmokers, the majority of them having stopped smoking again after suffering a relapse. To investigate factors determining success, Ss who for 12 years had uninterrupted abstinence were compared with those who for 12 years had continued to smoke almost without interruption. Personality factors, sociodemographic features, and characteristics of smoking behavior showed no demonstrable connection with the tendency to relapse. On the other hand, it did prove possible to explain 16% of the variance in the responses to treatment: in particular, high alcohol consumption, markedly addictive smoking, rare attendance at church, and the attitude that 'you have to believe in the treatment' were found to be conducive to relapse and addiction.

**1984**

Manganiello, Aaron J. (1984). A comparative study of hypnotherapy and psychotherapy in the treatment of methadone addicts. American Journal of Clinical Hypnosis, 26, 273-279.

This study sought to examine the effects of hypnotherapy on the ability of

methadone-maintained patients to reduce and/or eliminate their drug-taking behavior. Seventy adult volunteers at a methadone maintenance program were randomly assigned to experimental and control groups. The experimental group received hypnotherapy for 6 months in addition to the psychotherapy offered as standard clinic treatment. The control group received only psychotherapy. After treatment a 6-month follow-up was conducted by interviews. Groups were compared to determine significant differences in the number of successful withdrawals, the mean change in methadone dose level, incidence of illicit drug use, and degree of discomfort. Significant differences were found on all measures. The experimental group had significantly less discomfort and illicit drug use, and a significantly greater number of withdrawals. At six-month follow-up, 94% of the Ss in the experimental group who had achieved withdrawal remained narcotic-free

**1981**

Throll, D. A. (1981). Transcendental meditation and progressive relaxation: Their psychological effects. Journal of Clinical Psychology, 37 (4), 776-781.

Administered the Eysenck Personality Inventory, the State-Trait-Anxiety Inventory, and two questionnaires on health and drug usage to 39 Ss before they learned Transcendental Meditation (TM) or Progressive Relaxation (PR). All Ss were tested immediately after they had learned either technique and then retested 5, 10, and 15 weeks later. There were no significant differences between groups for any of the psychological variables at pretest. However, at posttest the TM group displayed more significant and comprehensive results (decreases in Neuroticism/Stability, Extroversion/Introversion, and drug use) than did the PR group. Both groups demonstrated significant decreases in State and Trait Anxiety. The more pronounced results for meditators were explained primarily in terms of the greater amount of time that they spent on their technique, plus the differences between the two techniques themselves.

**1980**

Holroyd, Jean (1980). Hypnosis treatment for smoking: An evaluative review. International Journal of Clinical and Experimental Hypnosis, 28 (4), 341-357.

17 studies of hypnosis for treatment of smoking published since 1970 were reviewed. Abstinence after 6 months posttreatment ranged from 4% to 88%. Effectiveness of treatment outcome was examined in terms of: S population, individual versus group treatment, standardized versus individualized suggestions, use of self-hypnosis, number of treatment sessions and time span covered by the treatment, and use of adjunctive treatment. At 6 months follow-up, more than 50% of smokers remained abstinent in programs in which there were several hours of treatment, intense interpersonal interaction (e.g., individual sessions, marathon hypnosis, mutual group hypnosis), suggestions capitalizing on specific motivations of individual patients, and adjunctive or follow-up contact. The 17 studies are presented in

sufficient detail to permit clinicians to follow the published procedures, and recommendations are made for future research.

**1979**

**Crasilneck, Harold B. (1979). Hypnosis in the control of chronic low back pain. American Journal of Clinical Hypnosis, 22, 71-78.**

Twenty-nine patients were referred because of low back pain. Five were excluded on psychological grounds because they were highly masochistic, extremely depressed, or manifested a low frustration tolerance. Of the 24 in the treatment group, 18 of the patients had surgery two or more times, and six one time. In each case low back pain returned within three to six months after surgery. Twenty of the patients were addicted to or excessively dependent on medications including acetaminophen, secobarbital, codeine phosphate, oxycodone hydrochloride, and morphine sulphate. Common factors among the patients included (1) consistent pain which was primarily organic in origin, (2) analgesic dependence, (3) insomnia, (4) reactive depression, (5) excessive interpersonal dependence, and (6) a fear of becoming a lifelong 'backache cripple.' Twenty patients responded positively; four patients failed to respond to the repeated hypnotic induction techniques and were considered failures. Sixteen reported an average of 80% relief during the first four sessions, and all 20 patients reported an average of 70% relief (based on verbal estimates by patients) by the sixth session. Fifteen voluntarily discontinued medication by the third week of therapy, and the rest were withdrawn by their physicians during the ensuing four weeks. Most patients were seen daily the first week, three times the second week, twice the third week, and thereafter as necessary. The mean number of out-patient sessions was 31 over an average of nine months. All patients were taught self-hypnosis. None of the individuals retained their addiction, and only occasionally did they require analgesics. Patients were seen by their referring physicians as needed during the course of hypnotherapy, and frequent consultations between the therapists created a combination of treatments best suited for each patient. It is concluded that hypnosis may be utilized maximally as an important adjunct to other therapeutic methods in the treatment of low back pain.

**1978**

**Stanton, Harry E. (1978). A one-session hypnotic approach to modifying smoking behavior. International Journal of Clinical and Experimental Hypnosis, 26, 22-29.**

Recent literature reviewing attempts to modify smoking behavior through the use of hypnosis is outlined, and an approach utilizing only 1 treatment is described. This single session includes: (a) the establishment of a favorable "mental set" on the part of the patient, (b) a hypnotic induction, (c) ego-enhancing suggestions, (d) specific suggestions directed toward the cessation of smoking, (e) an adaption of the "red balloon" visualization, and (f) success visualization. Of 75 patients treated by this technique, 45 ceased smoking. 6 months after the treatment session, 34, or 45%, were still nonsmokers, attesting to the efficacy of the method.

1977

Barkley, R. A.; Hastings, J. E.; Jackson, T. L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. 25 (1), 7-17.

29 Ss were assigned to one of 3 treatment conditions and treated for their cigarette smoking over a 2-week period. These conditions were: group rapid smoking, group hypnosis, and an attention-placebo control group. All treatments produced significant reductions in average daily smoking rates during the treatment phase but all Ss returned to near baseline levels of smoking by the 6-week follow-up. The rapid smoking and hypnosis groups did not differ from the control group in smoking rates at treatment termination or at the 6-week follow-up. They also did not differ from the control group in the number of Ss abstaining from smoking by treatment termination but did differ at follow-up. Eventually, at the 9-month follow-up, only Ss from the group rapid smoking condition had significantly more abstainers than the control group. The results suggested that rapid smoking can work as effectively in group procedures as previous individualized approaches had demonstrated. Group hypnosis, while less effective than some previous individualized approaches had indicated, was nevertheless only marginally less effective than the group rapid smoking procedure. The use of abstinence rates as opposed to average rates of smoking was strongly recommended as the best measure of treatment effectiveness for future research in this area.

1970

Kline, Milton V. (1970). The use of extended group hypno-therapy sessions in controlling cigarette habituation. International Journal of Clinical and Experimental Hypnosis, 18, 270-282.

Results of the present experimental approach to the treatment of smoking habituation tend to be consistent with the view of smoking habituation as a dependence reaction, parallel to drug addiction, and with the concept that habituation must be examined as a psychosomatic entity. Therapeutic approaches must take into account the psychophysiological characteristics of deprivation behavior. Hypnosis, and particularly extended periods of hypnotherapy involving the reduction and control of deprivation behavior, seems to offer a promising approach to the therapeutic treatment of smoking habituation. (German & Spanish summaries) (17 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 18 (4), 235-250.

Discusses the 1st 615 patient-smokers who were treated with a single 45-min session of psychotherapy reinforced by hypnosis. Technique of treatment, including rationale of approach, induction procedure, assessment of hypnotizability, and training instructions to stop smoking are presented in detail. 6-mo follow-up study results are discussed. Of 44% who returned a questionnaire, hard-core smokers

stopped for at least 6 mo. Another 20% reduced their smoking to varying degrees. Results of a 1-session treatment compare favorably with, and often are significantly better than, other longer-term methods reported in the literature. It is suggested that every habitual smoker who is motivated to stop be exposed to the impact of this procedure, or its equivalent, so that at least 1 of 5 smokers can be salvaged. (French & Spanish summaries). (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis: Final remarks in response to the discussants. International Journal of Clinical and Experimental Hypnosis, 18 (4), 268.

Reexamines the major points of the author's papers (see PA, Vol. 45:Issue 1) on smoking modification. Data inclusion, therapy length, Ss' ability to change, and use of multiple therapists and tape recordings as reinforcement are discussed. It is concluded that the method should be used to "sharpen our techniques that we can relatively quickly learn who has the capacity to change for given goals, and then to help evoke the desired change as efficiently as possible." (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1964

Ludwig, Arnold M.; Lyle, W. H. (1964). The experimental production of narcotic drug effects and withdrawal symptoms through hypnosis. International Journal of Clinical and Experimental Hypnosis, 12, 1-17.

The purpose of this study was to evaluate the role of suggestion in the production of certain narcotic drug effects and in the narcotic abstinence syndrome. In addition, we were interested in determining the extent to which actual narcotic drug effects could be reversed through post-hypnotic suggestion. The results of our study indicated that formerly addicted Ss, who had experienced at least one "cold turkey" withdrawal from narcotics, were able to attain a highly realistic suggested narcotic drug and withdrawal experience through hypnosis with appropriate physiological and behavioral changes, which they were unable to achieve in other control conditions. Moreover, when actual narcotic drugs were administered, certain Ss were able to return to normal behavior following appropriate post-hypnotic suggestions. Hypnosis was deemed to be essential in the production of all these effects. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Ludwig, Arnold M.; Lyle, William H., Jr.; Miller, Jerome S. (1964). Group hypnotherapy techniques with drug addicts. International Journal of Clinical and Experimental Hypnosis, 12 (2), 53-66.

This study was designed to investigate the appropriateness of a number of group hypnotherapeutic techniques which might be used in the treatment of addict patients. It is the belief of the investigators that the more "magical," "authoritative," and practical-oriented techniques seem more appropriate and

useful than techniques designed to elicit deep, insightful understanding of the emotional problems underlying drug addiction. Many of the specific hypnotherapeutic techniques used are described, and some of the difficulties and advantages of group hypnosis as a treatment method are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## **AGE DEVELOPMENT**

**1994**

**Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. *Ethics and Behavior*, 4.**

**Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.**

**NOTES: "A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).**

## **AGE REGRESSION**

**1993**

**De Pascalis, Vilfredo (1993). EEG spectral analysis during hypnotic induction, hypnotic dream and age regression. International Journal of Psychophysiology, 15, EEG was recorded monopolarly at frontal (F3, F4), central (C3, C4) and posterior (in the middle of O1-P3-T5 and O2-P4-T6 triangles) derivations during the hypnotic induction of the Stanford Hypnotic Clinical Scale (SHCS) and during performance following suggestions of hypnotic dream and age-regression as expressed in the before-mentioned scale. 10 low-hypnotizable and 9 highly-hypnotizable and right-**

handed female students participated in one experimental session. Evaluations were Fast-Fourier spectral analyses during the following conditions: waking-rest in eyes-open and eyes-closed condition; early, middle, and late phases of hypnotic induction; rest-hypnosis in eyes closed condition; hypnotic dream and age regression. After spectral analysis of 0 to 44 Hz, the mean spectral amplitude estimates across seven Hz bands (theta 1, 4-6 Hz, theta 2, 6-8 Hz; alpha 1, 8-10 Hz; alpha 2, 10-13 Hz; beta 1, 13-16 Hz; beta 2, 16-20 Hz; beta 3, 20-36 Hz) and the 40-Hz EEG band (36-44 Hz) for each experimental condition were extracted. In eyes-open and -closed conditions in waking and hypnosis highly-hypnotizable subjects produced a greater 40-Hz EEG amplitude than did low hypnotizable subjects at all frontal, central and posterior locations. In the early and middle hypnotic induction highly-hypnotizables displayed a greater amount of beta 3 than did low hypnotizables and this difference was even more pronounced in the left hemisphere. With posterior scalp recordings, during hypnotic dream and age regression, high hypnotizables displayed, as compared with the rest-hypnosis condition, a decrease in alpha 1 and alpha 2 amplitudes. This effect was absent for low hypnotizables. Beta 1, beta 2 and beta 3 amplitudes increased in the left hemisphere during age regression for high hypnotizable; low hypnotizables, in contrast, displayed hemispheric balance across imaginative tasks. High hypnotizables during the hypnotic dream also displayed in the right hemisphere a greater 40-Hz EEG amplitude as compared with the left hemisphere. This difference was even more evident for posterior recording sites. This hemispheric trend was not evidenced for low hypnotizable subjects. Theta power was never a predictor of hypnotic susceptibility, 40-Hz EEG amplitude displayed a very high main effect ( $p < 0.004$ ) for hypnotizability in hypnotic conditions by displaying a greater 40-Hz EEG amplitude in high hypnotizables with respect to lows.

#### NOTES

In the Discussion section, the authors indicate that they have no idea why they didn't replicate results of other theta studies, including their own, except maybe due to complex interaction among personality, subject selection, situation-specific factors, and hypnotizability.

They observe that the alpha results conform with previous findings (p. 163). Beta bands were sensitive. Highs showed left-hemisphere prevalence in all beta bands during age regression; they also showed hemispheric balance in the hypnotic dream condition. Beta 3 amplitude was also greater among highs than lows. "among high hypnotizables, beta 3 amplitude in the early hypnotic condition was greater in the left hemisphere as compared to the right and as the hypnotic induction proceeded hemisphere balancing, with reduced beta 3 amplitude, was displayed. This result appears in agreement with the predictions of the neurophysiological model proposed by Gruzelier et al. (1984) and Gruzelier (1988) as well as with other studies in which beta rhythm was found to discriminate performances between high and low hypnotizables (e.g., Meszaros et al., 1986, 1989; Sabourin et al., 1990)" (p. 163-164). 40 Hz amplitude was higher in highs and increased in right hemisphere during the hypnotic dream, especially in posterior areas. "This pattern of hemispheric

activation may be interpreted as an expression of the greater right-hemisphere activation and of the release of posterior cortical functions during the hypnotic dream and is compatible with the predictions of the Gruzelier model of hypnosis, however, the results obtained in this study for 40-Hz EEG amplitude failed to reveal an inhibition of the left-hemisphere activity with the progress of the hypnotic induction" (p. 164).

(They note that De Pascalis & Penna, 1990, agreed with the Gruzelier 1988 model: highs in early induction had increase of 40-Hz in both hemispheres, but as induction proceeded they had inhibition of left and increase in right hemisphere activity. In this current experiment, only beta 3 showed the hemispheric trend of Gruzelier's model. They cite other details of current study, p. 164, not consonant with Gruzelier.)

"The 40-Hz EEG rhythm, which according to Sheer (1976) is the physiological representation of focused arousal, appeared to discriminate between differential patterns of high and low hypnotizables. Both during hypnotic induction and during hypnotic dream and age regression highly hypnotizables exhibit greater 40-Hz EEG amplitude with respect to the lows. These findings support the validity of the assumption that hypnosis is characterized by a state of focused attention (Hilgard, 1965) and that 40-Hz EEG activity reflects differential attentional patterns among subjects high and low in hypnotizability. On the basis of these findings it would appear that 40-Hz EEG and beta 3 spectral amplitudes may prove to be useful measures of individual hypnotizability" (p. 164).

1988

ravindakshan, K. K.; Jenner, F. A.; Souster, L. P. (1988). A study of the effects of hypnotic regression on the auditory evoked response. International Journal of Clinical and Experimental Hypnosis, 36, 89-95.

Hypnotic regression in 6 hypnotizable Ss experienced in regression was studied by means of the auditory evoked response (AER). AER latency and amplitude is affected by arousal, attention, stimulus strength, and age. Ss aged between 27 and 61 years were regressed to the age of 7-9 years, and AERs were compared among three states of consciousness: normal awareness, hypnotic relaxation, and hypnotic regression. There was no change in AER morphology in the direction of that seen in children. Thus, age regression is not seen as a reversion to an earlier stage of neurological development but perhaps as role playing which is spontaneous and uninhibited, with the benefit of innocent belief in its accuracy.

NOTES: Raikov (1982) regressed 2 experienced Ss, comparing his results with those of actors acting as children and low hypnotizable subjects; he claimed to be able to reproduce neonatal reflexes in the highly hypnotizable Ss but not in the actors and low hypnotizable subjects.

AER's were used "because latency of the major waves and amplitude of the response is affected by level of arousal and attention..., strength of the stimulus, and, more importantly for this study, by age.... Surwillo (1981) noted that peak latencies of AERs were 16-21 msec longer in children aged 9-13 than in adults..." (p. 90)

**DISCUSSION** reviews the literature. "Changes in the intensity of light stimulation can cause significant shifts in the amplitude and latency of the visual evoked response, but neither the amplitude nor the latency have been changed by suggested alterations in stimulus intensity during hypnosis (Andreassi, Balinsky, Gallichio, de Simone, & Mellers, 1976; Beck & Barolin, 1965; Beck, Dustman, & Beier, 1966; Zakrzewski & Szelenberger, 1981). Similarly, significant changes were seldom found in the AER with suggested variations of sound intensity during hypnosis (Amadeo & Yanovski, 1975) and in somatosensory responses to electrical stimuli applied to the fingers with suggested anesthesia during hypnosis (Halliday & Mason, 1964). Deehan and Robertson (1980) were able to abolish the AER completely during hypnosis, but their stimuli were very different from that used in the present study.

"In all such studies, hypnosis and suggestions were aimed at changing the intensity of the stimulus to S's awareness, while the actual intensity of the stimulus was unaltered. In the present study, the authors attempted to find whether the morphology of the AER in children could be reproduced by age regression, without altering the nature or intensity of the stimulus in its delivery.... Like previous investigators, the present authors noticed that the tracings were cleaner and easier to produce during hypnosis (see Figure 1), although the changes in neurological development observed by Raikov (1982) were not evident" (pp. 93-94).

**1988-1999**

**Brink, Nicholas E. (1988-89). Using imagery as a planning and treatment guide in therapy. Imagination, Cognition and Personality, 8, 187-200.**

Procedures and case studies of how imagery can provide a means to redefine the problem, an agenda for therapy, information for determining the appropriate interventions, a criteria for evaluating progress, and the appropriate time for termination are presented. Images are evoked using one of several imagery situations. These images may converge on the common dynamic pattern clarifying the problem, represent different aspects of the problem, or represent different problems, depending upon the hypnotic suggestion used in evoking the images. The emerging pattern(s) provide the agenda for therapy. Emotional energy in imagery work is used to determine the appropriate timing and content for the therapeutic interventions. Emotional release provides a means of evaluating progress. When each of the items on the agenda are resolved with an emotional release the time for termination is near at hand. Therapy begins by evoking a minimum of three images using one of several situations, including time regression, seeing behind doors on a hallway, or going down in an elevator. These images may represent different aspects of the problem, different problems, or, by using the affect bridge, may converge on a common dynamic pattern clarifying the nature of a single problem.

**1961**

**Barber, Theodore Xenophon (1961). Experimental evidence for a theory of hypnotic behaviour: II. Experimental controls in hypnotic age-regression. International Journal of Clinical and Experimental Hypnosis, 9, 181-193.**

5 studies are often cited in support of the contention that involuntary infantile or childhood behavior patterns are revived under hypnotic age-regression. These studies are presented and re-evaluated in terms of other experimental evidence. The author concludes that the "good" hypnotic subject may vividly imagine that he is a child and may perform childlike behavior; "however, it has not been demonstrated that during "hypnotic age-regression" earlier patterns of behavior are revived that could not be performed voluntarily by an appropriately motivated but un hypnotized adult. From *Psyc Abstracts* 36:04:4II81B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1959

## NOTES

### "Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'
2. Skin conductance generally increased throughout the remainder of the experiment, i.e., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.
3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'
4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.
5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who showed a GSR stated, during or after the experiment, that they were by no means convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.
6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'-hypnotic behavior.)

"Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1. Ss do not necessarily become more 'passive' or 'relaxed' during the 'hypnotic induction procedure.'
2. Ss often become more and more 'excited' and 'aroused' when they are given a series of 'active' suggestions such as 'sensory hallucinations,' 'age-regression,' etc.
3. Ss often show momentary 'excitement' when they are 'hallucinating.'
4. A pinprick can 'arouse' a S to the same extent during 'hypnotic analgesia' as it can during 'normal waking.' In addition, 'hypnotic analgesic' Ss are often just as much 'aroused' by the threat of a pinprick as they are by an actual pinprick.
5. Many Ss become momentarily 'excited' when they are asked to look directly at an object (or person) which they have been told they will not be able to see. However, some Ss do not show this momentary 'excitement.'
6. Although Ss may state that they do not 'remember' the 'post'-hypnotic suggestion, they often become momentarily 'excited' when the E makes preliminary motions to give the signal for the 'post'-hypnotic act" (pp. 90-92).

### AGE REGRESSION

Fellows BJ. Creamer M. An investigation of the role of 'hypnosis', hypnotic susceptibility and hypnotic induction in the production of age regression. *British Journal of Social & Clinical Psychology* 1978;17(2):165-71 In response to criticisms of the methodology of Barber's(1969)experiments, a 2x2 factorial design, varying hypnotic susceptibility and hypnotic treatment, was used to study the role of 'hypnosis' in the production of age regression by suggestion. Twenty subjects of high hypnotic susceptibility and 20 subjects of low hypnotic susceptibility were randomly allocated to one of two treatment conditions:hypnotic induction procedure or motivational instructions. Both treatments were followed by suggestions to regress to the age of seven years. Two measures of age regression were taken:the Draw-A-Man-Test and a subjective rating of the reality of the experience. The results showed significant effects of both variables, with high susceptibility and induction treatment producing better regression on both measures than low susceptibility and motivation treatment. Hypnotic susceptibility was the stronger of the two variables. The ranking of the four conditions corresponded with predictions of hypnotic depth from the state theory of hypnosis, but the findings were not inconsistent with the non-state theory. The drawings of all regressed groups were more mature than the norms for the age of seven and the drawings of a group of seven year old children.

O'Brien RM. Kramer CE. Chiglinsky MA. Stevens GE. Nunan LJ. Fritzo JA. Moral development examined through hypnotic and task motivated age regression. *American Journal of Clinical Hypnosis* 1977;19(4):209-13 Thirty 17-28 yr old volunteers who had scored above 8 on the Stanford Hypnotic Susceptibility Scale, Form C, were randomly assigned to 3 groups (hypnosis, task motivation, and control). The 2 treatment groups were age regressed to the 1st grade. They were then examined through 5 moral dilemma stories to ascertain their level of functioning on L. Kohlberg's (1968) stage theory of moral development. The control group experienced the same examination without age regression. Results show that both treatment groups were at a significantly lower moral stage than the control group but that there was no significant difference between the 2 groups of age-regressed Subjects. In addition, it was found that a group of 10 actual 1st graders

**gave answers that were at a much lower level than those of the age-regressed Subjects. These results demonstrate cognitive age regression on Kohlberg's stages of moral development. They also suggest that task motivation situations are as efficient as hypnosis in producing this phenomenon.**

## **AGE / DEVELOPMENT**

**1994**

**Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.**

**Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.**

### **NOTES**

**1:**

**NOTES: "A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).**

**1970**

**Fromm, Erika (1970). Age regression with unexpected reappearance of a repressed childhood language. International Journal of Clinical and Experimental Hypnosis, 18, 79-88.**

**Describes the case of a 26-yr-old, 3rd-generation Japanese-American who thought he knew no Japanese. When hypnotically age-regressed to levels below age 4, he spontaneously and unexpectedly spoke Japanese, while only English was spoken at the adult and age-regression levels above 4 yr. The psychodynamics of the S's repression of the childhood language and questions pertaining to the nature and theory of age regression are discussed. (Spanish & German summaries) (16 ref.) (PscyINFO Database Record (c) 2003 APA, all rights reserved)**

## **ALCHOLOSM**

**1993**

**Eisen, Mitchell (1993). Assessing the hypnotizability of college students from addictive families. Contemporary Hypnosis, 10, 11-17.**

**The present study examined the relation between hypnotizability and the report of growing up in an addictive family where one or both parents were addicted to drugs and/or alcohol. A sample of 113 college students (47 male, 66 female) were studied for measure of childhood abuse, addiction history, dissociation and hypnotizability. As predicted, subjects from an addictive family were more hypnotizable than subject from a nonaddictive family. However, no relation between family addiction and dissociation was secured. Whereas abuse was found to be related to dissociation, it was not related to hypnotizability. The findings are discussed in terms of the effects of child abuse and neglect on dissociation and hypnotizability as it relates to the addictive family.**

### **NOTES**

**1:**

**Author reviews the literature in area of abuse and hypnotizability as well as dissociation. Subjects were unaware of purposes of the experiment when they volunteered. Of 113 Ss, 18% were reared in an addictive family; 13 Ss reported being abused, of whom 6 reported sexual abuse and seven physical abuse. Five of the 21 Ss who reported being reared in addictive families also reported being abused (3 physical, two sexual). Only one S reported both physical and sexual abuse.**

**Used HGSHS:A, Children of Alcoholics Screening Test, and Dissociative Experiences Scale of Carlson and Putnam (1986). Those with addiction in the family had Harvard scale mean score of 8.05, compared to those who didn't have it with mean of 6.95. No significant effect was found for ABUSE or the interaction of ABUSE and family addiction. The abuse question was, "Before the age of 12 parent punishment of you resulted in your physical injury (bruises, scarring, broken bones, etc.). Second question was, "Before the age of 12, did you participate in sexual behaviors (either with or without coercion) with a much older person?"**

**The Discussion thoroughly explores the possible reasons why their results differ from those of others.**

## **ALLERGY**

**1965**

**Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.**

**Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration,**

emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

1964

Black, Stephen (1964). Mind and body. London: Kimber

NOTES

1:

NOTES: Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the

suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

## AMNESIA

Schnyer DM, Allen JJ. Attention-related electroencephalographic and event-related potential predictors of responsiveness to suggested posthypnotic amnesia. *International Journal of Clinical & Experimental Hypnosis* 1995;43(3):295-315 Higher frequency electroencephalographic (EEG) activity around 40 Hz has been shown to play a role in cognitive functions such as attention. Furthermore, event-related brain potential (ERP) components such as N1 and P1 are sensitive to selective attention. In the present study, 40-Hz EEG measures and early ERP components were employed to relate selective attention to hypnotic response. Participants were 20 low hypnotizable individuals, half assigned as simulators, and 21 high hypnotizable individuals. Each of these groups was subsequently divided into two groups based on recognition amnesia scores. The four groups differed in 40-Hz (36-44 Hz) EEG spectral amplitude recorded during preinduction resting conditions but not in EEG amplitude postinduction. The groups also differed in N1 amplitudes recorded during hypnosis. Regression analysis revealed that these effects only distinguish the high hypnotizable participants who experienced recognition amnesia from all other groups. The findings support the role of selective attention in hypnotic responsiveness, and the utility of subdividing high hypnotizable individuals is discussed.

Simon MJ, Salzberg HC The effect of manipulated expectancies on posthypnotic amnesia *Int J Clin Exp Hypn.* 1985;33(1):40-51 The effects of manipulated S expectancy and direct suggestions for amnesia on posthypnotic amnesia were assessed. 120 undergraduate students were randomly assigned to 6 groups: negative expectancy (for amnesia)/suggestions (for amnesia); no expectancy/suggestions; negative expectancy/no suggestions; no expectancy/no suggestions; and 2 control groups. The results indicated that the expectancy manipulation had no effect on the occurrence of posthypnotic amnesia measured by the Stanford Hypnotic Susceptibility Scale, Form A (Weitzenhoffer & Hilgard, 1959), whereas suggestions for amnesia were found to have a significant effect. Hypnotized suggestion and no

suggestion Ss remembered significantly less than Ss in the nonhypnotized control groups. The implications of the findings were discussed.

1995

Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

1:

Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.

The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.

Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.

The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.

In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.

Freud presented his theory to his patients and then sought confirmation.

Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.

Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre

Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.

Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years.

1994

Farvolden, Peter; Bowers, Kenneth. S.; Woody, Erik Z. (1994, October). Hypnotic amnesia: Avoiding the intentional loop. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco

NOTES

1:

Social-cognitive position is that suggestions for amnesia lead to motivated attempts to forget, and the sense of nonvolition is due to attributional error. Neo-dissociation position is that post-hypnotic amnesia is activated by suggestions, and material is not available to consciousness. Ss may mistakenly attribute their amnesia to their own efforts, or to their imaginings. (See their analgesia studies.)

Used a recall organization paradigm. Ss learn 16 item categorized word list, then are given suggestion to forget one category. After suggestion is canceled, Ss are told to report again. In their heart rate study, highs were amnesic and recalled words not targeted for amnesia. Highs weren't trying to forget, even though they were experiencing things happening cognitively during the waiting period.

Study II. One group of highs engaged in a distraction task, which would prevent their participating in task relevant practice. Ss in the distraction condition recalled fewer words, just as in the standard hypnosis condition. However, their subjective report indicated they had even a stronger feeling that something had happened beyond their volition or control than did Ss in the standard hypnotic condition.

It appears that task relevant thoughts and imagery reported by Highs are not necessary. They are co-suggestion effects. See Hargedon, Bowers, & Woody in similar work, on analgesia. However, during the recall period Highs did not work as hard as the Lows in trying to remember according to both their self-reports and the heart rate measure.

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

NOTES

1:

"A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the

mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20)

Schefflin, Alan W. (1994). Forensic hypnosis: Unanswered questions. Australian Journal of Clinical and Experimental Hypnosis, 22, 25-37.

Many courts have mistakenly identified hypnosis as more suggestive than eyewitness testimony or leading questions, and therefore these courts have applied unnecessarily restrictive rulings on hypnosis. The dangers of suggestion in eyewitness and interrogation cases pose reliability problems that are equally as great. In all situations, pre-trial evidentiary hearings on admissibility of 'suggestive' testimony is essential. Expert testimony should be available to assist the judge. The forensic rules to date have failed to clarify some hard cases. In resolving these cases, courts are encouraged to adopt a case-by-case analysis rather than a total prohibition on hypnotically refreshed recollection. Courts have assumed conclusions about hypnosis that the laboratory experiments suggest are incorrect - juries are not overly persuaded by hypnosis testimony, there is no inevitable concreting effect and witnesses do not become impervious to cross-examination. Thus, the restrictive per se disqualification rules for hypnotically refreshed recollection are too severe

Woody, Erik Z. (1994, October). Cognitive-processing models of hypnotic dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

1:

Spanos contended that social psychology is an appropriate ground for hypnosis, and his work highlights the value of not taking things at face value (e.g. feelings of nonvolition).

I did this research with Ken Bowers. It addresses the question, does non-volition occupy a small role in hypnosis, or are hypnotic responses performed intentionally despite the hypnotized person's feeling of non-volition.

We did not rely on the research Subject's verbal report. When one exerts intentional effort to suppress a thought, the thought gets stronger. For example, when people try to comply with instruction not to think about white bears, they think about them repeatedly (Waitner's research).

Hypnosis suggestions are for amnesia (inability to remember), not intentional forgetting.

STUDY ONE. We used Waitner type instructions vs hypnosis in high and low hypnotizability Ss, to examine the role of intention in response. We used thinking about one's favorite automobile instead of a white bear as the task stimulus. Subjects were not to think about it for 2 minutes, but to press a button whenever a

thought about the automobile surfaced. There was another waking trial with suggestions; then hypnosis and re-testing.

Ss were undergraduates screened on Harvard Scale for hypnotizability and the Waterloo Stanford Group form. High hypnotizables scored 8 or more on both scales, lows scored 4 or less on both.

The variables recorded were total number of button presses, and average length of time per press. Analysis was by a 3 way mixed model ANOVA: high low, induction condition, and suggestion condition (blank mind vs. amnesia)

#### RESULTS.

Mean Number of Button Pushes Over Trials Group Waking Hypnosis

blank amnesia blank amnesia

mind mind High 6.9 2.9 1.8 .6 Low 5.2 4.7 4.3 3.7

1993

Woody, Erik Z. (1993, October). Factors, facets, and fiddle-faddle. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

1:

The classic suggestion effect implies involuntary behavior. A theory by Norman & Tim Shallice (published in a book on cognitive neuropsychology by Shallice) explains the classic suggestion effect in terms of underlying control processes.

There are 2 complementary systems: 1. contention scheduling (routine acts that don't require conscious control, activating schemas through environmental events and other schemas) for well learned habitual tasks. 2. supervisory attentional system - nonroutine actions in centralized processes, accessing unique information, operating only indirectly by modulating lower level control system, biasing their selection of schemas by system #1.

These two systems permit the sense of behavior being automatic or willed. The theory can be used to explain hypnotic nonvolition. For highs, hypnosis may partly disable System #2, dissociating lower levels of control and resulting in genuine changes in behavior because System #1 would be more enabled, triggered directly by co-active schemas and environmental stimuli. This increased dependence on a lower level of control would not rule out a wide range of behavior. It's mainly novel or very complex behaviors that would diminish, plus exercise of will.

The model also illuminates our understanding of behavioral rigidity and the tendency for thought/action to be triggered by [suggestions?]. Spontaneous voluntary behavior would be diminished. (See for example Orne's studies of the effect of apparent power outage during an experiment, in which high hypnotizable Ss did not move or leave the room but sat passively, whereas low hypnotizable simulating Ss simply got up and left.)

Also a weaker "supervisor" would lead to disinhibition of inappropriate or peculiar associations or behavior. In labs one sees few such triggers, although Hilgard observed drug flashbacks. The phenomena of hypnosis sequelae appear like a disinhibition of experiences.

Hypnotic analgesia follows this model too, an automatic and controlled processing of perceptual input.

Amnesia that follows hypnosis can be explained by this theory. Shallice has a model of how memory is affected: memory is a higher control system, enabling the handling of non-routine situations. Confronted by a nonroutine memory problem, the supervisory system formulates a model of what [the information] should look like, pulls out memories, and compares the model. If hypnosis interferes with the supervisor function it should interfere with memory (the description and verification phases) leading to [hypnotic amnesia?]. [With hypnosis one would predict]: 1. Poor access to memories requiring description (not overlearned material). Recall should demonstrate good cued memory but poor free recall. [It has been observed that] hypnotic amnesia selectively impairs free recall rather than recognition recall. 2. Hypnotized Ss should show poorer verification (the ability to discriminate irrelevant from correct associations). Many studies have shown this, with impoverished verification (e.g. the "discovery" of elaborate previous lives).

A dissociated control theory of hypnosis is thus possible, emphasizing a loss of control of supervisory system processes. It would implicate changes in frontal lobe processing. The essence of hypnosis, according to this approach, is the bypassing of executive control, and the frontal lobe is viewed as a center of executive control.

There are several ways that hypnosis suggests inhibition of frontal lobe functioning: 1. impoverishment of self initiated behavior 2. other-directedness 3. frontal amnesia (unable to distinguish true memories from irrelevant memories; prone to confabulation, especially when probed with false information) 4. poorer in temporal or sequential organization in memory.

How do we proceed to make this theoretical approach useful? We should do more neuropsychological studies, as Helen Crawford does. They emphasize the inhibition of frontal lobe functions.

Testable hypotheses arise: 1. Hypnotizable Ss should show the same kind of problem solving problems as frontal lobe patients. 2. Memory of hypnotized Ss should be like patients with frontal amnesia.

**1992**

**Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014**

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic

experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

Crawford, Helen J.; Kitner-Triolo, Melissa; Clarke, Steven W.; Olesko, Brian (1992). Transient positive and negative experiences accompanying stage hypnosis. Journal of Abnormal Psychology, 101 (4), 663-667.

Frequency of positive and negative experiences accompanying stage hypnosis was assessed in follow-up interviews with 22 participants of university-sponsored performances. Most subjects described their experience positively (relaxing, interesting, exciting, satisfying, illuminating, and pleasurable), but some described it negatively (confusing, silly, annoying, and frightening). Five subjects (22.7%) reported partial or complete amnesia; all were highly responsive to the stage hypnosis suggestions. One subject was completely unable to breach amnesia and felt annoyed and frightened. Five subjects (22.7%) believed the hypnotist had control over their behavior. Participants (n=15) tested subsequently on the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962) were mostly moderately to highly hypnotizable (M = 7.07), and the scores correlated significantly (r = .68) with the percentage of passed stage hypnosis suggestions.

#### NOTES

1:

Echterling and Emmerling (1987, American Journal of Clinical Hypnosis) conducted a follow-up of 18 people who participated in stage hypnosis at a university, within a month after the experience. Referring back to the hypnosis itself, 39% reported positive experiences, 39% reported both positive and negative experiences, and 22% (four people) reported 'strongly negative' experiences. The present study contacted subjects immediately after the stage hypnosis experience, either in person or by telephone. They completed both objective questions and open-ended questions referring to three time periods: after the hypnotic induction, during the hypnotic suggestions, and after the stage hypnosis had been terminated. Subjects were invited to come to the laboratory to be tested for hypnotizability, and 15 of the 22 did return for testing.

Of the 22 Ss, 4 had previously participated in stage hypnosis, one in laboratory hypnosis, and one had been hypnotized by her father. Of the 15 tested with the Stanford Hypnotic Susceptibility Scale, Form C: 7 were high hypnotizables (scoring 9-12), 7 were medium hypnotizables (scoring 4-8), and one was a low hypnotizable (scoring 0-3). Several people reported that they 'went along with' the hypnotist's suggestions, role playing rather than actually experiencing the suggestions.

"Most of the subjects found the experience positive: 86.4%, relaxing; 86.4%, interesting; 77.3%, exciting; 59.0%, satisfying; 54.6% illuminating; and 54.6%, pleasurable. Negative experiences were also reported: 36.4%, confusing; 36.4%, silly; 9.1%, annoying; and 9.1%, frightening. Only 1 subject reported the stage hypnosis experience as entirely negative.

**"The stage hypnotists told the participants about the suggestions at the end of the stage hypnosis performance and supposedly lifted amnesia. Despite this, some participants continued to experience partial or full amnesia for the suggestions. ...**

**"One participant reported complete amnesia even after the interview and was distraught, permitting only a telephone interview and not accepting an offer to be hypnotized at a later time to help recall what had been forgotten. ...**

**"... The interviewer told her what had been observed and attempted to breach the amnesia. The subject continued to report complete amnesia.**

**"Two other participants continued not to remember many of the suggestions but showed no major concern. Waking suggestions to breach amnesia were given, but no further information was obtained.**

**"Five participants reported feeling that the hypnotist had complete control over their behavior and that they could not resist the hypnotist's suggestions" (p. 664).**

**In their Discussion, the authors note that in general, when negative experiences occur, they tend to be mild and transient. None of the subjects in this investigation reported some of the negative sequelae reported in earlier literature (headaches, nausea, drowsiness). The few subjects who had strong cognitive distortions following hypnosis were highly hypnotizable, which also was observed in an earlier study published by the first author and her colleagues (Crawford, Hilgard, & Macdonald, 1982, *International Journal of Clinical and Experimental Hypnosis*).**

**Spontaneous post hypnotic amnesia is one example of cognitive distortion. The authors remarked on the rather high incidence of spontaneous amnesia for some specific suggestions (22.7%) , which was discovered when friends of the subjects described to them what they had done on stage. In an experimental study by Hilgard and Cooper (1965), only 7% of student subjects had spontaneous amnesia (though 35% had amnesia following suggestions for posthypnotic amnesia). Furthermore, in the Hilgard and Cooper study, hypnotizability correlated with suggested amnesia but not with spontaneous amnesia. Cooper (1972) reviewed the literature on posthypnotic amnesia and observed that spontaneous occurrence is less frequent than suggested amnesia.**

**Explanations of spontaneous amnesia include ideas that high hypnotizables who experience it are significantly different from those who do not (Chertok, 1981; Weitzenhoffer, 1989); or that it is due to expectancy (Kirsch, 1985); or that it is found in people with a tendency for dissociation in and out of hypnosis, or people who may be prone to repression or dissociative and post-traumatic stress disorders. For reviews of these issues, see Kihlstrom, 1987; Kihlstrom & Hoyt, 1990; Frankel, 1990; Nemiah, 1985; Spiegel, 1990; Spiegel & Cardena, 1991).**

**The authors note that stage hypnotists, while they may otherwise be ethical, do not provide information to subjects to correct misperceptions about hypnosis. For example, in this study 22.7% of the subjects believed, after the stage hypnosis experience, that the hypnotist had control over their behavior and they couldn't resist the suggestions. "Appropriate guidelines for stage hypnosis (see also Crawford et al., 1982) include screening out participants who are in therapy or counseling, correcting misperceptions about hypnosis among the participants before the hypnosis begins, screening subjects prior to hypnosis, avoiding embarrassing or upsetting suggestions, providing dehypnosis instructions to those who do not remain**

in hypnosis (or are asked to leave the performance), terminating fully the hypnotic experience, removing all amnesia suggestions and reviewing the events at the end of hypnotic experience, and remaining available afterward for further questions" (p. 666).

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

#### NOTES

1:

"Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

**"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).**

**Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131**

**Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.**

**Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.**

**In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed**

**NOTES: The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so—a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.**

**Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'**

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental of social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----

	False suggestion	Group A	Group B	Group C
Group D				
result (n=15)	(n=15)	(n=15)	(n=15)	-----
Accepted	12	6	7	3
Rejected	3	9	8	12

---- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias

may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Perry, Nancy W. (1992, Summer). How children remember and why they forget. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 1-2; 13-16.

#### NOTES

: "'My memory is the thing I forget with.' (a child's definition, cited in Grossberg, 1985, p. 60)" (p. 1).

"Unlike the simpler forms of memory retrieval, free recall is strongly age-related... the recall skills of preschool children develop gradually" (p. 2). "...in some cases, younger children can provide more accurate information than adults (Lindberg, 1991). For example, if an event is particularly salient (as sometimes happens in cases of trauma), recall may be exceptionally good (Brainerd & Ornstein, 1991; Lindberg, 1991)" (p. 13).

"Children have limited ability to use memory strategies. For this reason, children often know more than they can freely recall" (p. 13).

"The use of rehearsal as a memory strategy is almost automatic for adults. ... Ten-year-olds also commonly use rehearsal to aid memory. Young children, however, have not mastered rehearsal (Harris & Liebert, 1991).

"Another memory strategy is imagery, which involves (1) mentally picturing a person, place, or object, or (2) visually associating two or more things that are to be remembered. Children develop imagery much later than other memory strategies. Indeed, some people never learn this memory strategy (Flavell, 1977)" (p. 13).

"... stress alone may not impair memory processes. Indeed, stress can lead to arousal, heightened attention, and improved encoding (Deffenbacher, 1983). However, stress that results from intimidation may lead to either impairment in encoding or problems in recalling or reporting memories" (p. 14).

"Because the effect of suggestion on material that has been well encoded tends not to be significantly different across age groups (Cohen & Harnick, 1980), it may be that younger children's inferior performance on suggestive tasks results from inferior encoding" (p. 15).

#### 1991

Bowers, Kenneth S. (1991). Dissociation in hypnosis and multiple personality disorder. International Journal of Clinical and Experimental Hypnosis, 39, 155-176.

The first part of this paper examines the concept of dissociation in the context of hypnosis. In particular, the neodissociative and social psychological models of

hypnosis are compared. It is argued that the social psychological model, in describing hypnotic enactments as purposeful, does not adequately distinguish between behavior that is enacted "on purpose" and behavior that serves or achieves a purpose. 2 recent dissertations (Hughes, 1988; Miller, 1986) from the University of Waterloo are summarized, each of which supports the neodissociative view that hypnotic behavior can be purposeful (in the sense that the suggested state of affairs is achieved) and nonvolitional (in the sense that the suggested state of affairs is not achieved by high level executive initiative and ongoing effort). The second part of the paper employs a neodissociative view of hypnosis to help understand the current epidemic of multiple personality disorder (MPD). In particular, it is argued that many symptoms of MPD are implicitly suggested effects--particularly prone to occur in persons who have a lifelong tendency to use dissociative type defenses. The present author believes that this account is easier to sustain conceptually and empirically than the current view, which states that a secondary (tertiary, etc.) personality accounts for the striking phenomenological discontinuities experienced by MPD patients.

#### NOTES

1:

As an example of the fact that behavior that serves a purpose is not always performed on purpose, the author cites not falling out of bed while sleeping, and waking up in response to signals from the bladder to go to the bathroom. Lower levels of control can be dissociated from executive initiative and/or monitoring. "Since the experience of volition is closely tied to executive initiative and effort, suggested behaviors that bypass such initiative and effort are typically experienced as nonvolitional" (p. 157). Dissociated control occurs under waking conditions also, as when one dials a very familiar phone number rather than the one that they intended to dial. In this case, the behavior that is enacted is not what one consciously intended.

Miller's dissertation, also published as Miller & Bowers, 1986, is described on p. 158 ff. Without hypnosis, cold pressor pain (cold water immersion) reduced accuracy of performance on a multiple choice vocabulary test 35%. Both hypnotic analgesia and cognitive pain management strategies were equally effective in reducing pain of cold pressor test (and both interventions were more effective for high than for low hypnotizable Ss). However, the cognitive strategy group showed an additional drop of 30% in vocabulary performance from pre- to posttreatment cold water immersion (despite successfully reducing their pain). In the hypnosis condition, lows showed only a slight additional decrease (8%) while highs showed a slight (10%) increase in their vocabulary performance from pre- to posttreatment immersion. Thus, the effect of hypnosis in pain control "does not depend on S's utilization of high-level cognitive strategies. Rather, hypnotic analgesia seems to involve the dissociated control of pain--that is, control which is relatively free of the need for high- level, executive initiative and effort. ... Because hypnotic analgesia minimizes the degree of executive initiative and ongoing effort required to reduce pain, however, it seems inappropriate to view such reductions as something achieved on purpose" (p. 161).

Hughes' dissertation is described on p. 162 and ff. Instead of performance decrement on a cognitive task like vocabulary testing, she used increased heart rate as an index of cognitive effort. If heart rate increases when Ss successfully use hypnotic imagery, that would confirm the social psychological view that "suggested effects are achieved by this kind of ongoing allocation of high-level cognitive force or work" (p. 162).

Highs and lows were hypnotized and administered three trials of neutral and three trials of fearful imagery in counterbalanced order. Each imagery trial lasted 1 minute, after which Ss rated vividness of imagery, effort required, and amount of fear experienced.

Average imagery vividness was higher in highs than lows, for both neutral and fear imagery. For lows the correlation between heart rate increases and ratings of cognitive effort were .54 (neutral imagery) and .49 (fear imagery). For highs, the correlations were -.05 (neutral) and -.52 (fear). Thus, "for low but not high hypnotizable Ss, we find the predicted positive relationship between a cardiac indicator of cognitive effort and the ratings of cognitive effort involved in producing neutral imagery" (p. 163).

"First, for low hypnotizables engaged in fear imagery, ratings of effort are correlated .66 with ratings of fear. In other words, the more low hypnotizable Ss work to produce a fearful image, the more frightening the image is. Second, for high hypnotizables engaged in fear imagery, the correlation between ratings of fear and effort is minus .68-- indicating that the less effort highs report in producing fear imagery, the more frightened they become. Finally, for high hypnotizables, the correlation between ratings of fear and heart rate increase is .59, indicating that the more fear high hypnotizable Ss experience when engaged in fear imagery, the more their heart rate increases (the comparable figure for low hypnotizables is .16)" (p. 164).

The authors discuss why the pattern of correlations is different for people high and low in measured hypnotizability, and summarize the implications of both Miller's and Hughes' research. Both investigations indicate that, at least for high hypnotizable people, less initiative and effort are required to effect a response to hypnotic suggestion than one would expect. They show how behavior can be both purposeful and nonvolitional (in the sense of not exhibiting conscious intention and strategic efforts). By noting that the sense of nonvolition that accompanies a response to suggestion is an actual alteration in executive control, they provide a model for dissociative psychopathology such as MPD. For although executive control is dissociated, these experiments do not suggest that there is a second executive system or 'personality' that is responsible for the behavior.

Patients diagnosed with MPD have very high measured hypnotizability (Bliss, 1984). In fact, they seem to engage in self hypnosis, withdrawing into a trance or a dissociated state (Bliss, 1984). The authors quote Wilson & Barber (1983) as indicating that highly hypnotized, fantasy-prone normal individuals may become so absorbed in a character being imagined that they lose awareness of their own identity.

The authors offer a neodissociative account of MPD: "People prone to MPD are very high in hypnotic ability and are, therefore, vulnerable to the suggestive impact

of ideas, imaginings, and fantasies; what is more, they are high in hypnotic ability because they have learned to use dissociative defenses as a way of dealing with inescapable threat-- such as physical and sexual abuse (Kluft, 1987). ... Fantasied alternatives to reality (including a fantasied alter ego ... ) can become increasingly complex and differentiated. Gradually, these fantasied alternatives begin to activate subsystems of control more or less directly--that is, with minimal involvement of executive level initiative and control. Such 'dissociated control' of behavior does not necessarily eliminate consciousness of it, though one's actions are apt to be experienced as increasingly ego-alien. If and when the activating fantasies and resulting behaviors become sufficiently threatening, however, they can also be repressed into an unconscious (i.e., amnesic) status, thus further separating high-level executive and monitoring functions from the dissociated, ego-alien aspects of oneself. The fully realized result of this process is an individual who is subject to profound discontinuities in his or her sense of self. ... The experience of behaving in an outwardly uncharacteristic manner requires only that subsystems of control are more or less directly activated by ideas and fantasies in a manner that effectively bypasses executive initiative and control" (pp. 168-169).

923, Bowers, 1992 NOTES: Tart allegedly taught ESP skills based on reinforcement, using a machine that projected display and gave feedback immediately, so the subjects could learn to anticipate the picture better. But the picture presented next was time-linked to the S's response (so S could learn it).

1987 Behavioral and Brain Sciences review, with 2 target articles, makes one doubt strength of findings. ESP research doesn't distinguish between description of an observation and it's proposed cause.

MPD shares with ESP a tendency to predispose toward a certain explanation. Feeling like one has a separate personality leads to finding evidence for one. But an MPD account is wrong-headed because the diagnosis misconstrues a notion of personality, which is a developmental concept (a pattern of thought, feeling, and behavior). Mischel's (1968) account of human functioning competed with trait theory, so "personality" concept became extraneous.

Defining personality in terms of one's experiences or beliefs about oneself has led to further problems, encouraged by the descriptive approach of DSM III (which depends on patient reports). Drew Weston distinguished between the self and self representation. One can't argue that a computer programmed to describe itself is the same as it's descriptions.

Personality can't be reduced to person's beliefs about themselves. A secondary personality cannot be reduced to bizarre experiences a person believes are due to a second personality. Clinicians do not accept as valid the beliefs of a paranoid schizophrenic; or of an anxious neurotic. With multiple personality disorder (MPD) the patient becomes the expert and the clinician the student.

William Smith's 1986 SCEH paper: case study of patient who was convinced her problems were due to unresolved problems from a previous life. He didn't challenge her system but still worked with her successfully, communicating respect without validating her belief.

Advocates of MPDs think the observation that it is associated with high hypnotizability indicates great dissociation; critics think the association indicates

great suggestibility. There is a historical parallel: Mesmer probably didn't suggest seizure-like episodes, but implicit suggestions for seizures were probably partially responsible. Mistaken attribution permitted Mesmer to see this as validation of his theory of animal magnetism.

Clinicians are not the only ones to "suggest" MPD syndrome. High profile cases are in the media. We should also remember Orne's 1959 research showing that students who received false information a week earlier in lecture on hypnosis showed the behavior when they were hypnotized.

Janet's disaggregation (dissociation) theory said hysterics and hypnotized people responded to ideas dissociated from the main stream of consciousness. So his contemporaries thought that spontaneous amnesia was a defining feature of hypnosis; yet it is not thought to be so in our era. The idea may have circulated in Janet's time, by popular culture.

MPDs are always highly suggestible so can respond to circulating accounts in the media, and every account that reaches the media can influence these people.

We could abandon the diagnosis of MPD in favor of Spiegel's "disorder of self integration." It is less provocative, does not imply any clinical benefit in the benefits of seeking out more personalities. This might reduce the incidence of this disorder, or likelihood that a suggestible person would develop the disorder iatrogenically.

**1991**

**Davidson, T. M.; Bowers, K. S. (1991). Selective hypnotic amnesia: Is it a successful attempt to forget or an unsuccessful attempt to remember. Journal of Abnormal Psychology, 100, 133-143**

Subjects in two experiments learned a 16-item, 4-category word list and were then administered hypnotic suggestions to be amnesic for all the words in one of the categories. Even when selective amnesia was completely successful, subjects in both experiments revealed a high level of recall for words not targeted for amnesia; moreover, these words were recalled in a highly organized, category-by-category fashion. Evidently, attention to relevant retrieval (i.e., organizational) cues does not oblige recall of words targeted for amnesia. Forgetting in the presence of such powerful mnemonic cues seems to characterize hypnotic amnesia and some notes.

**NOTES**

The authors argue that mnemonic lapses of this kind represent a failed attempt to remember rather than a successful attempt to forget. Spontaneous forms of forgetting as well.

**Spiegel, David; Cardena, Etzel (1991). Disintegrated experience: The dissociative disorders revisited. Journal of Abnormal Psychology, 100 (3), 366-378.**

Presents proposed changes to the dissociative disorders section of the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and reviews the concept of pathological and nonpathological dissociation, including empirical findings on the relations between trauma and dissociative phenomenology and between dissociation and hypnosis. The most important proposals include the

creation of 2 new diagnostic entities, brief reactive dissociative disorder and transient dissociative disturbance, and the readoption of the criterion of amnesia for a multiple personality disorder diagnosis. Further work on dissociative processes will provide an important link between clinical and experimental approaches to human cognition, emotion, and personality.

1990

Gwynn, Maxwell I.; Quigley, Celia; Perlini, Arthur; Glatt, Richard; Spanos, Nicholas P. (1990, August). Eyewitness testimony: Effects of hypnotic interrogation and witness preparation. [Paper] Presented at the annual meeting of the American Psychological Association, Boston.

NOTES

1:

There is notable absence of empirical research on the effects of witness preparation on subsequent testimony. The present study investigates the separate and combined effects of hypnotic recall procedures and witness preparation on subjects' confidence in, and maintenance during cross-examination, of mug-shot identifications.

Session 1: Subjects viewed a 65 second videotape of a mock crime involving a shooting. The offender in this video was a male approximately 40-50 years old, whose face was partially obscured by the brim of a baseball cap.

Subjects were then taken individually to another room, where a second experimenter presented them with a series of five photographic mug shots. Half of the series contained the mug shot; the other did not. Subjects indicate if any portrayed the offender and then to rate their confidence in their identification.

Subjects for Session 2 were randomly assigned to one of two conditions:

Hypnotic condition ... followed by "reliving" instructions modeled after Reiser's procedures used in training police detectives.

Nonhypnotic condition ... Each subject was then presented with the mug shot lineup and rated their confidence as in Session 1 with the same second experimenter.

Subjects who in Session 2 identified any mug shot as portraying the offender returned about one week after for a mock courtroom appearance. Subjects were randomly assigned to either a "prepared" condition, or a "nonprepared" condition, with the restriction of equal numbers of offender-present vs. offender-absent lineups and hypnotic vs. nonhypnotic subjects in each condition ... The subject-witness was questioned by the third same experimenter under direct examination and then cross-examined by a fourth experimenter in the role of defense attorney.

Subjects in the prepared condition were given pointers concerning their courtroom appearance. These pointers included counseling to answer all of the questions fully, to speak in complete sentences, and to present themselves confidently.

The videotapes of the subjects' testimonies were then shown to independent blind raters who rated the degree of confidence displayed by the subject-witness at two points, first after direct examination, and again after cross-examination.

To summarize the results: 1) As in a number of previous studies, eyewitness confidence was unrelated to mug shot identification accuracy. 2) The use of hypnotic techniques as practiced by many police investigators did not lead to an increase in

the frequency or accuracy with which subjects identified a mug shot as portraying a previously viewed offender. 3) Again consistent with previous research, the use of hypnosis did lead to an increase in eyewitness confidence, without a corresponding increase in accuracy, and this confidence increase was correlated with pretested levels of hypnotic susceptibility. 4) Contrary to the speculation of researchers such as Orne, Laurence & Perry, hypnotic procedures did not lead to the creation of unshakable witnesses who were impervious to cross-examination. And, 5) The usual practice of pre-trial preparation of witnesses did lead to a resistance of witnesses to be broken down under cross-examination.

In conclusion, the key factor found to affect eyewitness confidence and mug shot identification was not the use of hypnotic memory enhancement techniques, but rather the usual practice of pre-trial witness preparation.

Spiegel, David; Cardena, Etzel (1990, October). New uses of hypnosis in the treatment of posttraumatic stress disorder. Journal of Clinical Psychiatry (Supplement), 51, 39-43.

Vietnam veterans with PTSD and those abused as children have above average hypnotizability. Hypnosis provides controlled access to memories that may otherwise be kept out of consciousness. New uses of hypnosis with PTSD victims involve coupling access to the dissociated traumatic memories with positive restructuring of those memories. Hypnosis can be used to help patients face and bear a traumatic experience by embedding it in a new context, acknowledging helplessness during the event, and yet linking that experience with remoralizing memories, such as efforts at self-protection, shared affection with friends who were killed, or the ability to control the environment at other times. In this way, hypnosis can be used to provide controlled access to memories that are then placed into a broader perspective. Patients can be taught self-hypnosis techniques that allow them to work through and thereby reduce spontaneous, unbidden, intrusive recollections. Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100.

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to- easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions.

Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

Ganaway, George K. (1989). Historical versus narrative truth: Clarifying the role of exogenous trauma in the etiology of MPD and its variants. Dissociation, 2, 205-220.

The author notes a current trend toward viewing multiple personality disorder (MPD) and its variants as a form of chronic post-traumatic stress disorder based solely on exogenous childhood trauma, and cautions against prematurely reductionistic hypotheses. He focuses on Kluft's Third Etiological Factor, which includes the various developmental, biological, interpersonal, sociocultural, and psychodynamic shaping influences and substrates that determine the form taken by the dissociative defense. He hypothesizes a credibility continuum of childhood and contemporary memories arising primarily from exogenous trauma at one end, and endogenous trauma (stemming from intrapsychic adaptational needs) at the other. The author offers alternative multidetermined explanations for certain unverified trauma memories that currently are being accepted and validated as factual experiences by many therapists. He describes some potentially deleterious effects of validating unverified trauma memories during psychotherapy, and recommends that the MPD patients' need for unconditional credibility be responded to in the same manner as other transference-generated productions.

1989-1990

Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.

Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self-consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

1989

Pillemer, D. B.; White, S. H. (1989). Childhood events recalled by children and adults. In Reese, H. W. (Ed.), Advances in child development and behavior. New York: Academic Press.

NOTES

1:

Authors discuss a dual memory theory. The first memory system is prominent in

early childhood, and is a system in which are organized and evoked by persons, locations, and emotions. Such memories are not easily "transportable" outside the original experience. These memories are accessed through images of face and place, actions, or feelings. The second memory system begins to develop in early childhood, is verbally mediated, and stores experiences in narrative form. Such memories are accessible through verbal interaction, and can be reviewed and shared with others verbally. For a small child, to access all of a memory one would need to tap into both memory systems. The authors suggest that the first memory system continues to be available throughout one's life, especially when strong emotion was associated so that verbal cues are not attached. [This has implications for retrieval of "lost" memories using imagery-based approaches like hypnosis.]

Schuyler, Bradley A.; Coe, William C. (1989). More on volitional experiences and breaching posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 37, 320-331.

: Highly responsive hypnotic subjects, who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia, were compared with each other on four physiological measures (heart rate, electrodermal response, respiration rate, muscle tension) during posthypnotic recall. Two contextual conditions were employed: One was meant to create pressure to breach posthypnotic amnesia (lie detector instructions); the other, a relax condition, served as a control. The recall data confirmed earlier findings of Howard and Coe and showed that voluntary subjects under the lie detector condition recalled more than the other three samples that did not differ from each other. However, using another measure of voluntariness showed that both voluntary and involuntary subjects breached under lie detector conditions. Electrodermal response supported the subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis.

#### NOTES

1:

The authors suggest that subjects observe themselves not remembering (i.e. not reporting memories) and conclude that they therefore could not remember. Such subjects, they say, are deceiving themselves in so far as they could remember if they were to direct their attention to salient cues.

Spanos, Nicholas P.; Lush, Nancy I.; Gwynn, Maxwell I. (1989). Cognitive skill-training enhancement of hypnotizability: Generalization effects and trance logic responding. Journal of Personality and Social Psychology, 56 (5), 795-804.

Compared low-hypnotizable subjects who simulated hypnosis, underwent cognitive skill training, or served as no-treatment controls to subjects who scored as high hypnotizables without training (natural highs) on response to analgesia, age-regression, visual hallucination, selective amnesia, and posthypnotic suggestions.

Subjects who attained high hypnotizability following skill training (created highs) did not differ from natural highs on any response index. Natural and created highs scored lower than simulators but higher than controls on the behavioral and subjective aspects of test suggestions. Simulators, however, were significantly less likely than natural highs or skill-trained subjects to exhibit duality responding or incongruous writing during age regression or transparent hallucinating. Results suggest that the hypnotic responses of natural and created highs are mediated by the same cognitive variables and that enhancements in hypnotizability produced by skill training cannot b

Van Denberg, Eric J.; Kurtz, Richard M. (1989). Changes in body attitude as a function of posthypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 37, 15-30. e adequately explained in terms of compliance. Hypothesized that highly hypnotizable subjects who remained amnesic for posthypnotic suggestions to improve body attitude would show greater changes than subjects who were not amnesic. Subjects given simulating instructions were used as a comparison group to assess experimental demands. 48 females were screened with the Harvard and assigned to one of 4 conditions: (a) high hypnotizable with amnesia suggestions, (b) high hypnotizable without suggested amnesia, (c) low hypnotizable simulator with amnesia, and (d) low hypnotizable simulator without suggested amnesia. A fifth group was formed of those high hypnotizable subjects who remembered the suggestion despite instructions to the contrary. The Body Attitude Scale (Kurtz, 1966) was administered prior to and 3 days after the experimental suggestions. Results generally demonstrated that high hypnotizable amnesic subjects manifested the greatest attitudinal and phenomenological changes as a result of the posthypnotic suggestion, although conclusions were tempered by performance of simulating subjects. The implications for hypnosis research and clinical practice are discussed.

#### NOTES

1:

"The hypothesis that hypnotized subjects would report greater positive changes in affect, self-esteem, and social functioning than simulators was tested using a brief structured questionnaire. An analysis of Subjects responses to the questionnaire while with the 'blind' research assistant (simulators in role) revealed number significant differences between groups (N = 48) on six of the seven questions. ... An analysis of Subjects' responses to the questionnaire while being debriefed by the primary investigator (simulators out of role) revealed significant differences among groups (N = 48) on three of the seven questions. ... High hypnotizable subjects with maintained amnesia demonstrated a strong tendency to be the most responsive of all groups of subjects on the first and second assessment. In contrast, the high hypnotizable Ss for whom amnesia 'broke down' reported the fewest phenomenological changes of any of the five groups during the first assessment, and comparatively few during the second assessment. Also of note is that once out of their role, simulators in both conditions dramatically reduced their reporting of positive change" (pp. 23-24).

"Moreover, a closer examination of the data demonstrated that phenomenological and behavioral differences in the groups did appear at several points during the experiment. For example, the 10 high hypnotizable subjects told to explicitly remember the suggestion did so, while 3 of the 10 simulators in this condition claimed to have forgotten it. On debriefing, these Subjects reported they did this because they believed 'really hypnotized subjects wouldn't be able to remember anything, even if they were told they could.' Further, no simulator in the amnesia condition reported they could recall the suggestion, in contrast to the high hypnotizable subjects, 44% of whom said they did remember it. With regard to phenomenological differences, simulators stated during debriefing with the primary investigator that they intentionally faked changes on BAS, and that they experienced no true effects from the suggestion for positive body attitude change. In contrast, high hypnotizability amnesic subjects reported global, pervasive changes in their mood and self-esteem that went beyond specific alterations in attitudes toward their appearance. By comparison, high hypnotizable subjects told to remember the suggestion reported greatly increased self-absorption and acute awareness of the suggestion, 'sort of like a broken record in my head'" (pp. 25-26).

"As shown by the present study, amnesia maintenance can be quite problematic. Of 18 high hypnotizable subjects for whom amnesia was suggested, only 10 remained fully amnesic for the suggestion after 3 days. In addition, those 8 subjects for whom amnesia 'broke down' showed minimal shifts on BAS, or in reports of phenomenological changes. Such frequent amnesia failure has been reported by other researchers, although the effectiveness of the suggestion is not always so compromised" (p. 26).

Van der Kolk, Bessel A.; Van der Hart, O. (1989). Pierre Janet and the breakdown of adaptation in psychological trauma. *American Journal of Psychiatry*, 146, 1530-1540.

Reviews Janet's investigations into mental processes that transform traumatic experiences into psychopathology. He was the first to systematically study dissociation as the crucial psychological process with which the organism reacts to overwhelming experiences and show that traumatic memories may be expressed as sensory perceptions, affect states, and behavioral reenactments. Janet provided a broad framework that unifies into a larger perspective the various approaches to psychological functioning which have developed along independent lines in this century. Today his integrated approach may help clarify the interrelationships among such diverse topics as memory processes, state-dependent learning, dissociative reactions, and posttraumatic psychopathology.

1988

Nadon, Robert; D'Eon, Joyce; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1988). Posthypnotic amnesia, the hidden observer effect, and duality during hypnotic age regression. *International Journal of Clinical and Experimental Hypnosis*, 36, 19-37

The present study ought to explore potential response differences to a suggestion for posthypnotic amnesia between those high hypnotizable Ss who do and those who do not manifest the hidden observer effect. In line with the hypothesis that Ss who

responded to the hidden observer suggestion are more highly engaged in cognitive monitoring of their experience and behavior (Nogrody, McConkey, Laurence, & Perry, 1983), it was predicted that these Ss would recall more Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962) hypnotic items, and in greater detail, following the reversal of amnesia than would their no-hidden observer counterparts. In this regard, both the quantity and the quality of posthypnotic recall was examined in 15 high, 11 high-medium, and 11 low hypnotizable Ss. Data on posthypnotic recall from low and high-medium hypnotizable Ss revealed the comparability of the present sample to samples of other studies that have investigated posthypnotic recall using standardized hypnotizability scales. Contrary to prediction, hidden observer Ss recalled significantly fewer hypnotic items and in less detail. Similar results were found when high hypnotizable Ss were dichotomized with respect to the presence or absence of duality in age regression (Perry & Walsh, 1978). Results are discussed in terms of implications for future research

## NOTES

1:

Spanos and colleagues attribute amnesia to directing attention away from the target material; others "emphasize individual differences and subjective experiences over and above Ss' interpretations of, and responses to contextual demands" (p. 20).

Evans & Kihlstrom (1973) pose a 'disrupted retrieval' hypothesis, stating that it is a result of retrieval functions rather than acquisition or storage processes (because so easily reversed), and there is considerable support for this. A number of studies show that partially amnesic Ss have disorganized temporal sequencing in their recall of hypnotic events (and the disorganization of recall appears to be related to the suggestion for posthypnotic amnesia and not to hypnosis per se, as it isn't observed in Ss who haven't received a suggestion for post hypnotic amnesia).

Two studies of videotape playback support the disrupted retrieval hypothesis and the hypothesis that what high hypnotizable Ss' recall is qualitatively different from what other Ss recall (McConkey & Sheehan, 1981; McConkey, Sheehan, & Cross, 1980). 1/3 of the amnesic Ss in both studies "acknowledged their hypnotic behavior when watching the playback, while spontaneously reporting that they were unable to comment on the corresponding subjective experiences" (p. 21). None of the simulators made this behavior/experience distinction, and McConkey & Sheehan (1981) suggested that different memory retrieval mechanisms may exist for behavior vs. experience.

Hilgard (1973, 1977, 1979) has suggested that mental functioning may be regulated by a hierarchy of cognitive control systems rather than by a single mental apparatus such as consciousness--the neo-dissociation theory. He uses the metaphor of a hidden observer to describe how Ss with hypnotic analgesia may be 'aware' of pain outside of their immediate conscious awareness. He suggests that the hypnotic analgesia process is like that of posthypnotic amnesia, since the information is 'temporarily unavailable' for retrieval in both cases.

In the present study the authors developed a scoring system to assess quality of recall in responses to post hypnotic amnesia suggestion. They scored details (bits) recalled, as well as the conventional number of test items recalled.

Ss were screened by Harvard and modified SHSS:C, to yield 15 high hypnotizable Ss (9-12), 11 high-medium Ss (8-10), 11 low Ss (1-3). Amnesia data were gathered from the SHSS:C sessions. The hidden observer effect was assessed in a subsequent session. Raters classified the 15 highs as containing 6 with hidden observer experience and 9 with duality of experience in age regression.

The hidden observer instructions were different from Hilgard; they stated that "just as there are bodily processes such as heart rate, blood pressure, and temperature control that are not fully represented in consciousness, there also may be a hidden part of the person of which the hypnotized person is unaware ... [and] that this part may be registering the pain (administered by a Take-Me-Along electrical stimulator) that is not accessible to the hypnotized part during analgesia" (p. 25). Contrary to expectations, "the hidden observer Ss gave evidence of experiencing greater residual amnesia (Kihlstrom & Evans, 1977) than their no-hidden observer counterparts" (p. 30).

The authors note in their discussion that this research provides further evidence of the heterogeneity of response pattern of highly hypnotizable people, in respect to passing very difficult test items, and they provide a review of that literature. They remark on the need to investigate cognitive style differences of Highs outside the hypnosis context, just as cognitive style differences have been studied comparing Highs to Lows. "Differences among Ss of varying hypnotic abilities have been found on measures of 'absorption' (Tellegen & Atkinson, 1974); 'imaginative involvement' (J. R. Hilgard, 1970, 1979); 'fantasy proneness' (Wilson & Barber, 1982); imagery abilities (Perry, 1973; Sutcliffe, Perry, & Sheehan, 1970); preference for an imagic cognitive style (Isaacs, 1982; Nadon, 1984, 1985); and sleep and dreaming patterns (Belicki & Bowers, 1982; Evans, 1977; Gibson, 1985; Nadon, 1985). An extension of this type of work to the study of high hypnotizable Ss should lead to heuristic findings concerning the nature of hypnosis and the different ways that high hypnotizable Ss experience the suggested subjective alterations in perception, memory, and mood (Orne, 1980) that are associated with high hypnotic responsiveness" (p. 31). For example, perhaps the no-hidden observer Ss prefer an 'absorption' style and the hidden observer Ss prefer a 'dissociative' style as different pathways into hypnosis.

The results of this study combined with a study by Laurence, Nadon, Nogrady, & Perry ("Duality, dissociation, and memory creation in highly hypnotizable subjects," published in *International Journal of Clinical and Experimental Hypnosis*, 1986, 34, 295- 310) "may point to a complex relationship among types of suggestion (e.g., hidden observer, pseudo-memory, & amnesia), and indices of specific cognitive style (e.g., duality in age regression)" (p. 32). However, measurement error cannot be ruled out.

"As with memory processes within hypnotic contexts, individual differences in hypnosis need to be explained within a broader framework. Hypnotic responses do not occur in isolation of individuals' abilities, beliefs, preferred thinking styles, and past experiences. As with the study of cognitive style differences among individuals differing in hypnotizability, the study of daily life experiences among high hypnotizable Ss who do and those who do not give evidence of dissociative type

phenomena in hypnosis may shed further light on the mechanisms implicated in hypnotic responding" (p. 33).

**1988**

**Spanos, Nicholas P.; Cross, Wendi P.; Menary, Evelyn; Smith, Janet (1988). Long term effects of cognitive-skill training for the enhancement of hypnotic susceptibility. British Journal of Experimental and Clinical Hypnosis, 5 (2), 73-78.**

Twelve initially low susceptible subjects, who scored in the medium or high susceptibility range on the Carleton University Responsiveness to Suggestion Scale (CURSS) following skill training, were posttested 9 to 30 months later with a group version of the Stanford Hypnotic Susceptibility Scale, Form C. Skill trained subjects scored significantly higher on behavioral and subjective dimensions of the Stanford Hypnotic Susceptibility Scale, Form C than low susceptible untrained control subjects who were posttested after an equivalent interval. Furthermore, the posttraining CURSS scores of the skill trained subjects were matched to those of subjects who received the same CURSS scores without training. Matched subjects were posttested on the Stanford Hypnotic Susceptibility Scale, Form C after only a brief delay. Skill trained and matched subjects failed to differ significantly on Stanford Hypnotic Susceptibility Scale, Form C susceptibility dimensions, but skill trained subjects showed higher levels of suggested amnesia than matched subjects. These findings support the idea that hypnotic susceptibility is modifiable and that training induced gains in susceptibility can be enduring

**Spanos, Nicholas P.; Gwynn, Maxwell I.; Della Malva, C. Lori; Bertrand Lorne D. (1988). Social psychological factors in the genesis of posthypnotic source amnesia. Journal of Abnormal Psychology, 97 (3), 322-329.**

Three experiments assessed the role of social psychological variables in source amnesia. Experiment 1 found that low-hypnotizable subjects instructed to simulate partial amnesia were more likely to exhibit source amnesia than high-hypnotizable hypnotic or task-motivated subjects. Experiment 2 found equivalent rates of source amnesia in low-hypnotizable simulators and high-hypnotizable hypnotic subjects. In addition, the findings of Experiment 2 failed to support the idea that the instructions for partial amnesia given to simulators cued for the occurrence of source of amnesia as well as for the occurrence of partial amnesia. In Experiment 3, preliminary instructions that legitimated source amnesia as a role-appropriate response produced significantly more posthypnotic source amnesia than did neutral or no instructions. Together, the findings of the 3 experiments support the relation of source amnesia to experimental demands and subjects' expectations.

**1987**

**Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.**

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting

attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

## NOTES

1:

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259). The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

Radtke, H. Lorraine; Thompson, Valerie A.; Egger, Lori A. (1987). Use of retrieval cues in breaching hypnotic amnesia. Journal of Abnormal Psychology, 96 (4), 335-340.

We conducted this study to determine whether hypnotically amnesic subjects would breach amnesia when forced to attend to powerful retrieval cues. Following a standard hypnotic induction procedure, 113 subjects attempted to recall a 48- item word list. The list consisted of instances of taxonomic categories presented in blocked format and was presented only once. A forced-recall procedure required subjects to recall 48 items even if that involved guessing. Next, 85 subjects were administered an amnesia suggestion and recalled the list a second time. The remaining 28 subjects served as controls and recalled the list a second time without the intervening suggestion. On Trial 3, the breaching trial, subjects were given the 12 category names and were required to recall 4 items under each. Finally, the suggestion was canceled for subjects in the suggestion condition, and all subjects completed a final cued recall. Subjects in the suggestion condition who showed amnesia on the second trial breached completely on Trial 3. We argue that the task demands prevented them from using the cognitive strategies that, under other circumstances, maintain amnesia. Limitations of the present study and suggestions for further research are discussed.

Silva, Christopher E.; Kirsch, Irving (1987). Breaching hypnotic amnesia by manipulating expectancy. Journal of Abnormal Psychology, 96 (4), 325-329.

Prior to hypnotic induction, subjects selected for high hypnotizability and ability to experience hypnotic amnesia were read one of two expectancy manipulations designed to convince them that deepening of hypnosis either would or would not

allow them to breach amnesia. After memorizing a list of six words, subjects heard a hypnotic induction, an amnesia suggestion, a challenge to remember, a trance-deepening procedure, and a second challenge to remember. On the first challenge, subjects in both conditions demonstrated considerable and equivalent degrees of amnesia. Following the trance-deepening procedure, subjects in the amnesia-expectancy condition displayed even more amnesia, whereas 80% of the Ss in the memory-expectancy condition completely recovered their memory of the word list. The data demonstrates that for most subjects in whom hypnotic amnesia can be elicited, it can be completely breached by manipulating Ss' expectancies.

Spanos, Nicholas P.; McLean, Joanne; Bertrand, Lorne D. (1987). Serial organization during hypnotic amnesia under two conditions of item presentation. Journal of Research in Personality, 21, 361-374.

Hypnotic and nonhypnotic subjects learned a 16 item list of unrelated words using either a standard presentation order (all items presented in the same order on all trials) or an incremental order (on Trial 1 only the first item was presented, on Trial 2 the first item followed by the second, etc.). Following criterion learning, the hypnotic subjects were administered an amnesia suggestion and challenged to recall, while nonhypnotic subjects engaged in a distraction task while attempting to recall. Hypnotic and nonhypnotic subjects who exhibited reduced recall (i.e., nonrecallers) showed equivalent decrements in seriation on the amnesia/distraction trial. Incremental presentation produced initial levels of seriation higher than those of standard presentation. Among nonrecallers, the incremental presentation was associated with a substantially larger reduction in seriation than was the standard procedure. Theoretical implications are discussed.

Spanos, Nicholas P.; de Groh, Margaret; de Groot Hans (1987). Skill training for enhancing hypnotic susceptibility and word list amnesia. British Journal of Experimental and Clinical Hypnosis, 4 (1), 15-23.

Subjects who pretested as low on hypnotic susceptibility received either cognitive skills training aimed at inculcating positive attitudes and interpretations concerning hypnotic responding, or no treatment. Trained subjects scored significantly and substantially higher on subjective and behavioral dimensions of susceptibility than controls. A second posttest assessed amnesia for a previously learned word list. Trained subjects showed more word list amnesia than either no treatment controls or subjects who had been matched to the trained subjects in terms of posttest susceptibility. Theoretical implications for theories of hypnotic susceptibility are discussed

1986

American Medical Association Council on Scientific Affairs (1986). Scientific status of refreshing recollection by the use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 34, 1-12.

**The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection.**

**NOTES**

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**The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection.**

**Davidson, Thomas McCabe (1986, January). Recall organization and volitional/non-volitional experiencing in posthypnotic and intrahypnotic amnesia: Inattention versus dissociation hypotheses (Dissertation, University of Waterloo). Dissertation Abstracts International, 47 (7), 3103-B.**

**"Two studies are reported which seek to evaluate the relative merits of two differing hypotheses concerning the cognitive processes underlying suggested hypnotic amnesia. The inattention hypothesis maintains that amnesia effects are produced when subjects volitionally divert attention from relevant retrieval cues so that recall is inefficient. The dissociation position is that amnesic subjects are prevented from utilizing normally relevant retrieval cues by a dissociative barrier that blocks access to target memories -- a forgetting over which subjects experience no volitional control. The two hypotheses were evaluated by means of a selective amnesia suggestion in the recall organization paradigm. "In the first experiment, high, medium, and low hypnotic susceptible subjects were administered either hypnotic induction or task-motivating instructions. Results indicated that there was no disorganization of amnesia trial recall or forgetting of words not targeted for amnesia, contrary to predictions from the inattention hypothesis. "In the second experiment, high hypnotizable subjects received the selective amnesia suggestion in both posthypnotic and intrahypnotic conditions. Intrahypnotic subjects were also separated into one group that received a ten second interval between the administration of the amnesia suggestion and the amnesia trial, and another group that had a delay between the suggestion and the amnesia trial equivalent to the posthypnotic group. Eight subjects who had testified that they were volitionally amnesic on a pre- screening amnesia test were also included in the posthypnotic condition. Again, the results indicated no recall disorganization or reduction in recall of words not targeted for amnesia. Subjects also uniformly provided evidence that their amnesia was experienced as non-volitional. There was, however, evidence that some amnesiacs were aware during the amnesia trial of the specific category targeted for amnesia. "The most important finding of both experiments is that subjects may attend to normally relevant retrieval cues and yet continue to evidence amnesia. The evidence is therefore consistent with the dissociation hypothesis, but**

disconfirms the inattention account of hypnotic amnesia. It appears that the selective amnesia context effectively prevents the successful use of volitional forgetting strategies. (Abstract shortened with permission of author)" (p. 3103).

Meagher, Christopher Roberts (1986). Suggestion and posthypnotic amnesia: Altered context or altered state? (Dissertation, University of Oregon). Dissertation Abstracts International, 47 (n1-B), 409-410. (Order No. DA 8605846)

"Posthypnotic amnesia has been investigated in the past and subsequently alluded to as either role enacted behavior or evidence for an altered state of consciousness. In order to gain further understanding of the circumstances which facilitate amnesic behavior, an experiment was carried out which was designed to vary the usual context in which recall and recognition memory are observed during posthypnotic amnesia. The suggestion for posthypnotic amnesia was altered from its usual form in that specific suggestions for recall amnesia and recognition amnesia replaced the usual general suggestion for overall memory impairment. Some Ss received the amnesia suggestion before presentation of the stimulus material rather than after stimulus presentation. In addition to the usual verbal stimuli, nonverbal stimuli were used. "A group of 44 highly hypnotizable, undergraduate Ss was divided into four treatment conditions. Three groups were hypnotized and given instructions to repeat a list of nine words taken from the Rey Auditory Verbal Learning Test, and to copy the nine figures of the Bender Gestalt Test. A fourth group performed these tasks in a normal waking state. One hypnotic group was given prestimulus suggestions for recall and recognition amnesia. Another was given poststimulus suggestions for recall and recognition amnesia, and the third hypnotic group received no amnesia suggestions. The dependent measures consisted of the scores on tests of recall and recognition of the stimulus words and figures. "A repeated measures multivariate analysis of variance revealed significant effects for hypnosis /suggestion condition, type of stimulus, and type of test. Further analysis determined that the two hypnotic groups given amnesia suggestions did not differ from each other but did show significantly greater amnesia than did either the no suggestion hypnotic control group or the waking control group. Recognition performance was significantly better than was recall performance for all groups in both stimulus situations. Nonverbal recall was significantly better than verbal recall for the two control groups given no amnesia suggestion. There was no stimulus effect for any other group and testing condition. The results of this experiment are discussed in terms of theories of hypnosis and memory, contextual variables of the hypnotic situation, and previous germane research" (pp. 409-410).

Radtke, H. Lorraine; Spanos, Nicholas P.; Malva, C. Lori Della; Stam, Henderikus J. (1986). Temporal organization and hypnotic amnesia using a modification of the Harvard Group Scale of Hypnotic Susceptibility. International Journal of Clinical and Experimental Hypnosis, 34, 41-54.

The Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) was modified to permit better assessment of amnesia and changes in temporal

organization during amnesia. First, a baseline measure of recall was obtained before administration of the amnesia suggestion. Second, on the recall trial following cancellation of the suggestion, Ss recalled everything they could remember. Amnesia was assessed by comparing recall during the suggestion with recall before it and after it was canceled. Temporal organization was assessed by correlating the order of item administration with Ss' recall orders. Hypnotic susceptibility and amnesia were independently related to temporal organization. Overall, high hypnotizable Ss organized less than medium or low hypnotizables, and amnesics showed less temporal organization than nonamnesics, but neither of these variables interacted with recall trial. The results are discussed in terms of recent theories of hypnotic amnesia.

#### NOTES

1:

Subjects in general tended to use less temporal organization during the suggestion compared to the baseline and postsuggestion trials. Although they did not obtain a disorganization effect comparable to that found in the clustering studies (e.g., Spanos & Bodorik, 1977), the results "replicated past studies that found differences in the recall organization of high and low hypnotizables during an amnesia suggestion" (p. 50), while suggesting that "the previous findings were not due to hypnotic amnesia" (p. 50).

"The baseline differences replicated Schwartz (1980) who found similar differences between high and low hypnotizable Ss following a hypnotic induction procedure but in the absence of an amnesia suggestion. Since we also found differences posthypnotically, it is questionable whether the hypnotic induction procedure was a causal factor in the Schwartz study. Furthermore, the presence of such differences on the postsuggestion trial represents a failure to replicate Evans's (1980) finding of no differences between high and low hypnotizable Ss under comparable nonhypnotic conditions. The present results are also contrary to those of two other studies that found no differences between high and low hypnotizables on rho scores on the amnesia trial (Radtke & Spanos, 1981; St. Jean & Coe, 1981) and a recent study using word stimuli which found a significant correlation between hypnotizability and temporal organization only during the amnesia suggestion (Kihlstrom & Wilson, 1984). Taken together these studies suggest that temporal organization (at least when hypnotic experiences are recalled) varies as a function of hypnotizability and therefore may be attributed to an individual difference factor" (p. 50).

The authors go on to say they have replicated other studies (p. 50), noting that the Harvard may not be the best method for investigating this issue, and individual testing of memory may be better (p. 51).

Schacter, Daniel L. (1986). Amnesia and crime: How much do we really know?. American Psychologist, 41, 286-295.

Claims of amnesia occur frequently after the commission of violent crimes and can have a significant bearing on the outcome of criminal trials. This article considers the relation between amnesia and crime within the broader context of research on memory and amnesia and provides a critical evaluation of current knowledge

concerning the issue. Particular attention is paid to the problem of distinguishing between genuine and simulated claims of amnesia. It is suggested that reliable data concerning the nature of amnesic episodes that occur after the commission of a crime are sparse, and that there is as yet little evidence that genuine and simulated amnesia can be distinguished in criminal cases. The results of several laboratory studies are summarized that indicate that feeling-of-knowing ratings distinguished between genuine and simulated amnesia under conditions in which psychologists and psychiatrists did not.

Sheehan, Peter W.; Tilden, Jan (1986). The consistency of occurrences of memory distortion following hypnotic induction. International Journal of Clinical and Experimental Hypnosis, 34, 122-137.

The present study examined a range of circumstances for their effects on the vulnerability of hypnotic Ss to memory distortion. 26 high and 26 low hypnotizable Ss were tested individually in a design in which Ss received information that was either misleading or not misleading about a series of events depicting an apparent robbery. The information was presented prior to Ss being given hypnotic instructions, and low hypnotizability Ss were especially motivated for positive response in the session. Memory for the robbery was studied across a range of measures that included forced choice recognition, free recall, and response to leading questions. Results demonstrated predictably variable effects. The 2 groups performed appreciably differently in free recall, for example, while in recognition testing, data indicated that high and low hypnotizable Ss both incorporated misleading information into their memories to the same degree. Some implications of the data for the forensic context are discussed.

#### NOTES

1:

56 Ss were prescreened with Harvard Group Scale of Hypnotic Susceptibility, Form A, defining highs = 9-12, lows = 0-3. Used Loftus materials for testing memory (wallet snatching sequence, on a series of slides). Errors were classified as errors of fact, of inference, or conjectures. Highs had more intrusions that were errors of fact than lows did ( $p < .05$ ), confirming the earlier results published by Sheehan & Tilden, 1984. There was no significant association between hypnotizability level and intrusion of central detail (description of robber and victim), but 57% of highs and only 18% of lows intruded peripheral objects incorrectly into their own narrative reports (i.e. descriptions given of the surroundings),  $p < .01$ .

There were trends for high hypnotizable Ss to recall more objects correctly than low hypnotizable Ss during narrative reporting ( $p < .06$ ) and to recall more central objects ( $p < .06$ ), but not more peripheral objects. There may have been a loosening of criteria for memory among high hypnotizables, because they appeared to produce both greater accuracy and inaccuracy in recall of certain types of detail.

During the recognition testing, high hypnotizables exhibited significantly greater confidence in their responses than low hypnotizable Ss, but there was no group difference for accuracy. "Results for both tests of integration then (recognition and free recall) confirmed the prediction that hypnotic Ss incorporate false information into their memory, and the effect did not differentiate high from low hypnotizable Ss" (p. 131).

When a leading question implied that traffic lights were present in the scene, 34% responded in some way to that suggestion, and 20% said that they could see the lights in their minds eye; but 14% said that "although they could not see the lights, they nevertheless remembered they were there" (p. 132). Response to the leading question did not differ between high and low hypnotizable Ss.

In their discussion, the authors note that hypnosis did not enhance memory in this study. "Results overall suggest that hypnotic induction lowers the correspondence between confidence and accuracy. In the present study, hypnotic Ss were confident about their recall when the degree of accuracy of their reports suggested they should have been quite uncertain. Hypnotic instruction itself would appear, then, to establish conditions that spuriously facilitate a high degree of confidence in the reports that Ss produce.

"A major point to be made about the present study is that both general distortion and confidence effects observed here cannot necessarily be attributed to hypnosis. There was no independent comparison condition, for example, to contrast results for hypnotic Ss with results for Ss receiving no induction procedures. Effects, then, could be attributed to the hypnotic context as much as to the effects of induction per se, and context rather than state may be responsible for the vulnerability of hypnotic Ss that has been observed. The influence of context is seen at least in the clear evidence for an interaction between situational factors and hypnotizability. In free recall, hypnotizable Ss were more prone to distortions than un hypnotizable Ss, while in recognition, hypnotizable and un hypnotizable Ss were equally prone. Mode of testing is, therefore, a major contextual variable that is related to the nature of the distortion and confidence effects that can be observed. Present data further indicate that the hypnotic context is associated with memory distortion even in Ss who have little capacity for being hypnotized, but who are instructed to believe that they can, in fact, experience much of what is being suggested" (pp. 133-134).

Forensic implications need to be tempered because of difference between laboratory and real life, but practitioners nevertheless should be cautious. "While it is not true that hypnotized persons, by virtue of their hypnotizability level, will always distort their reports more obviously than nonhypnotic Ss, so as to bring their recollections into line with what is implied or suspected, parameters do exist that clearly increase the risks of distortion that can occur after hypnotic instruction. This is evidenced, for example, by the distinctive distortion effects that have been demonstrated for high hypnotizable Ss when they are given induction instructions and later requested to tell their story in their own way. Overall, the present data imply that the law needs to closely evaluate the impact of the different settings in which hypnosis takes place and the different ways in which misleading information can be communicated to persons who are later asked to testify. The potential risks of hypnosis--as well as its utility--will depend critically on how that information has been conveyed, and the way in which Ss' memories are tested" (pp. 134- 135).

Spanos, Nicholas P.; de Groh, Margaret M.; Bertrand, L. David (1986). Serial organization during posthypnotic amnesia using a modified version of the Stanford Hypnotic Susceptibility Scale. Psychological Reports, 58, 311-322.

A version of the SHSS:C modified for group testing was administered to 108 subjects. The final item on the scale was modified to enable (a) computation of a continuous amnesia score for each subject and (b) the measurement of serial organization on the recall trials during amnesia and after the cancellation of amnesia. Scores on the SHSS:C (computed without the amnesia item) and amnesia were significantly correlated. Furthermore, SHSS:C scores correlated significantly and negatively with three of four indexes of seriation during amnesia. Amnesia scores, however, correlated significantly with only one of the seriation measures, and in regression analyses the addition of amnesia to SHSS:C scores did not enhance prediction of any organization index. Methodological and theoretical implications are discussed.

Wilson, L.; Kihlstrom, J. F. (1986). Subjective and categorical organization of recall during posthypnotic amnesia. Journal of Abnormal Psychology, 95 (3), 264-73.

Conducted 2 experiments to determine the fate of organization of recall during posthypnotic amnesia. In both studies, amnesia suggestions were administered to undergraduate Ss of low, medium, and high hypnotic susceptibility who had learned a word list by the method of free recall while they were hypnotized. In Exp I (n = 44), words were unrelated to each other, and subjective organization was measured by raw and adjusted pair frequency. In Exp II (n = 59), words were drawn from various taxonomic categories, and category clustering was measured by repetition ratio, modified repetition ratio, and adjusted ratio of clustering. Results indicate that, compared to baseline levels, subjective organization and category clustering did not decrease reliably during the time the amnesia suggestion was in effect. Moreover, these aspects of strategic organization were not significantly correlated with the number of items recalled during amnesia. Both findings contrast with previous results concerning temporal organization of a word list memorized by the method of serial learning. Findings suggest that the disruption of retrieval processes in posthypnotic amnesia may be limited to certain organizational schemes. (43 ref).

1985

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects reported their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they

relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension.

Eich, Eric; Reeves, John L.; Katz, Ronald L. (1985). Anesthesia, amnesia, and the memory/awareness distinction. Anesthesia and Analgesia, 64, 1143-1148.

Several studies have shown that surgical patients cannot consciously recall or recognize events to which they had been exposed during general anesthesia. Might evidence of memory for intraoperative events be revealed through the performance of a postoperative test that does not require remembering to be deliberate or intentional? Results of the present study, involving the recognition and spelling of semantically biased homophones, suggest a negative answer to this question and imply that intraoperative events cannot be remembered postoperatively, either with or without awareness.

#### NOTES

1:

"In this experiment, we attempted to apply the distinction between memory and awareness of memory to the question of whether adequately anesthetized and apparently unconscious patients can register and retain what is said in their presence during surgery. Prior research relating to this question has focused, for the most part, on the ability of postoperative patients to recall or recognize a specific item....The inference need not be drawn, however, that 'patients in so-called surgical planes of anesthesia cannot hear' (15, p. 89) or that anesthetized patients cannot encode and store in memory events that transpire during their surgery. The possibility remains that even though the effects of memory for intraoperative events may not--and probably cannot--be revealed in postoperative tests of retention that require remembering to be deliberate or intentional, such effects might be evident in the performance of tests that do not demand awareness of remembering.

"To explore the possible dissociation between memory and awareness of memory for intraoperative events, we modeled our experiment after a recent neuropsychological study by Jacoby and Witherspoon (5)" (p. 1143).

"...it appears that the prior presentation of a word has a substantial impact on its subsequent interpretation and spelling, regardless of whether or not the word is correctly classified as 'old' in a later test of recognition memory" (p. 1144).

"Approached from the standpoint of anesthesia theory and practice, the idea that recognition and spelling tap different memory processes or systems raises an interesting question for research. Specifically, suppose that during surgery, an anesthetized patient listens to a series of short, descriptive phrases, each consisting of a homophone and one or two words that bias the homophone's less common interpretation (e.g., war and PEACE, deep SEA). Suppose further that several days after surgery, the patient is read a list composed chiefly of old and new homophones (i.e., ones that either had or had not been presented intraoperatively) on two successive occasions. On one occasion, the patient is simply asked to spell each list item aloud; on the other occasion, the patient is asked to state aloud which list items he or she recognizes as having been presented during surgery. Given the situation sketched above, might the patient spell significantly more old than new homophones

in line with their less common interpretations, and yet fail to reliably discriminate between the two types of items in the test of recognition memory" (p. 1144).

Klatzky, Roberta L.; Erdelyi, Matthew H. (1985). The response criterion problem in tests of hypnosis and memory. International Journal of Clinical and Experimental Hypnosis, 33, 246-257.

Past experimental research on the effects of hypnosis on memory indicates both that hypnosis produces increases in correct recalls and that hypnosis produces increased vulnerability to misleading information and intrusions in recall. The present paper uses the framework of signal detection theory to account for this pattern of data. It suggests that the effects of hypnosis on memory cannot be ascertained from previous work, because of a general failure to discriminate between effects on the amount of information retrieved from memory and the criterion adopted by Ss for reporting what they remember.

#### NOTES

1:

Past experimental research indicates that hypnosis produces increases in correct recalls and as well as increased vulnerability to misleading information and intrusions in recall. This paper uses signal detection theory to account for the data. Signal detection theory describes performance as reflecting two underlying parameters--the information accessible to S at any point in time (designated as  $d'$ ) and the criterion adopted by S when making decisions about memory reports (report or decision criterion, response bias, or Beta). They review the recent literature on hypnosis and memory and conclude:

1. When the response output is not controlled, hypnotic instructions and/or hypnotizable have been found to produce increases in the number of correct recalls but this does not mean that the accessible information in memory has increased. What may be changing is the criterion for report.
2. When the response output is not controlled, hypnotic instructions and/or hypnotizable have been found to produce increases in incorrect recalls, i.e., intrusions, and compliance with leading questions, but this does not mean diminution or distortion of accessible memory ( $d'$ ). What may be changing is the criterion for report.
3. When response bias is controlled, hypnosis has been found to produce no enhancement of recognition but this does not imply that (a) Beta cannot change in recognition tests where it is allowed to vary, nor that (b) hypnosis has no effect on recall.
4. The proper experiment to determine whether hypnosis affects the accessibility of information in memory should place demands on the retrieval process and control the criterion for memory report.

The most decisive experimental outcome for the forensic situation would be a null or negative one: the demonstration that hypnosis does not enhance measures of memory accessibility. Then there would be no reason to use hypnosis to enhance memory.

1985-1986

Kunzendorf, Robert G.; Benoit, Michelle (1985-86). Spontaneous post-hypnotic amnesia and spontaneous rehypnotic recovery in repressors. Imagination, Cognition and Personality, 5 (4), 303-310.

The Salpêtrière school of hypnosis posited that true hypnotic effects occur spontaneously in people with repressive tendencies. Consistent with this early position, the current study indicates that both spontaneous amnesia after hypnosis and spontaneous recovery during rehypnosis are statistically associated with repression (but not with hypnotic suggestibility). In contrast, both suggested forgetting and suggested recovery are statistically associated with hypnotic suggestibility (but not with repression). Whereas the latter effects of suggestibility are attributable to the demand characteristics of hypnotic suggestions, the spontaneous effects of hypnosis on repressors' memories are not reducible to social psychological principles.

1985

Simon, Michael J.; Salzberg, Herman, C. (1985). The effect of manipulated expectancies on posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 33, 40-51.

The effects of manipulated S expectancy and direct suggestions for amnesia on posthypnotic amnesia were assessed. 120 undergraduate students were randomly assigned to 6 groups: negative expectancy (for amnesia)/suggestions (for amnesia); no expectancy/suggestions; negative expectancy/no suggestions; no expectancy/no suggestions; and 2 control groups. The results indicated that the expectancy manipulation had no effect on the occurrence of posthypnotic amnesia measured by the Stanford Hypnotic Susceptibility Scale, Form A (Weitzenhoffer & Hilgard, 1959), whereas suggestions for amnesia were found to have a significant effect. Hypnotized suggestion and no suggestion Ss remembered significantly less than Ss in the nonhypnotized control groups. The implications of the findings are discussed.

NOTES

1:

"The results of the study do not support Young and Cooper's (1972) earlier work which indicated that S expectancies play an important role in the occurrence of posthypnotic amnesia. [They do] support previous research (Hilgard & Cooper, 1965) which has shown that direct suggestions for amnesia play an important role in the occurrence of posthypnotic amnesia. It is also worth noting that forgetting was significantly greater for suggestion group Ss than for no suggestion Ss. In other words, the suggestion Ss could not remember as many items as the no suggestion Ss, even after the amnesia suggestions were lifted. This appears to be a replication of the 'residual amnesia' effect reported in previous studies (Hilgard & Hommel, 1961; Kihlstrom & Evans, 1977), in that Ss who showed a high level of initial amnesia (suggestion Ss) continued to display a persistence of the amnesia process, despite the cue to terminate amnesia" (p. 48).

"Although the nonstate theorists' argument cannot be completely dismissed, there are two points which tend to make the present findings particularly striking. Both concern the fact that the odds were actually stacked against the control group Ss remembering more than Ss in the hypnosis group, for reasons inherent in the design of the study. First of all, the control Ss were asked to engage in a set of routine and boring tasks. In contrast, the hypnosis group Ss were given instructions aimed at having them experience rather unusual phenomena which were significantly outside the realm of everyday experience. It seems logical to assume that such experience would be rather memorable. Second is the fact that the standardized scoring procedure which was used by the raters to score Ss' responses unavoidably favored the hypnosis group Ss. This was primarily because the number of acceptable responses was far greater for the hypnotized Ss, since in many cases a verbal description of the feelings or sensations which accompanied the task was sufficient to score the item as remembered. Thus, this finding suggests that the hypnotic state, in and of itself, may have had some inhibiting effect on memory. In other words, hypnotized Ss who did not receive any suggestions for amnesia may show more "forgetting" than nonhypnotized Ss due to some intrinsic characteristic of the hypnotized state. It is unlikely, however, that the extent of this "spontaneous" effect can ever be accurately determined because it will always be confounded by the internal expectations that Ss bring with them into the laboratory" (p. 49).

1984

Perry, Campbell (1984). Dissociative phenomena of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 12, 71-84.

Janet's concept of dissociation, Freud's notion of the Censor and Hilgard's multiple controls of consciousness are considered in relation to the hidden observer (HO) phenomenon. A review of reports of recent research, including that of the author and co-workers, indicates that the hidden observer effect occurs only in 40-50% of high susceptible subjects. It is speculated that subjects who show Hidden observer have maintained some contact with reality whilst those high susceptibles who do not show hidden observer are more deeply involved in hypnosis.

NOTES

1:

Author describes a series of experiments in their laboratory. Ss are double screened to select highly hypnotizable people, and accepted into the research only if they pass the amnesia item of SHSS:C and most of the other 11 items of that scale. Ss are told that hypnosis is a procedure which permits subjects to exercise various skills or abilities such as relaxation, imagination, imagery, absorption and selective attention--that everyone has some of these skills to varying degrees, and that hypnosis is one of many techniques (including yoga, etc.) for bringing out these skills and abilities. All sessions are videotaped for the Experiential Analysis Technique (EAT). The Hidden Observer (HO) procedure was modified so that E touched the S's shoulder lightly at the start of the item, and a second time to terminate the item. Whereas Hilgard used cold pressor pain, they used a mildly unpleasant shock provided by a Take-Me-Along electric stimulator.

Replying to Spanos and Hewitt (1980) in which data was interpreted as implying that the HO is an artifact of demand characteristics, "It struck me then, and still does, that people like Hilgard and ourselves, who believe that the HO is a phenomenon of hypnosis and not just some laboratory artifact, can only get it 40-50% of the time, whereas the investigators like Spanos and Hewitt, who believe it is all laboratory artifact, get the phenomenon almost 100% of the time. Usually it is the other way around, so it seems to me that if the HO is an artifact, it is unique in the history of psychology" (p. 77).

They found that all highs with the HO also reported subjective experiences similar to HO experience when they were not hypnotized. "For instance, one female subject who has the HO, insists that she is not hypnotized, despite compelling evidence to the contrary, because she feels the same way when she is not hypnotized. By contrast, another subject who is interested in creative writing reports HO type experiences when she is on a creativity binge and also when she is stoned" (p. 79).

They observed several consistent findings in their research: "(1) contrary to the belief that subjects who report HO's are more susceptible than those who do not, our findings are the reverse" (p. 79). The differences are not large enough to be significant, but that may be due to a ceiling effect on the scales since the subjects are already selected to be high hypnotizables. "(2) A second repeated observation is that when all the Ss were administered the HO instructions, they were given a second electric shock to the still analgesic hand, and asked to report the degree of pain they felt on a 1-10 scale where 1 = no pain and 10 = extreme pain. ... the HOs report having the HO experience and their pain reports on the 1-10 scale increase, in the manner described by Hilgard using cold pressor pain. The no HOS report no subjective difference, and their degree of analgesia actually increases" (p. 79).

The author describes further studies in which they obtained results in the opposite direction from what they had expected, based on the supposition that people who do not have the HO appear to set aside critical judgement more and to be more imaginatively involved. "So the finding of greater recall after reversal of amnesia for the no HOs both on number of items and on bits was a surprise" (p. 81). When they extended this research into the area of pseudo-memories, they found that "of the 8 subjects who had the HO, 7 of them believed the pseudo-memory was real. Of the 19 subjects who did not have the HO, only 6 of them accepted the pseudo-memory as real ... The effect was even stronger for duality in age regression. Of 12 subjects reporting duality, 10 reported the hallucinated noises as real; of the 15 with no duality, 3 accepted the reality of the pseudo-memory as actually having happened" (p. 81).

Spanos, Nicholas P.; Tkachyk, M.; Bertrand, L. D.; Weekes, J. R. (1984). The dissipation hypothesis of amnesia: More disconfirming evidence. Psychological Reports, 55, 191-196.

Hypnotic subjects were administered a suggestion to forget a previously overlearned word list. Before cancellation of the suggestion they were challenged twice to try and recall the words. Subjects in one group received a second challenge immediately after response to the first. Those in the second group were given a 15-min. delay before their second challenge. Subjects in both groups showed less amnesia after the

second challenge than after the first, but the length of delay between challenges had no effect on amnesia scores. These findings are inconsistent with the hypothesis that hypnotic amnesia involves an involuntary blockage of memory that decays spontaneously with time.

1983

Dillon, F. Richard; Spanos, Nicholas P. (1983). Proactive interference and the functional ablation hypothesis: More disconfirmatory data. International Journal of Clinical and Experimental Hypnosis, 31, 47-56.

According to the functional ablation hypothesis, memories for which amnesia has been hypnotically suggested do not interact with other information in memory. This hypothesis was tested in 2 interrelated experiments. In Experiment 1, Ss high and low in hypnotic susceptibility were administered a hypnotic induction procedure and tested on a Brown-Peterson (e.g., Wickens & Gittis, 1974) memory task designed to induce proactive interference (PI). Ss were exposed to 10 blocks of successive 3-word lists. Within each block, all words were strongly related, and, therefore, lists presented early in a block interfered with the retention of lists presented later (PI "buildup"). Following the "buildup" of PI, Ss were administered either a cue to be amnesic for the previous words of a block or a cue to relax. Contrary to the functional ablation hypothesis, the amnesia suggestion did not produce a "release" from PI in high susceptible hypnotic Ss. In other words, the amnesia suggestion did not prevent previously learned material from interfering with newly presented material. Experiment 2 demonstrated that the amnesia cues employed in the Brown-Peterson task produced a reversible recall deficit even though they failed to produce PI "release." These findings are consistent with the results of studies of the functional ablation hypothesis using the retroactive interference paradigms

1983

Geiselman, Ralph E.; Fishman, D. L.; Jaenicke, C.; Larnier, B. R.; MacKinnon, D. P.; et al. (1983). Mechanisms of hypnotic and nonhypnotic forgetting. Journal of Experimental Psychology: Learning, Memory, and Cognition, 9, 626-635.

40 undergraduates participated in 2 experimental sessions designed to study laboratory-induced amnesia, one using a standard hypnosis paradigm and one using a nonhypnotic directed forgetting paradigm. Two independent sources of variation were derived from the hypnotic amnesia data: retrieval inhibition and inhibition release. In the nonhypnotic directed-forgetting procedure, some items were cued to be either forgotten or remembered. At test, over 39% of the variance in the recall of the to-be-forgotten items could be accounted for by the inhibition and release constructs obtained with hypnosis. These relations between the 2 procedures were

not mediated by verbal ability (WAIS) or cognitive style (Hidden Figures Test). It is concluded that the mechanisms of forgetting involved in laboratory demonstrations of hypnotic and nonhypnotic amnesia are related, and the implication is that some of them are the same, namely, retrieval inhibition and inhibition release. Possible demand characteristics that accompany the hypnosis procedure were not apparent with the nonhypnotic procedure. Results provide evidence that hypnotically induced amnesia is not entirely the result of Ss' reactions to demand characteristics.

**Kihlstrom, John F.; Easton, Randolph D.; Shor, Ronald E. (1983). Spontaneous recovery of memory during posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 31, 309-323.**

Repeated testing of posthypnotic amnesia indicates that some Ss, initially responsive to the suggestion, show appreciable recovery of memory before the pre-arranged signal is given to cancel the amnesia. Comparison of Ss who received 2 successive memory tests during amnesia with others who received only a single test preceded by a distracting activity indicated that the recovery effect was attributable to the passage of time rather than to prior testing. There were wide individual differences in the extent of recovery, with some Ss maintaining a fairly dense amnesia on the second test. Those Ss who maintained amnesia were more hypnotizable, and showed a denser initial amnesia, than those who breached it. An analysis of subjective reports lent credence to the notion of partial response among some hypnotizable Ss who fail to meet a standard criterion of complete amnesia, and pseudoamnesia among some insusceptible Ss who appear to pass it. Some Ss reported voluntarily engaging in cognitive activity designed to induce forgetting, but these reports were related to neither the occurrence of initial amnesia nor its persistence. A failure of memory which reflects momentary disorientation upon transition from one mental state to another should be conceptually distinguished from a reversible amnesia initiated by hypnotic suggestion.

**Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology**

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their

reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

Simon, Michael J. (1983). The effect of manipulated expectancies on posthypnotic amnesia (Dissertation, University of South Carolina). Dissertation Abstracts International, 43 (n7-B), 2358. (Order No. DA 8228533)

"An attempt was made to determine the effects of manipulating subject expectancy on posthypnotic amnesia. The manipulation involved having Ss read an essay which included a paragraph informing them that they would have no trouble remembering what happened upon awakening from the trance. The effects of direct suggestions for amnesia were also assessed. "One hundred and twenty undergraduate students were randomly assigned to six groups: Negative Expectancy for amnesia/Suggestions for amnesia, No Expectancy for amnesia/Suggestions for amnesia, Negative Expectancy for amnesia/No Suggestions for amnesia, No Expectancy for amnesia/ No Suggestions for amnesia, and two control groups. "Subjects in the Suggestion conditions were administered the standard version of the Stanford Hypnotic Supports Scale Form A (SHSS-A). The No Suggestion subjects were administered a modified version of the SHSS-A which made no references to, and gave no suggestions for, posthypnotic amnesia. Finally, the control subjects were given a more drastically modified version of the scale in which the hypnotic induction as well as all references to hypnosis were eliminated. The control groups were employed to provide an estimate of the amount of forgetting exhibited by subjects who are not hypnotized. "The results indicated that the expectancy manipulation had no effect on the occurrence of posthypnotic amnesia as measured by the SHSS-A, while suggestions for amnesia were found to have a significant effect. Both Suggestion and No Suggestion subjects remembered significantly less than the subjects in the control groups. The implications of the findings were discussed" (p. 2358).

1982

Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)

"Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and showed that voluntary and involuntary Ss did not differ in response to the

contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).

St. Jean, Richard; MacLeod, Carrie; Coe, W. C.; Howard, M. L. (1982). Amnesia and hypnotic time estimation. International Journal of Clinical and Experimental Hypnosis, 30, 127-137.

Previous research has shown that hypnotic Ss tend to underestimate the duration of the hypnotic interval (Bowers, 1979; Bowers & Brenneman, 1979). Based on Ornstein's (1970) work, the present investigation tested the hypothesis that such underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session. Two separate studies, in which time estimates were collected in conjunction with administrations of the Harvard, failed to find a relationship between responses to the amnesia suggestion and time estimation. Ss in both studies substantially underestimated the duration of the hypnotic interval, but the degree of such underestimation was not related to hypnotic responsiveness. Thus, Ornstein's hypothesis that underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session was strongly disconfirmed.

1981

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

Radtke, H. Lorraine; Spanos, Nicholas P. (1981). Temporal sequencing during posthypnotic amnesia: A methodological critique. Journal of Abnormal Psychology, 90, 476-485.

In studies by Evans and Kihlstrom (1973, 1975, 1979), high susceptibles were less likely than low susceptibles to recall the events of the hypnotic session in temporal sequence (i.e., temporal disorganization effect) following an amnesia suggestion. The primary measure of recall order was the rank-order correlation (rho scores) between the presentation order and the recall order of hypnotic experiences computed for each S. Following a suggestion for posthypnotic amnesia, HSs usually obtained lower rho scores than LSs. This research is critically examined, noting methodological shortcomings associated with the susceptibility-scale paradigm, inconsistent findings, and failures to replicate. Two studies are described that found no relationship between susceptibility level and rho scores. These null results held true for Ss who recalled new information after cancellation of the amnesia suggestion (reversers) as well as for those who did not recall new information (nonreversers). Nevertheless, the authors have replicated previous work on differential recall of the first item.

Kihlstrom, John F.; Evans, Frederick J.; Orne, Emily C.; Orne, Martin T. (1980). Attempting to breach posthypnotic amnesia. Journal of Abnormal Psychology, 89 (5), 603-616.

Traditionally, posthypnotic amnesia has been construed as a subjectively compelling deficit in memory retrieval. Alternatively, it may represent a motivated failure to utilize appropriate retrieval cues, lack of effort in recall, active suppression of memory, or unwillingness to verbalize the critical material. In an effort to test the alternative hypothesis of amnesia, 488 college students were presented with 4 kinds of instructions (using 4 modifications of the Harvard Group Scale of Hypnotizability, Form A) designed to overcome the effects of suggested posthypnotic amnesia. The instructions particularly affected Ss of low and moderate hypnotizability who failed the criterion for amnesia. For those of moderate and high hypnotizability who met the criterion for amnesia, however, explicit requests for temporal organization, exhortations to maximize recall, and demands for honesty in reporting produced no greater effect on memory than did a simple retest. Results place some boundaries on both the traditional and alternative views of posthypnotic amnesia and invite further exploration of both cognitive and contextual models of the phenomenon.

Spanos, Nicholas P.; Radtke-Bodorik, H. Lorraine; Stam, Henderikus J. (1980). Disorganized recall during suggested amnesia: Fact not artifact. Journal of Abnormal Psychology, 89 (1), 1-19.

In 3 experiments and a reanalysis of previous data, hypnotic and nonhypnotic Ss learned a 9-item categorized word list and were then given an amnesia suggestion for the list. Clustering of recall was measured on the recall trials immediately before the suggestion, during it, and after it was canceled. In Experiment I with 173 undergraduates, hypnotic Ss showed more amnesia than task-motivated Ss. However, partial nonrecallers in both of these treatments showed disorganized (i.e., less clustered) recall during the suggestion as compared to before it or after canceling it. Experiment II, with 100 university students, disconfirmed the

hypothesis that the greater amnesia of hypnotic as compared to task-motivated Ss, was due to high levels of relaxation in the hypnotic Ss. Disorganization was again found in partial nonrecallers. The reanalysis of clustering data from previous experiments with 196 Ss demonstrated that the disorganization effect was not an artifact produced by reduced recall during the suggestion period, and Experiment II (with 166 18-42 year old Ss) indicated that Ss who followed instructions and faked partial amnesia when explicitly asked to do so (simulators) showed no disorganization effect. An inattention-encoding specificity hypothesis was developed to account for these findings.

Stam, Henderikus J.; Radtke-Bodorik, Lorraine; Spanos, Nicholas P. (1980). Repression and hypnotic amnesia: A failure to replicate and an alternative formulation. Journal of Abnormal Psychology, 89 (4), 551-559.

In an attempt to replicate and extend a study by S. R. Clemes, 2 groups of 10 undergraduate hypnotic Ss learned a list of 18 words and were given an amnesia suggestion telling them they would be able to remember only 10 of these words. Half of the list words were critical (i.e., considered to be related to repressed conflictual material) and half were neutral (unrelated to conflictual material) as determined by Ss' responses to a word association test. Experimental Ss received their own critical and neutral words and yoked control Ss received the critical and neutral words of experimental Ss. Neither the experimental nor the yoked control group exhibited selective amnesia in favor of critical words, thus constituting a failure to replicate Clemes's result. However, variables affecting the degree to which words were initially learned (e.g., imagery value, serial position) predicted their resistance to amnesia. These findings are inconsistent with a repression hypothesis but congruent with an inattention hypothesis of suggested amnesia. (41 ref).

Weitzenhoffer, Andre M. (1980). Hypnotic susceptibility revisited. American Journal of Clinical Hypnosis, 22, 130-146.

The concept and measurement of hypnotic susceptibility are re-examined in their relation to hypnotizability, hypnotic depth and suggestibility. The Stanford Scales and similar instruments are found to have failed to take into account essential features defining traditional hypnosis and suggestibility and to have created confusion in the scientific inquiry into hypnotism. Other available measures have not been particularly successful, but some bear further attention. Recent claims that hypnotizability can be trained have failed to distinguish between hypnotizability proper and accessory processes, leaving some question about what is actually being trained. Possible future directions of work on susceptibility are considered. Attempts to distinguish between 'clinical' and 'laboratory' hypnotizability are examined and found to have been premature and loosely based on facts.

1979

Karlin, Robert A. (1979). Hypnotizability and attention. Journal of Abnormal Psychology, 88 (1), 92-95.

An attentional explanation of cognitive hypnotic phenomena (e.g., hallucinations and amnesia) based on the ability to shift the pertinence of stored information was developed. It was hypothesized that individuals who were successful at a difficult attentional task would also succeed on cognitive hypnotic items. The Harvard Group Scale of Hypnotic Susceptibility, Form A was used to assess hypnotizability. To measure pertinence-shift ability, two tape recordings made by the same person were played through a single sound source. One tape was designated the target tape. Amount remembered and perceived task ease were summed to form an additive score of task success. Subjects above the median on the task were assigned to the good pertinence shift group (GP); those below the median were assigned to the poor pertinence shift group (PP). As predicted, GP subjects passed significantly more cognitive hypnotic items than did PP subjects ( $p < .05$ ). When task difficulty and compliance were controlled for, the results remained significant ( $p < .05$ ). These results were replicated in a second study.

#### NOTES

1:

A brief version of this paper was presented at the Annual Meeting of the Society for Clinical and Experimental Hypnosis, Asheville, North Carolina, October, 1978

Orne, Martin T. (1979). The use and misuse of hypnosis in court. International Journal of Clinical and Experimental Hypnosis, 27, 311-341

The various forensic contexts in which hypnosis has been used are reviewed, emphasizing its advantages and pitfalls. The technique may be helpful in the context of criminal investigation and under circumstances involving functional memory loss. Hypnosis has no utility to assure the truthfulness of statements since, particularly in a forensic context, subjects may simulate hypnosis and are able to willfully lie even in deep hypnosis; most troublesome, actual memories cannot be distinguished from confabulations either by the subject or by the hypnotist without full and independent corroboration. While potentially useful to refresh witnesses' and victims' memories to facilitate eyewitness identification, the procedure is relatively safe and appropriate only when neither the subject, nor the authorities, nor the hypnotist have any preconceptions about who the criminal might be. If such preconceptions do exist -- either based on information acquired before the hypnotic procedure or on information subtly communicated during the hypnotic procedure -- hypnosis may readily cause the subject to confabulate the person who is suspected into his "hypnotically enhanced memories." These pseudomemories, originally developed in hypnosis, may come to be accepted by the subject as his actual recall of the original events; they are then remembered with great subjective certainty and reported with conviction. Such circumstances can create convincing, apparently objective "eyewitnesses" rather than facilitating actual recall. A number of minimal safeguards are proposed to reduce the likelihood of such an eventuality and other serious potential abuses of hypnosis.

1977

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

1976

Coe, William C.; Basden, B.; Basden, D.; Graham, C. (1976). Posthypnotic amnesia: Suggestions of an active process in dissociative phenomena. Journal of Abnormal Psychology, 85, 455-458.

A retroactive inhibition design was used to examine the process of posthypnotic amnesia. The results supported the notion that "forgotten" material is as available to amnesic subjects at some level as it is to nonamnesic subjects. Further, so-called forgetting appears to be the result of an active process, that is, something the subject does. Implications for understanding dissociative phenomena in general are discussed.

Coe, William C.; Baugher, R. J.; Krimm, W. R.; Smith, J. A. (1976). A further examination of selective recall following hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 13-21.

29 Ss were tested for posthypnotic amnesia on SHSS:C. They rated each item for emotional tone (pleasant-unpleasant) and judged whether or not they had passed or failed it. There was some support for the notion that failed items are judged more unpleasant than passed items, but the emotional tone of an item was not related to its being recalled posthypnotically. There were minimal findings to suggest that Ss recall items which stand out in their experience. Discrepancies with earlier findings and the possible role of processes associated with normal memory are discussed.

Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, 18, 254-262.

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

#### NOTES

The suggestions were for arm levitation, arm rigidity, and amnesia.

Stewart, C. G.; Dunlap, W. P. (1976). Functional isolation of associations during suggested posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 24, 426-434.

A search was made for functional isolation effects of hypnotic amnesia that do not derive directly from either the explicit content or simple demand characteristics of amnesia instructions. The frequency of response repetition on a word association task was investigated as a function of posthypnotically suggested recall amnesia during the normal waking state. A trace of evidence for predicted amnesia effects occurred with only 1 out of 6 intensively trained, highly susceptible subjects. The results are compatible with the view that (a) suggested recall amnesia produces a disturbance of the retrieval process similar to source amnesia, and (b) indirect associational measures then merely serve to stimulate retrieval.

1970

Goldstein, M. S.; Sippelle, Carl N. (1970). Hypnotically induced amnesia versus ablation of memory. International Journal of Clinical and Experimental Hypnosis, **19** (3), 211-216. (Abstracted in Current Contents, 2, 35, 21)

Divided 33 hypnotizable undergraduates, all capable of achieving the criterion of amnesia for a 7-digit number, into 3 groups: 2 hypnotized and 1 pretend. The distributions of errors for an amnesic performance of these groups were compared with the theoretical chance distribution of errors expected in an amnesic performance. Both hypnotized groups differed significantly from the pretend group and from the theoretical distribution, while the performance of the pretend group did not differ significantly from the chance distribution. The performance of the pretend group conformed to the expectancy for amnesia significantly better than did the performance of either of the hypnosis groups. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, **12** (2), 100-130.

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

Raginsky, Bernard B. (1969). Hypnotic recall of air crash cause. International Journal of Clinical and Experimental Hypnosis, **17**, 1-19.

Discusses the use of hypnotic techniques to help a 33-yr-old male recall suppressed material which implicated him in an air crash. The cause was found after 2 short hypnotic sessions, where other methods used over 2 years had failed. The method can be used in all cases of amnesia. The S was made to hallucinate a threatening situation, and his hallucination gave a clue to the basic problem. He was then made to hallucinate a pleasant scene, which gave an indication of the method he used to escape from the problem. This was repeated at the 2nd session for confirmation. If the patient did not bring up the required material by free association under hypnosis, a dissociation of the personality induced in which the observing ego watched what the experiencing ego was doing to cause the accident. The results demonstrated that hypnotic techniques were more successful than sodium amytal interviews, free association, psychiatric interviews, physical and emotional isolation,

pressure by authorities, and kindness of friends. Reference was made to the problems involved when the interests of the S were in conflict with public safety. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Thorne, D. Eugene (1969). Amnesia and hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 225-241.

Explored the relative effects of 2 factors on short-term memory for a paired-associate learning task. 36 undergraduate and graduate paid volunteers were stratified, according to their Harvard Group Scale of Hypnotic Susceptibility, Form A scores, into 3 groups of 12 Ss each. The Ss within each of the 3 groups were then evenly but randomly assigned to 3 treatment conditions, which differed in terms of the kind of motivational procedure in which suggestions of amnesia for a recently learned paired-associate task were given. Results did not directly support or were sometimes contrary to predictions derived from popular hypnosis theories, which assert that posthypnotic amnesia is a reliable behavioral criterion for the "hypnotic state." (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Barber, Theodore Xenophon; Calverley, David S. (1968). Toward a theory of 'hypnotic' behavior: Replication and extension of experiments by Barber and co-workers (1962-65) and Hilgard and Tart (1966). International Journal of Clinical and Experimental Hypnosis, 16, 179-195.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS" CAPABILITIES AND

**DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Graham, K. R.; Patton, Ann (1968). Retroactive inhibition, hypnosis, and hypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 16, 68-74.**

**THE RELATIONSHIP OF HYPNOSIS AND POSTHYPNOTIC AMNESIA TO RETROACTIVE INHIBITION. 4 GROUPS OF 10 STUDENTS EACH LEARNED LISTS OF ADJECTIVES IN A RETROACTIVE INHIBITION PARADIGM. 2 GROUPS LEARNED THE INTERVENING LIST WHILE THEY WERE HYPNOTIZED. SS OF 1 OF THESE WERE GIVEN INSTRUCTIONS FOR POSTHYPNOTIC AMNESIA, WHILE SS OF THE OTHER WERE TOLD TO RECALL WHAT THEY HAD LEARNED UNDER HYPNOSIS. THE SAVINGS AND RECALL SCORES OF BOTH GROUPS FOR ITEMS OF THE ORIGINAL LIST WERE NOT DIFFERENT FROM A 3RD GROUP WHICH HAD LEARNED ALL 3 LISTS IN THE WAKING STATE. ALL GROUPS SHOWED SUBSTANTIAL RETROACTIVE INHIBITION WHEN COMPARED TO CONTROLS WHO HAD LEARNED NO INTERVENING LIST. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1966**

**Evans, Frederick J.; Thorn, Wendy A. (1966). Two types of posthypnotic amnesia: Recall amnesia and source amnesia. International Journal of Clinical and Experimental Hypnosis, 14 (2), 162-179.**

**Posthypnotic recall amnesia refers to S's inability to recall, when challenged posthypnotically, the events which occurred during hypnosis. Posthypnotic source amnesia, occurs when S subsequently remembers the experiences of hypnosis, but has no recollection of acquiring the experiences. Data from 3 samples are presented to support the distinction between the 2 types of amnesia. Of 243 Ss, 18 experienced recall amnesia, 26 displayed source amnesia, but only 4 developed both kinds. There were no differences in rated depth of hypnosis of these 3 subgroups. Recall amnesia and source amnesia correlated .37, .38, and .39, respectively ( $p < .001$ ) in the 3 samples. The evidence indicates the 2 types of amnesia are different phenomena. Similarities between source amnesia and certain (dissociative) normal and psychopathological memory processes are discussed. (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**O'Connell, D. N. (1966). Selective recall of hypnotic susceptibility items: Evidence for repression or enhancement?. International Journal of Clinical and Experimental Hypnosis, 2, 150-161.**

**5 samples of Ss given initial standardized tests of hypnotic susceptibility were analyzed for posthypnotic item recall. All samples showed evidence of selective**

recall favoring passed items compared to failed items. 4 samples however, showed greater selectivity among the low-scoring Ss, contrary to previous report. This evidence is interpreted as favoring an interpretation of selective recall in terms of an enhancement rather than a repression model. Intersample differences in pattern of recall are stressed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Orne, Martin T. (1966). On the mechanisms of posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 2, 121-134.**

Reviews experimental and clinical evidence about posthypnotic amnesia. 2 interpretations are contrasted which seem sharply opposed: (1) posthypnotic amnesia may be seen as essentially like any other hypnotically suggested experience. It can be considered as an explicitly or implicitly administered posthypnotic suggestion. (2) Amnesia can be viewed as a form of dissociation. 1 possible mechanism of such dissociation may be a basic difference of the structure of thought processes involved in hypnosis compared to those of normal waking experience. In this sense amnesia should occur independently of suggestion and be different in kind from most other hypnotic phenomena. The former mechanism may occur more frequently in experimental situations and the latter, in clinical contexts. (Spanish & German summaries) (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Stross, L. (1966). Impulse-defense implications in a case of amnesia. International Journal of Clinical and Experimental Hypnosis, 2, 89-103.**

An 18-yr-old girl with a delinquent history leading to several suicide attempts and a fugue is described as she was observed during shifting phases of her amnesic syndrome. Using the case study as a research tool, it is suggested that alteration of ego state might be an archaic, primitive means of defense against relatively unneutralized, intense drives. More speculative are the propositions, generated from this case, that the ego could employ different defensive means with regard to libidinal and aggressive drives and that alteration of ego state might be a specific defense against aggression. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1965**

**Field, Peter B.; Evans, Frederick J.; Orne, Martin T. (1965). Order of difficulty of suggestions during hypnosis. International Journal of Clinical and Experimental Hypnosis, 13, 183-192.**

This study tests the hypothesis that successful response to suggestion during hypnosis predisposes to further successful response, but failure leads to subsequent failure. The Harvard Group Scale of Hypnotic Susceptibility was administered to 2 groups of 51 volunteer students. For 1 group, 8 of the 12 items were administered in the order easy-to-difficult; for the 2nd group, in the order difficult-to-easy. Total

and 8-item mean scores, and frequency distributions, did not differ significantly between groups. Except for the item measuring posthypnotic amnesia, item difficulties for the 2 groups did not differ significantly. Although the difficult-to-easy group was more amnesic, the 2 groups recalled a similar number of additional items when amnesia was "lifted." The block of 4 easier items was relatively easier when preceded by a block of 4 harder items and, similarly, the harder items were relatively less difficult if preceded by a block of easier items. The magnitude of this effect was small, and the order effect hypothesis was basically not supported. Future research should consider the S's subjective impression of success and failure. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hilgard, Ernest R.; Cooper, L. M. (1965). Spontaneous and suggested posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 13 (4), 261-274. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 85)

This investigation was carried out to obtain comparable figures on the prevalence of spontaneous and suggested posthypnotic amnesia. 91 introductory psychology students were randomly assigned to 1 of 2 groups, and were required to serve as Ss for 2 consecutive days. The standard induction of the Stanford Hypnotic Susceptibility Scale, Form A was used on the 1st day, and that of Form B on the 2nd. Suggestibility items were then presented and served to appraise susceptibility and to test for amnesia. For 1 group, spontaneous amnesia was tested on the 1st day, and suggested amnesia on the 2nd day. This order was reversed for the 2nd group. Using as evidence of amnesia that 4 or fewer of the 10 possible items were recalled, 6 (7%) showed spontaneous amnesia on 1 of the 2 days, while a significantly larger number, 32 (35%), showed suggested amnesia. When the groups were subdivided on the basis of susceptibility scores, it was found that there is a marked advantage for suggested amnesia over spontaneous amnesia for highly susceptible hypnotic Ss, while this difference essentially disappears for low Ss. It was further found that (a) suggested amnesia is significantly greater than spontaneous amnesia whether or not 1 follows the other, (b) there is a small effect of the suggested posthypnotic amnesia for all levels of susceptibility, but this becomes pronounced with susceptibility scores of 6 and above, (c) the highly susceptible hypnotic Ss show no more spontaneous posthypnotic amnesia than do other Ss. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Dorcus, Roy M. (1960). Recall under hypnosis of amnesic events. International Journal of Clinical and Experimental Hypnosis, 8 (1), 57-61.

NOTES

1:

The author reported on hypnosis work with eight cases, four dealing with attempts to recall misplaced or lost articles and four dealing with recall of information related to the commission of crimes. He concluded "that recall is not greatly improved under hypnosis. However, when strong emotional elements surround the events to be recalled some additional information may be secured" (p. 60).

1956

Dittborn, Julio M. (1956). Toward a semeiology of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (1), 30-36.

"19 subjects were chosen among two hundred that in the year the experiment took place (1954) were to be 20 years old. 11 of these subjects qualified themselves as good swayers, whereas the 8 others were considered somehow refractory to the postural swaying test.

"All 19 went under a standard hypnotic induction: the operator employed the same words in all cases, and requested from all the execution of the same acts.

"Several involuntary signs of standard induction are described, which reveal that the subject has attained a convenient degree of muscular relaxation after appropriate suggestions.

"Fatigue is apparently an important source of spontaneous amnesia in good swayers.

"In the analyzed cases no involuntary sign has been detected, that could reveal us whether the inducted subject will or not present spontaneous post-hypnotic amnesia" (p. 36).

NOTES

1:

NOTES: Includes standardized tests of depth

1954

Schneck, Jerome M. (1954). The divided personality: A case study aided by hypnosis. International Journal of Clinical and Experimental Hypnosis, 2 (3), 220-232.

NOTES

1:

"Summary. Amnesia as a symptom assumes proportions more complex than would appear on the surface and the role of memory loss with specific reference to hypnotic recovery methods has been presented in several reports. Hypnotherapy would appear to be a preferred technique for resolving the symptom and at times for more extensive investigation of the underlying problems. The case reported now involved an extensive memory loss for past life, including personal identity. This was followed after nearly a year by recall and concurrent amnesia for the intervening time period. The latter amnesia was dispelled by recall at first under hypnosis and then by post-hypnotic extension and elaboration of the nuclear material. The patient's history was outlined and several facts of apparent importance in relation to the memory loss were revealed. The purposive and motivational features were stressed. Therapy was conducted in a medico-disciplinary setting with limitations based on administrative requirements. Military-legal complications of the patient's personality disorder and functioning were outlined. The concept of the divided personality was introduced and related to multiple personality and to another type of behavior which is quite similar to the divided personality except that periods of amnesia are not involved. The divided personality involves major cleavages in the continuity of living with amnesia and the

establishment of the individual in a setting where he undergoes extensive, significant operations relating to work, general activities, and even courtship and marriage. Unlike the generally accepted attributes of multiple personality involving considerable overt behavior, affect, and attitude alterations, the divided personality continues to function with his accustomed overt attitudes, interests, affect, and method of relating on an interpersonal level. Descriptively and overtly he is not too different if at all, but he seems to begin life anew in terms of setting and personal contacts. Cases of this type should be studied further with care, whenever possible, for further elicitation [sic] of psychodynamics. Hypnosis as a tool in treatment and investigation should prove helpful and is to be considered important.

## **ANALGESIA / ANESTHESIA**

**1995**

**Eastwood, John D.; Gaskaski, Peter; Bowers, Kenneth S. (1995, November). Frequency of pain reporting and analgesia: Exploration of a possible interaction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

### **NOTES**

**1:**

Two theories of pain control by hypnosis currently exist: 1. Socio-cognitive model - patient actively copes with noxious stimulus. Hypnotic analgesia should be like cognitive techniques like stress inoculation training. It requires deliberate effort. 2. Dissociative control model - pain reduction requires little cognitive effort.

These 2 theories have different predictions. He explains "ironic effects" theory, in which person must identify pain to reduce pain. Wagner's reflexivity constraint: any process of mental control must be consistent with state we are trying to create.

This investigation involved 25 Highs and 24 Lows who reported pain, produced by strain gauge. Taught either hypnotic analgesia or stress inoculation. Reported every 5 sec (high load) or 45 sec (low load). Subtracted report from baseline to make pain reduction scores. Highs in hypnosis had no difference in pain reduction under high or low mental load. For the other 3 groups (Highs under stress inoculation; Lows under either hypnosis or stress inoculation) the results were different. That is, for Highs in hypnosis the mean of pain reduction scores was the same even when challenged by frequent reports of how much pain was being experienced.

Results are congruent with Miller and Bowers' dissociative control model.

Wagner's ironic process theory is useful. Frequency of pain reporting moderates Ss reports of pain in analgesia. These results challenge the cognitive social model of hypnotic analgesia and support a dissociative control model. Unlike stress inoculation, hypnotic analgesia does not require cognitive effort for high hypnotizable subjects.

**1994**

**Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.**

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs) possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics. Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco

#### NOTES

1:

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall sequence of light changes that occurred during 60 sec when arm was in the cold water.

Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)

Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.

Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.

**30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).**

**60 second pain scores: Showed same trend.**

**There was no difference whatsoever for the lows.**

**Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).**

**Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.**

## **RESULTS.**

**Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.**

**Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.**

**P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.**

**State and trait differences are apparent.**

**The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory**

**The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."**

**Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.**

**Kiernan, Brian; Dane, Joseph R. (1994, October). Hypnoanalgesia reduces new physiologic index of pain, the R-III Index, but the role of hypnotic susceptibility remains unclear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

## **NOTES**

**Stimulated by work of Basil Finer, and following upon the Neodissociation theory of Hilgard; pain is registered by the body but dissociation that produces analgesia is a function of higher brain centers.**

Could hypnotic analgesia be mediated lower, at the level of the spinal cord? Gate at dorsal horn could be open or shut; subject to descending modulation. Is hypnosis involved in descending modulation of activity in the dorsal horn?

Hypothesis: reduced pain intensity would be associated with reduced activity at dorsal horn. From Price & Barber, we wanted to look at affect and intensity aspects of pain. Polysynaptic reflex, R-III, latency consistent with conduction velocity (when hand touches a hot stove); even with severed spinal cord injury we still demonstrate the reflex. The magnitude of reflex is linearly related to the pain sensation. The stronger the electrical pulse, the greater the magnitude of the reflex. Magnitude of reflex is linearly related to subjective pain. It is an index of nociceptive activity.

Procedure: Evoke reflex with electrical stimulus at ankle; measure signal at muscle with EMG. We anticipated that at dorsal horn, descending modulation would dampen signal.

15 healthy volunteers. Sural nerve was stimulated. R III reflex measured via EMG response. Used the visual analogue scale (VAS) to assess pain.

1993

Bejenke, Christel J. (1993, October). A clinician's perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

1:

Presents point of view of a private practice anesthesiologist in Santa Barbara, California. Used hypnosis for 20 years.

Use of hypnosis as hypnoanesthesia is rare since Esdaile, with brief resurgence in 50's, because surgery techniques advanced before anesthetics did in areas that were very risky. Now it is a matter of choice, and may be undertaken because of a patient's extreme fear of anesthesia, previous bad experience with anesthesia, fervent belief in holistic method, allergy, or previous experience with hypnosis. Still advised to use hypnosis for MRIs, radiation procedures, former drug addicts (who may have problems with drugs), burn patients, release of neck contractions, and medical procedures--especially with children--like lumbar puncture.

She disagrees with Kroger's estimate of only 10% of patients being able to use hypnoanesthesia; she does not believe it requires a lot of training, or profound muscle relaxation.

There is no indication of how many cases are actually done with hypnosis. Also, published cases are not representative of the quantity or complexity of cases; most published cases have a few extraordinary characteristics. The Irish surgeon Jack Gibson has done more than 4000 cases, some very complicated.

I have used it for D & Cs, and complex cases that were not published. Most of my patients elected to be alert during the hypnosis and conversed with their surgeons. The most common benefit is that recovery from anesthesia is not necessary; but these days with newer anesthetics recovery from anesthesia is rapid anyway. However, if as we suspect anesthesia affects immune function, that would be another reason to use hypnosis.

Preparation for surgery may be of three types: 1. formal hypnosis techniques 2. "hypnoidal" techniques that aren't formal 3. unprepared patients in whom hypnosis is used at last moment.

Examples. 1. Formal hypnosis: This symposium deals with this type of approach. Three groups derive particular benefit -- those requiring prolonged artificial ventilation postoperatively (because otherwise sedation must be used, which leads to complications), where prepared patients tolerate interventions calmly and comfortably -- cancer patients, for whom this can be first experience of patient to see self as active participant in care rather than a victim of the illness and of complicated technology -- pediatric patients. 2. Hypnoidal (hypnosis like) techniques: This is the most important application. Time doesn't permit much discussion here. Patients are in an altered state when they come for surgery, highly suggestible, and suggestions appear to be as effective as during formal trance state. The doctor can elicit positive responses during "casual conversation" while seemingly giving information to the patient. (The reverse is true also, with inadvertent negative suggestions, to the detriment of the patient.) Scrupulous adherence to medical facts is important during this type of conversation.

Operating room fixtures are useful for focus of attention, and I have published this information in an article.

Recovery room also is place where case specific information and appropriate suggestions can be given. Patient can experience his ability to alter sensations, for the first time, following suggestions.

Remainder of the hospitalization offers opportunity for reinforcing case specific positive suggestions.

Bennett, Henry L. (1993, October). Hypnosis and suggestion in anesthesiology and surgery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

1:

He began by saying that he is opposed to using hypnosis for surgery, though he favors a theory of how hypnosis effects physiological change, and cites T. X. Barber's classic "Changing Unchanging Bodily Processes."

Relaxation puts patient in a "psychological strait jacket" because surgery is so highly stressful. He gives information "about how to go through the surgery more comfortably," gets across the idea about coping style, tells them surgery is exertional and that they are tired afterward, that he can help them "using things you already know how to do," and specifies exactly what they can do--using model of himself as a trainer.

In some recent research he used pairs of pictures, some of which lead to pupillary constriction (blood pressure goes down) or dilation (blood pressure goes up). Instructing them to look, patients looked twice as long at the pictures than they did during free gaze. When not instructed to look, heart rate went down; when told to look, heart rate went up. So the researchers went back to free gaze. He uses this as a metaphor for many of the pre- surgery preparation activities that encourage relaxation "inappropriately."

He cites Cohen & Lazarus re vigilant copers, Price et al (1957), and some other studies on epinephrine effects. He uses examples of work patients may have done (e.g. planting a garden) when talking with patients prior to surgery, that gives them a sense of accomplishment later.

You have to give specific instructions or suggestion, not general relaxation suggestions.

Question from the audience: Can preoperative instructions (not hypnosis) diminish blood loss.

In Bennett's answer he seems to be reporting the earlier study: they found 150- 4000 cc blood loss, high variability. Extent of blood loss was determined by extent of surgery, by instructions to patients vs no instructions.

This study was replicated by Enqvist, Bystedt, & von Konow in the Anesthesia conference at Emory University in 1992.

May 1993 Western Journal of Medicine article, Disbrow, Bennett, & Owinos, with 40 lower abdominal surgery patients who got specific instructions or not. The SHCS was used to measure hypnotizability: highs resolved quicker than low hypnotizable patients. They also found that instructed patients did better than those who did not get specific instructions.

There are now 3 replications of McClintock's study: people use less medications after surgery, when tapes about rapid recovery are played \*during\* surgery.

Bennett is now using tapes with suggestions for recovery during surgery.

Blankfield, Robert P. (1993, October). Suggestion, hypnosis, and relaxation as adjuncts for surgery patients: Lessons from studies involving cardiac surgery patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL

## NOTES

1:

The author stated that his research and the few other studies of cardiac surgery patients do not support idea that cardiac surgery patients benefit from hypnosis and suggestion.

Types of intervention have varied: hypnosis, suggestion, relaxation; pre-op, during, or post-op; with many different outcome variables.

Aiken & Henrichs (1971) study was nonrandomized, nonblinded, for 30 patients getting open heart surgery. Treated patients had benefits.

Surman, Hackett, Silverberg, & Behrendt (1974) had a randomized, single-blind design for 40 patients taught Self Hypnosis (S-H), for elective mitral valve surgery. No difference in benefits. But 45% of patients taught S-H reported a subjective sense of benefit (though objective indicators didn't support that). [He says the difference between subjective/objective outcome ratings is important.]

Hart (1980) used randomized, single-blind design for 40 patients who had open heart surgery. No differences found except initial 3 days post surgery.

Greenleaf et al (1992) - see her paper presentation of this date.

Blankfield et al (presented at Society of Clinical and Experimental Hypnosis meeting in 1992) used a randomized, single-blind design for 95 patients, who were

randomly assigned to taped suggestions, music, or controls. No differences were found in benefits.

Our data were re-analyzed: patients who felt tape was helpful were compared to the remaining 62 patients, but there again were no differences in amount of narcotics used for pain, though there was a trend in the right direction; nursing assessments failed to identify less anxiety.

The point is, whereas the bulk of publications suggest benefits, there is little evidence with this population. Could these patients be different in personality, ability to respond to intervention, amount of external stimuli? They should be studied because there are a lot of these patients with only a few surgeons and you don't have to gain the cooperation of a lot of different surgeons to do this kind of research. Also, there is uniformity in cardiac surgery whereas standard operating surgery is in a state of flux in other areas (e.g. movement from generous incisions to micro procedures, and patients receiving this type of surgery remain in hospital for a week whereas this opportunity to study them during inpatient post-surgical period is disappearing in other areas). It is my opinion that cardiac patients may not be highly receptive to suggestion.

Curiously, according to Surman and my research, 1/2 the subjects report benefits. Either some benefits are subtle, or they are reporting a placebo effect.

Future studies need more patients, and the investigators must stratify on personality inventory variables such as Type A personality, hypnotizability, motivation, anxiety, depression, family support, social support systems. This is labor intensive, to determine which characteristics determine differing outcomes. The patients used in this type of research require more presurgery evaluation than previously has occurred.

The MMPI can be self administered and is widely acceptable, but is cumbersome, not well suited to people who are acutely ill. Assessment of Type A personality is important because Type A's might be less receptive to suggestion. Structured interview is time consuming, but a 52-item questionnaire can be self administered. Other factors listed above are important.

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, 15, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic

analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

1992

Anonymous (1992, May). Studies: Learning can occur while under anesthesia. Daily Breeze (South Bay, Los Angeles County).

NOTES

1:

"Surgical patients can absorb information while they're knocked out, and even learn tips that help with recovery, researchers reported Friday at a symposium on memory and anesthesia.

"Researchers at Papworth Hospital in Cambridge, England, studied 51 cardiac patients, one-third of whom heard a tape of positive 'therapeutic suggestions' during surgery. Another third heard batches of word associations; the rest heard a blank tape.

"Patients who were played the suggestion tape - which told them they were doing well, or wouldn't feel much pain - left the hospital 1 1/2 days earlier on average than other patients.

"Another study, from the University of Arizona College of Medicine, found that surgical patients who heard specific pain-relief suggestions recovered more easily than those hearing vague advice such as, 'Think of being well.'

"'These are still early days to invest in every operating suite buying a tape recorder to play for the patients,' said Dr. Sunit Ghosh, a researcher with the Papworth team. 'But this definitely does hold promise.'

"Scholars at the second annual Symposium on Memory and Awareness in Anesthesia said patients rarely wake up recalling - unprompted - something that happened during anesthesia.

"But several studies showed subconscious learning while the patients were out cold.

"Not everyone accepted the findings.

"It shows an enormous sensitivity on the part of the brain, if it can be shown,' said Eugene Winograd, an Emory University psychologist and organizer of the Emory-sponsored conference. 'I'm not confident it has been shown yet.'

"Some researchers in other studies found no association between messages heard during anesthesia and learning.

"Dr. Alan Aitkenhead, professor of anesthesia at the University of Nottingham in England, found no significant difference between patients who heard recuperative suggestions and patients who were treated to a deliberately dull history of the hospital where they were.

"Aitkenhead said his study kept all patients quite deeply anesthetized, and that may be why they might not have learned as much as patients in other studies.

"By far, most likely, it's a difference in levels of anesthesia,' he said.

"The Papworth researchers, in another study, found that some patients showed strong word associations after hearing tapes of groups of words during surgery; but other patients under a different anesthesia didn't.

"There needs to be standardization of our testing,' Ghosh said. 'I think it's partly related to the anesthesia technique and partly related to the way in which material is presented to the patient.'

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

Excluded: Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital

stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

**Music:** Herb Ernst, Dreamflight II. Suggestions: Music background, permissive, based on Evans & Richardson's study.

**Outcome Measures:** Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

Hajek, P.; Jakoubek, B.; Kyhos, K.; Radio, T. (1992). Increase in cutaneous temperature induced by hypnotic suggestion of pain. Perceptual and Motor Skills, 74, 737-738.

Eight patients with atopic eczema and six healthy subjects were given hypnotic suggestion to feel pain in the upper part of the back and in one case on the palm. An average local increase in skin temperature of 0.6 degrees centigrade (detected by thermovision) occurred under this condition. For some patients cutaneous pain threshold was increased before the experiment by means of repetitive hypnotic suggestion of analgesia. These subjects reported feeling no pain subjectively, but the local change in skin temperature was equal in both cases. The results suggest a central mechanism induced by measuring changes in pain threshold in the skin, which changes are independent of local changes in blood flow. Local pain in the middle of the upper part of the back, and in one subject for comparative purposes in the region of the right palm, was induced during a single hypnotic session by specific suggestion which emphasized a subjective feeling of local pain lasting for 6 minutes. In four of the eczema patients long-lasting cutaneous analgesia was induced before this experiment by a different suggestion which stressed the impossibility of conducting pain from the skin to the brain and which was repeated in ten consecutive hypnotic sessions. The spatial thermal reaction of the skin surface was monitored, with consecutive recordings taken at 20-sec. intervals before and after finishing the hypnotic suggestion of pain. There was a gradual increase in temperature (1.08 degrees Fahrenheit). In the four eczema patients with long-lasting cutaneous analgesia treated equally, the thermal reaction of the skin was similar to that described above although no subjective feeling of pain was reported. These subjects reported feeling only that their skin was getting warmer at the specified place.

Hargadon, Robin M.; Bowers, Kenneth S. (1992, October). High hypnotizables and hypnotic analgesia: An examination of underlying mechanisms. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

Bowers' dissociated control adaptation of Hilgard's neodissociation theory of hypnosis posits that higher control systems are not used if lower systems are activated.

Imagery may be less important for achieving hypnotic effects. It also may contribute differently than previously thought, an uncorrelated factor. If imaginal involvement and imagery is integral to the production of analgesia using hypnosis, one would get results different than if not integral.

Research: 65 Ss rated as high on two hypnotizability tests participated.

### Session 1:

Procedure entailed finger pressure pain: baseline, followed by 2 hypnosis treatment trials. Ss were not informed of the second trial before they did the first.

Standard suggestions: imagery congruent with the suggestion (hand like block of wood, protected by a glove)

Imageless condition: your hand will remain comfortably nonresponsive to the pressure; you will not allow other things to come into your mind.

### Outcome Measures

Analogue scale for pain 0-10

Nonvoluntary experience rated 0-4

### Session 2:

Administered Tellegen Scale, Woody & Oakman Scale, Marks Vividness of Imagery, Bowers' Effortless Experiencing, and Duality of Experience during age regression.

## RESULTS.

No difference was found between the standard and imageless conditions in amount of pain reduced. So in high hypnotizables, use of imagery or not doesn't matter for controlling pain. Some Ss had a clear preference however, for one or the other method (even counter to their own expectations).

Feelings of nonvolition did not differ as a function of imagery use.

Multiple regression showed effects of hypnotizability and effortless experiencing. Ss who have an effortless experiencing of imagery benefit from using it to reduce pain; those who find it more effortful do better without imagery when attempting to reduce pain.

Contrary to last year's results reported by Bowers, high imagery was related to duality of experiencing in age regression.

Dissociated control theory is consistent with the results but not necessarily demonstrated. It is important to discriminate between imagery as a mediator rather than as a co-occurrence. This research suggests, as did Zamansky's work on counter suggestions, that imagery is not as critical for hypnotic response as we previously thought.

## 1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

#### NOTES

1:

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids).

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest—at least 1 day in postoperative hospital stay or one half day in fever.

Discussion: The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the

case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good...Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

1990

NOTES

1:

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore

**goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.**

**The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.**

**The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis. The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).**

**Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.**

**Results were as follows.**

**1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]**

**2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.**

**3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions**

(indicating that peripheral and central afferent conduction velocities were the same).

**Discussion.** "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

Harmon, Teresa M.; Hynan, Michael T.; Tyre, Timothy E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. Journal of Consulting and Clinical Psychology, 58, 525-530.

Studied the benefits of hypnotic analgesia as an adjunct to childbirth in 60 nulliparous women. Subjects were divided into high- and low-susceptibility groups before receiving six sessions of childbirth education and skill mastery using an ischemic pain task. Half of the subjects in each group received a hypnotic induction at the beginning of each session; the remaining control subjects received relaxation and breathing exercises typically used in childbirth education. Both hypnotic subjects and highly susceptible subjects reported reduced pain. Hypnotically prepared births had shorter Stage 1 labors, less medication, higher Apgar scores, and more frequent spontaneous deliveries than control subjects' births. Highly susceptible, hypnotically treated women had lower depression scores after birth than women in the other three groups. The authors believe that repeated skill mastery facilitated the effectiveness of hypnosis in the study.

1988

Boeke, S.; Bonke, B.; Bouwhuis-Hoogerwerf, M. L.; Bovill, J. G.; Zwaveling, A. (1988). Effects of sounds presented during general anaesthesia on postoperative course. British Journal of Anaesthesia, 60, 697-702.

In a double-blind, randomized study, patients undergoing cholecystectomy were administered one of four different sounds during general anaesthesia: positive suggestions, nonsense suggestions, seaside sounds or sounds from the operating theatre. The effect of these sounds on the postoperative course was examined to

assess intraoperative auditory registration. No differences were found between the four groups in postoperative variables

**NOTES**

**1:**

Postoperative course was evaluated by 5 variables: pain, nausea and vomiting, evaluation by nursing staff, subjective well-being, and duration of postoperative hospital stay. From the chart they used amount of postoperative analgesia, volume of nasogastric suction or drainage and fluid lost through vomiting over 6 days post-operatively; duration of postoperative hospital stay was registered after discharge. See p. 699 for details, including wording of questions. They cite their own earlier study that got positive results, and explain the difference as possibly due to use of only male voices on tapes, lack of difference in the sounds on tapes in this study, insensitivity of outcome measures (patients stayed longer in first study than in this one), and sample too small in this study (106).

Boeke et al. (1988) report that this double-blind, randomized study of positive suggestions, noise or sounds from the operating theatre presented to 3 groups of patients undergoing cholecystectomy during general anaesthesia had positive results for older patients. patients > 55 years who received positive suggestions had a significantly shorter postoperative hospital stay than the other patients in this age category.

**Goldmann, Les; Ogg, T. W.; Levey, A. B. (1988). Hypnosis and daycase anaesthesia. A study to reduce preoperative anxiety and intraoperative anaesthesia requirements. Anesthesia, 43, 466-469.**

52 female patients having gynecological surgery as day cases received either a short preoperative hypnotic induction or a brief discussion of equal length. Hypnotized patients who underwent vaginal termination of pregnancy required significantly less methohexitone for induction of anesthesia and were significantly more relaxed as judged by their visual analogue scores for anxiety. Less than half the patients were satisfied with their knowledge about the operative procedure even after discussions with the surgeon and anesthetist. A significant correlation was found between anxiety and perceived knowledge of procedures. Results suggest that preoperative hypnosis can provide a quick and effective way to reduce preoperative patient anxiety and anesthetic requirements for gynecological daycase surgery.

**1987**

**Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo?**

**NOTES**

**1:**

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in *Psychosomatic Medicine*, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is

hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects. The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

Goldmann, Les (1987, October). Ways of maximizing patient memory for events during anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

1:  
Reported a series of experiments: 1. Under atropine, we did not get an orienting response to things having to do with the operation, but did get an orienting response to jokes, dogs barking, and the name of a polite anesthetist. 2. Replicated the research by Bennett and didn't get ear pulling response. 3. Studied cardiac patients. Gave subjects a pre-anesthesia speech of importance [of hearing under anesthesia? Notes here are not clear.] and a chin touch suggestion that was successful. 7 of 30 subjects gave reports of recall - usually recalled something of particular interest to them. These 7 subjects appeared more anxious postoperatively than previously. 4. Recognition study: Pre-op "IQ" test. Gave subjects answers to the questions while they were under anesthesia, and postoperatively they had better performance than previously. 5. Recall study, double blind. Interviewer learned something about the patient, and told them something about what was learned about the patient during anesthesia e.g., You have a lovely garden. After surgery they were hypnotized by someone who did not know what information was given, and then recall for information "heard" under anesthesia was tested. 6. 10 female patients who were good hypnotic subjects, all received the same statement under anesthesia, that they would believe for a moment that they had green hair. During the interview, one said she was fascinated by green things, one wanted to go home and wash her hair.

Goldmann, Les; Shah, M. V.; Hebden, M. W. (1987). Memory of cardiac anesthesia: Psychological sequelae in cardiac patients of intra-operative suggestion and operating room conversation. Anesthesia, 42 (6), 596-603.

Thirty elective cardiopulmonary by-pass surgery patients were interviewed pre- and postoperatively. A random selection of patients heard a prerecorded audio tape toward the end of surgery after they were rewarmed to 37 degrees C. The tape contained suggestions for patients to touch their chin during the postoperative interview, to remember three sentences, and to recover quickly. The interviewers were blind to the experimental conditions. The experimental group touched their chins significantly more often than the control group ( $p = .015$ ). Sentence recognition did not reach significance, perhaps due to the small numbers and low salience of the stimuli. Seven patients (23%) recalled intraoperative events, five with the aid of hypnosis. Three reports (10%) were corroborated. Preoperative medication ( $p < .01$ ) and postoperative anxiety ( $p < .05$ ) were significant predictors of those patients who reported recall.

Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia,

hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

## NOTES

1:

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the

present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259). The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

1986

Farthing, G. William; Venturino, Michael; Brown, Scott W.; Lazar, Joel D. (1986, April). Internal vs. external distraction in the control of pain as a function of hypnotic susceptibility. [Paper] Presented at the annual meeting of the Eastern Psychological Association, New York.

NOTES

This study tested the prediction, derived from their 1984 study: for highly hypnotizable subjects, pain reduction methods involving either attention to external distracting stimuli or attention to internally generated distracting images will be effective in reducing pain. However, for low hypnotizables only external stimulus distraction will be effective, and internal images will not be effective distractors for reducing pain.

Used independent groups of college students, with 1/3 highs, 1/3 mediums, and 1/3 lows. Used five conditions: (n=12 per subgroup 3H x 5T) 1. Suggestion - Subjects told "to image as vividly as you can that your hand is numb and insensitive, as if it were made of rubber." (No hypnotic induction was used.) 2. Guided imagery - Subjects told to listen to a story that would be read to them, and to try to imagine the scenes as vividly as possible. (Story included scenes where the s was the main character.) 3. Word memory - Subjects told to listen to a list of words that would be read to them and try to remember them for later recall test (30 abstract nouns, at rate of 1 every 2 seconds. 4. Pursuit rotor - which subjects did during the ice water immersion. 5. Placebo control - included suggestion, "For this test you will find that you can succeed in not being disturbed by the cold water if you carefully follow the following instructions. While your hand is in the water you should not try to control

your thoughts. Just let your mind wander freely to whatever feelings or thoughts or ideas happen to come to you."

1985

Eich, Eric; Reeves, John L.; Katz, Ronald L. (1985). Anesthesia, amnesia, and the memory/awareness distinction. Anesthesia and Analgesia, 64, 1143-1148.

Several studies have shown that surgical patients cannot consciously recall or recognize events to which they had been exposed during general anesthesia. Might evidence of memory for intraoperative events be revealed through the performance of a postoperative test that does not require remembering to be deliberate or intentional? Results of the present study, involving the recognition and spelling of semantically biased homophones, suggest a negative answer to this question and imply that intraoperative events cannot be remembered postoperatively, either with or without awareness.

#### NOTES

1:

"In this experiment, we attempted to apply the distinction between memory and awareness of memory to the question of whether adequately anesthetized and apparently unconscious patients can register and retain what is said in their presence during surgery. Prior research relating to this question has focused, for the most part, on the ability of postoperative patients to recall or recognize a specific item....The inference need not be drawn, however, that 'patients in so-called surgical planes of anesthesia cannot hear' (15, p. 89) or that anesthetized patients cannot encode and store in memory events that transpire during their surgery. The possibility remains that even though the effects of memory for intraoperative events may not--and probably cannot--be revealed in postoperative tests of retention that require remembering to be deliberate or intentional, such effects might be evident in the performance of tests that do not demand awareness of remembering.

"To explore the possible dissociation between memory and awareness of memory for intraoperative events, we modeled our experiment after a recent neuropsychological study by Jacoby and Witherspoon (5)" (p. 1143).

"...it appears that the prior presentation of a word has a substantial impact on its subsequent interpretation and spelling, regardless of whether or not the word is correctly classified as 'old' in a later test of recognition memory" (p. 1144).

"Approached from the standpoint of anesthesia theory and practice, the idea that recognition and spelling tap different memory processes or systems raises an interesting question for research. Specifically, suppose that during surgery, an anesthetized patient listens to a series of short, descriptive phrases, each consisting of a homophone and one or two words that bias the homophone's less common interpretation (e.g., war and PEACE, deep SEA). Suppose further that several days after surgery, the patient is read a list composed chiefly of old and new homophones (i.e., ones that either had or had not been presented intraoperatively) on two successive occasions. On one occasion, the patient is simply asked to spell each list item aloud; on the other occasion, the patient is asked to state aloud which list items he or she recognizes as having been presented during surgery. Given the situation

sketched above, might the patient spell significantly more old than new homophones in line with their less common interpretations, and yet fail to reliably discriminate between the two types of items in the test of recognition memory" (p. 1144).

**1984**

**Gillett, Penny L.; Coe, William C. (1984). The effects of rapid induction analgesia (RIA), hypnotic susceptibility and the severity of discomfort on reducing dental pain. American Journal of Clinical Hypnosis, 27, 81-90.**

**ACT** The study was designed to address three issues involved in hypnotic analgesia for dental pain: 1) The effectiveness of J. Barber's (1977) hypnotic procedure for producing analgesia in its usual form and a shortened form, 2) the relationship of hypnotic susceptibility to analgesic responsiveness, and 3) the effect of dental procedure discomfort level on hypnotic analgesia. Sixty unselected dental patients were administered either J. Barber's (1977) RIA or a shortened version of it (SI) before their dental treatment. Measures of hypnotic susceptibility were obtained as were dentists' ratings of the discomfort levels involved in the various dental procedures administered. The 52% success rate of the present study failed to replicate Barber's very high (99%) success rate, although procedural differences might explain the lower rate. RIA and SI were equally effective. Hypnotic susceptibility level did not relate significantly to success with hypnotic analgesia. The level of dental procedure discomfort was the clearest predictor of success with hypnotic analgesia. The greater the discomfort rating of a procedure the less likely that hypnotic analgesia would be successful.

**1980**

**Edwards, William Henry (1980). Direct versus indirect hypnosis for the relief of chronic pain in spinal cord injured patients (Dissertation, United States International University). Dissertation Abstracts International, 40 (10-B), 4996.**

**NOTES**

**1:**

This study compared effectiveness of direct hypnosis and indirect hypnosis (Rapid Induction Analgesia, developed by Joseph Barber) in reducing experimental and clinical pain in spinal cord injured patients. The 30 male paraplegic patients who had chronic benign pain volunteered for the study. They were administered three tests: the Pain Estimate Scale (Sternbach, 1974), Ischemic Muscle Pain Test (IMPT), and the Stanford Profile Hypnotic Susceptibility Scale, Form II -- SPHSS -- (Weitzenhoffer and Hilgard, 1967). Each patient experienced three sessions: (1) Baseline Control, (2) Direct Hypnosis, and (3) Indirect Hypnosis. Patients were randomly assigned to Sessions (2) and (3). The results indicated no significant statistical difference in the effectiveness of direct versus indirect hypnotic analgesia in these chronic pain patients. Direct and indirect hypnosis were equally effective; hypnotizability was not associated with outcome. Furthermore, there was no

interaction between treatment effects and pretreatment pain level. The results were similar for both clinical and experimental pain.

1979

Barber, Joseph; Donaldson, David; Ramras, Susan; Allen, Gerald D. (1979). The relationship between nitrous oxide conscious sedation and the hypnotic state. Journal of the American Dental Association, 99, 624-626.

NOTES

1:

Nitrous oxide-oxygen produces a state of consciousness in the patient that is reported to be similar to the hypnotic state. In this investigation, the authors test the hypothesis that nitrous oxide-oxygen heightens a patient's responsiveness. This study apparently did not have a control group receiving nitrous oxide but no suggestions, to evaluate the amnesia and analgesic effects of the drug alone.

Bennett, Henry L.; Giannini, Jeffrey A.; Kline, Mark D. (1979, September). Consequences of hearing during general anesthesia. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

A double blind 2X2 study exposed 23 herniorrhaphy and cholecystectomy patients to either a 45 minute suggestion tape or to the actual sounds of the operation. Structured interviews conducted postoperatively assessed hypnotic susceptibility and regressed patients under hypnosis to operative events. Ten patients accurately recalled significant events from surgery but only under hypnosis. Recall was greater and more accurate in patients scoring high on the Stanford Clinical Hypnosis Scale. Fewest number of pain medications were given postoperatively to patients receiving the suggestion tape. Hernia patients showed better recall than gallbladder patients.

1977

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

1976

Chaves, John F.; Barber, Theodore Xenophon (1976). Hypnotic procedures and surgery: A critical analysis with applications to 'acupuncture analgesia'. American Journal of Clinical Hypnosis, 18 (4), 217-236.

Although hypnotic procedures are useful for reducing the anxiety of surgery and helping patients tolerate surgery, they do not consistently eliminate pain. Six factors that are part of or associated with hypnotic procedures help patients tolerate surgery. These factors pertain to patient selection, the patient-physician relationship, the preoperative 'education' of the patient, the adjunctive use of drugs, and the use of suggestions of analgesia and distraction. It appears that the same factors account for the apparent successes of 'acupuncture analgesia' as well. A frequently-overlooked fact, that most internal tissues and organs of the body do not hurt when they are cut by the surgeon's scalpel, is also important in understanding how surgery can be performed with either 'hypnoanesthesia' or 'acupuncture analgesia.'

1975

Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35.

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Acupuncture analgesia: A six-factor theory. Psychoenergetic Systems, 1, 11-21.

The dramatic successes claimed for acupuncture suggest that Western medicine has failed to identify important factors that pertain to the nature of pain and its control. This may not be the case, as there are at least six factors which are often overlooked by writers describing the absence of pain (i.e., analgesia) during acupuncture: (a) the patients accepted for surgery under acupuncture usually believe that it will work, (b) drugs are frequently used in combination with acupuncture, (c) the pain associated with surgical procedures is less than is generally assumed, (d) the patients are prepared in special ways for surgery under acupuncture, (e) the acupuncture needles distract the patient from the pain of surgery and, (f) suggestions for pain relief are present in acupuncture treatment. It is concluded that more research is needed to determine whether additional factors are needed to help explain the phenomenon of acupuncture analgesia.

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

1970

Evans, Michael B.; Paul, Gordon L. (1970). Effects of hypnotically suggested analgesia on physiological and subjective responses to cold stress. Journal of Consulting and Clinical Psychology, 35 (3), 362-371.

Relative effects of suggested analgesia and hypnotic induction were evaluated with regard to reduction of stress responses (self-report, heart rate, pulse volume) to the physical application of ice-water stress. Four groups (N = 16 each) of undergraduate female Ss, equated on hypnotic susceptibility, were run individually, receiving (a) hypnotic induction plus analgesic suggestion, (b) hypnotic induction alone, (c) waking self-relaxation plus analgesic suggestion, or (d) waking self-relaxation alone. The major findings were that suggestion, not hypnotic induction procedures, produced reductions in the self-report of distress, and that the degree of reduction

was related to hypnotic susceptibility in both "hypnotic and "waking" conditions. Neither suggestion nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of hypnotic phenomena, results are related to other literature, suggesting that an adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

**1969**

**Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, 12 (2), 100-130.**

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

**1965**

**Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.**

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

**Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.**

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a

particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Attar, A.; Muftic, M. (1964). Narcohypnosis in abdominal surgery. British Journal of Medical Hypnotism, 16 (1), 29-32.

Effectiveness of a relaxation technique to increase the comfort level of patients in their first postoperative attempt at getting out of bed was tested on 42 patients, aged 18 to 65, who were hospitalized for elective surgery. Study group patients were taught the relaxing technique; control group patients were not taught the technique. Each group had an equal distribution of cholecystectomy, herniorrhaphy, and hemorrhoidectomy patients. Blood pressure, pulse, and respiratory rates of subjects in both groups were compared prior to surgery and after the postoperative attempt to get out of bed. Subjects' reports of incisional pain and bodily distress were measured via a pain and distress scale after their attempt at getting out of bed. Amount of analgesics used in the first 24 hrs following surgery was examined. Mean differences in report of incisional pain and body distress, analgesic consumption, and respiratory rate changes were statistically significant, supporting the hypothesis that use of a relaxation technique to reduce muscular tension will lead to an increased comfort level of postoperative patients.

1961

Hilgard, Josephine R.; Hilgard, Ernest R.; Newman, Martha (1961). Sequelae to hypnotic induction with special reference to earlier chemical anesthesia. Journal of Nervous and Mental Disease, 133, 461-478.

## NOTES

Although a review of relevant literature turned up little in the way of statistical studies, some case studies were located in which unintended or unexpected results of hypnosis were observed. The authors located 15 cases in which the symptoms that developed subsequent to symptom removal using hypnosis were more disturbing than the original symptom. This type of response occurred in patients with extensive psychiatric history, prior to the hypnosis experience. However, it could not be determined whether the undesired response was due to hypnosis or to the psychotherapy that was provided to these patients.

In order to avoid the complications introduced by studying undesired sequelae in psychiatric patients receiving posthypnotic suggestions for therapeutic purposes, this investigation used a sample of non-patient university students (114 male and 106 female) who volunteered for research. Subjects were asked about "aftereffects" in followup interviews. Aftereffects that might be considered sequelae are exemplified by statements such as, "I was 'in a fog' for one hour" and "Things were hazy and vague for four hours."

Of the 220 Subjects, 17 (7.7%) reported sequelae, many of them "minor and fleeting." None of the sequelae was of psychotic proportions. Only 2.3% of the sample experienced sequelae that lasted as long as a few hours. Although the relationship of sequelae to hypnotizability was slight, there seemed to be a relationship to having had a difficult experience with chemical anesthesia in early childhood. They present six case studies, three who had difficulty with chemical anesthesia and three for whom the sequelae appeared to relate to a different kind of childhood experience.

The investigators concluded that "a routine experience of hypnosis is generally harmless in a student population, but E (or therapist) should be alert for possible aftereffects, and provisions should be at hand for occasional brief psychotherapy, even though the experiments themselves are not oriented toward therapy" (p. 477).

The authors present a psychodynamic explanation for the sequelae observed. "It is conjectured that the conflicts within the induction phase of hypnosis that produce either immediate or delayed symptoms are primarily those having to do with the exercise of power and the reaction to authority, hence, conflicts between the conscious willingness to be hypnotized and the unconscious resistance to or fear of the submissive role required. The individual forms that such conflicts take are highly varied.

"The conflicts within the established state differ, in that the state is not reached unless the conflicts of the induction are at least temporarily resolved. The new state, which has regressive characteristics, makes S vulnerable to conflicts based on reality distortions (as in suggested hallucinations) or ethical-social issues (as in suggested behavior violating his moral code or superego demands). Sometimes specific suggestions revive early experiences that were traumatic or provocative of fear.

"While the language of psychodynamics is appropriate in the discussion of these cases, the many redintegrative factors also suggest that learning theory can have much to say in explanation of them. Because learning theory has ways of dealing with conflict and conflict resolution, it can also encompass some of the problems discussed as conflicts over authority, commonly treated in psychodynamics as transference problems.

"The many reflections of earlier childhood experiences in the sequelae, including some of the dreams, suggest the promise of a developmental theory of hypnosis" (p. 477).

1960

Hernandez-Peon, R.; Dittborn, J.; Borlone, M.; Davidovich, A. (1960). Changes of spinal excitability during hypnotically induced anesthesia and hyperesthesia. American Journal of Clinical Hypnosis, 3, 64. (From 21st International Congress of Physiology, Buenos Aires, 1959, pg. 124, Abstracts)

Although hypnosis is well established, the physiological mechanisms of the hypnotic state and their related sensory phenomena are far from clear. Hernandez-Peon and Donoso have found that the magnitude of photic evoked potentials in the optic radiations of awake human subjects changed in response to previous verbal suggestions concerning the intensity of the expected photic stimulus. This striking

observation led the cited authors to propose that certain hypnotic sensory phenomena might be explained, at least partially, by changes occurring as far down as second-order sensory neurons by centrifugal mechanisms controlling the sensory input to the brain. In the intact subject it is impossible to record uncontaminated electrical indexes of afferent impulses from those lower sensory neurons. However, it is possible to gain indirect evidence of tactile sensory inflow to the spinal cord by recording cutaneous reflexes. In young males, a forearm skin reflex evoked by a single square pulse of 0-.1 msec. duration was recorded with cathode- ray oscilloscope. The amplitude of the evoked potentials was often reduced during the hypnotic state, and it was further reduced by verbally suggesting to the hypnotized subject complete anesthesia of the forearm. Reciprocally, during hypnotically suggested hyperesthesia the cutaneous reflex was enhanced. It is concluded that during hypnotic anesthesia and hyperesthesia excitability changes occur at the spinal level, and it is suggested that these changes probably involve the spinal internuncial system interposed between the dorsal root ganglion cells and the motoneurons. (From Abstracts, 21st Internat. Cong. Physiol., Buenos Aires, 1959, p. 124.)

Barber, Theodore Xenophon; Coules, John (1959). Electrical skin conductance and galvanic skin response during 'Hypnosis'. International Journal of Clinical and Experimental Hypnosis, 7 (2), 79-92.

ABSTRACT: No Abstract available

## NOTES

1:

"Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'
2. Skin conductance generally increased throughout the remainder of the experiment, i.e., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.
3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'
4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.
5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who showed a GSR stated, during or after the experiment, that they were by no means

convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.

6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'-hypnotic behavior.)

"Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1. Ss do not necessarily become more 'passive' or 'relaxed' during the 'hypnotic induction procedure.'
2. Ss often become more and more 'excited' and 'aroused' when they are given a series of 'active' suggestions such as 'sensory hallucinations,' 'age-regression,' etc.
3. Ss often show momentary 'excitement' when they are 'hallucinating.'
4. A pinprick can 'arouse' a S to the same extent during 'hypnotic analgesia' as it can during 'normal waking.' In addition, 'hypnotic analgesic' Ss are often just as much 'aroused' by the threat of a pinprick as they are by an actual pinprick.
5. Many Ss become momentarily 'excited' when they are asked to look directly at an object (or person) which they have been told they will not be able to see. However, some Ss do not show this momentary 'excitement.'
6. Although Ss may state that they do not 'remember' the 'post'-hypnotic suggestion, they often become momentarily 'excited' when the E makes preliminary motions to give the signal for the 'post'-hypnotic act" (pp. 90-92).

1955

Ament, Phillip (1955). A psychosomatic approach to the use of anesthesia for a hysterical dental patient: A case history. Journal of Clinical and Experimental Hypnosis, 3, 120-123. (Abstracted in Psychological Abstracts 56: 1280)

NOTES

1:

Author describes a case highly resistant both to anesthesia and dentistry. Although very responsive to hypnosis, she continued moaning and moving from side to side (later determined to be her way of preventing dental work even though anesthetized). Ultimately a combination of hypnosis and multiple anesthetics was needed, including nembutal, sodium pentothal, nitrous oxide and novocain. In the author's experience, most other patients require only hypnosis or hypnosis plus novocaine.

ANIMAL MAGNETISM/MESMERISM

2001

Gravitz, M.A. (2001, August). The historical role of hypnosis in the theoretical conceptualization of transference. [Paper] Presented at the Annual Meeting of the American Psychological Association, San Francisco.

Long before Freud incorporated rapport and transference into his psychoanalytic theories, Mesmer and a number of his followers had recognized the significance of relationship factors in animal magnetism. While the mesmerists generally held that animal magnetism was transmitted as a physical force (i.e., fluidum) from one person to the other, later dynamic therapists emphasized the importance of psychological factors. This paper documents the contributions over several centuries of these early theoreticians, leading eventually to the work of Freud, Janet, Erickson, and others.

1997

Chaves, John F. (1997). The state of the state debate in hypnosis: A view from the cognitive-behavioral perspective. International Journal of Clinical and Experimental Hypnosis, 45 (3), 251-265.

For most of the past 50 years, hypnosis research has been driven by a debate about whether hypnotic phenomena can be best described and understood as the product of an altered state of consciousness. The meanings of some of the pivotal concepts in this debate and the nature of the phenomena that gave rise to them were ambiguous at the outset and led to misconceptions and surplus meanings that have obscured the debate through most of its history. The nature of the posited hypnotic state and its assumed consequences have changed during this period, reflecting the abandonment of untenable versions of hypnotic state theory. Carefully conducted studies in laboratories around the world have refined our understanding of hypnotic phenomena and helped identify the critical variables that interact to elicit them. With the maturation of the cognitive-behavioral perspective and the growing refinement of state conceptions of hypnosis, questions arise whether the state debate is still the axis about which hypnosis research and theory pivots. Although heuristic value of this debate has been enormous, we must guard against the cognitive constraints of our own metaphors and conceptual frameworks. - Journal Abstract

1988

Gibson, H. B. (1988). Discussion commentary: Gauld's (1988) Reflections on Mesmeric analgesia. [Comment/Discussion] .

NOTES

1:

Author notes that mesmerism is not hypnotism because induction techniques are different and psychological and physiological results are different. Esdaile used mesmerism, not hypnotic suggestion. "If the essential differences between mesmerism and hypnotism were to be generally recognized and acknowledged, a lot of modern writing would be outmoded, hence recognition will be tardy and reluctant, but I think it will come" (p. 25). However, research on mesmerism would be difficult because "it seems likely that successful mesmerism may require not only very lengthy manipulations but subjects in a very real state of heightened emotion or acute fear, such as obtained before surgery in the last century, or was artificially (sic) engendered in the salons of the early mesmerists. It has certainly been

demonstrated that the nearest thing to a mesmeric trance that we are likely to witness, the states of tonic immobility that can be produced in animals, are potentiated by stimuli that arouse fear (Gallup et al., 1970)" (p. 27).

**1979**

**Spanos, Nicholas P.; Gottlieb, Jack (1979). Demonic possession, Mesmerism, and hysteria: A social psychological perspective on their historical interrelations. Journal of Abnormal Psychology, 88 (5), 527-546.**

Provides a social psychological interpretation of the interrelations among demonic possession, mesmerism, and hysteria. It is argued that the reciprocal role relationship of mesmerist and magnetized S in the 18th and 19th centuries involved the secularization of the role relation that had existed between exorcist and demonically possessed. The commonalities between these 2 sets of social roles are delineated, some of the variables leading an individual to learn and enact the possessed role are outlined, and several lines of historical evidence pertaining to the influence of the exorcist-demoniac relationship on the mesmeric relationship are outlined. The influence of the possessed role in shaping the role of the hysterical patient is also discussed. The use of hysteria as a modern explanatory concept in histories of possession and mesmerism, however, is criticized. (198 ref).

**1978**

**Schneck, Jerome M. (1978). Benjamin Rush and animal magnetism, 1789 and 1812. International Journal of Clinical and Experimental Hypnosis, 26, 9-14.**

Little information is available about animal magnetism in the United States during the late eighteenth and early nineteenth centuries. An early assessment of animal magnetism in the United States was provided by Benjamin Rush in 1789 and 1812. Unlike Benjamin Franklin and his colleagues on the 1784 French commission who recognized the role of imagination yet without its potential benefits, Rush discerned the value of both suggestion and imagination in their constructive potential and incorporated them into his medical practice while rejecting Mesmer's theories and techniques. This is of additional interest because of Rush's fame as an early American physician and his position as the father of American psychiatry.

## **ANXIETY**

**Ashton C Jr. Whitworth GC. Seldomridge JA. Shapiro PA. Weinberg AD. Michler RE. Smith CR. Rose EA. Fisher S. Oz MC. Self-hypnosis reduces anxiety following coronary artery bypass surgery. A prospective, randomized trial. Journal of Cardiovascular Surgery 1997;38(1):69-75** **OBJECTIVE:** The role of complementary medicine techniques has generated increasing interest in today's society. The purpose of our study was to evaluate the effects of one technique, self-hypnosis, and its role in coronary artery bypass surgery. We hypothesize that self-hypnosis relaxation techniques will have a positive effect on the patient's mental and physical condition following coronary artery bypass surgery.

**EXPERIMENTAL DESIGN:** A prospective, randomized trial was conducted. Patients were followed beginning one day prior to surgery until the time of discharge from the hospital. **SETTING:** The study was conducted at Columbia Presbyterian Medical Center, a large tertiary care teaching institution. **PATIENTS:** All patients undergoing first-time elective coronary artery bypass surgery were eligible. A total of 32 patients were randomized into two groups. **INTERVENTIONS:** The study group was taught self-hypnosis relaxation techniques preoperatively, with no therapy in the control group. **MEASURES:** Outcome variables studied included anesthetic requirements, operative parameters, postoperative pain medication requirements, quality of life, hospital stay, major morbidity and mortality. **RESULTS:** Patients who were taught self-hypnosis relaxation techniques were significantly more relaxed postoperatively compared to the control group ( $p=0.032$ ). Pain medication requirements were also significantly less in patients practising the self-hypnosis relaxation techniques than those who were noncompliant ( $p=0.046$ ). No differences were noted in intraoperative parameters, morbidity or mortality. **CONCLUSION:** This study demonstrates the beneficial effects self-hypnosis relaxation techniques on patients undergoing coronary artery bypass surgery. It also provides a framework to study complementary techniques and the limitations encountered.

Benson H. Frankel FH. Apfel R. Daniels MD. Schniewind HE. Nemiah JC. Sifneos PE. Crassweller KD. Greenwood MM. Kotch JB. Arns PA. Rosner B. Treatment of anxiety: a comparison of the usefulness of self-hypnosis and a meditational relaxation technique. An overview. *Psychotherapy & Psychosomatics*. 1978;30(3-4):229-42 We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsiveness to hypnosis: moderate-high and low responsiveness. The MT or HT was then randomly assigned separately to each member of the two responsiveness groups. Thus, 4 treatment groups were studied: moderate-high responsiveness MT; low responsiveness MT; moderate-high responsiveness HT; and low responsiveness HT. The low responsiveness HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate-high hypnotic responsiveness, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsiveness

scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating questionnaires. The meditational and self-hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

**Boutin GE. Tosi DJ. Modification of irrational ideas and test anxiety through rational stage directed hypnotherapy RSDH. Journal of Clinical Psychology 1983;39(3):382-91** Examined the effects of four treatment conditions on the modification of Irrational Ideas and test anxiety in female nursing students. The treatments were Rational Stage Directed Hypnotherapy, a cognitive behavioral approach that utilized hypnosis and vivid-emotive-imagery, a hypnosis-only treatment, a placebo condition, and a no-treatment control. The 48 Ss were assigned randomly to one of these treatment groups, which met for 1 hour per week for 6 consecutive weeks with in-vivo homework assignments also utilized. Statistically significant treatment effects on cognitive, affective, behavioral, and physiological measures were noted for both the RSDH and hypnosis group at the posttest and at a 2-month follow-up. Post-hoc analyses revealed the RSDH treatment group to be significantly more effective than the hypnosis only group on both the post- and follow-up tests. The placebo and control groups showed no significant effects either at post-treatment or at follow-up.

**Goldmann L. Ogg TW. Levey AB. Hypnosis and daycase anaesthesia. A study to reduce pre-operative anxiety and intra-operative anaesthetic requirements. Anaesthesia 1988;43(6):466-9** Fifty-two female patients who underwent gynaecological operations as day cases received either a short pre-operative hypnotic induction or a brief discussion of equal duration. Hypnotized patients who underwent vaginal termination of pregnancy required significantly less methohexitone for induction of anaesthesia. They were also significantly more relaxed as judged by their visual analogue scores for anxiety. Less than half of the patients were satisfied with their knowledge about the operative procedure even after discussions with the surgeon and anaesthetist. A significant correlation was found between anxiety and perceived knowledge of procedures. The results suggest that pre-operative hypnosis can provide a quick and effective way to reduce pre-operative patient anxiety and anaesthetic requirements for gynaecological daycase surgery.

**Hurley JD. Differential effects of hypnosis, biofeedback training, and trophotropic responses on anxiety, ego strength, and locus of control. Journal of Clinical Psychology 1980;36(2):503-7** Pretested 60 college students on three scales: The IPAT Anxiety Scale, the Barron Ego-strength scale, and the Rotter I-E scale. The Ss then were assigned randomly to one of four treatment groups designated: Hypnotic treatment, biofeedback treatment, trophotropic treatment, and control. Three of these groups met separately for 60 minutes once a week for 8 weeks. The control

group did not meet during this time. During the sessions, each group was trained in a different technique for self-regulation. At the end of the 8-week period the scales were readministered to all groups. A series of covariance analyses indicated that hypnosis was a more effective self-regulatory technique for lowering anxiety levels when compared to biofeedback or trophotropic response procedures. With regard to increasing ego strength, both the hypnotic training group and the biofeedback training group proved to be significant. No significant difference was found between the experimental and control groups on the I-E scores.

## **ANXIETY (DENTAL SURGERY)**

**1984**

**Katcher A. Segal H. Beck A. Comparison of contemplation and hypnosis for the reduction of anxiety and discomfort during dental surgery. American Journal of Clinical Hypnosis 1984;27(1):14-21** Used complex moving visual stimuli to induce states of relaxation, hypnosis, and reverie in 42 dental patients (aged 21-60 yrs). To test the efficacy of using aquarium contemplation to induce relaxation, Subjects were randomly assigned to 1 of 5 treatments prior to elective oral surgery: contemplation of an aquarium, contemplation of a poster, poster contemplation with hypnotic induction, aquarium contemplation with hypnosis, and a nonintervention control. Subjects were administered 5 tests of susceptibility adapted from the Stanford Hypnotic Susceptibility Scale; blood pressure, heart rate, and subjective and objective measures of anxiety were also taken. It was found that pretreatment with aquarium contemplation and hypnosis, either alone or in combination, produced significantly greater degrees of relaxation during surgery than poster contemplation or the control procedure. Two-way ANOVA demonstrated that a formal hypnotic induction did not augment the relaxation produced by aquarium contemplation. Findings suggest that aquarium contemplation can alter patients' subjective experiences and overt behavior during oral surgery. Other clinical applications of the contemplation procedure are discussed.

**1976**

**Melnick J. Russell RW. Hypnosis versus systematic desensitization in the treatment of test anxiety. Journal of Counseling Psychology 1976;23(4):291-295.** Assessed the comparative effectiveness of systematic desensitization (SD) and the directed experience hypnotic technique (HT) in reducing self-reported test anxiety and increasing the academic performance of 36 test-anxious undergraduates. Subjects were assigned randomly to either the HT or SD conditions or to 1 of 2 control groups. All Subjects had previously scored above the 50th percentile on Sarason's Test Anxiety Questionnaire (TAQ) and below the 85th percentile on a midterm exam. Results indicate that only the SD treatment significantly reduced TAQ scores. No significant improvement in academic performance was observed for either treatment. An additional analysis of high- vs moderate-anxious subgroups failed to show differential treatment effects on either dependent measure.

**Podolnick EE. Field PB. Emotional involvement, oral anxiety, and hypnosis. International Journal of Clinical & Experimental Hypnosis 1970;18(3):194-210. 48**

undergraduates were randomly assigned to either a high or low emotional arousal manipulation and then underwent a tape-recorded hypnotic induction and test of depth. The high-arousal group was exposed to infantile oral objects and were led to believe that they would have to suck on them as part of a physiological psychology experiment in which the cutaneous sensitivity of the human mouth was being mapped. The low-arousal group believed they only had to blow on whistles or pipes. While both groups were anticipating these experiences, hypnosis was induced. Subjects in the high-arousal group were significantly more hypnotizable ( $p < .001$ ) than their counterparts in the low-arousal group. Subjects in the high-arousal group were significantly less anxious after hypnosis than they were before hypnosis, while the low-arousal Subjects did not show a reduction in anxiety. The groups did not differ on several background personality tests given as checks on the randomization. (Spanish & German summaries)

**1993**

Rankin EJ. Gilner FH. Gfeller JD. Katz BM. Efficacy of progressive muscle relaxation for reducing state anxiety among elderly adults on memory tasks. *Perceptual & Motor Skills* 1993;77(3 Pt 2):1395-402 Cognitively intact anxious elderly subjects were randomly assigned to either a progressive muscle relaxation-training condition or control condition ( $ns = 15$ ) and then completed selected subtests from the Wechsler Memory Scale--Revised. Despite significant reductions in state anxiety in the relaxation group, no significant differences were detected between the two groups on memory measures. These results are discussed within the context of previous research, and suggestions for further research are made

**1994**

Amigo, Salvador (1994, August). New approach to self-regulation therapy--treatment strategies. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Training programs demonstrate that hypnotizability can be improved. Use individualized treatment programs. Cognitive behavioral treatment can be improved by hypnotic suggestions. Emphasis is on alertness and relaxation, not sleepiness; on conversation with the clinician rather than just listening.

Emotional self regulation is the procedure studied most. They used three phases: Phase 1: Sensory recall exercises (smell, taste, heaviness provoked by lifting a book). Phase 2: Reproduce sensations (hand stiffness, smell) without therapist stimulus. Phase 3: Generalization. Any demand generates the suggested effects. (Tell Subject his brain is very activated, that he can respond without training. Give therapeutic suggestions.)

Case of nicotine addiction presented.

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

**Case #1:** Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a

special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

**1993**

**Morgan, William P. (1993, October). Use of hypnosis in exercise and sport psychology. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

**NOTES:** Performance of exercise is rated as equal effort with hypnosis and waking conditions; but with hypnotic suggestion they will perceive it as more or less effortful (uphill exercise vs going down the hill). When they think they are going up hill both cardiac and respiratory response increase physiologically, with catecholamine differences.

Mitchell (1981) suggests that respiration changes with exercise do not result from muscle feedback, but that central motor brain signals go to both the cardiovascular centers and to exercising muscle. Actually, it appears that both muscle and cortex give signals, and their synergy governs whether ventilation or heart rate increase.

Wang & Morgan, Psychophysiological responses to imagined exercise, Sport Psychology Lab, University of Wisconsin-Madison. Reported that both external (watching someone else) and internal (imagining oneself) visualizing give responses similar to actual exercise.

We have done research on the prediction of respiratory distress (dyspnea) - work we have done with fire fighters. The best predictor of this on treadmill with air supply is trait anxiety. Sometimes the firefighters who took off face mask even though they had air did not know why they did. It is an opportunity to use hypnotic age regression. SCUBA divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

For active people and athletes there is an "iceberg" profile on the POMS, below average on tension, depression, anger, fatigue, and confusion, but higher on vigor. But the divers who panic have a flat profile, around the 50th percentile on all POMS scales.

Middleman et al used Navy divers in 25 degree C. water and used hypnosis to increase and decrease their body temperature--one of the best papers on the topic. Ss who were best able to use imagery, to think of a beach, had the poorest responses; the ones who could relax did poorest, because shivering produces heat and keeps you warm. It is opposite of what is needed.

In our work, we took 5 highest and 5 lowest anxiety Ss; the latter had higher rates of respiration than the former.

All Ss are similar in oxygen use whether volunteers or not. When people volunteer for research before they know hypnosis will be used, the males are lower than females [on hypnotizability?] when they finally volunteer. [He presents a lot of different tests on which volunteers do not differ from nonvolunteers personality wise.]

Ikai & Steinhaus is a classic study of Disinhibition of Inhibitory Mechanisms. Taking Ss up to their maximum (in weight training) to a plateau, Ikai & Steinhaus said this is a pseudomaximum. They showed that strength increases if - you fire a starter pistol behind them - you ask them to shout just as they do it - they have alcohol - they have amphetamine sulfate - they have hypnosis It is disinhibition of the inhibitory mechanisms.

[He referred to the book Mind of the Marathoner.]

In Tibet an anthropologist was amazed to see a man running into their camp, and he ran straight through--a monk carrying messages. He created a non-cultic form of meditation in the laboratory (trained to visually "fix" on mountaintop, to have respiration in synchrony with locomotion, and to use a pseudo mantra "down" each time they put their foot down). Placebo condition was used also. Ss were tested by blinded lab assistants. Endurance time increased from 16 minutes to 20, while controls decreased a minute.

Now we can predict who will win a race. Elite runners do not dissociate; they use association strategy. They pay close attention to race strategy, they monitor themselves constantly (they slow down when they feel bad), and attempt informally to stay loose, not get tight, and relax. Dissociation has, however, been used for the last 300 meters of a marathon (New Zealander Dixon).

1992

Bindler, Paul (1992, October). Hypnosis and Psychotherapy: The clinical utility of altered states of consciousness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Author assesses state, especially attentional changes, with Multidimensional Consciousness Scale (receptivity, arousal, .... etc.)

Clinical management of anxiety is goal. Cites Nash as characterizing anxiety disorders with cognitive/affective characteristics similar to hypnotized state. Wickramasekera's model has people high in neuroticism and high in hypnotizable being hypersensitive to stress, with physiological hyperarousal. Lows have alexithymia, may be unresponsive to symbolic events but very responsive to concrete events; poor verbalization of alexithymics leads to somatization.

Author focuses on relaxation and anxiety reduction. Suggests that Crawford's attention model (highs better able to shift cognitive and attentional strategies) is useful.

Instructions facilitate focusing attention inward so external stimuli become irrelevant. Therapist helps patient focus attention on the link between cognitions and tension.

Garssen, Bert; de Ruiter, Corine; Van Dyck, Richard (1992). Breathing retraining: A rational placebo?. Clinical Psychology Review, 12, 141-153

Breathing retraining of patients with Hyperventilation Syndrome (HVS) and/or panic disorder is discussed to evaluate its clinical effectiveness and to examine the mechanism that mediates its effect. In relation to this theoretical question, the validity of HVS as a scientific model is discussed and is deemed insufficient. It is concluded that breathing retraining and related procedures are therapeutically effective, but probably due to principles other than originally proposed, namely decreasing the tendency to hyperventilate. An alternative principle is the induction of a relaxation response, presenting a credible explanation for the threatening symptoms, giving a distracting task to practice when panic may occur, and promoting a feeling of control.

NOTES: Goal of treatment is to (1) reduce respiratory rate, and (2) cognitive reattribution of physical symptoms to hyperventilation instead of other more catastrophic causes. Reviews a number of studies, mostly small sample, including panic disorder studies, and concludes that the majority point to a therapeutic effect of breathing retraining and cognitive reattribution of physical symptoms to

hyperventilation for patients suffering HVS and the closely related panic disorder with or without agoraphobia. However, the specificity of these techniques for HVS is questionable. Vlaander-van der Giessen (1986) found relaxation training just as effective as breathing retraining; and Hibbert & Chan (1989) found breathing retraining equally effective as a placebo treatment, and not more effective with patients who had recognized symptoms at a hyperventilation provocation test than with those who had not.

Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131.

Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

1991

Bodden, Jack L. (1991). Accessing state-bound memories in the treatment of phobias: Two case studies. American Journal of Clinical Hypnosis, 34, 24-28.

Two cases of simple phobia demonstrate the inadequacies of both behavioral and psychodynamic theories. These cases and their treatment outcomes provide support for the state-dependent memory and learning theory. Hypnosis and ideomotor

signaling proved to be not only effective treatments but also useful means of illuminating the role and nature of symptom function. Issues of symptom removal and substitution are also discussed in relation to these cases

**NOTES:** The authors state that Rossi and Cheek (1988) summarize a number of experimental studies on animal memory that demonstrate that different information substances are involved in different learning situations. For example, ACTH and cortisol are involved in avoidance learning while angiotensin is involved in operant conditioning. In hypnosis, state dependent memory seems to be implicated. "Hilgard (1977) interpreted the state-dependent memory studies by Overton and others as entirely consistent with and supportive of his theory of hypnosis. Milton Erickson (1948) has also strongly suggested that it is the altered levels of arousal and affect that are responsible for the encoding and recall of stress-related problems with hypnosis" (p. 26).

"Affective experiences are apparently stored independently from their intellectual counterparts, or the emotional unit from one set may attach itself to a constellation of cues that make up a totally different cognitive set. Hypnosis may facilitate recall by providing relevant cues during an altered state of consciousness" (p. 27).

"In commenting upon [one of Erickson's cases], Rossi (1986) states that Erickson was effective because he helped the patient access state-bound memories by reviewing the context and sensory-perceptual cues that surrounded their original acquisition" (p. 27).

"When traditional behavior therapy fails it may be because the original fear stimulus is state bound or unconscious. What is conscious to the patient are those stimuli that are similar in some important respect to the original phobic stimulus and are acquired by stimulus generalization. Desensitization may reduce the patient's reactivity to the associated or acquired stimuli but cannot desensitize the original stimulus until it can be accessed consciously" (p. 27).

"The two main psychological explanations of phobic behavior are psychodynamic and behavioral. The psychodynamic approach is built upon the early writings of Freud (1956) on the traumatic basis of neurosis. Freud speculated that the intense anxiety (psychic pain) associated with the emotional trauma lead to dissociation, repression, and amnesia. Symptoms represented a dissociated or symbolic vestige of the repressed ('forgotten') trauma.

"Behavioral explanations (e.g., Rimm & Masters, 1974) are built upon classical and operant conditioning models of learning. Classical conditioning explains how a neutral stimulus (e.g., a bridge) can acquire reactivity and elicit a fear response. Avoidant behavior, which preserves the phobia, is acquired and maintained by operant conditioning. Treatment apparently involves gradual extinction of the fear response.

"These two divergent explanations have spawned quite different therapeutic approaches, with the behavioral approach (systematic desensitization) demonstrating greater empirical support for its effectiveness (Kaplan & Sadock, 1986). The problem is made complex theoretically by the fact that desensitization doesn't always work, even when applied in a competent fashion" (p. 25).

"Freud's early work on the traumatic basis of neurosis pointed to but offered an incorrect explanation of phobias whose origins were unconscious or state bound (i.e., not available to recall during the normal conscious state)" (p. 25).

Cochrane, Gordon J. (1991). Client-therapist collaboration in the preparation of hypnosis interventions: Case illustrations. American Journal of Clinical Hypnosis, 33, 254-262.

Therapists can use hypnosis in a variety of situations to help clients utilize their own resources effectively. In both heterohypnosis and tape-assisted self-hypnosis, the respectful collaboration of therapist and client in the development of specific intervention strategies can be effective. I have described four cases to illustrate the collaborative aspect of heterohypnosis in a surgical setting and tape-assisted self-hypnosis for anxiety, tinnitus, and situational depression. In each case the clients were willing and able participants.

#### NOTES:

"Hypnotic interventions as adjunctive therapeutic modalities for a variety of surgical procedures have been well documented (Frankel, 1987; Gravitz, 1988; Nathan, Morris, Goebel, & Blass, 1987). The availability, relative safety, dependability, and ease of use have made chemical agents the anesthetic of choice in the majority of surgical situations, but hypnosis, either alone or in conjunction with chemical agents, can have a number of advantages for some patients (Udolf, 1987, p. 248). Some patients who have extreme preoperative pain and anxiety can learn to use self-hypnosis (Frankel, 1987); others may use hypnosis when experiencing postoperative nausea and other uncomfortable side effects of chemical anesthetics. Some may fear death under general anesthesia or react to a previous trauma arising from general anesthesia and the operating room procedures in general (Udolf, 1987, p. 250) and therefore choose hypnotic strategies. In the following case illustration the patient feared general anesthesia because of a previous negative postoperative experience" (p. 255).

While collaboratively planned hypnosis often empowers the patient, contributing to a sense of personal control and well being, some patients are not able to participate in that manner. Cochrane cites patients who are severely depressed or "who struggle with narcissism and other severe pathologies" (p. 260). He notes that audiotapes are useful for supplementing in-session therapy, contributing to skill development, attitude change, and a sense of self-worth. He cites Eisen and Fromm (1983) as indicating that self hypnosis is also useful for clients "who struggle with issues of control and intimacy" (p. 260).

Mauer, D. R. (1991, October). A comparison of cognitive-behavioral and hypnotic techniques in the management of electromyography pain (Dissertation, University of Iowa). Dissertation Abstracts International, 53 (4), 1070-B. (Order No. DA 9217180)

"Compared a cognitive behavioral technique that included providing specific sensory and procedural information combined with relaxation with a hypnotic

technique (relaxation with guided imagery) and a control group for management of acute EMG pain and anxiety. Pain and anxiety ratings were gathered from 45 EMG patients and observers for both nerve conduction and needle electrode components of the EMG exam. It was found that only the hypnosis group significantly reduced pain and anxiety during the needle electrode portion of the procedure. Patients with unexplained or functional symptoms reported more EMG pain and anxiety than patients who had an organically based disease. Because having had a prior EMG seemed to have an effect on the efficacy of treatment, the data were reexamined. Results determined that inexperienced EMG patients who were treated had less pain and anxiety than patients who experienced EMG before, but inexperienced control patients had an increase in pain and anxiety over experienced patients" (p. 1070).

### 1990-1991

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

### NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from

Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.])

"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).

"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.

"The finding that blunterners experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunterners are more likely to perceive mind wandering as the essence of stress management rather

than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunters experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

**Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.**

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

**Lazarus, A. A.; Mayne, T. J. (1990). Relaxation: Some limitations, side effects, and proposed solutions. Psychotherapy, 27, 261-266**

Deep-muscle relaxation has been widely regarded as anxiety inhibiting, and the relaxation response an antidote to tension and stress. However, some relaxation techniques have been shown to have negative effects. These include relaxation-induced anxiety and panic, paradoxical increases in tension, and parasympathetic rebound. Specific indications and contraindications are discussed.

#### NOTES

1:

The following unpleasant side effects have been observed: "unpleasant sensations of heaviness, warmth, perspiration, tingling, numbness, dizziness, floating, coolness; paradoxical increases in tension; rapid heart rate; feelings of physical and psychological vulnerability; depression; fear of losing control; depersonalization; dissociation; myoclonic jerks; spasms; headache; akathisia; negative auditory, gustatory, and olfactory reactions; intrusive images and thoughts; anxiety; irritability; guilt; regressive urges; hallucinations; and panic" (p. 261).

People have been observed to have "negative or untoward reactions to meditation ([Lazarus, 1976]; French, Schmid & Ingalls, 1975; Kennedy, 1976), relaxation (Borkovec & Grayson, 1980; Carrington, 1977; Edinger & Jacobsen, 1982), and

biofeedback (Miller & Dworkin, 1977). In his doctoral dissertation Heide (1981) found that more than half of his subjects under focused relaxation reported increased tension due to the relaxation session. Recently, the concept of RIA--relaxation-induced anxiety--has appeared in the literature (Heide & Borkovec, 1983; 1984). Clients suffering from generalized anxiety appear to be especially prone to RIA" (pp. 261-262).

Others have suggested that relaxation may be counterindicated for asthmatics, because the small airways dilate with sympathetic nervous system arousal. The specific instructions of autogenic training may be counterindicated for patients with gastrointestinal disease because focusing on a sense of warmth in the abdomen tends to produce more peristalsis, increased blood flow in the gastric mucosa, and acidity in the gastric juice (Luthe & Schultz, 1979). Even the standard relaxation therapy for tension headache (as well as other pain problems) is being replaced with cognitive behavioral therapy, which may have relaxation as only one component. "The point again is that relaxation is not a panacea, and that an informed selection and administration of treatments is mandated, even in disorders where relaxation has traditionally been held second only to medication" (p. 264).

Interviews suggest people with relaxation induced anxiety (RIA) fear losing control. "Some are afraid of heightened arousal; others refer to helplessness, depression, some unidentified internal or external danger, a fear of going crazy, a negative association with anesthetics, a fear of falling from heights, plus any number of catastrophic expectations (Chambless & Goldstein, 1980)" (p. 264). Lazarus recommends that if someone displays RIA, the therapist may try alternative techniques, which might include for example tensing-relaxing muscles, passive receptivity, positive or pleasant imagery, focus on breathing, subvocal monotonous chant or mantra, or the Vipassana meditation practice of achieving awareness of spontaneous sensations and thoughts. The relationship with the therapist, differences in room illumination, amount of time per session, and sitting or reclining may be important.

"If a therapist deduces that a client is likely to derive benefit from relaxation training, three obvious questions arise: (1) Which of the many types of relaxation training programs is this particular client likely to respond to? (2) How frequently, and for what length of time, should the client practice the selected relaxation sequence? (3) Will treatment adherence be augmented or attenuated by the supplementary use of cassettes for home use?" (P. 262).

The authors describe their Structural Profile Inventory (SPI; Lazarus, 1989), a 35-item questionnaire, which may be used to predict the preferred sequences and forms of relaxation to employ with individual clients. "A predominantly imagery/sensory reactor, for example, may do well with visualization and autogenic training, whereas a highly active/cognitive client might be better advised first to engage in strenuous exercise followed by calming self-statements (Zilbergeld & Lazarus, 1988)" (p. 265). They suggest that for those patients who are perfectionistic and simply can't "just let go," they might simply fill a bathtub with warm water and sit in it for 10-20 minutes and rest with a magazine (rather than "relax") once or twice a day.

**McNally, Richard J. (1990). Psychological approaches to panic disorder: A review. Psychological Bulletin, 108 (3), 403-419.**

Panic disorder has been the subject of considerable research and controversy. Though biological conceptualizations have been predominant, psychological theorists have recently advanced conditioning, personality, and cognitive hypotheses to explain the etiology of panic disorder. The purpose of this article is to provide an empirical and conceptual analysis of these psychological hypotheses. This review covers variants of the "fear-of-fear" construal of panic disorder (i.e., Pavlovian interoceptive conditioning, catastrophic misinterpretation of bodily sensations, anxiety sensitivity), research on predictability (i.e., expectancies) and controllability, and research on information-processing biases believed to underlie the phenomenology of panic. Suggestions for future research are made.

**1987**

**Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.**

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

**1986**

**Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.**

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one

nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

#### NOTES

1:  
620, Belicki & Bowers, 1982 ABSTRACT: Investigated the role of demand characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A), which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

1984

Billotti, Thomas J. (1984, August). The effects of rational emotive imagery and rational emotive imagery plus hypnosis in reduced public speaking anxiety (Dissertation). Dissertation Abstracts International, 46 (2), 633-634-B.

"Previous investigations have demonstrated the effectiveness of rational emotive therapy in reducing public speaking anxiety and the increased benefit derived by combining rational emotive procedures with hypnosis. The present study examined the effectiveness of rational emotive imagery and rational emotive imagery plus hypnosis in reducing public speaking anxiety in subjects with high and low levels of imaginative ability. The dependent measures employed included self report, behavioral and physiological measures of anxiety. "47 undergraduate students who reported anxiety while speaking in public served as subjects in the study. The subjects were divided into high and low levels of imaginative ability and randomly assigned to one of three experimental groups as follows: rational emotive imagery, rational emotive imagery plus hypnosis, and an instructional control group. It was hypothesized that subjects in the rational emotive imagery plus hypnosis group would evidence significantly less anxiety than subjects in the rational emotive imagery and instructional control group, and that subjects with high pre-treatment levels of imaginative ability would evidence significantly less anxiety than subjects with low pre- treatment levels of imaginative ability. "The results of this study provided some support for the efficacy of combining rational emotive imagery with hypnosis. Subjects in the rational emotive imagery plus hypnosis group evidenced significantly less anxiety than subjects in the rational emotive imagery and instructional control group on the two self-report measures. There were no significant differences as between subjects in the rational emotive imagery group and instructional control group or between subjects with high and low imaginative

ability on post-treatment assessments. Subjects tended to have their highest pulse rates at the start of the speeches, their lowest pulse rate just after the speeches, and moderate pulse rates just before and during the speeches. "Factors contributing to these results and interpretations of the data were discussed. Suggestions regarding the direction of future research were offered" (p. 633- 634).

**Katcher, Aaron; Segal, Herman; Beck, Alan (1984). Comparison of contemplation and hypnosis for the reduction of anxiety and discomfort during dental surgery. American Journal of Clinical Hypnosis, 27, 14-21.**

Complex moving visual stimuli are used to induce states of relaxation, hypnosis and reverie. To test the efficacy of using aquarium contemplation to induce relaxation, 42 patients were randomly assigned to one of five treatments prior to elective oral surgery: 1) contemplation of an aquarium, 2) contemplation of a poster, 3) poster contemplation with hypnotic induction, 4) aquarium contemplation with hypnosis, and 5) a non intervention control. Blood pressure, heart rate, and subjective and objective measures of anxiety were used as dependent measures. Pretreatment with aquarium contemplation and hypnosis, either alone or in combination, produced significantly greater degrees of relaxation during surgery than poster contemplation or the control procedure. Two-way ANOVA demonstrated that a formal hypnotic induction did not augment the relaxation produced by aquarium contemplation.

#### **NOTES**

**1:**  
The consent form was designed to reduce anxiety about hypnosis by stating that if hypnosis was used, it would be used only to induce relaxation. Patients were then randomly assigned to one of the 5 pretreatment groups, with 8 in each of the four contemplation groups and 10 in the nonintervention control.

**1. Aquarium contemplation.** Ss contemplated it for 40 minutes; during the 1st 25 min, 5 tests of suggestibility were administered (from the Stanford) which eliminated all tests the authors considered anxiety-provoking such as suggested hallucination. Also, the terms hypnotically relaxed or hypnotic relaxation replaced the term hypnosis throughout the protocol.

**2. Poster contemplation** was the same, using a color photo of a mountain waterfall.

**3. Poster contemplation with hypnosis** used a protocol derived from Stanford, with visual fixation on poster, then the 5 tests, then Ss contemplated the poster for 10 minutes under hypnosis and were given post hypnotic suggestion that they could reenter hypnosis during the dental procedure by closing their eyes and visualizing the poster

**4. Aquarium contemplation with hypnosis** was like #3 except that Ss were asked to look at "either one fish or a portion of the aquarium" during induction and were told to reenter hypnosis during treatment by closing their eyes and visualizing the aquarium

**5. Nonintervention control** Ss were given no tests of suggestibility; they were seated in a chair and told to "relax."

During surgery, an observer recorded overt signs of anxiety or agitation on a check list, making entries at five-minute intervals.

The surgeries took variable lengths of time (5-90 minutes) and variable kinds of procedures (multiple injections, removal of bone, etc.) Surgeons varied in management-- gentleness, etc.

Blood pressure fell significantly during all 5 pretreatments without any significant differences between groups. Analysis of interaction effects, significant at the 0.1 level for all 3 dependent variables, indicated that hypnosis had a major effect on relaxation only when the S was contemplating a poster. Hypnosis had no significant influence on the levels of relaxation obtained by contemplation of the aquarium.

There were no significant differences between groups in the number of suggestions accepted.

1983

Boutin, Gerald E.; Tosi, Donald J. (1983). Modification of irrational ideas and test anxiety through rational stage directed hypnotherapy (RSDH). Journal of Clinical Psychology, 39 (3), 382-391.

Examined the effects of four treatment conditions on the modification of Irrational Ideas and test anxiety in female nursing students. The treatments were Rational Stage Directed Hypnotherapy, a cognitive behavioral approach that utilized hypnosis, and vivid emotive imagery, a hypnosis-only treatment, a placebo condition, and a no-treatment control. The 48 Ss were assigned randomly to one of these treatment groups, which met for 1 hour per week for 6 consecutive weeks with in-vivo homework assignments also utilized. Statistically, significant treatment effects on cognitive, affective, behavioral, and physiological measures were noted for both the RSDH and hypnosis group at the posttest and at a 2-month follow-up. Post-hoc analyses revealed the RSDH treatment group to be significantly more effective than the hypnosis only group on both the post- and follow-up tests. The placebo and control groups showed no significant effects either at posttreatment or at follow-up.

Harris, Gina M.; Johnson, Suzanne Bennett (1983). Coping imagery and relaxation instructions in a covert modeling treatment for test anxiety. Behavior Therapy, 14, 144-157.

The present study compared the efficacy of instructing test anxious subjects to use personalized coping imagery based on nonacademic experiences of competence with coping imagery based on academic experiences of competence. The effect of relaxation was also examined and the relationship of imagery elaborateness and content to treatment effectiveness was assessed. Sixty-three subjects were randomly assigned to one of four treatments or a waiting list control group. Test anxiety as measured by a self-report instrument significantly decreased in all treatment groups. Improvement in grade point average occurred for all treatment groups except for academic coping imagery without relaxation which was also the least efficient treatment. The waiting list control group significantly deteriorated in academic performance. Relaxation training did not appear to enhance treatment

effectiveness or influence the elaborateness or content of the imagery used. Test anxiety scenes elicited highly response-oriented images by all subjects. However, the stimulus/response content of the subjects' images was not influenced by treatment outcome. In contrast, successful treatment was primarily associated with reduction in negative coping imagery descriptions, although an increase in positive coping statements cured as well.

Heide, F. J.; Borkovec, T. D. (1983). Relaxation-induced anxiety: Paradoxical anxiety enhancement due to relaxation training. Journal of Consulting and Clinical Psychology, 51, 171-182.

The present study was designed to document the occurrence of relaxation-induced anxiety. Fourteen subjects (7 male, 7 female) suffering from general tension and significant levels of anxiety were given one session of training in each of two relaxation methods, progressive relaxation and mantra meditation; order of presentation was counterbalanced. Four of the subjects plus one other who terminated prematurely displayed clinical evidence of an anxiety reaction during a preliminary practice period, while 30.8% of the total group under progressive relaxation and 53.8% under focused relaxation reported increased tension due to the relaxation session. Progressive relaxation produced greater reductions in subjective and physiological outcome measures and less evidence of relaxation-induced anxiety, and the phenomenon was not clearly evident from physiological measures and from subjective ratings even in this clinical population.

1982

Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. International Journal of Clinical and Experimental Hypnosis, 30, 417-442.

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5 more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in

observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

1981

Fling, Sheila; Thomas, Anne; Gallaher, Michael (1981). Participant characteristics and the effects of two types of meditation vs. quiet sitting. Journal of Clinical Psychology, 37 (4), 784-790.

Randomly assigned 61 undergraduate volunteers to Clinically Standardized Meditation (CSM), quiet sitting (SIT), or wait list1 and 19 others to Open Focus (OF) or wait list2. Ss were tested before training and again 8 weeks later. All groups but wait list2 decreased significantly on Spielberger's trait anxiety. All groups became nonsignificantly more internal on Rotter's locus of control. On the Myers-Briggs Type Indicator, meditation volunteers were more introverted than extraverted, intuitive than sensing, feeling than thinking, and perceiving than judging. All groups became more intuitive, approaching significance for CSM only. OF became significantly more extraverted than both CSM and SIT, and CSM significantly more so than wait list1. Practice time correlated with anxiety reduction for the combined treatment groups. More evidence was found for correlations of practice time and outcome with growth motivation than with either new experience motivation or expectancy of benefit.

1980

Heide, Frederick J.; Wadlington, W. L.; Lundy, Richard M. (1980). Hypnotic responsivity as a predictor of outcome in meditation. International Journal of Clinical and Experimental Hypnosis, 28 (4), 358-385.

This study tested the hypothesis that measures of hypnotic responsivity would predict outcome from brief meditation training. 58 Ss were matched on hypnotic responsivity and randomly assigned to meditation and control conditions. The Ss in the meditation group displayed significantly greater decreases in trait anxiety than control Ss following a 1-week treatment period. The Ss highest in hypnotic responsivity showed the most substantial decrements in anxiety. It is concluded that hypnotic responsivity is moderately predictive of outcome in meditation. Findings were also consistent with reports that hypnotic responsivity is not increased by practice in meditation.

NOTES

1:

Subjects in the Meditation condition received 1 hour of group instruction-- a lecture which discussed physiological benefits, guidelines for practice, and possible side-effects. "The technique consisted of the passive, subvocal repetition of a mantra, 'Om,' for a period of 20 minutes. It was emphasized that the mantra should be allowed to 'repeat itself' in a gentle, effortless fashion. The Ss were told that when they found themselves distracted by thoughts, they should not try to block them out but should simply return to repeating the mantra" (p. 360). Ss practiced the

technique for 20 minutes and were asked to meditate twice daily for 7 days, keeping a log for that period.

**Hurley, John D. (1980). Differential effects of hypnosis, biofeedback training, and trophotropic responses on anxiety, ego strength, and locus of control. Journal of Clinical Psychology, 36 (2), 503-507.**

Pretested 60 college students on three scales: the IPAT Anxiety Scale, the Barron Ego-strength scale, and the Rotter I-E scale. The Ss then were assigned randomly to one of four treatment groups designated: hypnotic treatment, biofeedback treatment, trophotropic treatment, and control. Three of these groups met separately for 60 minutes once a week for 8 weeks. The control group did not meet during this time. During the sessions, each group was trained in a different technique for self-regulation. At the end of the 8-week period the scales were readministered to all groups. A series of covariance analyses indicated that hypnosis was a more effective self-regulatory technique for lowering anxiety levels when compared to biofeedback or trophotropic response procedures. With regard to increasing ego strength, both the hypnotic training group and the biofeedback training group proved to be significant. No significant difference was found between the experimental and control groups on the I-E scores.

**Lamb, Douglas H.; Strand, Kenneth H. (1980). The effect of a brief relaxation treatment for dental anxiety on measures of state and trait anxiety. Journal of Clinical Psychology, 36 (1), 270-274.**

Used a brief deep muscle relaxation procedure to reduce patient (N = 39) anxiety during a dental appointment. State anxiety decreased significantly for a relaxed (treated) group from the waiting room period to the actual contact with the dentist. This reduction in state anxiety was maintained for the duration of the dental visit. There were no changes in trait anxiety. Implications for the reduction of state and trait anxiety in an in vivo situation were discussed.

**Lundy, Richard M.; Heide, Frederick J.; Wadlington, W. L. (1980). Hypnotic responsivity as a predictor of outcome in meditation. International Journal of Clinical and Experimental Hypnosis, 28 (4), 358-366.**

## NOTES

1:

TM reportedly diminishes Trait Anxiety (not State Anxiety). Spielberger's Anxiety Scale was administered. Non-analytical attention is increased in TM. Spanos, et al. found a relationship between sustained attention in a meditation task and hypnotizability. Both load on the same factor.

Used Control and Experimental groups pretested on a scale of hypnotizability (Harvard Scale?): Lows = 1-4; Mediums = 5-7; Highs = 8-12.

Subjects were given instructions for modified TM, including a lecture on physiological benefits. "Let the sound 'OM' repeat itself; let that sound pass through and return to the mantra." Subjects logged practice on their 20 minute

meditation twice a day, for 7 days. They were given pre- and posthypnotic tests of State and Trait anxiety.

**RESULTS.** Meditators decreased Trait anxiety but not State anxiety. But anxiety was reduced more for high hypnotizables than for other levels. There was greater change in anxiety for High hypnotizables who practiced meditation . No difference in pre- and posthypnotic test on Harvard, confirming Spanos, et al.

**CONCLUSIONS.** This provides more evidence that the skill of hypnotizability has more utility than we had thought, in therapy. Spanos, et al. also found that improvement in meditation was correlated with hypnotizability (in terms of number of intrusions) and Benson, Frankel, et al., found Lows benefit less in blood pressure change with either meditation or hypnosis.

**1978**

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard (1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. Psychotherapy and Psychosomatics, 30, 229-242.

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating

questionnaires. The meditational and self- hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

Counts, D. Kenneth; Hollandsworth, James G., Jr.; Alcorn, John D. (1978). Use of electromyographic biofeedback and cue-controlled relaxation in the treatment of test anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 990-996.

The effect of using electromyographic (EMG) biofeedback to increase the efficacy of cue-controlled relaxation training in the treatment of test anxiety was studied. Forty college undergraduates scoring in the upper third on a self-report measure of test anxiety were randomly assigned to one of four treatment conditions - EMG-assisted cue- controlled relaxation, cue-controlled relaxation alone, attention-placebo relaxation, and no-treatment control. Pre-post self-report measures of test anxiety, state anxiety, and trait anxiety were obtained. In addition, a performance measure in the form of a mental abilities test was administered. Subjects from the three relaxation groups received six 45- minute individual sessions over a period of 2 weeks. All treatments were conducted using audiotape recordings. The results indicate that cue-controlled relaxation is effective in increasing test performance for test anxious subjects, that EMG biofeedback does not contribute to the effectiveness of this procedure, and that self-report measures of anxiety are susceptible to a placebo effect.

Lehrer, Paul M. (1978). Psychophysiological effects of progressive relaxation in anxiety neurotic patients and of progressive relaxation and alpha feedback in nonpatients. Journal of Consulting and Clinical Psychology, 46 (3), 389-404.

Gave 10 anxiety neurotic patients 4 sessions of individual instruction in progressive relaxation; 10 patients served as waiting list controls. 10 nonpatients were assigned to each of the same conditions, and an additional 10 nonpatients were given 4 sessions of alpha feedback. Nonpatients showed more psychophysiological habituation over sessions than patients in response to hearing 5 very loud tones and to a reaction time task. Patients, however, showed greater physiological response to relaxation than did nonpatients. After relaxation, the autonomic responses of the patients resembled those of the nonpatients. The effects of relaxation were more pronounced in measures of physiological reactivity than in measures of physiological activity. Defensive reflexes yielded to orienting reflexes more readily in nonpatients than in patients. There was also a tendency for progressive relaxation to generalize to autonomic functions more than alpha feedback.

1977

Dillbeck, Michael C. (1977). The effect of the transcendental meditation technique on anxiety level. Journal of Clinical Psychology, 33 (4), 1076-1078.

Two weeks of twice-daily practice of the Transcendental Meditation (Transcendental meditation) technique was compared with 2 weeks of twice-daily practice of passive relaxation as a means of reduction of anxiety, as measured by the

Trait scale of the State-Trait Anxiety Inventory. Thirty-three graduate and undergraduate students were assigned randomly to a relaxation group and a Transcendental meditation group. After a 2-week experimental interval, the relaxation Ss began Transcendental meditation. As hypothesized, in the comparison between the relaxation and meditation Ss, as well as between conditions of the relaxation-meditation group, Transcendental meditation was significantly more effective in reducing anxiety level. Thus, the anxiety-reducing effect of the practice of Transcendental meditation cannot be attributed merely to sitting quietly twice daily, although additional research must determine the extent to which S expectations for change contributed to this effect.

Gatchel, Robert J.; Hatch, John P.; Watson, Paur J.; Smith, Dan; Gaas, Elizabeth (1977). Comparative effectiveness of voluntary heart rate control and muscular relaxation as active coping skills for reducing speech anxiety. Journal of Consulting and Clinical Psychology, 1093-1100.

The present study investigated whether heart rate biofeedback training is as effective as muscular relaxation training in reducing speech anxiety. Also, a combined muscle relaxation/biofeedback treatment group was included in this study. All treatment groups were compared to a false-biofeedback placebo control group. This investigation also assessed whether the degree of autonomic nervous system awareness significantly influences the treatment process. Ten speech-anxious subjects, half of whom scored high on the Autonomic Perception Questionnaire (APQ) and half of whom scored low on the APQ, were assigned to each group. Results indicated that all four groups demonstrated a decrease in self-reported anxiety. Assessment of physiological measures (heart rate and skin conductance) indicated that the three treatment groups were associated with less physiological responding during the posttreatment assessment of anxiety, relative to the false-biofeedback group. Moreover, among the three treatment groups, the combined relaxation/biofeedback group demonstrated the lowest level of responding. The degree of autonomic awareness was not found to be related to therapeutic improvement

Lick, John R.; Heffler, David (1977). Relaxation training and attention placebo in the treatment of severe insomnia. Journal of Consulting and Clinical Psychology, 45 (2), 153-161.

This study compared the effectiveness of progressive relaxation training with and without a supplementary relaxation recording, which the subjects played at home, and an attention placebo manipulation in the modification of severe insomnia in adult volunteers. The results indicated that the relaxation training procedures were significantly more effective than placebo and no-treatment controls in modifying several parameters of sleeping behavior, in reducing consumption of sleep-inducing medication, and in influencing a self-report anxiety measure. The supplementary relaxation tape did not increase the effectiveness of relaxation training conducted in

the clinic, and there was no difference in the efficacy of the placebo and no-treatment conditions. Physiological data gathered during the last treatment session indicated few significant correlations between reductions in arousal associated with relaxation training and treatment outcome.

1976

Gatchel, Robert J.; Proctor, Janet D. (1976). Effectiveness of voluntary heart rate control in reducing speech anxiety. Journal of Consulting and Clinical Psychology, 381-389.

The effects of learned control of heart rate deceleration and therapeutic expectancy set in reducing speech anxiety were investigated in a factorial design employing 36 speech-anxious subjects. Heart rate control training and no heart rate control training were each paired with high-therapeutic-expectancy and neutral-expectancy instructions, in order to assess the individual and combined effects of the two factors. Results demonstrated that learning to control heart rate deceleration led to a significant reduction in self-report, physiological (heart rate and skin conductance level), and overt signs of anxiety, relative to the no-heart-rate control condition. High-therapeutic-expectancy instructions also contributed to a reduction in self-reported anxiety. These results demonstrate that learned heart rate control is an effective therapeutic technique for reducing anxiety.

Hemme, Robert; Boor, Myron (1976). Role of expectancy set in the systematic desensitization of speech anxiety: An extension of prior research. Journal of Clinical Psychology, 32 (2), 398-404.

#### SUMMARY

The influence of expectancy set with regard to therapy outcome on the effectiveness of systematic desensitization (SD) for reducing public speaking anxiety was investigated. The 7 Ss given a high expectancy set for favorable therapy outcome were informed about psychological research that indicates that SD is effective to reduce public speaking fears. SD was administered with the standard instructions to the 11 Ss given a neutral expectancy set. This expectancy manipulation did not require deception and perhaps could be used with actual SD therapy clients. As in previous research by Woy and Efran, the expectancy set manipulation significantly modified Ss' self-report of subjective perceptions of anxiety from pretreatment to posttreatment speeches, but did not affect overt behavioral or physiological indices of anxiety. Since subjective perceptions of anxiety responses are psychologically significant behaviors, these data suggest the importance of conveying a high expectation of improvement to SD and perhaps also to other types of therapy clients. SD sessions administered to small groups of clients on consecutive days, as in this study, appeared to be as effective to reduce speech anxiety as SD sessions administered to each client individually at 1-week intervals, as in the Woy and Efran study" (pp. 403-404).

Lawlor, E. D. (1976). Hypnotic intervention with 'school phobic' children. International Journal of Clinical and Experimental Hypnosis, 24, 74-86.

Case studies are used to illustrate the use of hypnosis in working with children who exhibit symptoms of "school phobia." Responses obtained during and after hypnosis are utilized to uncover underlying conflicts and fears.

The literature (Ansbacher, 1956; Friedman, 1959; Johnson, 1957; Johnson, Falstein, Szurek, & Svendsen, 1941; Kessler, 1966; Waldfogel & Gardner, 1961) confirms the findings that a child through his symptoms has fears which he is unable to bring to consciousness and talk about. Typical are fears of abandonment by parents; fears of disaster befalling parents, especially the mother; fears based on destructive wishes toward siblings due to severe rivalry for the mother's love and attention; fears that exhibiting angry feelings will be punished by the parents; and fears of annihilation and starvation.

Hypnosis has aided in restoring these children to a school environment more quickly than more traditional methods. One case is reported with excerpts from a session. The perceptions uncovered through the use of hypnosis can be utilized with children in various school settings

1973

McReynolds, William T.; Barnes, Allan R.; Brooks, Samuel; Rehagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

1971

McAmmond, D. M.; Davidson, P. O.; Kovitz, D. M. (1971). A comparison of the effects of hypnosis and relaxation training on stress reactions in a dental situation. American Journal of Clinical Hypnosis, 13, 233-242.

NOTES

1:

Compared the effectiveness of relaxation, hypnosis, and a control condition in reducing in dental phobics the reaction to pressure-algometer stimulation and the injection of anesthesia. For subjects with high baseline skin-conductance levels, relaxation was most effective in reducing stress reactions. Hypnosis did not differ from the control condition. For subjects with a medium or low skin-conductance baseline, relaxation was not effective. The hypnosis group rated their treatment as most effective, and the controls rated their treatment as least effective. Five-month follow-up indicated that all subjects in the hypnosis group returned for dental

treatment and that 5 of 10 in the control group and only 1 of the relaxation group returned for care.

1970

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

#### NOTES

Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience.

Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

1968

Nuland, William (1968). The use of hypnotherapy in the treatment of the postmyocardial infarction invalid. International Journal of Clinical and Experimental Hypnosis, 16 (3), 139-150.

DEALS WITH THE PSYCHOLOGICAL ASPECTS OF CONVALESCENCE AND REHABILITATION OF PATIENTS FOLLOWING CORONARY INFARCTION. THE FOCUS IS ON THE SITUATIONAL FACTORS WHICH THE PATIENT ENCOUNTERS DURING CONVALESCENCE THAT SERVE TO PROLONG AND REINFORCE THE INVALIDISM. IT IS CONCERNED ESPECIALLY WITH THE VALUE OF HYPNOTHERAPY AS COMPARED WITH OTHER PSYCHOTHERAPEUTIC METHODS IN TREATING THESE CASES. THE ANXIETY AND EMOTIONAL STRESS WHICH CAN BE RELIEVED THROUGH THE USE OF HYPNOSIS IS DIRECTED PRIMARILY TOWARD REDUCING EMOTIONAL TURMOIL WHICH RESULTS FROM THE CORONARY ATTACK WITH THE CONSEQUENT FEAR OF PHYSICAL ACTIVITY AND OF SUDDEN DEATH. SPECIFICALLY, HYPNOSIS IS USED

EFFECTIVELY IN REASSURANCE, REEDUCATION, DESENSITIZATION, GUIDANCE, AND OTHER DIRECT SUPPORT TECHNIQUES IN ACCORDANCE WITH THE PATIENT'S SYMPTOMS AND NEEDS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Davison, Gerald C. (1965, June). Anxiety under total curarization: Implications for the role of muscular relaxation in the desensitization of neurotic fears. [Paper] Presented at the annual meeting of the Western Psychological Association, Honolulu.

NOTES

1:

I began by describing the Jacobson-Wolpe position on the use of deep muscular relaxation as an anxiety-inhibitor: these writers assume that the considerable reduction in proprioceptive feedback from muscles which are in a relaxed state is incompatible with a state of anxiety. Then I mentioned the evidence that at least modern neuromuscular blocking-agents operate solely at the myoneural junction, with no direct central effects. I went on to discuss the various studies which have used paralytic drugs, primarily d- tubocurarine chloride, to show the learning of fear-responses under complete striate muscle paralysis: the fact that these animals are able to acquire classically-conditioned fear-responses under curare was taken as evidence inconsistent with the views of Jacobson and Wolpe. Several studies were then reviewed which purport to furnish confirmatory evidence for the Jacobson position: these studies showed considerable central depression during curare paralysis. I re-interpreted these studies in the light of the over-riding importance of exteroceptive stimulation, stressing that the animals in the curare learning experiments were likewise deprived of proprioceptive feedback and yet were hardly non- anxious: the important difference was that the animals in the conditioning experiments were stimulated frequently from the environment while curarized, this stimulation maintaining an alert, often anxious state. Finally, two hypotheses were put forward as to why training in muscular relaxation does, in fact, inhibit anxiety: the one suggested that relaxing one's muscles generates strong positive affect states, which in turn inhibit anxiety; the other hypothesis called attention to the fact that the states of muscular relaxation under curare versus under self-induced relaxation differ in the important respect that only with self-induced relaxation is there a reduction in efferent activity--perhaps this elimination of efferents, rather than afferents, inhibits anxiety.

1955

Jacoby, James D. (1955). A statistical report on the practical use of hypnosis in dentistry. Journal of Clinical and Experimental Hypnosis, 3 (2), 117-119.

NOTES

1:

This is a description of one dentist's office practice employing hypnosis: 197 hypnodontic subjects experienced 776 hypnodontic sessions (about 4 sessions per

patient). Appointments included: 107 surgical (exodontics), 527 operative, 15 prosthetic, 46 periodontic surgery, 14 endodontics, and 67 "for suggestive conditioning only." The average depth of trance estimated from the first "conditioning" appointment was: 4 refused all instruction following introduction of the subject; 4 were refractory -- did not enter a trance or relaxed mood; 43 reached hypnoidal stage; 41 reached light trance; 65 reached medium trance; 40 reached somnambule stage. The author concludes, "we might also remind ourselves that all patients do not survive surgical or anesthesia intervention. The hypnodontist or hypnotherapist has a 100% clean record for the survival of his patient or even of any deleterious side effects of his treatment. No other specialty of medical-dental therapy is so fortunate" (p. 119).

## AROUSAL

1994

Amigo, S. (1994). Self-regulation therapy and the voluntary reproduction of stimulant effects of ephedrine: Possible therapeutic applications. Contemporary Hypnosis, 11 (3), 108-120.

## NOTES

1:

"Emotional self-regulation therapy is comprised of three phases. In the first phase, several sensory recall exercises are used to teach subjects how to voluntarily reproduce various physical sensations (hand numbness and heaviness, smell and taste) that are initially provoked by real stimuli (cold water, a heavy book, cigarette ashes, and lemon juice). Subjects are asked to associate these sensations with images, words, or other cues that will help them to later reproduce the sensations without the physical stimuli.

"In the second phase, subjects reproduce these sensations without the physical stimuli and are asked to generate them in response to various cues suggested by the therapist (e.g., touching a pencil, pen, book, etc.) ....

"In the last phase ... a demand of any kind generates the suggested effects. In the beginning of this phase, subjects are told that because of previously performed exercises, their minds are highly activated and receptive, so that they can respond to the therapist's verbal suggestions, without needing training for each new sensation. At this point, therapeutic suggestions are given to the patient" (p. 109).

1993

Harris, Ruth M.; Porges, Stephen W.; Carpenter, Myrna E. Clemenson; Vincenz, Lilli M. (1993). Hypnotic susceptibility, mood state, and cardiovascular reactivity. American Journal of Clinical Hypnosis, 36 (1), 15-25.

In this study we explored the relationship between hypnotic susceptibility measured with the Harvard Group Scale of Hypnotic Susceptibility (HGSHS) and cardiovascular parameters. After assessing their degree of hypnotic susceptibility, we induced 21 female students into happy mood states and into sad mood states. During the mood state induction we monitored blood pressure, heart rate, and

cardiac vagal tone continuously. The study demonstrated a strong relationship between hypnotic susceptibility and both cardiac vagal tone and heart rate reactivity. Subjects with lower heart rate and greater vagal tone during baseline and greater heart rate increases during mood induction were more susceptible to hypnosis. Multiple regression analyses indicated that approximately 40% of the individual difference variance of hypnotic susceptibility was accounted for by baseline cardiac vagal tone and heart rate reactivity during mood state. The data demonstrate that autonomic tone, assessed by cardiac vagal tone and heart rate reactivity, are related to hypnotic susceptibility as measured by the HGSHS. - Journal Abstract

**1991**

Crowson, J. Jeffrey, Jr.; Conroy Aileen M.; Chester, Traci D. (1991). Hypnotizability as related to visually induced affective reactivity: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39 (3), 140-144.

Numerous studies have explored the relationship between hypnotizability and individual differences in imaginative involvement and creativity. Most have assessed imaginative or affective involvement by involving Ss in a variety of imaging tasks. Unlike these earlier studies, however, the present study made no attempt to actively involve Ss in the film viewing task. Rather, individuals assessed as high, medium, or low in hypnotizability were exposed to either a violent film, a neutral film, or no film. Results provided tentative evidence to indicate that the level of negative affect reported was significantly greater for highly hypnotizable Ss. Results were discussed in terms of the limitations of the present study and implications for future studies.

**1990**

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

**NOTES:**

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis.

The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]

2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.

3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

**Discussion.** "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive

receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

#### **1989-1990**

**Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. Imagination, Cognition and Personality, 9 (4), 303-320.**

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low, low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

**Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.**

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of

Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

#### NOTES

1:

This paper is based on a paper presented to Division 30, Psychological Hypnosis, at annual meeting of the American Psychological Association, Aug 1987.

1988

Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

#### NOTES

1:

Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time

sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:

A Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability

Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

Neiss, Rob (1988). Reconceptualizing arousal: Psychobiological states in motor performance. *Psychological Bulletin*, 103 (3), 345-366.

This review of research dealing with psychologically induced arousal and motor performance focuses on the hypothesized inverted-U function relating arousal to performance. The inverted-U hypothesis is supported only in a weak and psychologically trivial fashion. More useful research in human motor performance would investigate discrete psychobiological states, which include affect and cognition as well as physiology. Examination of profound individual differences in response to incentive and threat suggests that psychobiological states have their genesis in response expectancies and hypnotic-like self-inductions. The cognitive and affective components of these states are highly interactive and perhaps not profitably separated. Because performance anxiety is a central problem in the motor realm, it is carefully delineated and the test anxiety literature is scrutinized. Psychophysiological test batteries and other investigations in the area are described, and guidelines for future research are provided.

Neiss, Rob (1988). **Reconceptualizing relaxation treatments: Psychobiological states in sports.** Clinical Psychology Review, 8 (2), 139-159

Reviews studies relating relaxation treatments to motor performance and attempts to explain these treatments from a psychological perspective. The inverted-U hypothesis is based on arousal, which has construct validation problems and is a physiological, rather than a psychological, construct. Arousal cannot distinguish among fear, anger, sexuality, and other psychobiological states; predictive validity is low in the area of motor performance. The inverted-U hypothesis is effectively refutable in current usage, and empirically weakly supported. Relaxation treatments are reconceptualized as relatively nonspecific psychological therapies, potentially useful in alleviating dysphoric, debilitating psychobiological states. These treatments are particularly apt for athletics, where performance anxiety is a pervasive problem..

1984

Pekala, Ronald J.; Kumar, V. K. (1984). **Predicting hypnotic susceptibility by a self-report phenomenological state instrument.** American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

1982

Blum, Gerald S.; Nash, John K. (1982). **EEG correlates of posthypnotically controlled degrees of cognitive arousal.** Memory and Cognition, 10, 475-478.

Experimental control over five degrees of cognitive (as opposed to organismic) arousal has been developed by hypnotic programming techniques. Previously these posthypnotic manipulations have been applied to the investigation of diverse topics such as visual discrimination, performance on the Stroop test, selective concentration on color versus form of consonants, and cognitive "reverberation." The present study explored EEG correlates of the five degrees of cognitive arousal in a task requiring participants to visualize objects for one-minute periods while lying on a couch with eyes closed. Analysis of data from the occipital area in left and right hemispheres revealed that the highest degree of arousal was accompanied by larger amplitudes of alpha and beta power and smaller amplitudes of theta. This

pattern of results was similar in both hemispheres, although more marked in the left. The findings, which provide an independent source of support for validity of the hypnotic programming, are discussed in relation to EEG literature on cognitive activity.

#### NOTES

1:

Hypnosis doesn't enhance imagery. It provides the conditions under which mental alertness may be manipulated, and very clear imagery is associated with the alert condition whereas blurry imagery is associated with the lowest cognitive arousal condition. The other impression comes from clinical work, i.e. that hypnosis enhances imagery. This article is an example of hypnosis used in other research--see last page.

1981

De Piano, F. A.; Salzberg, H. C. (1981). Hypnosis as an aid to recall of meaningful information presented under three types of arousal. International Journal of Clinical and Experimental Hypnosis, 29 (4), 383-400.

This study was designed to examine the effect of hypnotic induction on recall of information which was incidental, meaningful, and contextually presented. A hypnotic induction with task motivating suggestions was found to enhance recall to a greater extent than were task motivating suggestions alone. It was argued that the positive findings of this study might be due to (a) the types of information used for recall in this study, (b) confidence/motivational factors felt to be facilitated by hypnotic induction, and (c) reduction in critical judgment which allows for the reporting of partial memories. Film-induced arousal resulted in physiological measures and self-reports of arousal which varied with the content of the films. The effects of arousal on recall, however, were less clear but with only slight indications that traumatic arousal had a deleterious effect on recall. Support for the contention that a hypnotic induction would aid recall of information learned under traumatic arousal to a greater extent was not found. The range of arousal produced, however, was probably restricted in comparison to "natural" arousal. Greater differences in recall might be found in real world situations.

#### NOTES

1:

Hypnosis was not mentioned during recruitment of subjects. They were connected to equipment to measure physiological changes, and then shown a film. Each S saw one of 3 films: Low Arousal (depicting scenes of horses running in the distance, landscape, people socializing), Sexual Arousal (two lovers in romantic encounter, culminating in sexual intercourse), or Traumatic Arousal (a transorbital surgical lobotomy of the brain).

1979

Quall, Penelope J.; Sheehan, Peter W. (1979). Capacity for absorption and relaxation during electromyograph biofeedback and no-feedback conditions. Journal of Abnormal Psychology, 88 (6), 652-662.

The present research examined the relation between absorption capacity and relaxation during electromyograph biofeedback and no-feedback (instructions only) conditions. Sixteen high absorption and 16 low absorption female subjects underwent a biofeedback and no-feedback session with the order of conditions counterbalanced. For high absorption subjects in the first session, EMG reductions were greater during no- feedback than during biofeedback, although the performance of biofeedback subjects improved in the second session. For low absorption subjects, no differences in EMG reductions were apparent across experimental conditions. Postexperimental self-report data demonstrated differences between absorption groups in subjects' state of arousal and quality of consciousness. It was concluded that for subjects with high capacity for absorbed attention, experimental conditions that allow for a withdrawal from the external environment are most conducive to relaxation, whereas for subjects with limited capacity for absorbed attention, conditions such as biofeedback that place an attentional demand on subjects may be preferable.

1978

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

1977

Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the

latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

1974

Bloom, Richard F. (1974). Validation of suggestion-induced stress.

NOTES

1:

Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1967

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS

**OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Blum, Gerald S. (1967). Experimental observations of the contextual nature of hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (4), 160-171.**

**EXPLORED THE DISTINCTIVE MENTAL CONTEXT OF HYPNOSIS WITH A WELL TRAINED MALE UNDERGRADUATE. 1ST, A CONTEXT EFFECT WAS DEMONSTRATED BY PRESENTING 2 SETS OF STIMULI ON A TRIAL, 1 UNDER THE HYPNOTIC CONDITION AND 1 UNDER THE WAKING, AND TESTING THEIR SUBSEQUENT SALIENCE IN HYPNOTIC OR WAKING REPORT STATES. ATTEMPTS WERE THEN MADE TO ISOLATE ELEMENTS OF THE HYPNOTIC CONTEXT-CLOSED EYES, LOWERED MENTAL AROUSAL, AND "BLANK MIND"-NONE OF WHICH PROVED TO BE SUFFICIENT IN ITSELF TO ACCOUNT FOR THE OBSERVED PHENOMENON. A GREATER DIFFICULTY OF SPONTANEOUS INFORMATION TRANSMISSION FROM HYPNOTIC TO WAKING CONDITION THAN VICE VERSA LED TO ADDITIONAL EXPERIMENTS IN WHICH PRIOR HYPNOTIC "PRIMING," IN THE ABSENCE OF SPECIFIC POSTHYPNOTIC SUGGESTION, HAD NO EFFECT ON RELATED WAKING TASKS. FINALLY, A THEORETICAL INTERPRETATION WAS PROPOSED TO EXPLAIN HOW INITIALLY WEAK HYPNOTIC INPUTS, REGISTERED WITHIN A HIGHLY DISTINCTIVE MENTAL CONTEXT, CAN ACQUIRE VIRTUALLY COMPLETE COGNITIVE DOMINANCE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1960**

**McCord, Hallack (1960). A note on a change in mental age accompanying hypnosis of a teen-age-girl. International Journal of Clinical and Experimental Hypnosis, 8 (4), 259-262.**

**NOTES**

**1:**

**An adolescent with questionable diagnosis (mental retardation due to organic brain damage or functional psychological disorder) was given the E-G-Y test for an estimate of verbal intelligence. After initial testing, in which attention span was limited and she was very negativistic, she was re-tested in light hypnosis. Her mental age "more than doubled -- went up by six years -- "in the intervening 24 hours. The author ascribes improvement to relaxation from light hypnosis and opined that the 10 year level achieved under hypnosis was close to her "true" level of functioning. Subsequent attempts to hypnotize her were not successful, possibly due to short attention span and negativistic tendencies.**

**1959**

arber, Theodore Xenophon; Coules, John (1959). Electrical skin conductance and galvanic skin response during 'Hypnosis'. International Journal of Clinical and Experimental Hypnosis, 7 (2), 79-92.

#### NOTES

1:

##### "Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'

2. Skin conductance generally increased throughout the remainder of the experiment, ie., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.

3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'

4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.

5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who showed a GSR stated, during or after the experiment, that they were by no means convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.

6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'hypnotic behavior.)

"Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1. Ss do not necessarily become more 'passive' or 'relaxed' during the 'hypnotic induction procedure.'

2. Ss often become more and more 'excited' and 'aroused' when they are given a series of 'active' suggestions such as 'sensory hallucinations,' 'age-regression,' etc.

3. Ss often show momentary 'excitement' when they are 'hallucinating.'

4. A pinprick can 'arouse' a S to the same extent during 'hypnotic analgesia' as it can during 'normal waking.' In addition, 'hypnotic analgesic' Ss are often just as much 'aroused' by the threat of a pinprick as they are by an actual pinprick.

5. Many Ss become momentarily 'excited' when they are asked to look directly at an object (or person) which they have been told they will not be able to see. However, some Ss do not show this momentary 'excitement.'

6. Although Ss may state that they do not 'remember' the 'post'-hypnotic suggestion, they often become momentarily 'excited' when the E makes preliminary motions to give the signal for the 'post'-hypnotic act" (pp. 90-92).

## **ARTHRITIS/RHEUMATOLOGY**

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

### **NOTES**

**1:**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1996**

Holroyd, Jean (1996). Hypnosis treatment of clinical pain: Understanding why hypnosis is useful. International Journal of Clinical and Experimental Hypnosis, 44 (1), 33-51.

Clinical and experimental research literature indicates hypnosis is very useful for severe and persistent pain, yet reviews suggest hypnosis is not widely used. To encourage more widespread clinical application, the author reviews recent controlled clinical studies in which hypnosis compares favorably with other interventions; links advances in understanding endogenous pain modulation to a neurophysiologic view of hypnosis and hypnoanalgesia; relates the neurophysiology of hypnoanalgesia to management of chronic pain; challenges the view that hypnotic pain control is only for the highly hypnotizable patient; and raises issues about how people learn to control pain with hypnosis. Training in hypnotic analgesia may usefully enhance nervous system inhibitory processes that attenuate pain.

#### NOTES

1:

Hypnosis has been more effective for pain management than other cognitive behavioral interventions in studies of fibromyalgia (Haanen, Hoenderdos, Van Romunde, Hop, Malle, Terwiel, & Hekster, 1991); burn treatment (Patterson, Everett, Burns, & Marvin, 1992); and cancer bone marrow transplant procedures (Syrjala, Cummings, & Donaldson, 1992). Central nervous system gating or downward modulation of pain impulses may account for hypnotic pain control. "Hypnosis enables both amplification and attenuation of cortical response subsequent to sensory registration and prior to consciousness, depending on whether suggestions are for increasing or decreasing awareness (Blum & Barbour, 1979)" (p. 36). This type of inhibition may even be observed in the peripheral nervous system (see Hernandez-Peon, Dittborn, Borlone, & Davidovich, 1959/1960; Sharev & Tal, 1989; Kiernan, Dane, Phillips, & Price, 1995). Work by Helen Crawford (1994) suggests that frontal and limbic areas of the brain are involved in inhibitory patterns of brain activity, and that generation of theta EEG rhythms by lower centers is associated with the suppression of awareness of pain.

Some very low hypnotizable people have been able to learn to control pain with hypnosis, suggesting that it is a skill that can be learned. However, few investigations of improvement of hypnoanalgesia were located. Rather, one must generalize from the fact that other kinds of hypnosis skills have been improved using special training programs, such as the Carleton University program developed by Gorassini & Spanos, 1986). Although most research on improving hypnotic response has been based on operant learning principles, a model that incorporates respondent (classical conditioning) principles might be more useful when it comes to understanding the training of a neurophysiological response, such as inhibitory brain patterns associated with hypnoanalgesia. "Historical success with clinical pain, taken together with newer findings in the neurophysiology of hypnosis, indicate that we should be spending more energy investigating how learning may improve hypnotic analgesia" (p. 43). "We should acknowledge that there are advantages to hypnosis beyond those of relaxation, a good placebo, and psychotherapy. ... Responsible care demands that we provide training or practice in

hypnotic analgesia when treating pain, and especially whenever a chronic pain patient initially appears to be nonresponsive" (p. 43).

1991

Haanen, Huub C.M.; Hoenderdos, Henk T.W.; Van Romunde, Leo K.J.; Hop, Win C.J.; Malle, Constant; Terwiel, Jack P.; Hekster, Gideon B. (1991). Controlled trial of hypnotherapy in the treatment of refractory fibromyalgia. Journal of Rheumatology, 18 (1), 72-75.

In a controlled study, 40 patients with refractory fibromyalgia were randomly allocated to treatment with either hypnotherapy or physical therapy for 12 weeks with followup at 24 weeks. Compared with the patients in the physical therapy group, the patients in the hypnotherapy group showed a significantly better outcome with respect to their pain experience, fatigue on awakening, sleep pattern and global assessment at 12 and 24 weeks, but this was not reflected in an improvement of the total myalgic score measured by a dolorimeter. At baseline most patients in both groups had strong feelings of somatic and psychic discomfort as measured by the Hopkins Symptom Checklist. These feelings showed a significant decrease in patients treated by hypnotherapy compared with physical therapy, but they remained abnormally strong in many cases. We conclude hypnotherapy may be useful in relieving symptoms in patients with refractory fibromyalgia.

#### NOTES

1:

The patients in this study were 38 women and 2 men, ages 30-65, who had had fibromyalgia for an average of 8.5 years (range 1.5 - 40 years). Of these, 25 were on sick leave or incapacitated, and 6 were unemployed. Patients were randomly assigned to hypnotherapy, or to training in muscle relaxation plus massage (designated "physical therapy"). They were withdrawn from analgesics, except for paracetamol (like Tylenol), at the beginning of this program. Hypnotizability was not measured.

Hypnosis treatment consisted of an arm levitation induction, imagery deepening techniques, ego strengthening suggestions, and suggestions for control of muscle pain, relaxation, and improved sleep. Patients received eight one-hour sessions in decreasing frequency over three months; after Session 3 they were given a 30-minute audiotape to assist in daily self hypnosis. Seventeen patients completed hypnotherapy but three were dissatisfied and withdrew after 3 sessions.

Patients did self ratings on (1) duration of morning stiffness, (2) muscle pain, (3) fatigue on awakening, (4) sleep disturbance, and (5) global assessment, the last four using visual analog scales (VAS). Patient assessment at 12 and 24 weeks was the primary outcome measure, since fibromyalgia is diagnosed principally from patient's self described symptoms.

Independent observers did not know to which group the patient belonged. The physician's evaluation included (1) dolorimeter measures of point tenderness (for a Total Myalgic Score, TMS), (2) presence of tender points at 30 points, with 5 control points, (3) overall pain rating with visual analogue scale.

The Hopkins Symptom Checklist (HCL-90) also was used to evaluate outcome.

Using analysis of variance techniques and correcting for initial values, the study found significantly more favorable values in the hypnosis group than in the physical therapy group for muscle pain, fatigue on awakening, sleep disturbance, patient's overall assessment, and HCL total score. However, differences were not significant for morning stiffness, physician's overall assessment, or T.S. There were no differences between Weeks 12 and 24 for both groups; therefore the mean value for weeks 12 and 24 for each patient were used to calculate percentage change relative to baseline.

The reduction in pain medication used by the hypnosis group was quite remarkable. "Median (range) analgesic drug use at the initiation of the study (mostly paracetamol) was in the hypnotherapy group 3.0 (0-42) tablets/week and in the physical therapy group 4.5 (0-21)/week. At Week 12 this was 1.0 (0-21) tablet/week for the hypnotherapy group and 7.0 (0-34) tablets/week for the physical therapy group. At the end of the study, 10 of 12 patients in hypnotherapy group and 3 of 12 patients in the physical therapy group had reduced their paracetamol use (Fisher exact test:  $p = 0.006$ )" (pp. 73-74).

Although it was observed that the total number of tender points decreased (regardless of treatment group), the Total Myalgic Score assigned by the physician had not changed either at week 12 or at week 24. In fact, even the control points were tender in 44% of the patients; most patients showed some pain response to a control point in one or two sessions of the three. "Only 12 of 40 patients had consistently nontender control points, 4 in hypnotherapy group and 8 in the physical therapy group. ... No relation was found between the initial HCL total score and the changes in the other variables studied" (p. 74).

Figures taken from Table 2, showing percent change as compared to baseline:

Physical Therapy (%)	Hypnotherapy (%)	Morning stiffness (minutes)	0.0	-25.0	
Muscle pain (VAS)	-6.8	-10.2**	Fatigue on awakening (VAS)	-0.3	-16.7**
Sleep disturbance (VAS)	-1.0	-23.1**	Overall assessment patient	-8.4	-33.2**
	+5.7	-3.2	T.S. (kg/3 cm <sup>2</sup> )	-11.1	-2.4
			HCL total score	-0.9	-13.0**

In their Discussion, the authors write, "In this controlled therapeutic trial in patients with refractory fibromyalgia hypnotherapy was more successful than physical therapy in improving complaints. The assessment of fatigue on awakening, sleep disturbance, muscle pain, the patient's overall assessment and the total score of the HCL showed a significant decrease in the hypnotherapy group at the end of the hypnotherapy at 12 weeks. This decrease persisted for 3 months after finishing the hypnotherapy. The variables studied in the physical therapy group had not changed significantly at 12 and 24 weeks.

"However, the patients in the hypnotherapy group improved only subjectively. This improvement was not seen via more objective variables (T.S. and number of tender points), in accordance with others [Carette et al., 1986]. This suggests that coping with the disease may be positively influenced by hypnotherapy though the underlying disorder is still present.

"Correction of the sleeping disturbance by hypnotherapy was the most consistent finding and possibly played an important role in the subjective improvement of fibromyalgia" (p. 74).

The authors noted that the HCL yielded scores in the pathological range during the baseline period. "Thus, in our study, patients with long-standing fibromyalgia often showed pathological feelings of discomfort. In the hypnotherapy group the total score of the HCL decreased significantly suggesting that the physical disturbance may be secondary to long-standing fibromyalgia. It is worth noting that only 3 of the 57 questions on the HCL-90 concern fibromyalgia" (p. 74).

The authors express the opinion that their data do not support a distinction between fibromyalgia and psychogenic rheumatism [Simms, Goldenberg, Felson, & Mason, 1988; Campbell, Clark, & Tindall, 1983] based on pain reported at control points. "Most patients in our study had variable tender control points. The finding of tender control points in fibromyalgia is consistent with others [Wolfe, Smythe, Yunus, et al., 1990; Scudds, Rollman, Harth, & McCain, 1987]. Also we found a positive correlation between the number of tender points and the presence of tender control points. Therefore, it seems more likely that there is a fairly large overlap between fibromyalgia and psychogenic rheumatism (tender all over)" (p. 75).

1990

Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

1989

Yousufzai, N. M. (1989). Rheumatoid arthritis and hypnosis: Case report. British Journal of Experimental and Clinical Hypnosis, 6 (3), 178-181.

In this study we aimed to assess the effectiveness of clinical hypnosis on the symptoms and disease activity of rheumatoid arthritis (RA). 66 RA patients participated in a controlled group design. 26 patients learnt the hypnosis intervention, 20 patients were in a relaxation control group, and 20 patients were in a waiting-list control group. During hypnosis, patients developed individual visual imagery aimed at reducing the autoimmune activity underlying the RA and at reducing the symptoms of joint pain, swelling, and stiffness. Subjective assessments of symptom severity and body and joint function, using standardized questionnaires

and visual analogue scales, were obtained. Objective measures of disease activity via multiple blood samples during the therapy period and at the two follow-ups were also taken. These measurements were of erythrocyte sedimentation rate, C-reactive protein, hemoglobin, and leukocyte total numbers. Results indicate that the hypnosis therapy produced more significant improvements in both the subjective and objective measurements, above relaxation and medication. Improvements were also found to be of clinical significance and became even more significant when patients practiced the hypnosis regularly during the follow-up periods.

#### NOTES

1:

"The effect of hypnotic suggestion on pain and mobility of joints was remarkable. On the fifth session there was hardly any pain, and shoulder movements were almost normal" (p. 179).

1985

Domangue, Barbara B.; Margolis, Clorinda; Lieberman, D.; Kaji, H. (1985). Biochemical correlates of hypnoanalgesia in arthritic pain patients. Journal of Clinical Psychiatry, 46, 235-238.

Self-reported levels of pain, anxiety, and depression, and plasma levels of beta-endorphin, epinephrine, nor-epinephrine, dopamine, and serotonin were measured in 19 arthritic pain patients before and after hypnosis designed to produce pain reduction. Correlations were found between levels of pain, anxiety, and depression. Anxiety and depression were negatively related to plasma norepinephrine levels. Dopamine levels were positively correlated with both depression and epinephrine levels and negatively correlated with levels of serotonin. Serotonin levels were positively correlated with levels of beta-endorphin and negatively correlated to epinephrine. Following hypnotherapy, there were clinically and statistically significant decreases in pain, anxiety, and depression and increases in beta-endorphin-like immunoreactive material.

1984

Elkins, Gary R. (1984). Hypnosis in the treatment of myofibrositis and anxiety: A case report. American Journal of Clinical Hypnosis, 27, 26-30.

A 38-year-old woman with chronic myofibrositis pain was treated by the use of hypnosis and psychotherapy. Hypnotherapeutic techniques, including symptom alteration, relaxation, and insight, are described. This regimen resulted in reduction in pain and emotional distress, which was maintained at three months and one year after treatment.

#### ASORPTION

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

Sapp, Marty; Hitchcock, Kim (2003). Creative imagination, absorption, and dissociation with African American college students. Sleep and Hypnosis, 5 (2), 95-104.

The purpose of this study was to assess creative imagination, absorption, and dissociation with African American college students. Two hundred thirty-six undergraduate African American students ranging between the ages of 18 to 22 participated in this study. Students were assigned to the following experimental manipulation: (a) Creative Imagination Scale (CIS), a cognitive-behavioral measure of hypnotizability; and (b) Dissociative Experiences Scale (DES), General Dissociation Scale (GDS), and Tellegen Absorption Scale (TAS) embedded within the CIS. Results indicated that dissociation and absorption were affected by the CIS. Finally, this sample was compared with the European American sample obtained by Barber and Wilson (1978) and Wilson and Barber (1978), and clearly the two samples differed on creative imagination,  $t(405)=7.00$ ,  $p<.005$ . The African American sample had a significantly lower mean CIS score than the European American sample.

#### NOTES

Key words: imagination, hypnosis, absorption, dissociation, adolescents, cultural differences, African American college students, cognition.

2002

Manmiller, Jessica L.; Kumar, V. K.; Pekala, Ronald J. (2002). Hypnotizability, creative capacity, creativity styles, absorption and phenomenological experience. [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.

"The study investigated relationships between creative capacity, styles of creativity, hypnotizability, and absorption. Participants were 429 students enrolled in Introduction to Psychology classes. Students first completed questionnaires pertaining to creative capacity, creativity styles, and absorption (Tellegen's Absorption Scale). They were subsequently hypnotized using the Harvard Group Scale of Hypnotic Susceptibility and completed the Phenomenology of Consciousness Inventory. The pattern of results suggests that creative capacity is

more closely related to absorption than hypnotizability. The support for P. G. Bowers' assertion that effortless experiencing while engaged in creative tasks and hypnotic tasks is a process that is common to both high creative and high hypnotizable subjects was weak. Hypnotizability was more strongly and negatively correlated with volitional control for suggestions experienced during hypnosis, than both absorption and creative capacity. Creativity styles of belief in unconscious processes, use of techniques, final product orientation (intrinsic/extrinsic) motivation, environmental control and behavioral self-regulation, and superstition were negatively correlated with volitional control (feeling of effortlessness experiencing) during hypnosis, but the correlations were small in magnitude" (Bulletin of Division 30, Psychological Hypnosis, Fall, 2002, Vol. 11, No. 3, P. 14).

**2000**

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

Lichtenberg, P.; Bachner-Melman, R.; Gritsenko, I.; Ebstein, R. P. (2000). Exploratory association study between catechol-O-methyltransferase (COMT) high/low enzyme activity polymorphism and hypnotizability. American Journal of Medical Genetics, 96, 771-774.

Only recently have studies of electrocortical activity, event-related potentials, and regional cerebral blood flow begun to shed light on the anatomical and neurobiological underpinnings of hypnosis. Since twin studies show a significant heritable component for hypnotizability, we were prompted to

examine the role of a common, functional polymorphism in contributing to individual differences in hypnotizability. A group of 109 subjects (51 male, 58 female) were administered three psychological instruments and tested for the high/low enzyme activity COMT val/met polymorphism. We observed a significant correlation between hypnotizability measured by the Stanford Hypnotic Susceptibility Scale (SHSS:C), ability to partition attention (Differential Attentional Processes Inventory or DAPI), and absorptive capacities (Tellegen Absorption Scale or TAS). The effect of COMT on the various dependent variables was initially examined by multivariate analysis that corrects for multiple testing. The dependent variables were SHSS:C hypnotizability scores, four attentional subscales of the DAPI, and TAS total score grouped by the COMT genotype (val/val, val/met, met/met) as the independent variable. Hotelling's Trace statistic was significant when scores were grouped by the COMT genotype (Hotelling's  $T^2 = 1.88$ ,  $P = 0.04$ ). Post-hoc testing using the Bonferroni correction shows that the only significant difference is between the val/met vs. the val/val COMT genotypes on hypnotizability. This association was significant for men but not for women. As for all case-control studies, these results need to be interpreted cautiously and require replication.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

NOTES:

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm,

accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1997-1998**

**Hillig, Justine A.; Holroyd, Jean (1997-98). Consciousness, attention, and hypnoidal effects during firewalking. Imagination, Cognition and Personality.**

Subjective experiences of individuals who walked on hot coals during a firewalking ceremony were investigated. This study extended and partially supported an investigation reported by Pekala and Ersek in this Journal [1]. Twenty-three participants completed retrospective questionnaire assessments concerning their subjective experiences while walking on hot coals. Results from twelve participants were compared with the participants' own experiences during a baseline condition. The data suggested that attention during firewalking is significantly more "one-pointed" than during a baseline condition, and that consciousness may be characterized as more "hypnoidal" than during a baseline condition. Walking on hot coals was further characterized by trends toward reporting increased altered awareness, altered experience, and absorbed attention. Participants who developed a greater degree of blistering reported significantly greater hypnoidal effects during the firewalk than those who developed a lesser degree of blistering.

**1996**

**Dixon, Mike; Labelle, Louise; Laurence, Jean-Roch (1996). A multivariate approach to the prediction of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 44 (3), 250-264.**

The present study examined the relation between various self-report measures and two measures of hypnotizability within a multivariate framework. A group of 748 participants was tested on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), the Tellegen Absorption Scale (TAS), as well as the Preference for an Imagic Cognitive Style (PICS) questionnaire. One hundred ninety of these participants also completed the Paranormal Experiences Questionnaire (PEQ). Data were analyzed using hierarchical multiple regression equations, and the results of the analyses indicated that both the TAS and PICS accounted for significant amounts of unique variance in each of two 373-member samples of HGSHS:A scores. A further sub-sample of participants (n = 161) was tested on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) to see if these results would generalize to another measure of hypnotizability. Hierarchical multiple regression analyses revealed that although the PEQ predicted significant amounts of unique SHSS:C variance over and above that predicted by the TAS, the PICS failed to do so. This inconsistency in results may be due in part to the generally low

intercorrelation between the different hypnotizability scales and points to the need to develop new predictor variables that are orthogonal to each other. - Journal Abstract

Kumar, V. K.; Pekala, Ronald J.; Cummings, James (1996). Trait factors, state effects, and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 44 (3), 232-249.

This study examined the relationship of 15 trait (e.g., absorption, ego-permissiveness) and 21 phenomenological variables (assessed by the Phenomenology of Consciousness Inventory) with performance on the Harvard Group Scale of Hypnotic Susceptibility, Form A. Factor analyses suggested three trait factors (absorption-permissiveness, general sensation seeking, and social desirability) and five state factors (dissociated control state, positive affect, negative affect, attention to internal processes, and visual imagery). The factors correlated to hypnotizability were absorption-permissiveness, dissociated control, positive affect, and attention to internal processes. In predicting hypnotizability, the amount of variance accounted for by the trait factors was approximately 9%; an additional 22% was accounted for by state factors. The interactions did not account for any additional variance in predicting hypnotizability.

Wickramasekera, Ian; Price, Daniel C. (1996, November). Morbid obesity, absorption, neuroticism, and the high risk model of threat perception. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Tampa, FL.

We studied seventy morbidly obese patients, candidates for gastric exclusion surgery. We found that their mean absorption score was significantly lower and that their mean neuroticism score significantly higher than a matched control group. These results are consistent with predictions from the High Risk Model of Threat Perception (Wickramasekera, 1979, 1988). People high in neuroticism are hypothesized to be hypersensitive to threat at a behavioral and biological level, and therefore, at greater risk for stress related psychobiological disorders. People low in absorption are hypothesized to have poor perception of psychosocial sources of threat have a more restricted range of psychological methods of coping with threat. Therefore, they may be at greater risk during stress of not recognizing psychosocial sources of threat of unconsciously using substances to self-soothe and of perceiving medical surgical solutions to weight gain as more credible than psychosocial therapy programs. We found that low absorption and high neuroticism as predicted by the HRMTP were significantly more prevalent among the morbidly obese seeking surgical therapy than a matched community control group.

1995

Bryant, Richard A. (1995). Fantasy proneness, reported childhood abuse, and the relevance of reported abuse onset. International Journal of Clinical and Experimental Hypnosis, 43 (2), 184-193.

This study investigated the relationship between fantasy proneness and the age at which reported childhood sexual abuse occurs. Seventeen adult females who reported having been sexually abused before the age of 7 years, 20 females who reported having been abused after the age of 7 years, and 20 females who reported having never been abused were administered two measures of imaginative involvement (Tellegen Absorption Scale [TAS] and Inventory of Childhood Memories and Imaginings [ICMI]). Participants who were reportedly abused early in childhood obtained higher scores on the TAS and ICMI than participants who were reportedly abused later in childhood, who in turn obtained higher scores than the control participants. Findings are discussed in terms of factors that mediate fantasy proneness and reports of childhood abuse.

Crawford, Helen J.; Kapelis, Lia; Harrison, David W. (1995). Visual field asymmetry in facial affect perception: Moderating effects of hypnosis, hypnotic susceptibility level, absorption, and sustained attentional abilities. International Journal of Neuroscience, 82 (n1-2), 11-23.

Effects of hypnotic level, affect valence and cerebral asymmetry on reaction time (RT) in the discrimination of Ekman and Friesen (1978) stimuli of angry and happy faces were studied in counterbalanced conditions of waking and hypnosis. Assessed previously on two hypnotic susceptibility scales (Harvard Group Scale of Hypnotic Susceptibility; Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C)), non-depressed subjects were 16 low (0-4 SHSS:C) and 17 highly (10-12 SHSS:C) hypnotizable, right-handed college students. Subjects were required to identify affect of faces, presented tachistoscopically to left (LVF) or right (RVF) visual fields, by using a forced-choice RT paradigm. Highs were significantly faster than lows in angry and happy affect recognition. Hypnosis had no significant effects. For highs only, angry emotional valence was identified faster when presented to the right hemisphere (RVF), but there were no significant hemispheric effects for happy emotional valence. For lows there were no hemispheric differences. Gender was a nonsignificant factor. Significant correlations showed that faster reaction times to angry and happy stimuli, in both LVF and RVF in waking and hypnosis, were obtained by subjects who reported more deeply absorbed and extremely focused and sustained attention on the Tellegen (1982) Absorption Scale and a subscale of the Differential Attentional Processes Inventory (Grumbles & Crawford, 1981). Vividness of Visual Imagery Questionnaire (Marks, 1973) and Affect Intensity Measure (Larsen, 1985), in general, did not correlate with RTs. The potential role of the fronto-limbic attentional system in the recognition of external visual sensory affect is discussed.

Glisky, Martha L.; Tataryn, Douglas J.; Kihlstrom, John F. (1995). Hypnotizability and mental imagery. International Journal of Clinical and Experimental Hypnosis, 43 (1), 34-54.

Two studies investigated the relationship between mental imagery and hypnotizability, with the imagery measures administered in a hypnotic context. The

correlation of hypnotizability with vividness of imagery was significant in one study, but not in the other; both correlations were significantly lower than that obtained between hypnotizability and absorption, assessed in the same samples. The correlations with control of visual imagery, and with various measures of the vividness of motor imagery, were even lower and rarely significant. Except for an aggregate index of motor imagery, a search for significant nonlinear relationships with hypnotizability yielded nothing that was consistent across studies. Future studies of imagery and hypnotizability should make use of better measures of vividness of mental imagery and consider the relevance of aspects of imagery other than vividness.

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

1994

Atkinson, Richard P. (1994). Relationships of hypnotic susceptibility to paranormal beliefs and claimed experiences: Implications for hypnotic absorption. American Journal of Clinical Hypnosis, 37, 34-40.

This study examined the relationship of hypnotic susceptibility level to belief in and claimed experience with paranormal phenomena. The Harvard ... and the Inventory of Paranormal Beliefs and Experiences [developed for this study] were administered on consecutive days to 43 undergraduate students (14 men, 29 women) ... . a significant multiple correlation was obtained ( $r = .55, p < .001$ ). A partial correlation between hypnotic susceptibility and belief in paranormal phenomena was also significant ( $r = .53, p < .001$ ), while hypnotic susceptibility was not found to be

significantly related to claimed paranormal experiences. Implications of these relationships for the role of absorption in hypnosis are discussed.

**NOTES**

**1:**

Discusses relationship to Absorption, and the fact that Labelle, Dixon, Laurence, & Nadon (1990) got correlation of hypnotizability with paranormal experience.

Csoli, Karen; Ramsay, Jason T.; Spanos, Nicholas P. (1994, August). Psychological correlates of the out-of-body experiences--a reexamination. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

**NOTES**

**1:**

**NOTES:** 12% of population reports an out-of-body experience (OBE) sometime in their lives. They leave their body and can see self from the outside. Awareness is confined to the new point of view, not fragmented; there is unimpaired intellectual ability; feelings of detachment, completeness, well being, and profound relaxation. Can occur under stress or deep relaxation; not while driving a car.

Psychological correlates aren't known. Studies are inconclusive with respect to belief systems (religious, death anxiety, etc.); measures of absorption, hypnosis, imaginative ability, imagery controls. Recent Carlton study with 87 Ss (33 had OBE) got results we didn't expect. They completed questionnaires, were tested for hypnotizability, had an interview re OBE experience.

This study found the OBE-experiencing people had higher levels of anxiety, psychosomatic symptoms, and panic attacks. They were also higher on magical thinking, perceptual aberration, and Schizophrenia scores. They didn't differ on mysticism, levels of drug or alcohol use, or level of self esteem.

Grant, Carolyn (1994). The Computer-Assisted Hypnosis Scale: Standardization and norming of a computer-administered measure of hypnotic ability (Dissertation). Dissertation Abstracts International, 54 (10/B), 5387.

**ABSTRACT:** "In a counterbalanced, within-subjects, repeated measures design, 130 subjects were administered both the Computerized Assisted Hypnosis Scale (CAHS) and the Stanford Hypnotic Susceptibility Scale, Form C (Stanford Hypnotic Susceptibility Scale: C). For each hypnotic procedure responsiveness was assessed along three dimensions: behavioral (CAHS, Stanford Hypnotic Susceptibility Scale: C), subjective depth (Field Depth Inventory), and relational involvement (Archaic Involvement Measure). Subjects also completed a Stanford Hypnotic Susceptibility Scale: C self scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the Stanford Hypnotic Susceptibility Scale: C across the three dimensions assessed. Results are discussed in terms of the theory and practice of clinical assessment, noting directions for future research" (p. 5387).

Wain, Harold J.; Wollman, K. (1994, October). A comparison of the hypnotic capacity of psychiatric outpatients and psychiatric consultation liaison patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES

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NOTES: We used the Hypnotic Induction Profile (HIP) in our studies. HIP Scores (eyeroll and arm levitation) for Psychiatric Consultation Liaison patients (PCLA group) and Psychiatric Outpatient Clinic (POC) group are significantly different, as are the total scores on the HIP.

Eyeroll Scores: PCLA = 2.625, POC = 2.205 HIP Scores: PCLA = 7.330 POC = 5.920

Thus there is higher hypnotizability in Consultation Liaison patients. Engel and Romano suggested that 75% of patients going to a physician have a psychological component to their illness.

Once a person recognizes they have a medical condition there is a sense of trauma, a sense of anxiety, which contributes to an altered state. Components of hypnosis (absorption, decreased vigilance, suggestion, dissociation, assimilation of data, trance logic, time distortion) may affect how they then assimilate a symptom.

Why is hypnosis (absorption) so effective in an emergency room? Patients in the emergency room feel panicked, thinking "physiologically and psychologically I'm out of control." By using hypnosis you give them an anchor. Maybe hypnotizability enhances medical symptomatology, but it can also facilitate treatment.

We use the HIP because the eye roll component is observable by medical colleagues and patients.

1993

Atkinson, Richard P. (1993, October). Shifts in Muller-Lyer Illusion difference thresholds: Are high hypnotizables more sensitive than lows in hypnosis?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

1:

NOTES: Refers to Wallace (1979) finding that hypnotizability correlates with afterimage persistence. Atkinson showed highs perform better than lows in perceptual tasks in hypnosis only. Also studies indicate highs are more susceptible to illusions. Our study showed difference in threshold and point of subjective equality for highs and lows.

32 undergraduates had Harvard and Group Stanford Form C, were 9-12 or 0-3 on both scales. Counterbalanced conditions of waking and hypnosis. Used computer monitor to compare length of lines. Waking condition Ss had to close eyes for 15 minutes before the trials, same length of time as for hypnosis condition.

Significant interaction between hypnotizability and sessions was observed: highs had significantly decreased difference thresholds in hypnosis compared to waking, and significantly decreased difference thresholds compared to lows in hypnosis. Thus they had greater sensitivity than lows.

The point of subjective equality ANOVA did not yield significant effects. Highs show higher sensitivity to illusion in hypnosis than in waking, and more than the lows.

Nadon, Robert (1993, October). Nomothetic and idiographic approaches to hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

1:

Scientists and practitioners are not benefitting from each other's contributions. The central contribution to hypnosis, both basic and applied, is the logic and validity of study designs. The false memory issue is an example. Clinicians supply an answer the public likes, but scientist provide data based on nomothetic (group average) models that are not useful here.

Most of my own work is nomothetic, but it can work together with case study approach. We use a synergistic model: the combined effects of traits, cognitive, social, and affective factors are investigated. Interactions are tricky to detect, but we need a spirit of enquiry that encourages designs sensitive to interactions.

One example is Radke & Spanos' study that used a scale rating whether subject was hypnotized and another indicating degree of absorption-and-hypnotized vs absorption-and-not-hypnotized. Nadon's reanalysis showed a scale by Ss interaction: mediums were different on the 7 point scale but highs were not. (Highs were less manipulated by the scale manipulation).

Jean-Roche Laurence and Nadon replicated the interaction. Then Nadon did a study to test the idea that highs were less affected by scale manipulation because they relied more on subjective experience. They measured Absorption in a different context and hypothesized that the highs here would be less affected on the 7 point scale in the other context; it was validated. There seemed to be a linear absorption by a quadratic hypnotizability interaction.

Another simple example of interaction at work: there are different lines predicting hypnotic ability based on the Absorption scale, representing need for control on the scale. Those low in need for control have a stronger prediction of hypnotizability from Absorption scale. With high need for control, Absorption doesn't predict hypnotizability. This may explain why the correlation isn't stronger between Absorption and hypnotizability.

Nadon investigated how level of relaxation could be affected by an interaction. Measured muscle tension of masseter (?) while listening to music (half of Ss) or focusing on relaxing (50%). In an experiential condition there was a negative correlation between Absorption and muscle tension (highs relaxed more); in an Instrumental condition it was the opposite. So both high and low Absorption people were capable of relaxation, but to get the best relaxation you would have to know their Absorption score.

A second study hypothesized that predispositions for certain kinds of affect (Tellegen's positive affect, like extroversion) and negative affect (like neuroticism). High Absorption extraverts low in neuroticism worked best with music; and [missed words]. This supports Tellegen's hypothesis re the effects of positive and negative affect and Absorption.

Now we can discuss individual characteristics that suggest which relaxation strategy will benefit. The practical implications can be validated by case studies.

**Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.**

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

#### NOTES

1:

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the \_subjective sense of \_altered state\_ --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness. Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and

arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group. Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. International Journal of Clinical and Experimental Hypnosis, 40, 21-43.

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum. Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of

hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

#### NOTES

1:

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum--which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5 " (p. 27). "In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance . He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift

in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965)); Hilgard's general factor would probably correspond better to the Tellegen genuine responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales.

Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the instructions used to introduce the particular hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

Goodman, Linda; Holroyd, Jean (1992). Ego receptivity and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 40 (2), 63-67.

Ego receptivity has been described as important for the psychotherapy process and as a characteristic of hypnosis (Deikman, 1974; Dosamantes-Alperson, 1979; Fromm, 1979). Receptivity also has been associated with a measure of absorption (Tellegen, 1981). In the first pilot study with 6 dance/movement therapy students, higher observer ratings of receptivity were associated with greater hypnotizability ( $r = .79$ ,  $df = 4$ ,  $p < .05$ , 2-tailed test). In the second pilot study, the correlation was replicated ( $r = .51$ ,  $df = 12$ ,  $p = .06$ , 2-tailed test) with 14 dance/movement therapy students. In the second pilot study, receptivity did not correlate with absorption. Receptivity and absorption, however, accounted for 54% of hypnotizability population variance in a step-wise multiple regression. Receptivity accounted for a unique part of the variance after the effects of absorption were removed. It was concluded that receptivity should be explored as a potential predictor of hypnotizability, and that a reliable scaled measure of receptivity should be developed.

## NOTES

1:

Receptivity was rated by dance instructor on the following scale. "TABLE 1 Criteria for Ranking Ss on Receptivity A. Individuals were rated high if they could consistently do the following most of the time:

1. If they moved with emotional involvement.
  2. If they could readily verbally describe their movement experience in terms of sensations or feelings.
  3. If they were able to image while moving. That is, their movement experience could be transformed into representational visual images.
  4. In their describing their movement experience verbally, if they readily alluded to the images which were generated from their body movement.
  5. If they could relate their movement experiences to other contexts outside of the therapeutic one.
  6. If they could develop a working alliance with the therapist (based on students' capacity to risk experiencing self with increased emotional depth).
- B. Individuals were rated low, if they were not able to do the above most of the time. C. Individuals were rated in the mid-range if they were able to do the above some of the time" (p. 65).

Kvaal, Steven; Lynn, Steven Jay; Myers, Brian (1992, October). The Gulf war: Effects on hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

We did a study that follows the line that volunteers may differ from nonvolunteers for hypnosis experiments (Authors cite 3 studies, including one with Hilgard as later author; Brodsky; Zamansky). Also, Ss who volunteer early in the quarter at the university are motivated for hypnosis; later volunteers want course credit. The former want to experience hypnosis.

Previously we did a study on authoritative vs permissive suggestions with Ss who volunteered early or late in the quarter; Ss were tested twice. For Ss who volunteered in first 2 weeks of the quarter, scores decreased across testing; for Ss volunteering late, scores remained stable across testing. This implies that if an experiment were conducted late in a quarter we would conclude that repeated testing has no effect; if done earlier, we would have concluded repeated testing decreases scores.

This result has been replicated. It is therefore important to run Ss across an entire quarter or year.

The present study differs from the foregoing study. It addresses the question: Do life events affect scores on the Harvard Scale? Do tension, uncertainty, etc. affect scores? Would they depress scores? Are scores reactive to environmental events?

On January 14 the U.S. issued an ultimative to Iraq; that very day we administered a tape recorded version of the Harvard Scale of Hypnotic Susceptibility, preceded by the Tellegen Absorption Scale. The hypnotizability tests were self-scored for involvement and involuntariness. Tension throughout the day escalated, culminating with bombing 2 hours before the hypnosis screening. The graduate

student announced war had started and told Ss they could leave if they wanted. All 52 Ss stayed!

Control group was 58 Ss tested at same time of the quarter, one year before (10 days into the quarter).

Analysis was by a 3 x 2 ANOVA. There was no main effect for time of testing, sex, or interaction for any measures on hypnotizability, or subjective involvement.

The Tellegen Absorption scale showed a significant timing x sex interaction: males on outbreak of war scored lower than all other groups (15 vs 21 or more for all other groups). Tensions had no effect on subjective or objective scores of hypnotizability. Thus the males were affected on the Absorption Scale by outbreak of war. The fact the Tellegen Scale was more reactive suggests hypnotizability may be more stable than Absorption. Absorption might have been depressed because males were more upset by images of military services. Little research has been conducted to examine the possible positive effects on hypnotizability of positive events in real life.

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

## NOTES

1:

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

Lyons, Larry C. (1992, October). Absorption and hypnotizability: Meta-analysis of studies to determine if contextual effects are important. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

Correlations between hypnotizability and Absorption range from .20 to .40; Council et al. suggest the correlation between these variables is a context effect (expectancy). In our review there was no statistically significant difference between correlations that were found in and out of context (.26 and .23, weighted means) in more than 40 studies with more than one correlation per study.

When Absorption was measured before hypnosis experience the  $r = .25$ ; after the hypnosis experience,  $r = .32$  (significantly different), which also was different from what context hypothesis would predict. Any context difference may be a function of length of time between the Absorption and hypnosis sessions.

Data does not support the context hypothesis. Measuring Absorption after hypnosis resulted in higher mean correlations with susceptibility. However, the magnitude of this relationship was small. Variation due to test reliability and small sample size are likely explanations of the differences in the magnitude of the correlations across studies. We also must consider scale reliability and sample error (samples less than 1000 have departures from the population correlation that are fairly large).

CONCLUSION. We should construct confidence intervals around observed correlations and look at the overlap; don't look only at the significance of the difference between correlations.

Author is in the process of conducting a mail survey to obtain unpublished results on context effect.

Perry, Campbell (1992). Theorizing about hypnosis in either/or terms. International Journal of Clinical and Experimental Hypnosis, 40, 238-252.

The present paper addresses 3 issues raised by Coe (1992). First, it maintains that the "altered state" issue of the 1960s remains buried in current dichotomous classifications of hypnosis theories as involving either "special processes" or the social- psychological position. Given the current diversity of the field, it appears imprudent to classify theorizing in either/or terms; additionally, despite a history of using the term "altered state" in a circular way, it is not an inherently circular formulation. It can be used descriptively simply to point to the observation that some individuals in hypnosis report subjective alterations. A second issue broached concerns the metaphorical status of the term "hypnosis"; it is accepted as a misleading metaphor inherited from 19th century investigators such as Braid, Faria, Puysegur, and Liebeault. Provided that it is recognized that this metaphor refers to a "domain" (E. G. Hilgard, 1973) of characteristically elicited behaviors, no problem ensues in retaining this metaphor derived from nocturnal sleep. A subsequent discussion of current conceptualizations of hypnosis indicates considerable agreement among investigators; there is much consensus that hypnosis is an individual differences phenomenon, in which imagination may, in some individuals, become so intense and so vivid, as to take on "reality value," to the extent that a hypnotized person may have difficulty in distinguishing fantasy from reality. The S abilities of imagery/imagination, absorption, dissociation, and automaticity (which may be proved to be an index of dissociation) are proposed as being the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.

Price, Simani M.; Crawford, Helen J.; Plantier, Mary E.; Jones, Elizabeth P. (1992, October). Sustained attention, selective attention, and automaticity: Relationships to hypnotic responsiveness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

There are four dimensions of attention: 1. focused & sustained attention 2. selective attention 3. divided or dual attention 4. ambient attention (the ability to attend to one thing but have floating attention also)

Ss had Harvard and Group Stanford scales of hypnotizability, to divide them into low, medium, and high groups. They were recruited for a study of attentional correlates with no mention of hypnosis, in order to reduce expectancy effects.

In this study, 57 Ss had two 45 second trials on the Stroop test; the higher scores mean less Stroop-type interference. We studied the effects of distraction on ability to do mental arithmetic. (There were to ignore a word in the sum column.) Then Ss were tested for implicit memory of the words.

Necker Cube task was administered (to replicate Crawford & Wallace): four trials, 60 sec. each Absorption Scale

Crawford & Gumbles scale

RESULTS. There were no differences on most of the tests for high, medium, and low groups. Hypnotizability correlated with extremely focused attentional ability as

measured by the DAPI Extremely Focused Attention factor, and the Tellegen Absorption Scale. Moderately Focused Attention loaded on DAPI Moderate Focus. Necker Cube and Implicit Memory (for words) loaded on the Dual Ambient Attention factor.

Spiegel, Herbert; Greenleaf, Marcia (1992). Personality style and hypnotizability: The fix-flex continuum. Psychiatric Medicine, 10, 13-24.

Since Mesmer, there has been much confusion about the inter-relationship between an individual's degree of hypnotizability, the personality style of the individual, and the importance of the therapeutic strategy. Empirical and experimental research supports the hypotheses that there are: 1) biopsychosocial components of hypnotizability on a continuum ranging from ecologically insensitive (not modifiable by external stimuli) to ecologically sensitive (very modifiable by external stimuli); 2) biopsychosocial components that can be measured to identify an individual's degree of hypnotic capacity and responsivity; 3) distinct personality styles which correlation with low, mid-range and high hypnotizability on a fix (ecologically insensitive) - flex (ecologically sensitive) continuum; and 4) different clinical syndromes which correlation with these categorical distinctions. We propose that measuring hypnotizability and personality style is a way to clarify diagnosis and choose appropriate treatment strategies to maximize existing biopsychosocial resources of an individual with a specific problem in a particular context.

Spiegel, David (1992, October). Dissociation during trauma. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

Spiegel & Spiegel's theory of hypnosis involves: 1. absorption 2. suggestion 3. dissociation

Traumatic memories may be out of consciousness yet may influence consciousness. Thus, rape victim may not be able to continue to enjoy sex with her husband or may hyperventilate when near the place it occurs. This conceptualization is consistent with Kihlstrom's evidence using priming in verbal learning; and Ken Bowers' research on hypnosis for pain control.

Hypnotizability is higher in childhood than in adults, so if children are traumatized they may resort to dissociation more easily.

Certain dissociative disorders may be associated with high hypnotizability (forgetting the causal arrow, as association does not imply causation).

The diagnosis of post traumatic stress syndrome (PTSD) in the current diagnostic manual, DSM III-R, parallels the three characteristics of hypnosis, except that the diagnosis also includes a history of trauma. (In the upcoming revision, DSM IV will remove the language of "beyond the range of normal human experience" when characterizing the trauma in patient's history. The traumas referred to will be physical traumas.)

Woody, Erik Z.; Oakman, Jonathan; Drugovic, Mira (1992, October). Fleshing out a two-component view of individual differences underlying hypnotic responsiveness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

Balthazar and I pointed out that different psychological processes are implicated in hypnotizability scale items, depending on the difficulty of the item. One process is more important on easy items, the other on difficult items.

We correlated an external variable as a function of difficulty of the items. Used the Absorption scale as the non-hypnotic measure for the latent correlation (biserial correlations). As item difficulty increases, the correlation with Absorption increases (from .2 to .5).

This suggests a high level of Absorption is needed to pass difficult items on the hypnotizability scale. We argued that Absorption is connected to true hypnotic responsiveness.

Now we are looking for indicators of easy item responsiveness. Last year I tried to explain anomalies in the data, anomalies that disappeared with a full complement of Ss.

Another possible external variable to correlate with item difficulty is a social compliance type of attribute, but in the history of hypnosis those variables are not found. Therefore we used a model from alcohol research that investigates an expectancy type of suggestion.

In that model, Ss drank two drinks that were alcohol free, but one drink purportedly had alcohol. Ss were told that large amounts of alcohol affect changes in perception, and that we were testing whether small amounts did. They were tested for "feeling of sluggishness in limbs," etc. They rated a list of experiences they might be having. The 109 Ss had been tested on Harvard A scale in separate research.

Ratings in the alcohol model had high internal consistency; this suggestion score correlated with hypnotizability in .2-.3 range.

The pattern of latent correlations would be predicted to be a graph with a negative slope, which the researchers obtained.  $R = -.77$

The easier the hypnosis item, the stronger the correlation with the expectancy measure. The easiest Harvard A scale items tap little more than those expectancy effects, and the hardest items have almost nothing to do with the expectancy effect.

What does this mean? We thought it was evidence of a social influence factor. Further work suggests we need to be more specific.

We measured the other putative variables: 1. Compliance Questionnaire (Gudjonsson, 1989); it evaluates the tendency to comply with requests, and to obey instructions; e.g., "I tend to go along even when someone is wrong." It has correlated with a measure of social conformity. 2. Suggestibility Questionnaire (which we developed). Items were based on interviews in which Ss told about everyday suggestible things--e.g. "When I hear about an illness I tend to get it. When someone tells me they smell something, I tend to also."

These Compliance and General Suggestibility tests correlated .12 and .07 respectively with the alcohol expectancy measure; nor did they correlate with each other. They do not measure the same trait. Also, though they correlated .18 and .26 with hypnotizability, neither variable showed the spectral pattern on latent correlation analysis. Thus, we need to be more specific in linking the alcohol expectancy measure to hypnosis. Most items on Harvard A scale are motor items of either direct suggestion or inhibition (challenge) type. The relationship of alcohol expectancy to direct motor items is strong; the relationship is weaker with motor challenge items (for which another process must be important). We can think of will vs automatic control of behavior, as in the theory presented by Normal and Shallice. For well-learned behavior there are two levels of control: 1. low level - doesn't require conscious attention and control 2. higher level - relevant to initiation of action, planning Direct motor suggestion response requires little attentional effort and the role of will is not important. There exists ambiguity for indeterminacy of the role of will and attention. Ambiguity offers an opportunity to attribute one's action to hypnosis. What happens in alcohol expectancy is different, but an ambiguous experience is happening due to "alcohol" in the drink--ambiguous experience is interpreted according to the context. This differs from the neodissociation theory explanation, according to which the suggested behavior is enacted voluntarily but the voluntary aspect is separated from consciousness. To me, for simple motor acts the causality is inferred rather than perceived. For simple motor acts, no such higher level control is needed. Motor challenge items have instructions to "try" to overcome; S must exert will. "Try to raise your arm" is different from "Raise your arm." The S could remain role consistent and not try; ambiguity is maintained and the S could look to the context for an explanation.

In the Normal and Shallice model, hypnosis weakens the higher system relative to the lower system. The S might be trying to exert will but experience it as less [influential] than in the normal state. Such capacity would not be tapped by an alcohol expectancy measure. We think of individual differences in hypnotizability as multiple processes, like a tree that consists of more than one healthy branch but has plenty of dead wood to be pruned out.

1991

Campbell, Laura; St. Jean, Richard (1991, August). Attentional processing and hypnotic time estimation. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

The tendency of subjects to substantially underestimate the duration of the hypnotic period is, by now, well-documented (St. Jean, 1989). Recent attempts to account for this phenomenon have focused on the attentional processing requirements of the hypnotic role and hypnotic task. St. Jean, McInnis, and Swainson (1990) presented a "busy-beaver" hypothesis which views the hypnotic subject as so occupied with the demands of task and role that little attention may be spared for the processing of unrelated stimuli. Consequently, when stimuli such as contextual changes, or other cues denoting the passage of time, are unattended the result is a reduction in subjective duration. St. Jean et al. (1990) reported a study in which the attentional

demands of a listening task, presented in a hypnotic context, were varied by placing additional processing demands, in the form of a complex problem-solving task, on some subjects, but not on others. Subjects in the attentionally-demanding condition underestimated the duration of the listening period to a far greater degree than their passive listening counterparts. Estimates were not related to hypnotic susceptibility. St. Jean et al. (1990) did not employ a waking comparison condition. Such a comparison is important in determining whether the hypnotic role, or context, apart from the processing demands they usually impose, contribute to the underestimation effect. The present study provides such a comparison by presenting the same attentional manipulation in both a waking and a hypnotic context. The findings of the previous study were strongly corroborated; subjects in the attentional condition gave significantly shorter duration estimates than those who passively listened. The nature of the context, hypnotic or waking, did not, however, influence the magnitude of time estimates. These results, together with similar findings in the time-perception literature, appear to lend considerable support to the "busy-beaver" hypothesis. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

Evans, Frederick J. (1991). Hypnotizability: Individual differences in dissociation and the flexible control of psychological processes. In Lynn, Steven J.; Rhue, Judith W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 144-170). New York: Guilford Press.

#### NOTES

1:

"In summary, some of our recent data suggest that there are a number of interacting reliable correlates of hypnotizability ... . None relate to suggestibility in the traditional sense. ... Hypnotizability is related to the ability to process cognitive information during sleep, to the physiological ease of falling asleep, and to a dimension of subjective sleep characteristics we have labeled the 'control of sleep' (involving ... the ability to fall asleep easily and readily at will, and the tendency to take naps). Additional data have suggested that the concept of absorption can be meaningfully divided into subfactors that reflect the volitional control over the absorption process that correlates with hypnotizability in both normal and patient populations. ... (C)ontrolled absorption correlates significantly with hypnotizability in both normal and patient populations--a result that might be predicted from the concept of multiple pathways as correlates of hypnotizability (J. R. Hilgard, 1970). ... Finally, both the control-of-sleep dimension and hypnotizability relate to the reductions of symptoms and psychopathology even when psychiatric patients are not treated with hypnotic techniques" (pp. 164-165).

Glicksohn, Joseph; Mourad, Boaz; Pavell, Eyal (1991-92). Imagination, absorption and subjective time estimation. Imagination, Cognition and Personality, 167-176.

We report an exploratory study that investigated the interaction of trait and task in determining duration judgment. High and low absorption subjects (determined by median split along the Absorption Scale) viewed a series of paired slides, and were

required to relate to each pair in one of two tasks: A metaphor-production task, and a story-production one. These tasks were carried out for an objective interval of fifteen minutes, following which the subject was required to verbally estimate this duration, retrospectively. In addition, from the individual protocols we measured the average time till response and the average time of response. A significant interaction between absorption and task was obtained for the latter two variables. In addition, a main effect for task was found for the duration estimation. These and other results are assessed in terms of both a cognitive-timer model for time estimation and a contextualistic approach to temporal processing.

## NOTES

1:

The authors used a model for subjective time estimation (STE) that involves a cognitive timer (or internal clock) that encodes temporal information. STE purportedly may be correlated with the amount of attention directed at the passage of time, and negatively correlated with attention paid to other kinds of tasks. They used tasks that aroused Subjects' imagination--a series of pairs of slides. One group was to produce a metaphor relating the two slides, while the other group was to produce a short story relating the two--theoretically an easier task. The authors hypothesized that high absorption Ss would be more engrossed in the task than low absorption Ss, and therefore would underestimate the amount of time used for the task irrespective of task difficulty. For the low absorption Ss they predicted that time estimates for the more difficult metaphor task should be longer, because the task itself demanded more attention than the other task. (High absorption Ss would not exhibit such a difference.) As another measure, Subjects were required to produce four short time intervals (4, 8, 16, and 32 seconds) to assess whether there might be a different rate of the cognitive timer for the two types of Ss, irrespective of nontemporal task involvement. 26 Ss were randomly allocated to one of two conditions (metaphor task or story task). Since this number of Ss is too small for an adequate evaluation of the interaction effect (absorption x task) of particular interest, the authors regard the experiment as exploratory only. The results suggest that high absorption Ss view the tasks as easy and pleasant relative to the lows, and have larger STE values. Shorter time estimates are associated with the metaphor task than the story task, for both highs and lows--an unexpected finding. While highs take the same amount of time for metaphor production as for story production, lows take longer to produce a metaphor than a story (and of course, the metaphor is shorter in length!) The high absorption Ss provided larger estimations of time for the task in which they produced a required number of seconds (4, 8, etc.), indicating a slower baseline rate of functioning of the cognitive timer. The authors in their discussion find the results supportive of the cognitive timer model. They cite the finding that duration estimate was predicted from STE, task, and interaction of absorption with average time to response. (1) remembered duration was positively correlated with baseline functioning of the cognitive timer (STE) (2) remembered duration was negatively correlated with task difficulty (3) remembered duration was an interactive function of absorption and average time to response.

Nadon, R.; Hoyt, I. P.; Register, P. A.; Kihlstrom, J. F. (1991). Absorption and hypnotizability: Contextual effects re-examined. Journal of Personality and Social Psychology, 60, 144-153.

Two independent studies failed to find evidence consistent with Council, Kirsch, and Hafner (1986), who argued that the repeatedly observed correlations between Tellegen's (1981) Absorption Scale (TAS) and hypnosis measures were artifacts of testing context, and de Groot, Gwynn, and Spanos (1988), who claimed evidence for a Gender x Context moderator effect. In the present studies, subjects completed the TAS and other personality questionnaires during an independent survey and later immediately prior to an assessment of hypnotizability. In Experiment 1 (N = 475), the effect of context on the relation between questionnaire scores and hypnotizability was weak and variable; in Experience 2 (N = 434), these weak effects were reversed. The results reaffirmed the construct validity of absorption as both a major dimension of personality and as a predictor of hypnotic responsiveness.

Neill, W. Trammell (1991, August). Consciousness and the inhibitory control of cognition. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

#### NOTES

1:

This review mentions an association between Tellegen's Absorption Scale and a cognitive inhibitory process called negative priming. Westberry and colleagues, including Anker and Neill, found that people high on the Absorption Scale show an extremely large negative priming effect.

Attention is usually attributed to facilitation (selectively processing stimuli that meet our needs) but might also be due to inhibition of competing stimuli. If, after stimulus S2 has been ignored, we now require a response to either S2 or a new stimulus, S3, according to the facilitation theory S2 should be processed as easily as S3; according to the inhibition theory, processing of the recently ignored stimulus may be hampered by the persistence of inhibition. Dalrymple-Alford provided evidence of inhibition using a Stroop color naming task in which each printed word in a list named the ink color of the next word in the list. Dalrymple-Alford concluded that the response to each word had to be suppressed in order to name its ink color, thereby making it harder to make that same response to the next item. Neill replicated it: color naming was slower when the current color matched the previous distractor (e.g., YELLOW in green ink, after GREEN in red ink) than when the current and previous trial were unrelated (e.g., YELLOW in green ink, after BLUE in red ink).

Tipper, Weaver, Cameron, Brehaut, & Bastedo (1991) had subjects name a picture at fixation, ignoring another picture to the left or right, and Tipper (1985) had subjects ignore picture drawn in another color. If the ignored picture subsequently becomes the target, it is named more slowly than an unrelated target. A particularly interesting finding is that the inhibition generalizes to semantic associates (e.g. if a picture of a dog is ignored, a picture of a cat will then be named more slowly). Yee (1991) demonstrated the effect with ignored words. Tipper (1985) called the inhibitory effects "negative priming".

Neill used a task in which S is shown a string of five letters, and is instructed to judge the second and fourth letters as "same" (e.g., ABABA) or "different" (e.g., ABACA). Negative priming was shown by slower reaction time to target letters that matched the previous ignored distractors (in case below, ABABA):

ABABA - Reaction times are 779 for CACAC and 766 for CDCDC because the A appears in both ABABA and CACAC.

Negative priming does not appear to be perceptual, since it occurs between physically dissimilar stimuli, e.g. in the Stroop task ignoring a printed word inhibits responding to a color. And Tipper and Driver (1988) found negative priming between pictures and corresponding words. By default, the locus of inhibition appears to be at the level of a central cognitive representation. That is, it occurs at a level in which the word GREEN and the color green are related to the same abstract concept, but have not yet accessed an overt response.

However, in the letter-matching task, negative priming occurred only if the ignored distractor letter and subsequent target shared the same letter case. If the ignored distractor and subsequent target were in opposite case (e.g., ABABA, then cacac), positive priming was obtained instead. Because the letter-matching task could be performed on the basis of perceptual similarity, it appears that inhibition can be specific to the perceptual representation when attention is directed to that level of processing. Individual differences in negative priming appear to be related to more global cognitive effectiveness. N.B. Stroop interference is greatest at age 7, decreasing to adolescence, then plateaus through adulthood (Comalli,

Wapner & Werner, 1962). Children in second grade also show less negative priming than young adults in picture naming task (Tipper et al. 1989). (Same thing was found for the elderly, and it is associated with distractibility).

Negative priming research suggests the inhibition of irrelevant processing that is critical for effective functioning. Beech, Baylis & Claridge, 1989, and Beech & Claridge, 1987, studied schizophrenics and college students with schizotypal traits using negative priming task, where these appear to be associated with a failure to inhibit distracting information.

Broadbent et al's (1982) Cognitive Failures Questionnaire measures self-reported lapses of perception, memory, and motor function. Tipper and Baylis (1987) found that negative priming was negatively correlated with cognitive failures; i.e. cognitive failures are associated with less inhibition of distracting information.

Westberry, 1984; Westberry, Anker & Neill, in preparation - found that people high on the Absorption Scale show an extremely large negative priming effect, while the effect for "low absorbers" was negligible.

Nelson, Peter L. (1991-92). Personality attributes as discriminating factors in distinguishing religio-mystical from paranormal experients. Imagination, Cognition and Personality, 11, 389-406.

In the first section of this article, an operationalized notion of preternatural experience is described which includes two general classes of experience: religio-mystical (Ontic) and paranormal (Perceptual). The exploratory study which follows

uses the personality measures of the complete Tellegen Differential Personality Questionnaire taken from 120 subjects who reported having had spontaneous religio- mystical and/or paranormal experiences at some time in the past. The scores on all eleven primary dimensions, three higher order affect factors, and two validity scales were used individually, in univariate ANOVAs, and together, in a Direct Discriminant Function Analysis, to successfully separate two classes of preternatural experients from non- experients and from each other.

**Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.**

**Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.**

**NOTES**

**1:**

**Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990). This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151). The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item**

subscale has items that are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said." Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as "When I was a child I enjoyed fairytales," and extreme imaginings (15 items) such as "When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it."

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid ( $n = 8$ ) or invalid ( $n = 8$ ). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153). Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content. "The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159). In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, *Cortex*, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources. Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets,

musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162). Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

1991

Radtke, H. Lorraine; Stam, Henderikus J. (1991). The relationship between absorption, openness to experience, anhedonia, and susceptibility. International Journal of Clinical and Experimental Hypnosis, 39, 39-56.

Examination of the absorption (Tellegen Absorption Scale [TAS] of Tellegen & Atkinson, 1974), openness to experience (OTE Inventory of Costa & McCrae, 1978), and anhedonia (ANH Scales of L. J. Chapman, J. P. Chapman, & Raulin, 1976) scales suggested that they might be conceptually related. Given the reliable relationship between TAS and hypnotic susceptibility, the authors were interested in studying OTE and ANH as possible personality correlates of hypnotic susceptibility. 2 studies, 1 involving a community sample and the other a sample of university students, were conducted to assess the relationships between the TAS, OTE, and ANH scales and hypnotic susceptibility. As predicted, in Study 1 (community sample) the TAS and OTE inventories were positively correlated with one another and both were negatively correlated with the ANH scale. This pattern of correlations was replicated in Study 2 (university sample), but only TAS correlated significantly with hypnotic susceptibility. Factor analyses further confirmed these findings. It was concluded that the conceptual relationship among the TAS and the OTE and ANH scales resides in some dimension other than hypnotic susceptibility.

#### NOTES

1:

Two studies used Tellegen Absorption Scale (TAS), Costa & McCrae's (1978) Openness to Experience Inventory (OTE), and Chapman, Chapman, & Raulin's (1976) Anhedonia scales (ANH). One involved a community sample, the other involved university students.

OTE and TAS  $r = .42$  and  $.62$

TAS and HGSHS:A  $r = .22$  ( $p < .10$ ) in one study "Thus, while there is a significant overlap in variability between TAS and the other person variables, the variance shared between TAS and hypnotic susceptibility is unique to those two measures. Further research is needed to determine the role of expectancies in contributing to this pattern of findings and the extent to which item overlap may be responsible for the observed correlations (Nicholls et al., 1982). Inspection of the items included in the three scales indicated that only TAS assesses involvement in experiences; items on the ANH and OTE instruments focus on interest or willingness to engage in various experiences" (p. 51).

"Notably, the correlations between TAS and the 2 subjective indices of hypnotic susceptibility, SUB and O-I, were slightly stronger than the correlations between TAS and the two indices reflecting overt behavior (OBJ and HGSHS:A scores). This pattern of relationships is consistent with recent arguments that objective indices alone do not fully capture the hypnotic experience (e.g., Spanos et al., 1983).

"Interestingly, the correlations among the three personality scales tended to be stronger in Study 1 where a community sample was assessed in a nonhypnotic context than in Study 2 where a sample of university undergraduates was assessed in a hypnotic context. The two samples differed significantly on all three scales both in terms of mean level and variability, indicating possible ceiling effects and restricted range problems in the university sample. Given that almost all of the research on hypnotic susceptibility and its correlates has been conducted on university students, these findings point to the utility of obtaining research participants from a greater cross-section of the population" (pp. 51- 52).

"Of particular importance, these results indicate that the relationships among TAS and the OTE and ANH scales do not depend upon the hypnotic context and are not the product of expectancies generated by the anticipation of being hypnotized. Nevertheless, the conceptual relationship among the three scales resides in some dimension that is unrelated to hypnotic susceptibility. At this point, we can only speculate as to what this dimension might be. One possibility is that TAS and the OTE and ANH scales reflect an openness to various experiences; what absorption and hypnotic susceptibility uniquely share is the willingness to become involved in imaginal and sensory experiences" (p. 52).

Ross, Colin A.; Joshi, S.; Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. Hospital and Community Psychiatry, 42, 297-301.

The 28-item Dissociative Experiences Scale was administered to a stratified cluster sample of 1055 respondents in a general population of Winnipeg. Dissociative experiences were common in the sample and were not related to socioeconomic status, sex, education, religion, or place of birth, although they declined with age in both sexes. A principal components analysis identified three factors accounting for 47.1% of the combined variance of scores. The first factor, absorption-imaginative involvement, is composed of common, benign experiences such as missing part of a conversation, being able to ignore pain, staring into space, absorption in a television program or movie, not being sure if you did something or only thought about it, and remembering things so vividly one seems to be reliving it. The other two factors, activities of dissociated states and depersonalization-derealization, composed of less common experiences such as not recognizing friends or family members and not recognizing one's own reflection in a mirror, may be powerful predictors of DSM-III-R dissociative disorders.

1990

Bartis, Scott P.; Zamansky, Harold S. (1990). Cognitive strategies in hypnosis: Toward resolving the hypnotic conflict. International Journal of Clinical and Experimental Hypnosis, 38, 168-182.

Two experiments were carried out to assess the relative contributions of dissociation and absorption as cognitive strategies employed by high and low hypnotizability Ss

in responding successfully to hypnotic suggestions. Of special interest was the manner in which Ss deal with conflicting information typically inherent in hypnotic suggestions. In the first experiment, Ss rated their attentional focus and the involuntariness of their experience after responding to a number of hypnotic suggestions administered in the usual manner. In the second experiment, the level of conflict was varied by instructing some Ss to imagine a circumstance that was congruent and other Ss to imagine a circumstance that was incongruent with the suggested behavioral response. The results of the 2 experiments were consistent in suggesting that, depending upon the nature of the hypnotic suggestion, high hypnotizability Ss are able to employ dissociation or absorption in order to respond successfully. Low hypnotizability Ss, on the other hand, seem to be relatively ineffective dissociators. When the structure of the hypnotic suggestion precludes the use of absorption, the performance of low hypnotizables deteriorates.

1990-1991

Drake, Stephen D.; Nash, Michael R.; Cawood, Glenn N. (1990-91). Imaginative involvement and hypnotic susceptibility: A re-examination of the relationship. Imagination, Cognition and Personality, 10, 141-155.

Several researchers have reported that significant correlations between hypnotic susceptibility and absorption result from the reactive effects of administering scales immediately before measurement of hypnotizability. The present study was conducted to determine whether interview measures of imaginative involvement are similarly reactive. Three groups of 48, 43, and 43 Ss each were first administered 3 scales of absorption/imaginativeness. This was followed by administration of a hypnotizability scale. Ss in Group 1 who were administered the 3 scales immediately prior to hypnosis evidenced the usual significant positive correlation between each of the 3 scales and hypnotizability. Ss in Groups 2 and 3 were administered the 3 scales 24 to 36 hours prior to hypnosis. Group 2 Ss were informed that administration of these scales was part of a hypnosis experiment. Group 3 Ss were not aware that the scales were part of a hypnosis experiment. No significant correlation between hypnotizability and the 3 measures of imagination/absorption was evidenced for either Group 2 or Group 3. Our findings suggest that any relationship between these two constructs may be quite dependent on how and when the measures are administered.

1990

Freeman, William B., Jr.; Kessler, Marc; Vigne, Jeffery (1990). Random number generation, absorption, and hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 10-16.

Graham and Evans (1977) found that a measure of random number generation (RNG) was related to hypnotizability. In 2 studies, the relationship between hypnotizability and Graham and Evans' RNG (1977) index was examined. In Study 1 Evans' (1981) measures of controlled and automatic absorption were also evaluated. In Study 1 no relationship was found between the measures of absorption

or RNG and hypnotizability. Since Study 1 was carried out primarily to evaluate methods for modifying hypnotizability, Study 2 was designed to evaluate RNG measure directly. Study 2 found no consistent relationship between RNG and hypnotizability, or between RNG and measures of the experience of hypnotic depth and nonvolition.

Pekala, Ronald J.; Forbes, Elizabeth J. (1990, Spring). Subjective effects of several stress management strategies: With reference to attention. Behavioural Medicine, 39-43.

This study assessed variations in reported attentional experience associated with several stress management techniques (hypnosis, progressive relaxation, deep abdominal breathing) and baseline (eyes closed) as a function of hypnotic susceptibility. Three hundred nursing students experienced the stress management conditions and afterward completed a self-report inventory, the Dimensions of Attention Questionnaire (DAQ), in reference to each condition. The DAQ quantifies 12 aspects of attentional experience in a reliable and valid manner. The results demonstrated that progressive relaxation, hypnosis, and deep abdominal breathing are characterized by differences in reported attentional experience that are further moderated by an individual's hypnotic susceptibility. The clinical implications of these results are discussed.

#### NOTES

1:

"Significant main effects were found for conditions for perspicacity, absorption, and control, with progressive relaxation associated with increased perspicacity and absorption, but with decreased control vis-a-vis hypnosis.

"Significant main effects for groups were found for perspicacity, locus, direction of attention, absorption, control, and vigilance. ... [Post-hoc comparisons] revealed that high susceptibles (vis-a-vis low susceptibles) reported increased perspicacity, absorption, a more inward-focused attention, more feelings of being out of their bodies, and decreased control and vigilance. High-mediums were also different from lows (in the same direction) for all of the above comparisons except for direction of attention. Low-mediums, along with lows, were different from highs for absorption and control.

"Significant interactions between conditions and groups were found for absorption, control, and vigilance. Whereas low susceptibles reported significantly increased absorption but significantly decreased control and vigilance during progressive relaxation than during hypnosis, high susceptibles reported no significant differences between relaxation and hypnosis for absorption, control, or vigilance" (p. 41).

The authors describe the differences found for deep abdominal breathing on p. 41.

"The interaction effects suggest that the experience of hypnosis and progressive relaxation are moderated by a person's hypnotic susceptibility--low susceptibles experience significantly greater absorption, but decreased control and vigilance during progressive relaxation than during hypnosis, although there are no such differences for high susceptibles. This suggests that progressive relaxation may be a

'better' procedure than hypnosis to use with low susceptibles, at least if one wants to increase absorption and decrease vigilance and control" (p. 42).

The authors also note that "deep abdominal breathing is associated with increased 'calmness of mind,' in reference to a baseline condition, as demonstrated by increased attentional detachment and equanimity, and decreased vigilance and density (the 'amount' of thoughts going through one's mind)" (p. 42).

Tenenbaum, Steven J.; Kurtz, Richard M.; Bienias, Julia L. (1990). Hypnotic susceptibility and experimental pain reduction. American Journal of Clinical Hypnosis, 33 (1), 40-49.

We exposed 24 subjects high in hypnotic susceptibility and 24 subjects low in hypnotic susceptibility to a cold-pressor pain stimulus under either hypnotic or waking conditions, using each of two pain-reduction strategies (analgesia and distraction) separately. Trance depth level was held constant for hypnotized subjects. We used pain-tolerance levels as measures of pain, and we analyzed them by survival analysis. High susceptibles reported significantly lower pain ratings and kept their hands immersed longer in the cold water than low-susceptible subjects. There were no significant differences between hypnotic and waking condition subjects or between the different strategies. We have discussed the results in terms of a relationship in the literature between choice of experimental design (between-subjects or within-subjects) and the effectiveness of a hypnotic induction for suggested pain reduction.

#### NOTES

1:

High hypnotizable Subjects scored 25 or above on the Wilson & Barber (1977) Creative Imagination Scale--the CIS (out of 40) and 4 or above on the Morgan & Hilgard (1979) Stanford Hypnotic Clinical Scale--SHCS (out of 5); Lows scored 15 or lower on the CIS and 2 or lower on the SHCS. Depth ratings during hypnosis were 7.4 for Highs, 2.3 for Lows; Tellegen Absorption scores were 25 and 18, respectively.

Subjects were assigned to either waking suggestion group or hypnosis group to avoid carryover effects across sessions, hence there were four groups: highs/waking procedure, highs/hypnotic procedure, lows/waking procedure, lows/hypnotic procedure. Each group was taught two strategies--analgesia or distraction--in a counterbalanced order, with administration of the Absorption Scale during a 15 minute rest in between the two procedures.

For hypnotic inductions, Experimenters provided an audiotape of an induction based on the SHCS, and had Ss report trance depth. When self-reported depth became less than baseline, following either strategy training period, deepening procedures were used to re-establish the earlier depth level. Analgesia testing was not done blind as to subgroup membership and/or susceptibility.

The analgesia condition involved a suggestion of numbness in the hand and arm exposed to the cold pressor (Bassman & Wester, 1983). The distraction condition involved a suggestion to imagine a pleasant beach scene (Turk, Meichenbaum, and Gnest, 1984).

The number of individuals dropping out (removing their hands from the bath) at any one time period was measured, providing 'survival curves.' Pain tolerance was the same for Highs and Lows during baseline; also pain tolerance was the same for the hypnotic group as for the waking group. However, Low hypnotizable Ss removed their hands from the cold water faster than High hypnotizables: after 90 seconds only 60% of Lows, compared with 85% of Highs, remained. The same results occurred for distraction.

"In summary, both treatments allowed subjects to tolerate the cold pressor longer. There were no significant differences between subjects receiving or not receiving a hypnotic induction, and high-susceptibility subjects appeared to derive significantly greater benefit from treatment than did low-susceptibility subjects, as reflected by their tendency to tolerate exposure to the cold bath for greater lengths of time" (p. 46).

"High-susceptible subjects appeared to derive significantly greater benefit from treatment than did low-susceptible subjects, as reflected by their tendency both to tolerate exposure to the cold bath for greater lengths of time and to produce lower pain ratings" (p. 46).

"One issue that remains unresolved concerning the relationship between susceptibility and pain reduction is whether susceptibility is a transsituational capacity that is accessed by suggestion, or as Spanos, Hodgins, Stam, and Gwynn (1984) have asserted, simply an expectancy effect created by the susceptibility screening process, in which susceptibility screening appeared to act as a 'primary effect,' generating a successful experience related to hypnosis. The hypothesis that susceptibility is a capacity that can be accessed by suggestion is supported by the bulk of the literature on susceptibility and pain reduction, including research generated by both social-cognitive and neo-dissociation theorists (e.g., Hilgard, 1975; Spanos & Hewitt, 1980). In addition, susceptibility has proved to be a relatively stable trait, resistant to clinically significant modification (Crouse & Kurtz, 1984; Hilgard, 1975).

"Empirical resolution of this question would seem to require extension and replication of the Spanos, Hodgins, Stam, and Gwynn (1984) study, including exploration of whether screening at the end of the treatment phase of a suggestion experiment wipes out the relationship between susceptibility and successful suggestion for other hypnotic phenomena, such as amnesia, hallucination, time distortion, and so forth" (pp. 47-48).

1989

Balthazard, Claude G.; Woody, Erik Z. (1989). Bimodality, dimensionality and the notion of hypnotic types. International Journal of Clinical and Experimental Hypnosis, 37 (1), 70-89.

The notion of hypnotic types -- of qualitative differences in the mechanisms by which people respond to hypnotic suggestions -- is examined with respect to the kind of evidence that has traditionally been seen to support it. Bimodality in the distribution of hypnosis scores has been taken as evidence for two "types" of hypnotizability. It is argued that little can be said about the nature of underlying

processes from the distribution of raw scores. The relationship of factor analytic results to possible underlying typologies is examined. It is concluded that the present evidence simply does not allow an evaluation of the merits of current typological formulations.

Carlson, Eve Bernstein; Putnam, Frank W. (1989). Integrating research on dissociation and hypnotizability: Are there two pathways to hypnotizability?. Dissociation, 2, 32-38.

Attention to the relationship between hypnotizability and dissociation has been limited to date. Reviews recent studies implying a relationship between "dissociativity" and hypnotizability, and places in context of J. Hilgard's theory of two developmental pathways to hypnotizability (imagination/absorption and punishment). This might imply two subsets of hypnotizable persons, as Nadon et al. (1988) postulate--one with a dissociative style and one with an absorption style. Also, high capacity for imaginative involvement may be a necessary condition for a dissociative response to trauma. Branscomb (1988; unpublished) posits a genetic-stressor model for PTSD in which a history of dissociative-proneness and child abuse predispose one to PTSD when a trauma occurs in a non-supportive environment. Relates this theory to hidden observer research and to dissociative patients.

Hoyt, Irene P.; Nadon, Robert; Register, Patricia A.; Chorny, Joseph; Fleeson, William; Grigorian, Ellen M.; Otto, Laura; Kihlstrom, John F. (1989). Daydreaming, absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 332-342

#### NOTES

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NOTES: It appears that the consistent correlation between hypnotizability and positive-constructive day dreaming is carried largely by three subscales--Acceptance of Daydreaming, Positive Reactions to

Day dreaming, and Problem-Solving. Number other subscales consistently correlated with hypnotizability. When absorption was taken into account, daydreaming activity made no independent contribution to the prediction of hypnotizability. "The present results differ from Crawford's (1982) somewhat, however, in terms of the specific aspects of daydreaming activity that are associated with hypnosis. Crawford found that hypnotizability correlated consistently (i.e., in both men and women) with three subscales tapping imagery variables: the presence of visual and auditory imagery in daydreams and the hallucinatory vividness of daydream imagery. In the present study, the imagery subscale, including both visual and auditory items, did not correlate significantly with hypnotizability; unfortunately, the hallucinatory vividness subscale is not represented on the short form (SIPI) of the daydreaming questionnaire used in this study. Crawford (1982) did not find consistent correlations between hypnotizability and scales measuring acceptance, positive reactions, and problem solving--the subscales that consistently yielded significant correlations in the present study. Not too much interpretive

weight should be given to any of the correlations between hypnotizability and daydreaming subscales, until a full replication with reliable subscale measurements (such as those provided by the long, original IPI) has been completed. The important point made by Crawford (1982), and confirmed in the present study, is that hypnotizability is related to positive-constructive rather than guilty-dysphoric daydreaming" (p. 338). The two studies agree that absorption and hypnosis are not correlated with daydreaming scales reflecting poor attentional control. Given the theoretical emphasis in both domains on the narrowing of attention and exclusion of potentially distracting input, negative correlations with this aspect of daydreaming might have been expected.

**Johnson, Blair; Eagly, Alice H. (1989). Effects of involvement on persuasion: A meta-analysis. Psychological Bulletin, 106 (2), 290-314.**

Defines involvement as a motivational state induced by an association between an activated attitude and the self-concept. Integration of the available research suggests that the effects of involvement on attitude change depended on the aspect of message recipients' self-concept that was activated to create involvement: (a) their enduring values (value-relevant involvement), (b) their ability to attain desirable outcomes (outcome-relevant involvement), or (c) the impression they make on others (impression-relevant involvement). Findings showed that (a) with value-relevant involvement, high-involvement subjects were less persuaded than low-involvement subjects;

**Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.**

Attempted to construct and validate a questionnaire measure of hypnotic-like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis,

however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

Rhue, Judith W.; Lynn, Steven Jay (1989). Fantasy proneness, hypnotizability, and absorption--a re-examination: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 100-106.

In a previous study (Lynn & Rhue, Journal of Personality and Social Psychology, 1986) of fantasy-prone persons, "fantasizers" participated in an 8-10 hour, multi-session study. Group selection was based on scoring in the upper 4% of the college population on the Inventory of Childhood Memories and Imaginings (ICMI) of Wilson and Barber (1981) and conforming to the fantasy-prone personality syndrome (Wilson & Barber, 1981) during an interview. Fantasizers differed from nonfantasizers (lower 4% of population) and medium range scorers on measures of hypnotizability (Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962) and absorption (Tellegen Absorption Scale, Tellegen, 1976). In the current study, Subject were selected on the basis of their ICMI scores and participated in a 1-session experiment. As in our first study (Lynn & Rhue, 1986), fantasizers differed from both comparison groups on the measure of absorption and from the nonfantasizers on the measure of hypnotizability. Further, the correlations among fantasy proneness, absorption, and hypnotizability were stable across studies. Fantasy proneness and absorption were not found to be truly discriminable constructs. Unlike our initial study (Lynn & Rhue, 1986), fantasy-prone and medium range Subjects were equally hypnotizable. Methodological differences across studies provide a plausible explanation for the disparate results obtained.

Ronnestad, Michael Helge (1989). Hypnosis and autonomy: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 37, 154-168.

The study focused on autonomy as a moderator variable in the prediction of subjectively reported hypnotic depth. Ss in the experimental part of the study were 56 undergraduate psychology and education majors classified as either high or low in autonomy. Ss who were equated on capacity for absorption were individually administered 1 of 3 hypnotic inductions: an authoritarian induction, a permissive hetero- induction, or a self-hypnosis induction. The study had a double-blind design. The data suggest that situational manipulation has greater impact on low than on high autonomy Ss. Individual-difference variables such as absorption, have greater impact on hypnotic depth for high than for low autonomy Ss. The data indicate that the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. A factor-analytic inquiry of absorption confirmed the importance of affective/regressive capacity for hypnotic functioning for high autonomy Ss. The study supported the alternate-path perspective of hypnosis.

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There is very little research on autonomy and hypnosis. The authors cite studies showing only a modest relationship between hypnotizability and locus of control.

In this study, 176 students were assigned to the high autonomy group if they were in the upper 1/3 of two of 3 autonomy scales (Rotter's Locus of Control Scale, the Inner- Directedness Subscale of the Shostrom Personal Orientation Inventory, and the Autonomy subscale of Jackson's Personality Research Form) and not in the lower 1/3 of the third scale. Ss were designated as low autonomy if the obverse obtained. This procedure yielded 27 high and 29 low autonomy Ss.

Ss were hypnotized with one of three inductions: authoritarian with many motor items (Barber Suggestibility Scale), permissive with mostly imagery (Barber & Wilson's Creative Imagination Scale), or guided self-hypnosis with mostly imagery (taken from Fromm et al, 1981). After hypnosis, Ss rated their own hypnotic depth on a 1-10 scale, and their perception of E or the procedure as authoritarian and directive. Ss' attitude, expectations, motivation, and experienced effortlessness were measured. E rated Ss for pre-hypnosis rapport and post-hypnosis rapport.

The results indicated that there was no difference in hypnotizability level between high and low autonomy Ss. The correlation between effortlessness of experience and hypnotic depth was high for low autonomy Ss (.51) but not significant for high autonomy Ss (.12). In general the two groups were very similar in terms of mean scores on most variables. The differences appeared in the correlations between self-reported hypnotic depth and the other variables. For low autonomy Ss correlations were not significant between depth and pre-hypnotic variables (rapport-pre, absorption, expectation) but for highs the same correlations were significant (rapport-pre .47, absorption .54, expectation .48).

But for post-hypnosis variables, low autonomy Ss had significant correlations between depth and the two variables measured from post-hypnosis interviews (perceived authoritarian/directiveness .40, effortlessness .51) and the highs did not have significant correlations. The multiple correlation between these variables and depth was  $R = .28$  for low autonomy Ss (with no contribution from rapport-pre) and  $R = .72$  for high autonomy Ss, with absorption contributing most. The more they perceived the induction as authoritarian or directive, the greater depth reported by low autonomy Ss. Although low and high absorption Ss did not differ on the Absorption Scale, absorption predicted hypnotic depth better for the highs.

The author divided the Absorption Scale into four rational factors: Affective/Regressive, Perceptual/Cognitive, Dissociative, and Mystical. Low and high autonomy Ss scored at approximately the same level on these categories, but correlations between these categories and depth for low and high autonomy Ss were somewhat different. (See Table.)

Correlations between Categories of Absorption and Hypnotic Depth for Low and High Autonomy Ss

Absorption	Low Autonomy	High Autonomy	All Ss	Category	r	r
Affective/Regressive	.14	.56**	.33**	Perceptual/Cognitive	.25	.33*
	.32*	.57**	.47**	"Mystical"	.07	.16
				Dissociative	.29*	

In their discussion, the authors note that one might assume that high autonomy Ss would be less affected by variations in hypnosis procedures than low autonomy Ss.

The differences found in depth scores for these two groups were supportive of this expectation. "Fluctuations in subjectively reported depth scores for low autonomy Ss only, clearly suggest autonomy to be a moderator variable" (p. 163).

Moreover, the results indicate "that high autonomy Ss in comparison to low autonomy Ss are more likely to express their inner dispositions, such as absorption and expectation, in the hypnotic setting. High autonomy Ss may be more reflective of and attuned to individual predisposing characteristics and less influenced by situational demands. ... the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. Low autonomy Ss, however, are more likely to be demand congruent and less likely to be self-congruent. The latter finding was suggested both by the significant F ratio for low autonomy Ss across treatments, and also by the stronger relationship found for this group between depth and how authoritarian/directive they perceived the procedure to be" (p. 163).

[Paradoxically, among low autonomy Ss an authoritarian approach yields less depth but greater suggestibility (higher hypnotizability scores).] "The tendency for low autonomy Ss to have a higher behavioral score on the authoritarian procedure is consistent with Tellegen's (1979) assumption that there are two pervasive dimensions in current hypnotizability measures--a compliance dimension and a true hypnotic responsiveness dimension. According to Tellegen, motor items may be more saturated with compliance, while cognitive items may be more saturated with true hypnotic responsiveness. The BSS has a motor emphasis, and the higher behavioral scores for the low autonomy group of Ss may be interpreted as an expression of compliance.

"In addition to the inner-directedness and self-congruence hypothesis of why autonomy may be a moderator variable, another possible explanation is related to accuracy of self-perception. The intercorrelational and multiple regression data showed repeatedly that a stronger relationship existed between prehypnotic variables and hypnotic depth for high autonomy than for low autonomy Ss. The relational capacity, as tapped by the rapport-pre variable, absorption, which may be conceptualized as a personality trait; and expectation, a cognitive variable, were all related to depth for high autonomy Ss. For low autonomy Ss, none of these variables were individually related to depth. Differences in Ss' accuracy of self-reporting may explain this. According to ego-psychology theory, highly individuated Ss, with clear self-other differentiation and congruence in self-perception, are better able to make accurate statements about themselves. The self-assessments of Ss with low differentiation capability may be less accurate and possibly more affected by demand characteristics and response set. In other words, their self-assessments have more error. The generally lower correlations for the low autonomy Ss may reflect this" (p. 164).

"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

**Snodgrass, M.; Lynn, Steven Jay (1989). Music absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 41-54.**

The present study investigated differences between high (N = 15), medium (N = 20), and low (N = 16) hypnotizable Ss' involvement in imaginative versus nonimaginative music. Ss were first screened for hypnotizability with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). In a second session presented as a study of music appreciation, Ss listened to classical music of high- and low-rated music imaginativeness. Ss' involvement was indexed by absorption, imagery elaboration reported in open-ended essays, and reaction time to a pure tone. High hypnotizable Ss reported more absorption than low hypnotizable Ss, regardless of the imaginativeness level of the music. Ss reported more imagery elaboration in the imaginative than in the low-imaginative passages. High hypnotizable Ss tended to differ in their imagery elaboration in response to the imaginative passages but not in response to the nonimaginative passages. Reaction time results were nonsignificant. No sex differences were found. Medium hypnotizable Ss were indistinguishable from both high- and low-hypnotizable Ss. The findings are generally compatible with J. R. Hilgard's (1970, 1974) construct of imaginative involvement.

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Compliance, imaginal correlates and skill training. [Comment/Discussion] .

#### NOTES

1:

The authors defend the Carlton skill training program against accusation that the trained Ss are simply complying in the context of social pressure. They also discuss characteristics of high hypnotizables (absorption and imagery), noting that the majority of lows do not have low absorption/imagery scores (citing de Groh, 1988, and noting the research on context dependency for absorption).

"Despite all of this, it is worth noting that the results of our modification studies are not inconsistent with the hypothesis that high hypnotizability requires imaginative skills that some subjects do not possess in sufficient degrees. For example, two recent studies (Spanos et al., 1987; Cross and Spanos, 1988) found that the extent to which low hypnotizables showed gains following administration of the CSTP was predicted by their pre-tested levels of imagery vividness. Lows with good imagery benefitted substantially more from the CSTP than did lows with poor imagery ability. When it is kept in mind that most low hypnotizables do not score low on measures of imagery/absorption (de Groh, 1988), then the findings that substantial numbers of low hypnotizables can be taught to attain high hypnotizability is not at all inconsistent with the notion that high hypnotizability requires at least moderate levels of imagery/absorption ability" (p. 14).

Zamore, Neal; Barrett, Deirdre (1989). Hypnotic susceptibility and dream characteristics. Psychiatry Journal of the University of Ottawa, 14 (4).

This study examined the relationship of hypnotic susceptibility to a variety of dream characteristics and types of dream content. A Dream Questionnaire was constructed synthesizing Gibson's dream inventory and Hilgard's theoretical conceptions of

hypnosis. Several dream dimensions correlated significantly with hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory. For Ss as a whole, the strongest correlates were the frequency of dreams which they believed to be precognitive and out-of-body dreams. Ability to dream on a chosen topic also correlated significantly with hypnotic susceptibility for both genders. For females only, there was a negative correlation of hypnotizability to flying dreams. Absorption correlated positively with dream recall, ability to dream on a chosen topic, reports of conflict resolution in dreams, creative ideas occurring in dreams, amount of color in dreams, pleasantness of dreams, bizarreness of dreams, flying dreams, and precognitive dreams.

de Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

1:

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

#### 1988

Houle, M.; McGrath, Patricia Anne; Moran, Greg; Garrett, Owen J. (1988). The efficacy of hypnosis- and relaxation-induced analgesia on two dimensions of pain for cold pressor and electrical tooth pulp stimulation. Pain, 33 (2), 241-251.

This study evaluated hypnosis- and relaxation-induced suggestions for analgesia for reducing strength and unpleasantness of pain (noxious tooth pulp stimulation; cold pressor stimulation). The Tellegen Absorption Questionnaire was used to assess hypnotic susceptibility for 28 subjects in order to match treatment groups according to sex and susceptibility scores. Tooth pulp stimulation consisted of a 1 sec train of 1 msec pulses at a frequency of 100 Hz, applied at 20 sec intervals to the central incisor. Six stimuli, selected between S's pain and tolerance thresholds, were presented 3 times each in random order. Cold pressor stimulation consisted of forearm immersion in a circulating water bath maintained at 0-1 degrees C. Subjects made threshold determinations of pain and tolerance and used Visual Analogue Scales to rate the strength and the unpleasantness of both noxious stimuli before and after receiving either hypnosis- or relaxation-induced analgesia.

There were no significant differences between hypnosis- and relaxation-induced interventions. However the percent reduction in both strength and unpleasantness varied as a function of type of pain. Both hypnosis and relaxation significantly reduced the strength and unpleasantness of tooth pulp stimulation, but only the unpleasantness of cold pressor pain. The pain reductions were not correlated with subjects' hypnotic susceptibility levels.

The results indicate that the extent and the quality of the analgesia produced by these cognitive-based therapies vary not only according to subjects' characteristics and the efficacy of the intervention, but also according to the nature of the noxious

stimuli. Tooth pulp and cold pressor stimulation represent qualitatively different stimuli with respect to both the type of nerves activated and the mode of stimulus application. Discrete, randomly presented levels of noxious electrical stimulation to the teeth activate predominantly small fibers and produce brief pain sensations that vary unpredictably in intensity. In contrast, continuous cold stimulation to the forearm activates a variety of nociceptive and non-nociceptive fibers and produces progressive cold and pain sensations with a predictable increase in intensity from cold sensations to paresthesia and severe pain.

#### NOTES

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In this investigation, when the authors conclude that "pain reductions were not correlated with subjects' hypnotic susceptibility levels" (p. 241), it must be noted that hypnotizability was estimated from scores on the Tellegen Absorption scale, which is not actually a measure of hypnotic susceptibility level.

**Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.**

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

#### NOTES

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Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time

sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:

A. Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability

Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

Lynn, Steven Jay; Weekes, John R.; Matyi, Cindy L.; Neufeld, Victor (1988). Direct versus indirect suggestions, archaic involvement, and hypnotic experience. Journal of Abnormal Psychology, 97 (3), 296-301.

This study examined the effects of direct (Harvard Group Scale of Hypnotic Susceptibility; Shore & Orne, 1962) versus indirect (Alman-Wexler Indirect Hypnotic Susceptibility Scales; Pratt, Wood, & Alman, 1984) suggestions on archaic involvement (Nash & Spinler, in press) with the hypnotists, objective responding, and subjective involvement and involuntariness ratings, when the scales were administered in all possible combinations (direct/indirect, N = 61; indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect suggestions reported a greater emotional bond with the hypnotist and increased fear of negative appraisal than subjects who received direct suggestions. Repeated testing resulted in response decrements on measures of objective responding, subjective involvement, and involuntariness that were paralleled by diminished involvement with the hypnotist. The most stable relation between scales was evident when scales were defined as direct hypnosis

across both sessions. Although direct and indirect suggestions produced comparable effects in the first session, in the second session, direct suggestions fostered greater subjective involvement and feelings of involuntariness.

1987

Chaves, John; Brown, Jude (1987). Spontaneous cognitive strategies for the control of clinical pain and stress. Journal of Behavioral Medicine, 10 (3), 263-276.

The spontaneous cognitive strategies employed by 75 patients undergoing dental extractions or mandibular block injections were elicited using a structured interview. Interest focused on the relationship between these strategies and several personality variables, including state and trait anxiety, locus of control, and absorption. In addition, the effect of strategy utilization on perceived pain and stress was assessed. Forty-four percent of the patients employed cognitive strategies designed to minimize pain and stress, while 37% catastrophized, engaging in cognitive activity which exaggerated the fearful aspects of their experience. Only 19% of the patients denied any cognitive activity during the clinical procedure, and many of these used noncognitive coping strategies. Discriminant analysis revealed that situational anxiety was associated with the use of cognitive coping strategies. Catastrophizing was associated with increasing age, past dental stress, and higher levels of stress vulnerability (high trait anxiety and external locus of control). Copers reported less stress than catastrophizers but not less pain.

Nadon, Robert; Laurence, Jean-Roch; Perry, Campbell (1987). Multiple predictors of hypnotic susceptibility. Journal of Personality and Social Psychology, 53, 948-960. Report two experiments in which various measures thought to be related to hypnotizability were analyzed by stepwise discriminant analysis. Absorption and preference for an imagic style of thinking predicted hypnotizability. Addition of 2 other variables in Experiment 2--a Sleep-Dream score derived from Evans's Cognitive Control of Sleep Mentation subscale and Gibson's Dream Questionnaire, and the Belief in the Supernatural subscale of the Taft Experience Questionnaire--increased the correct classification of the medium-hypnotizable subjects from chance levels to 74%. Argue for a confirmatory and hierarchical approach in future studies to explore correlates of hypnotizability more fully.

#### NOTES

1:

The following notes were made at an SCEH presentation: [Robert Nadon, Hypnotizability: A Correlational Study Involving Experiential, Imagery, and Selective Attention Variables.]

Author used a number of variables that have related to hypnotizability in single measure studies to predict with a multiple  $r$ . 30 male and 30 female Ss, given Harvard (?) then screened on Form A, and finally on Form C. Classed as Low (0-2), Medium (5-10 without amnesia), and High (11-12 with amnesia).

Independent Variable Triserial  $r$  % Correctly Classified Sheehan (1967) short Betts  
-.69\*\* 57 Preference for Imagery Mode of Thought

(Isaacs 1982) .64\*\* 57 Tellegen's Absorption .58\*\* Personal Experience Questionnaire .51\*\* 80  
(Evans 1982) Concordia Fantasy Questionnaire Pavio Stroop Random Number Generation Task Modified Van Nuys Meditation Task 8 Auditory attention tasks

1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

NOTES

1:  
620, Belicki & Bowers, 1982 ABSTRACT: Investigated the role of demand characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A), which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

Council, James R.; Kirsch, Irving; Hafner, L. P. (1986). Expectancy versus absorption in the prediction of hypnotic responding. Journal of Personality and Social Psychology, 50, 182-189.

The Absorption Scale was administered to subjects in the context of a hypnosis experiment and in a context unrelated to hypnosis. Expectancies of responding to hypnotic suggestions were assessed both before and after trance induction, but before administration of suggestions. Hypnotic depth was assessed by different methods before suggestions were given, and after hypnosis. Absorption was correlated with hypnotic responsivity and expectancy, but only when assessed in a

hypnotic context. Completing the Absorption Scale in a hypnotic context appeared to affect responsiveness by altering expectancies. Only postinduction expectancies were predictive of response to suggestions. Results of path analysis suggest that trance inductions alter expectancies for responding to hypnotic suggestions and that these altered expectancies determine subsequent hypnotic behavior.

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

#### NOTES

1:  
As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance

on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the

ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

**Register, Patricia A.; Kihlstrom, John F. (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34, 84-97.**

Measures of hypnotizability based on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) correlate only moderately with those based on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Ss (N = 148) scoring in the high range (10-12) on HGSHS:A were classified according to whether they scored in the "virtuoso" range (11-12) or not on a subsequent administration of SHSS:C. Significant group differences were found on items comprising the cognitive distortion subscale of HGSHS:A, whether assessed in terms of overt behavior or subjective impressions of success. The 2 groups also differed on global self-ratings of hypnotic depth and on those subscales of Field's Inventory Scale of Hypnotic Depth concerned with subjective feelings of loss of control, automaticity, transcendence of normal functioning, and fluctuating depth. Assessments of hypnotizability are enhanced when investigators consider subjective involvement as well as behavioral measures of hypnotic response. This is particularly important when the more dissociative aspects of hypnosis are under scrutiny.

#### NOTES

1:

The correlation between Harvard Group and Stanford Scale scores is usually about  $r = .60$  (Bentler & Roberts, 1963; Coe, 1964; Evans & Schmeidler, 1966). This is much lower than one would expect ( $r = .82$ ), based on the tests' individual reliabilities (Evans & Schmeidler, 1966).

The authors developed a Table to show the cross-classification of Ss in terms of Harvard and SHSS:C. Only a minority (33%) of Ss scoring in the highest range of HGSHS:A also scored in the highest range on the SHSS:C (or 50% if cutting points are different).

The Absorption scale correlated  $r = .38$  ( $p < .001$ ) with the Harvard Scale, which fell to  $r = .31$  ( $p < .01$ ) when corrected for expansion of range. The correlation between Absorption and SHSS:C was  $.35$  ( $p < .001$ ).

The issue of predicting Stanford 'virtuosos' from Harvard 'virtuosos' was addressed. HGSHS:A predictor variables were used to determine which items determined whether or not one of the HGSHS:A 'virtuosos' (the 20% who scored 11-12) would also be a SHSS:C 'virtuoso.' It was found that 70% of the SHSS:C

virtuosos, but only 53% of the nonvirtuosos, had reversible posthypnotic amnesia on the HGSHS:A. None of the ideomotor or challenge subscale items demonstrated this ability to predict group association. Although the 'virtuosos' differed from the 'nonvirtuosos' in self reported depth, none of the coding categories associated with the depth variable differentiated the groups; also, judges could not predict who would be a Stanford 'virtuoso' based on subjects' descriptions of depth following the Harvard scale administration.

The Experimenters also could not predict who among the Harvard 'virtuosos' would be classified as a Stanford 'virtuoso' based on either their Absorption Scale score or previous experience with hypnosis.

It was found that subjects' subjective experience of the suggestions for hallucinations, amnesia, and posthypnotic behavior (all considered to be cognitive alterations) were the most highly correlated with the subsequent total SHSS:C score. On the Field scale, which measures subjective experience, the most predictive items had to do with feelings of automaticity and loss of control (referred to as nonvoluntary behavior in other literature). Predicting SHSS:C score by 5 items (Harvard behavioral score, Harvard subjective score, Field total score, Tellegen Absorption total score, and self reported depth rating),  $r = .44$ . "The 5-element regression, employing only total scores, explained 17% ... of the variance of SHSS:C; thus, the feelings of subjective success accounted for the vast proportion (79%) of the explainable variance. For the 16 element regression, employing subscales derived from factor analysis of HGSHS:A and Inventory Scale of Hypnotic Depth, the cognitive subscale was dominant, accounting for 65.5% of explainable variance" (p. 92).

A discriminant function analysis employing the same five total score variables correctly classified 63.3% of the virtuosos.

In their Discussion, the authors suggest that investigators use subjective response as well as behavioral response when identifying hypnotic talent (virtuosos) for research. Particularly, the subjective experience of success seems to be important. Little is known, to date, about the determinants of that sense of success with hypnotic suggestions. "In part, they may relate to the 'classic suggestion effect' (K. S. Bowers, 1981; P. G. Bowers, 1982; Weitzenhoffer, 1974): the quasi-automatic, compulsory, involuntary quality which distinguishes hypnotic response from compliance with simple social requests. If so, then a direct assessment of perceived involuntariness might enhance the predictive validity of HGSHS:A even more. This is especially true for the perceptual-cognitive alterations which relate to Ss' capacity for dissociation" (p. 94).

The authors further recommend, "In those situations where HGSHS:A must stand alone for economic reasons, however, and especially where HGSHS:A is employed as a convenient preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

Sweeney, Carol A.; Lynn, Steven Jay; Bellezza, Francis S. (1986). Hypnosis, hypnotizability, and imagery-mediated learning. International Journal of Clinical and Experimental Hypnosis, 34, 29-40.

The relationship between hypnotizability, imagery utilization ability, and hypnosis was examined in a study described to Ss (N = 157) as an 'imagery experiment.' In Session 1, the Tellegen Absorption Scale (Tellegen, 1976) was completed and the imagery-mediated paired-associate learning task was administered as a baseline measure. In Session 2, either hypnosis, task motivation, or no treatment instructions were administered and the learning task was repeated with a different word list (each 15 high, 15 low imagery pairs). In Session 3, the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) was administered. Overall, recall was superior for high imagery words. Hypnotizability was not associated with imagery-mediated recall. Recall performance, however, was correlated with Tellegen Absorption Scale scores. Interestingly, learning and recall performance decreased between Sessions 1 and 2 for hypnotized Ss but remained the same for task motivated and control Ss. The decrease in performance was mediated by less concern for performance and diminished anxiety. Self-reports of imagery utilization did not differ among groups of Ss.

#### NOTES

1:

The authors review literature on the relationship between hypnotizability, hypnosis, and imagery abilities, noting that results are conflicting. One reason for differing results may be that imagery scales are self-report measures, subject to reporting bias of varying types. The imagery-mediated paired-associate learning paradigm, using high and low imagery paired associates, may address that reporting bias issue. This investigation used 157 Ss grouped into high (9-12), medium (5-8), and low (0-4) hypnotizability levels on the basis of the Harvard Scale. Given the fact that high imagery words are usually recalled more easily than low imagery words (Paivio, 1971), a relationship observed between hypnotizability and imagery-mediated recall would elucidate the role of imagery utilization for memory functions.

The experimental conditions included hypnosis, task motivation, and a no treatment control condition, in order to evaluate the possible enhancement effects of hypnosis on imagery utilization for memory functions. The task motivation group was included to control for motivational factors, and the no treatment control condition to control for the practice effects of repeated testing.

The word pair stimuli were from Paivio et al (1968): 30 pairs consisting of 15 high and 15 low imagery noun pairs. Each Subject participated in three experimental sessions.

Session 1. Ss were told that they were in an experiment on imagery to remember pairs of words. They completed the Tellegen Absorption Scale, then were given instructions for using imagery for recalling words, and for rating vividness and clarity of each image immediately after it was formed. Finally they performed the learning task.

Session 2. Ss received either hypnosis, task motivation instructions ("try to form good interacting images of the word pairs" with exhortation to score as high as possible), or control (Like Session 1). No one in hypnosis group refused the

induction (despite the fact that they were not forewarned in Session 1 that the experiment might involve hypnosis). Ss completed a questionnaire on the percentage of word pairs they used images to remember, how easy it was to block out or ignore distractions, how vivid and clear were images of words during recall, how concerned they were about their performance, and how much anxiety, if any, they experienced during the experiment.

Session 3. The Harvard Scale was administered. Three Ss declined to participate in the Harvard Scale administration.

The results were analyzed with a 3 x 2 x 2 x 2 repeated-measures ANOVA: hypnotizability, instruction (hypnotic induction, task motivation, no treatment), session (1 and 2), and pair imagery (high and low). The expected enhanced memory performance of high hypnotizables with high imagery words in the hypnosis condition did not emerge in the results. However, the expected stimulus-imagery effect was observed (a higher proportion of high imagery words than low imagery words recalled). The expected higher imagery ratings for hypnotized high hypnotizable Ss also was not found. Furthermore, there was a significant interaction effect for recall session by hypnotizability: low hypnotizable Ss rated imagery less vivid in Session 2 than in Session 1, while highs rated it more vivid in Session 2 than in Session 1. Thus, low hypnotizable Ss' imagery ratings actually decreased between Recall Session 1 and 2, while high hypnotizable Ss' imagery ratings increased between Recall Session 1 and 2.

While the Absorption Scale correlated with the Harvard (.28,  $p < .001$ ) and with various measures of recall, hypnotizability did not correlate with any of the recall measures. The questionnaires administered during Session 2 suggested that hypnotized Ss were less concerned and anxious than the no treatment control Ss, and less concerned than the Ss receiving task motivation instructions.

In their Discussion, the authors speculate that the strong stimulus-imagery effects might have made it unlikely for them to find differences between high, medium, and low hypnotizable Ss in imagery-based paired associate learning. They suggest including word pairs that range across the continuum of imagery ratings in future research. They also speculate that differences between hypnotizability levels might be found (as 'T Hoen reported in 1978 publication) if Ss were required to respond in a shorter time interval, or if hypnotizability were measured by a scale with more cognitive items than the Harvard Scale--both conditions in 'T Hoen's research protocol.

"The most striking finding of the present research is that instead of facilitating performance in an imagery-mediated recall task, hypnosis resulted in a decrement in recall relative to control conditions. In the hypnotic condition, the amount of learning actually decreased from one session to the next (waking-hypnosis) but remained equivalent in the task motivation (waking-task motivation) and no treatment groups (waking-waking)" (p. 37). The authors note that it is not possible to determine from their research design whether hypnosis interfered with the learning task, the retrieval task, or both.

"The findings suggest that hypnotizability may be related to reported vividness and clarity of imagery but unrelated to the actual ability to utilize imagery in an

imagery- mediated paired-associate learning task. ... Although high hypnotizables' self-report ratings of imagery and vividness increased, their recall performance was not accordingly enhanced. The disparity between subjective and objective measures underscores the importance of including both types of measures in studies of imagery abilities" (pp. 37- 38).

To a considerable degree, this study controlled for Ss' expectancies regarding hypnosis better than some earlier studies. This study differs from earlier research in that (1) Experimenters didn't test hypnotizability prior to the imagery-mediation task; and (2) the study was defined as an experiment on imagery, and hypnosis was not mentioned until just before the induction in Session 2.

"In conclusion, the present results indicate that, under certain conditions, hypnosis may decrease Ss' motivation and performance. No support was provided for the ability of hypnosis to facilitate imagery utilization and performance on an imagery-mediated task. The results are compatible with the views proffered [sic] by theoreticians who have emphasized the importance of expectancies and the experimental context (e.g., Barber, 1979; Coe & Sarbin, 1977; M. T. Orne, 1951, 1959; Spanos, 1982)" (p. 38).

Zamansky, Harold S.; Clark, Lorene E. (1986). Cognitive competition and hypnotic behavior: Whither absorption?. International Journal of Clinical and Experimental Hypnosis, 34, 205-214.

According to the widely held absorption notion, the successful response to hypnotic suggestions requires S to focus attention on the content of these suggestions and to avoid incompatible and contradictory cognitive activities. This assumption was tested by exposing high, middle, and low hypnotizability Ss continuously to incompatible suggestions and images as they attempted to respond to the direct suggestions of the hypnotist. Performance under these circumstances was substantially as effective as in baseline sessions (without incompatible suggestions) for the high and medium hypnotizable Ss. On the other hand, fewer than half of the low hypnotizability Ss responded successfully. The results are viewed as compatible with both a social enactment and a neodissociation interpretation of hypnosis.

#### NOTES

1:

Subjects were 58 volunteer students divided into 12 high (8-12), 26 medium (5- 7) and 20 low (<5) hypnotizables on the basis of the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A). Depending on the number of suggestions passed during the SHSS:A, 2-4 'target suggestions' were selected from among those each S passed. All Ss had passed at least one of the target suggestions.

The target suggestions that had been successfully passed were readministered with incompatible suggestions and imagery being given to the S. For example, the S might be asked to practice the opposite response, to note and remember the movements and muscles used to produce the response, to think that they should be able to resist the suggestion, to picture themselves performing the opposite response by recalling the earlier practice experience. For example, while giving a suggestion for arm rigidity, the Experimenter might say "Picture yourself bending your arm"

or "Imagine what it would be like to bend your arm." The S was even encouraged to perform another competing response, e.g. to bend the other arm, and to try to use that experience in resisting the target suggestion. The S was requested to verbalize the incompatible thoughts out loud while performing the target suggestion. Nevertheless, the direct suggestion also was interspersed, as, "You will find, nevertheless, that your right arm won't bend."

**RESULTS.** All 12 highs passed at least one target item and 10 passed all of the target items. 23 of 26 medium suggestible Ss passed at least one item and 17 passed all of them. Only 8 of 20 low hypnotizable Ss passed at least one target suggestion; 7 passed all of them however. Usually the low hypnotizables had only one or two target items, since they passed few items on the original SHSS:A test.

In their Discussion, the authors state, "Despite popular opinion, therefore, it appears that it is not necessary for the good hypnotic S to be fully 'absorbed' or to be 'imaginatively involved' (J. R. Hilgard, 1979) in the direct suggestions of the hypnotist to perform these suggestions successfully. ... It is the responses of the lows that were quite clearly degraded by the presence of conflicting thoughts and images" (p. 209).

As a control study, the authors tested 11 other Ss who had low hypnotic susceptibility, to determine whether the effect found with lows (that they could resist) was actually a function of test-retest unreliability. They administered 1-2 target suggestions without contradictory suggestions two or more times. The results were that, once a S had passed a suggestion once, they continued to pass it (even when it was administered 3-4 times). "If anything, the suggestions sometimes appeared to gain in effectiveness with repetition" (p. 210).

The authors did another control study with 17 highs, 9 medium Ss, and 8 lows, in which the conflicting suggestion was given by a hypnotist who did not know the hypnotizability of the S: after S was hypnotized, hypnotist A wrote the "target" on a slip of paper, left the room, and hypnotist B entered and gave the conflicting suggestions for that target. All 17 highs and 7 of the 9 medium hypnotizable Ss passed, but only 2 of 8 lows were able to do so.

The authors conclude, "It may well be that processes such as absorption and imaginative involvement may facilitate the successful response to hypnotic suggestions, but, clearly, the utilization of such processes is not essential for the successful hypnotic performance of high and medium hypnotizability Ss" (p. 212).

**1985**

Ashton, M.A.; McDonald, R.D. (1985). Effects of hypnosis on verbal and non-verbal creativity. International Journal of Clinical and Experimental Hypnosis, 33 (1), 15-26.

60 female volunteers, 30 hypnotizable and 30 un hypnotizable, screened on 2 measures of hypnotizability, were assigned to a hypnosis, simulation, or waking motivated treatment condition to assess whether hypnosis has a differentially enhancing effect upon verbal and non-verbal creativity test performance. Verbal

and figural components of the Torrance Tests of Creative Thinking (Torrance, 1974) and the Sounds and Images Test (Cunnington & Torrance, 1965) were the principal dependent variables. Postexperimental measures of absorption and effortless experiencing were also obtained. A 2 x 3 independent groups ANOVA did not sustain the prediction of an interaction effect between S hypnotizability and the presence of hypnosis on 3 composite measures of verbal and nonverbal creativity. Although there was an absence of treatment effects, hypnotizable Ss consistently achieved higher scores on the Torrance scoring categories, and their performance was statistically superior on a composite index of overall creativity. Absorption and effortless experiencing measures were also significantly higher for hypnotizable Ss than for un hypnotizable Ss.

1984

Barabasz, Arreed F. (1984). Antarctic isolation and imaginative involvement - preliminary findings: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (3), 296-300.

Group 1 Ss (N = 9) were interviewed in Antarctica prior to and following 1 year of Antarctic isolation. Group 2 Ss (N = 7) were exposed to 3 weeks of Antarctic field-site isolation and were interviewed upon return to the United States. A control group of 10 Ss was also interviewed on 2 occasions, paralleling Group 1. Group 1 showed a significant increase in imaginative involvement from pre- to post-Antarctic isolation. Group 2 showed a significantly greater level of imaginative involvement than the control Ss. The possibility that Antarctic living may have revived the mental processes available to these Ss as children is considered within both regression and learning explanations.

Crouse, Eric; Kurtz, Richard (1984). Enhancing hypnotic susceptibility: The efficacy of four training procedures. American Journal of Clinical Hypnosis, 27, 122-136.

In this study, we have compared the effects on hypnotic susceptibility of several components of training procedures based on a social learning model, which have been reported to be successful in enhancing hypnotic susceptibility. These included: 1) attitude-conception of hypnosis information, 2) involvement instructions, 3) goal-directed fantasy instructions, and 4) practice vs. no practice in responding to hypnotic suggestions. A 3 x 2 x 2 repeated measures factorial design was used for the experiment with 60 female volunteers serving as subjects in the study. Contrary to expectations, no differential treatment effects were obtained on either objective or subjective measures of hypnotizability. Furthermore, it was questionable whether or not any of the three information-based components even produced gains in hypnotic susceptibility. None produced clinically significant gains. They also were not found to alter either the subjects' attitudes or their use of hypnosis-related skills. Similarly, practice was found to be ineffective in enhancing responsiveness to suggestions. Taken as a whole, the results of this study suggest that the gains in

hypnotic susceptibility reported for social learning-type training procedures may be due to causes other than those posited by social learning theory.

## NOTES

1:

Diamond (1977) posited 3 core components to modification procedures: attitudinal and set factors, cognitive strategy factors, and optimal learning factors (specific ways subjects are taught the internal responses).

"The present study was undertaken to more fully clarify the extent to which each of the critical components hypothesized by Diamond contributes to increasing susceptibility. It was predicted that subjects receiving attitude-conception of hypnosis information and subjects receiving involvement instructions would show a significantly greater gain in hypnotizability than Ss receiving goal-directed fantasy instructions. Secondly, it was predicted that a significantly greater gain in subjects' hypnotizability would result from an opportunity to practice responding to hypnotic suggestions when coupled with involvement instructions than when accompanied by goal-directed fantasy instructions or attitude-conception of hypnosis information" (p. 125).

A revised SHSS:C was used; it deleted words that explicitly suggested goal directed fantasies (GDF's) on several items: hand lowering, moving hands apart, taste hallucinations, arm rigidity, arm immobilization. Experimenters used audiotaped presentation. Subjects in 3 of 6 experimental groups were also given opportunity to practice 30 minutes on 3 occasions spaced no more than one week apart. They were given 2 practice trials on each of 5 hypnotic suggestions taken from several different scales.

"While differential treatment effects were not found, there was a general facilitation of hypnotic responsiveness for all Ss across treatment conditions on both objective and subjective hypnotizability measures. The mean change in the objective hypnotizability score for all subjects was +.68, ... $p < .001$ ; the corresponding mean change in the subjective hypnotizability scores was +3.11 ...  $p < .001$ . Although statistically significant, neither of the shifts appear to indicate clinically significant shifts in hypnotic responsiveness" (p. 129).

The changes in the positive direction in hypnotizability were not correlated with hypnotizability. Subjects appear to change in their conceptualization of hypnosis, in the direction of it being more a self-induced phenomenon ( $p < .001$ ).

In their Discussion, the authors write, "Taken as a whole, results of this study challenge assumptions which have been made about how training procedures based on a social learning model affect gains in hypnotic susceptibility" (p. 131). Each experimental manipulation was intended to influence a mediating variable, and that apparently did not happen. Teaching subjects to use GDFs on a few items did not generalize so that subjects would generate GDFs on novel items. The results suggest "caution against assuming that social learning base training procedures are effective in altering subjects' attitudes and/or their use of skills thought to mediate hypnotic responsiveness" (p. 133). Nevertheless, the correlational data support previous studies that relate hypnotizability to the mediating factors under investigation.

Continuing their Discussion, the authors write, "Clearly, more attention should be paid in future studies to assessing changes in mediating variables produced by such

training procedures. This is particularly important in terms of subjects' use of GDF's and their use of cognitive strategies to increase the extent of their involvement in the hypnotic experience. It is significant that in this study neither involvement instructions nor GDF instructions were found to alter subjects' use of cognitive strategies. Changes in these skill-related factors need to be demonstrated if social learning based training procedures are to be proven effective in altering subjects' hypnotic abilities rather than simply in raising subjects to their optimal level of responsiveness.

"One explanation which has been offered for the reported success of such training procedures is that they work by changing subjects' attitudes, motivation and/or expectations of hypnosis while leaving any aptitudinal component to hypnosis unaltered (Perry, 1977). From this point of view the gains in susceptibility reported for such procedures result from subjects moving closer to their optimal or 'plateau' level of responsiveness rather than from real changes in subjects' hypnotic abilities" (p. 134).

Alternatively, it is possible that the increases observed following training programs have something to do with the hypnotist-subject relationship. For example, increases in hypnotizability are more modest when the training is given in written instructions than when it is given in person by a hypnotist.

Kearns, John S.; Zamansky, Harold S. (1984). Synthetic versus analytic imaging ability as correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 32, 41-50.

It was hypothesized that synthetic imaging ability, but not analytic imaging ability, is positively related to hypnotizability. The correlation of scores on a paired-associates task, used as a measure of synthetic imaging ability, with scores on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), indicated a statistically nonsignificant trend in the predicted direction. 2 measures of analytic imaging ability, as well as Sheehan's (1967) revision of the Betts (1909) Questionnaire Upon Mental Imagery, a measure of vividness of imagery, did not correlate significantly with SHSS:C. The results are discussed in terms of their relation to studies of creativity and goal-directed fantasy.

#### NOTES

1:  
The authors review the literature on imagery and hypnotizability and propose that an important variable in hypnosis is an ability to expand imaginatively upon a given verbal input (synthetic imaging ability), akin to Spanos' (1971) concept of goal-directed fantasy. They cite studies relating creativity ("essentially a synthetic process") to hypnotizability, and predict that skill in solving spatial relations problems (analytic imaging ability) is not correlated with hypnotizability because it involves "accurately scanning visual images and converging on solutions to specific problems," (p. 42) rather than creative fantasy characteristic of hypnotic behavior. Forty Subjects had two sessions each: imagery tests in #1 and SHSS:C in #2. Imagery tests included, in this order: 1. Paired Associates (Paivio, 1972; a test of synthetic imaging), in which paired words are learned and later recalled;

Experimental Ss were to learn them by combining them into an image, while Control Ss were to simply try to learn them. The nouns differed in imagery strength (potential for stimulating images). 2. Nonsense Forms (a test of analytic imaging), in which Subjects trace with their fingers an irregularly shaped Masonite form, blindfolded, and then choose one of 5 drawings that best matches the form. 3. Cube Visualization (a test of analytic imaging), in which Ss imagine a 2" wooden cube painted red on all faces, that had been sawed into 1" cubes; they are to say how many of the smaller cubes would be red on 3 faces, 2 faces, one face, and none of the faces. 4. Betts QMI.

The Paired Associates (PA) scores were a ratio of high imagery words recalled to low imagery words recalled, intended to reflect the impact of imagery availability on memory. There was a trend for hypnotizability to correlate with PA ratio scores, regardless of whether intermediate or low imagery nouns were used as baseline ( $\rho = .37$  and  $.34$ ,  $p < .10$ ) in the experimental group ("Use imagery to learn."), a trend that was not found in the control group (no imagery instructions). Neither measure of analytic imaging ability (Nonsense Forms, Cube test) correlated with hypnotizability.

In their Discussion, the authors write, "The common factor in successful performance of both imagery-mediated paired associates learning tasks and hypnotic suggestions appears to be the ability to expand imaginatively upon a given verbal input" (p. 47). They cite the literature relating hypnotizable and creative performance (p. 47). "The present findings with the Nonsense Forms Test and the Cube Visualization Test, both of which failed to correlate significantly with SHSS:C, support the hypothesis that hypnotizability is not related to analytic, spatial-imagining skills" (p. 47). "The nonsignificant correlation between Betts QMI and SHSS:C adds to the growing body of inconsistent findings observed with Betts QMI" (p. 47).

"Given the complex nature of hypnotic susceptibility and of imagery (Monteiro et al., 1980), it is perhaps not surprising that studies attempting to relate the two variables directly frequently yield only modest relationships. Very likely, the inclusion of appropriate mediating variables would serve to clarify and, in particular instances, augment the relationships observed between hypnotic responsiveness and imaging ability. One such variable may be the capacity to become fully involved in everyday nonhypnotic experiences, commonly called absorption. This variable has been shown in numerous studies to be related to hypnotizability (e.g. Tellegen & Atkinson, 1974), as well as to creativity and vividness of imagery (P. Bowers, 1978, 1979; Monteiro et al., 1980). Even more relevant to the present study is the possible interaction between level of hypnotic susceptibility and the relationship between synthetic imaging ability and SHSS:C scores. It may be, for example, that the contribution of synthetic imaging ability becomes more critical in eliciting hypnotic behavior from Ss who are only moderately susceptible to hypnosis. Such an analysis was not possible in the present experiment, since the number of high, medium, and low susceptible Ss was approximately equal, and, therefore, the number of Ss at each level was insufficient for an adequate subgroup analysis. Clearly, however, future studies of the role of

imaginal skills in hypnotic responsivity must move in directions such as these" (p. 48).

Magnavito, F.; Gaupp, L. (1984, October). Absorption, hypnotic susceptibility, and automatization of visual attention. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

1:

Absorption (Tellegen Scale) correlated .62 with SHCS and -.45 with a measure of visual automatization. They conclude that highly absorption-prone individuals attend more to sensory information, processing their environment in a childlike, less automatized manner. The measure of visual automatization, H, was obtained by camera recorded eye movements and fixations as Ss viewed slides in any way they desired.

Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

#### 1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo

induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

## NOTES

1:

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis. Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsivity. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic

responsivity generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

Saavedra, Ramon Luis; Miller, R.J. (1983). The influence of experimentally induced expectations on responses to the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 31, 37-46.

A sample of 75 female and 63 male undergraduates were told that their hypnotizability was predictable through the application of a battery of questionnaires and physiological measures. Three levels of hypnotizability expectations were created, with 3 groups of Ss informed that they were highly hypnotizable, moderately hypnotizable, or low in hypnotizability, respectively. A control group received no such expectations. All Ss were then administered the Harvard. Results indicated a significant main effect due to the assigned hypnotizability expectations. Only Ss in the low expectation group, however, scored significant differently from the other groups on the Harvard. Four other variables were examined as covariates: locus of control, attitude toward hypnosis, absorption, and self-predictions of hypnotizability. All but locus of control correlated significantly with the Harvard. It also was shown that the degree to which assigned expectations influenced Harvard scores was a function of the confidence Ss had in those expectations.

#### NOTES

1:

The authors state that research has shown that it is easier to lower hypnotizability scores by providing negative expectancies than to increase hypnotizability scores through provision of positive expectancies. In this study, very little of the variance of hypnotizability scores was accounted for by the expectancy manipulation.

#### 1982

Crawford, Helen J. (1982). Hypnotizability, daydreaming styles, imagery vividness, and absorption: A multidimensional study. Journal of Personality and Social Psychology, 42 (5), 915-926.

In 25 male and 31 female university student and staff volunteers, the interrelationships between the following measures were studied: hypnotic susceptibility (SHSS:A and C), imagery vividness (VVIQ), involvement in everyday activities (TAS), and daydreaming styles (28 scales of Singer & Antrobus's Imaginal Processes Inventory). Factor analysis produced a factor characterized as a positively vivid and absorptive imagination style. Hypnotic susceptibility, VVIQ, TAS, and

positive-affect daydreaming styles all loaded on this factor. Two other factors were a dysphoric daydreaming style and a lack-of-attentional-control style. Stepwise multiple regressions suggested that males and females, at least within this sample, exhibit different relationships between hypnotic susceptibility and predictor variables. Similar differences were found for the VVIQ and the TAS and their daydreaming-scale predictor variables.

St. Jean, Richard; MacLeod, Carrie; Coe, W. C.; Howard, M. L. (1982). Amnesia and hypnotic time estimation. International Journal of Clinical and Experimental Hypnosis, 30, 127-137.

Previous research has shown that hypnotic Ss tend to underestimate the duration of the hypnotic interval (Bowers, 1979; Bowers & Brennehan, 1979). Based on Ornstein's (1970) work, the present investigation tested the hypothesis that such underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session. Two separate studies, in which time estimates were collected in conjunction with administrations of the Harvard, failed to find a relationship between responses to the amnesia suggestion and time estimation. Ss in both studies substantially underestimated the duration of the hypnotic interval, but the degree of such underestimation was not related to hypnotic responsiveness. Thus, Ornstein's hypothesis that underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session was strongly disconfirmed.

1981

Baum, D.; Lynn, Steven J. (1981). Hypnotic susceptibility level and reading involvement. International Journal of Clinical and Experimental Hypnosis, 29 (4), 366-374.

The study investigated differences between high and low hypnotizable Ss in their involvement in imaginative versus nonimaginative reading material. 10 high and 8 low susceptible Ss read passages of high and low rated imaginativeness. Ss' involvement in the passages was measured by self-report and reaction time. High and low hypnotizable Ss differed only in their involvement in imaginative material, with good Ss expressing greater involvement. High susceptible Ss tended to report more involvement in high than in low imaginative material, confirming J. R. Hilgard's (1965, 1970) observations. The reaction-time measure failed to parallel self-report, yielding non-significant results.

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general

reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

Tellegen, Auke (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on 'Role of the feedback signal in electromyograph biofeedback: the relevance of attention' by Qualls and Sheehan. Journal of Experimental Psychology: General, 110, 217-226.

High and Low Absorption Ss differ in set rather than in capability for attending to external or internal stimuli, as Qualls and Sheehan suggest. Trait x Treatment interaction for Absorption illustrates concept of personality dispositions being inherently interactive functional units. Provides a content analysis of Absorption scale (subscales) and relates absorption to other constructs in psychology. "It is not the internal versus external focus per se that play a decisive role but the subject's experiential versus instrumental set. For example, with two treatment levels, one would expect to obtain an Absorption x Treatment interaction even if both treatment conditions required an external attentional focus, as long as they contrasted an experiential and an instrumental set" (pp 223-224).

Yanchar, R. J.; Johnson, H. J. (1981). Absorption and attitude toward hypnosis: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 29 (4), 375-382.

2 factors which have been found to correlate to a small degree with susceptibility are (a) an individual's attitude toward being hypnotized and (b) an individual's capacity for subjective involvement in an experience (absorption). The present study was an attempt to replicate previous findings by Spanos and McPeake (1975) and to extend these findings to determine if there was a significant interaction between these 2 factors in their relationship to susceptibility. 99 Ss (65 females and 34 males) completed the absorption questionnaire of Tellegen (1979) and the attitude questionnaire of Barber and Calverley (1966). Their hypnotic susceptibility was assessed with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Attitude and absorption were found to have small positive

correlations with susceptibility, results which corroborate previous research. The multiple regression analyses indicated that there were no significant interactions between the factors of attitude, absorption, and sex.

1980

Kelly, Paul James ; Bowers, Kenneth S. (1980, October). Absorption as a mediator of time distortion under hypnotic and non hypnotic conditions. [Lecture] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Chicago.

NOTES

1:

Bowers found that there was a negative correlation between amount of time underestimation and hypnotizability, measured by the Stanford Scale, Form C:  $r = -.41$  to  $-.53$ .

I. Group Stanford C condition.  $N=151$  Time estimate taken before amnesia suggestion. Ss rated their absorption on each item using Tellegen Scale. 126 underestimates  $r = -.23$  25 overestimates  $r = -.52$  Combined with deviation score,  $r = .26$ . (May be lower than the correlations found by Ken Bowers because individual form C used by Bowers has more cognitive items.) These results lend support for Bowers' absorption theory of time distortion. Tellegen Scale did not correlate with time distortion.

II. Non-hypnotized condition Retested 48 underestimators of time elapsed: a. 24 in absorption condition (listening to Poe's Pit and Pendulum) b. 24 in non absorption condition (listening against white noise background, so it was hard to hear words and they could not "get absorbed")

Percent of actual elapsed time (which was 35 minutes) was used as the measure. (Hypnosis session in Study I was 38-4 minutes.) Using ANOVA they found a significant difference between trance and non-trance conditions, but no difference for the story condition.

The authors suggested that perhaps absorption is not important in the non-trance condition or maybe button pressing for distraction interfered. Underestimation was greater in trance than non-trance conditions. Interaction was significant. Highs did not underestimate as much in the story condition as in the hypnosis condition.

CONCLUSION: This study replicates and extends earlier studies and supports the absorption explanation.

O'Grady, K. E. (1980). The Absorption Scale: A factor-analytic assessment. International Journal of Clinical and Experimental Hypnosis, 28 (3), 281-288.

95 female and 53 male introductory psychology students were administered the Tellegen Absorption Scale (Tellegen & Atkinson, 1974); the Repression-Sensitization Scale (Byrne, Barry, & Nelson, 1963); the F Scale (Adorno, Frenkel-Brunswick, Levison, & Sanford, 1950); the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970); the Nowicki-Strickland Locus of Control Scale (Nowicki & Duke, 1974); and the Marlowe-Crowne Social Desirability Scale (Crowne & marlowe, 1964). A principal axis analysis of the inter-correlations

indicated that 3 major factors could account for the bulk of variance among the 6 inventories. Inspection of the correlation matrix and the factor loadings showed that the Absorption Scale shared a quite modest amount of variance with the remaining scales, and that it appeared to represent a dimension entirely different than those found in the other measures. These results offer strong support to the notion that the Absorption Scale is tapping a relatively new personality dimension.

St. Jean, Richard (1980). Hypnotic time distortion and learning: Another look. Journal of Abnormal Psychology, 89 (1), 24.

Conducted 2 studies employing different methodologies with a total of 75 undergraduates to test the hypothesis that hypnotic time distortion facilitates verbal learning. All of the Ss in Exp 1 and most of those in Exp II were given a modified version of the Stanford Hypnotic Susceptibility Scale-Form C. All Exp II Ss were also given the Harvard Group Scale of Hypnotic Susceptibility. Analysis of previous research indicated that hypnotic susceptibility and the form of time-distortion suggestions might be important moderator variables in the relationship. The separate and combined effects of these variables were observed in both studies. No combination of hypnotic susceptibility and time-distortion suggestions in either study raised performance level beyond that of the waking- and/or hypnotic-control conditions. Responses to a postexperimental questionnaire in Exp II indicated that high-susceptible Ss reported subjectively convincing changes in experienced time flow following time-distortion suggestions (12 ref)

1979

Bowers, Kenneth S.; Breneman, H. A. (1979). Hypnosis and the perception of time. International Journal of Clinical and Experimental Hypnosis, 27, 29-41.

Ss who were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A of Shor and E. Orne (1962) underestimated the duration of the 'hypnotic interval' by 41%. The same Ss underestimated a nonhypnotic interval of the same length by only 14%. This temporal foreshortening of the hypnotic interval, replicated on several different samples (combined, N = 435) confirms informal observation that people underestimate the length of time they have been hypnotized. Contrary to prediction, however, there was no relation between the amount of underestimation and hypnotic responsiveness. Discussion focused on possible reasons why significant underestimation of the interval was not accompanied by the expected (negative) correlation of hypnotic responsiveness and temporal foreshortening.

Bowers, Kenneth S. (1979). Time distortion and hypnotic ability: Underestimating the duration of hypnosis. Journal of Abnormal Psychology, 88, 435-439.

In a replication of previous research, 3 different samples of Ss (109 Ss) underestimated the length of time they were hypnotized. However, as in a previous investigation, there was no significant relation between Ss' hypnotizability and the

amount of temporal foreshortening of the hypnotic interval. A small subset of Ss (13-23%) in each of 3 separate samples overestimated instead of underestimated the length of time they had been hypnotized. When this small group of overestimators is set aside, the correlations between hypnotic ability and temporal estimates become significant for each of the 3 (sub) samples of underestimators - ranging from -.41 to -.53. It is demonstrated that these correlations could not be accounted for by R. F. Ornstein's (1976) storage-size hypothesis, but were probably due to Ss of varying hypnotizability becoming differentially absorbed in the hypnotic proceedings. This understanding is consistent with work in time perception showing that imaginative absorption leads to a foreshortening of time. (12 ref).

Quall, Penelope J.; Sheehan, Peter W. (1979). Capacity for absorption and relaxation during electromyograph biofeedback and no-feedback conditions. Journal of Abnormal Psychology, 88 (6), 652-662.

The present research examined the relation between absorption capacity and relaxation during electromyograph biofeedback and no-feedback (instructions only) conditions. Sixteen high absorption and 16 low absorption female subjects underwent a biofeedback and no-feedback session with the order of conditions counterbalanced. For high absorption subjects in the first session, EMG reductions were greater during no- feedback than during biofeedback, although the performance of biofeedback subjects improved in the second session. For low absorption subjects, no differences in EMG reductions were apparent across experimental conditions. Postexperimental self-report data demonstrated differences between absorption groups in subjects' state of arousal and quality of consciousness. It was concluded that for subjects with high capacity for absorbed attention, experimental conditions that allow for a withdrawal from the external environment are most conducive to relaxation, whereas for subjects with limited capacity for absorbed attention, conditions such as biofeedback that place an attentional demand on subjects may be preferable.

Spanos, Nicholas P.; Steggle, Shawn; Radtke-Bodorik, H. Lorraine; Rivers, Stephen M. (1979). Nonanalytic attending, hypnotic susceptibility, and psychological well-being in trained meditators and nonmeditators. Journal of Abnormal Psychology, 88 (1), 85-87.

Four groups of trained meditators differing in amount of meditation practice and a group of nonmeditators attended nonanalytically to a mantra in two meditation sessions. Subjects signaled intrusions into their attending, and were also assessed on several person variables. The four trained meditator groups differed from one another only in terms of self-esteem. When combined into a single group, meditators signaled fewer intrusions and reported "deeper" levels of meditating than nonmeditators. However, meditators and nonmeditators did not differ on hypnotic susceptibility, absorption, or indices of psychopathology.

Bowers, Patricia G. (1978). Hypnotizability, creativity and the role of effortless experiencing. International Journal of Clinical and Experimental Hypnosis, 26, 184-202.

Creative people and highly hypnotizable people describe their experience of finding creative solutions or responding to hypnotic suggestions as "effortless." It is suggested that receptiveness to subconscious work accounts for the experience of effortlessness in both tasks. An experiment using 32 high and low hypnotizable men and women was designed to explore the hypothesis that the aptitude for such effortless experiencing accounts for the relationship found between creativity and hypnotizability.

Analyses of variance indicate highly significant effects of level of hypnotizability on composite scores reflecting effortless experiencing of several tasks and creativity. Intercorrelations of these indices are about .60. As predicted, effortless experiencing accounts for much of the relationship between high versus low hypnotizability and composite creativity. The role of imagery vividness and of absorption in both hypnotizability and creativity were also explored.

Finke, R. A.; Macdonald, H. (1978). Two personality measures relating hypnotic susceptibility to absorption. International Journal of Clinical and Experimental Hypnosis, 26 (3), 178-183.

2 scales of involvement in absorbing experiences, developed independently by Tellegen (1976) and Swanson (1978), were compared with each other and with a group version of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Significantly positive correlations were obtained for all three comparisons. The results further confirm the relationship between hypnotic susceptibility and absorption, providing new evidence for the existence of stable individual differences in hypnotizability.

Schwartz, W. (1978). Time and context during hypnotic involvement. International Journal of Clinical and Experimental Hypnosis, 26 (4), 307-316.

A recent conceptualization of hypnosis suggests that hypnotized Ss should show a disruption in episodic memory which would reflect a diminished awareness of duration and sequence. Specifically, the predictions were that hypnotized Ss would exhibit less accurate estimates of duration, and less sequence in their recall of activities, than would nonhypnotized Ss. The empirical task consisted of giving Ss the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962), either with the induction (hypnosis condition), or without the induction (control condition). Prior to the termination of the scale, Ss were asked to recall the activities they had performed and the time that had elapsed since they began the scale. Hypnotized Ss (N = 10) were significantly less sequential in their recall of activities, and less accurate in their estimations of the passage of time, than were nonhypnotized Ss (N = 10). These results suggest that persons who respond to hypnosis are less concerned with the context which the world provides for their actions than are nonhypnotized controls.

1969

Gendlin, Eugene T. (1969). Focusing. Psychotherapy, 6 (1), 4-15.

NOTES

1:

This paper presents a therapeutic procedure that involves experiential focusing, described as a bodily method. The paper provides a step by step procedure that has been used in research. "First of all, the method involves a sharp and complete shift in direction. One must cease talking at oneself inside; one must ask: 'What's wrong?' and then keep quiet, and refrain from answering oneself. It is understood that everyone knows a great deal about what is wrong..." (P. 4).

"Whenever the patient is unsure about what he has found (explaining or doubting) the way to deal with it is always again with a fresh start. One needn't decide the verbal issues that arise. 'Focus freshly on it instead, let it come freshly again' - this is almost always the answer to whatever the issue now seems to be" (p. 6).

"In this experiential therapy, it is important that the therapist respond to what is directly felt even while it isn't yet conceptually clear. What patients sense in focusing is often conceptually vague. The patient feels the felt meaning distinctly enough, but if he talks, he often begins by complaining that it isn't possible to think about it clearly. 'There's something funny there, about the way I pull out of relationships ... (He has talked about the problem before, but not about what is 'funny' here, he just focused and encountered that) ... but I can't describe it. It's ... ah ... funny, there.' The therapist must be able to talk to that, even without knowing what it is: 'You got something there, but you don't know what it is, yet. It's a funny something that you find, right there in how you pull out'" (pp. 6-7).

The theory postulates 'felt meaning' as a body sense of the many complexities of a problem, and experiential effect as a kind of body resolution of a problem. Focusing is viewed as "one essential of psychotherapy, desensitization, Jungian imagery, hypnotherapy, free association, and other methods" (p. 9). "Experiential focusing makes specific and synthesizes the steps of those therapeutic methods which systematically seek to engender body change process" (p. 10).

1968

Gendlin, Eugene T. (1968). The experiential response. In Hammer, E. F. (Ed.), Use of interpretation in treatment: Technique and art (pp. 208-227). New York: Grune & Stratton.

NOTES

1:

The author poses the question, "How can a therapist's response have a concrete experiential effect in the individual?" He notes that therapists do not deal with clear emotions but with more complex experiencing. "What we feel is not an internal object (an 'affective state' as something only inside us), but a felt sense of a whole situation - how we are in that situation, what we bring about, perceive, and feel we are up against" (p. 209). "Therefore, such a felt sense isn't something only felt, but is also intellectual" (p. 209). The therapist should draw the patient's attention to the complexity of experiencing. "Only as the client 'focuses' on his felt meaning, can it

shift, and only from it can further facets emerge. Some individuals come into psychotherapy with a great ability to engage in this experiential 'focusing'(Gendlin, 1968), while with others the therapist must struggle to draw their attention again and again to the felt sense they concretely have. Sometimes the client acts as though he had no idea that he has access to anything but his words" (p. 211). The therapy must remain experiential. "A therapeutic response always aims at the client's own directly-felt sense of what he is talking about" (p. 213).

**1965**

**Field, Peter B. (1965). An inventory scale of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 13, 238-249. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 86)**

An inventory of 300 items describing subjective experiences during hypnosis was administered to 102 students after they had wakened from hypnosis. The 38 items that correlated best with a standard measure of hypnotic susceptibility are proposed as an inventory measure of hypnotic depth. Items dealing with absorption and unawareness, automaticity and compulsion, and discontinuity from normal experience correlated best with the criterion, while items dealing with conscious motivation to enter hypnosis, feelings of surface compliance with suggestions, and unusual bodily sensations showed generally weaker relationships to the hypnotizability criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1959**

**Bowers, Margaretta K. (1959). Friend or traitor? Hypnosis in the service of religion. International Journal of Clinical and Experimental Hypnosis, 7 (4), 205-215.**

**NOTES**

**1:**

Hypnosis may potentiate religious experiences like prayer and worship, where hypnosis meets the world of inner reality. In the first to fourth centuries, Jewish mystics alluded to depth of mind in religious experience, but the idea of oneness with God "cannot be accepted as a healthy psychological concept" (p. 207).

"We have the possibility of understanding prayer and worship as an intrapsychic phenomenon, as a communication with one's total being. Once the premise of the indwellingness of God can be accepted as a psychological [sic] entity, then we can understand prayer as being a total response of the psychic life of the individual in order that he can understand the feelings of wholeness, self-confidence, and self-esteem in himself, and further, how this can be aided by hypnotic techniques" (p. 207).

The author interprets the 13th Century mystic's words, 'the divine will, dresses or cloaks itself in the will of the devout,' as similar to hypnosis, in which a state "may occur where the patient loses his awareness of the separateness of himself and the hypnotist so that the hypnotist's voice may be felt as his own voice" (p. 208). This is

all right as long as awareness of separateness is re-established when the person comes out of the hypnotic or religious experience.

The religious mystic also may use autohypnosis "to achieve a greater experiencing of God and a heightened religious experience. Such a state likewise produces an ecstasy. Such ecstasy is sometimes present in religious conversion experiences as well. This ecstasy is healthy if the separateness and integrity of God and Man are kept separate" (p. 209). The author describes a phenomenon in which a priest who leads a deeply devotional religious service may feel a loss of a sense of self afterward, complaining of great fatigue and inability or unwillingness to relate to people. The same post-devotional emptiness and depression sometimes occurs among parishioners.

A psychoanalytically oriented case study of misdirected religious belief, amplified by religious service induced trance, is presented.

## **ASTHMA**

Ewer TC, Stewart DE Improvement in bronchial hyper-responsiveness in patients with moderate asthma after treatment with a hypnotic technique: a randomised controlled trial *BMJ Clinical Research Edition*. 1986;293(6555):1129-32 A prospective, randomised, single blind, and controlled trial of a hypnotic technique was undertaken in 39 adults with mild to moderate asthma graded for low and high susceptibility to hypnosis. After a six week course of hypnotherapy 12 patients with a high susceptibility score showed a 74.9% improvement (p less than 0.01) in the degree of bronchial hyper-responsiveness to a standardised methacholine challenge test. Daily home recordings of symptoms improved by 41% (p less than 0.01), peak expiratory flow rates improved by 5.5% (p less than 0.01), and use of bronchodilators decreased by 26.2% (p less than 0.05). The improvement in bronchial hyper-reactivity occurred without a change in subjective appreciation of the degree of bronchoconstriction. A control group of 17 patients and 10 patients undergoing treatment with low susceptibility to hypnosis had no change in either bronchial hyper-responsiveness or any of the symptoms recorded at home. This study shows the efficacy of a hypnotic technique in adult asthmatics who are moderately to highly susceptible to hypnosis.

Kohen DP Relaxation-mental imagery (self-hypnosis) for childhood asthma: behavioral outcomes in a prospective, controlled study *Hypnos* 1995 Sep;22(3):132-44 Twenty-eight (28) 7-12 yr old children entered a controlled study of the effects of self-hypnosis on asthma. Asthma belief and behavioural inventories were collected before, and at one and two yrs after intervention. Asthma diaries were kept daily and mailed monthly. Subjects were randomly assigned to (1) Experimental (self-hypnosis), (2) Waking suggestion (no Hypnosis), (3) attention placebo (no hypnosis or asthma discussion), or (4) traditional control groups. Twenty four (24) completed 1 month follow-up, 16 completed 6 months, and 13 completed 2 yrs. Results included fewer Emergency Room visits in the experimental group (p greater than 0.05); (2) less school missed in the experimental group compared to the traditional controlled group (p greater than 0.001) and to the waking suggestion group (p greater than 0.005); (3) no differences in psychological evaluations between groups,

and (4) surprising findings regarding hypnotic and hypnotic-like experiences among subjects.

**Maher-Loughnan GP, McDonald M, Mason AA, Fry L** Controlled trial of hypnosis in the symptomatic treatment of asthma *BMJ* 1962; ii: 371-6 **Philipp RL, Wilde GJS, Day JH** Suggestion and relaxation in asthmatics *J Psychom Res* 1972; 16: 193-204

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**Anbar, Ron** (2002, Dec 3). Hypnosis in pediatrics: applications at a pediatric pulmonary center.. *BMC Pediatrics*, 2 (1), 11-18.

**BACKGROUND:** This report describes the utility of hypnosis for patients who presented to a Pediatric Pulmonary Center over a 30 month period.

**METHODS:** Hypnotherapy was offered to 303 patients from May 1, 1998 - October 31, 2000. Patients offered hypnotherapy included those thought to have pulmonary symptoms due to psychological issues, discomfort due to medications, or fear of procedures. Improvement in symptoms following hypnosis was observed by the pulmonologist for most patients with habit cough and conversion reaction. Improvement of other conditions for which hypnosis was used was gauged based on patients' subjective evaluations.

**RESULTS:** Hypnotherapy was associated with improvement in 80% of patients with persistent asthma, chest pain/pressure, habit cough, hyperventilation, shortness of breath, sighing, and vocal cord dysfunction. When improvement was reported, in some cases symptoms resolved immediately after hypnotherapy was first employed. For the others improvement was achieved after hypnosis was used for a few weeks. No patients' symptoms worsened and no new symptoms emerged following hypnotherapy.

**CONCLUSIONS:** Patients described in this report were unlikely to have achieved rapid improvement in their symptoms without the use of hypnotherapy. Therefore, hypnotherapy can be an important complementary therapy for patients in a pediatric practice.

**NOTES**

1:

Full text is available free, on-line, through PubMed

1996

**Kohen, Daniel** (1996). Relaxation/mental imagery (self-hypnosis) for childhood asthma: Behavioural outcomes in a prospective, controlled study. *Australian Journal of Clinical and Experimental Hypnosis*, 24 (1), 12-28.

Twenty-eight 7-12-year-old children entered a controlled study of the effects of self-hypnosis on asthma. Asthma belief and behavioural inventories were collected before, and at one and two years after intervention. Asthma diaries were kept daily and mailed monthly. Subjects were randomly assigned to (a) experimental (self-hypnosis), (b) waking suggestion (no hypnosis), (c) attention placebo (no hypnosis or asthma discussion), or (d) traditional control groups. Twenty-four completed one-

month follow-up, 16 completed six months, and 13 completed two years. Results included: (a) fewer emergency room visits in the experimental group ( $p < 0.05$ ); (b) less school missed in the experimental group compared to the traditional control group ( $p < 0.001$ ) and to the waking suggestion group ( $p < 0.005$ ); (c) no differences in psychological evaluations between groups; and (d) surprising findings regarding hypnotic and hypnotic-like experiences among subjects

1992

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

Isenberg, S. A.; Lehrer, P. M.; Hochron, S. (1992). The effects of suggestion on airways of asthmatic subjects breathing room air as a suggested bronchoconstrictor and bronchodilator. Journal of Psychosomatic Research, 36, 769-776.

The Thirty-three asthmatic subjects were told they were receiving, alternately, an inhaled bronchoconstrictor and inhaled bronchodilator, although they actually were only breathing room air. No subjects showed suggestion-produced effects on FEV1, although two (of the 19 on whom FEF50 was measured) showed effects of greater than 20% on measures of maximal midexpiratory flow. The incidence of the effect is smaller than reported previously, possibly because some subjects in previous studies inhaled saline, a mild bronchoconstrictor, and reversal of effect was not required for classification as a reactor. Higher percentages of subjects in this study showed decreased MMEF in response to the "bronchoconstrictor", but this appeared to reflect fatigue rather than suggestion effects. However, the fact that the effect occurred in a relatively non-effort-dependent measure suggests that real changes occurred in bronchial caliber, not just in test effort. Suggestion had a significant effect on perception of bronchial changes, but the correlation between actual and perceived changes was minimal. There was an increase in FVC prior to

administration of the "bronchoconstrictor", possibly reflecting a preparatory response to the expected drug. Correlations among self-report variables suggested the existence of three personality dimensions among our population related to suggestion and asthma: cognitive susceptibility to suggestion of bronchial change; feeling of physical vulnerability; and anxiety. However, there was no significant relationship between airway response to suggested changes and hypnotic susceptibility, as measured by the Harvard Group Scale of Hypnotic Susceptibility.

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**1991**

Madrid AD, Barnes SH. (1991, Oct). A hypnotic protocol for eliciting physical changes through suggestions [Abstract]. American Journal of Clinical Hypnosis, 34 (2), 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning and behavior.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

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**NOTES**

**1:**

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response

required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Murphy, A. I.; Lehrer, P. M.; Karlin, R.; Swartzman, L.; Hochron, S.; McCann, B. (1989). Hypnotic susceptibility and its relationship to outcome in the behavioral treatment of asthma: Some preliminary data. Psychological Reports, 65, 691-698.

## NOTES

1:

Twelve subjects from an experiment on relaxation therapy for asthma were given the Harvard. Hypnotizability was positively correlated, at a borderline significance, with improvement in the methacholine challenge test, a measure of asthma severity. Performance on the amnesia item of the Harvard was correlated with improvement in self-reported symptoms of asthma.

## 1987

Pastorello, E. A. (1987). The role of suggestion in asthma. I. Effects of inactive solution on bronchial reactivity under bronchoconstrictor or bronchodilator suggestion. Annals of Allergy, 59, 336-338.

Twenty-eight Ss affected by perennial asthma were selected in order to investigate the possibility of inducing or relieving an asthmatic attack by means of suggestion. 25 were positive to a methacholine challenge test, and among them, 11 reacted to an ultrasonic nebulized distilled water test. The effect of suggestion on airway response was assessed by 8 inhalations of normal saline at 32 degrees Centigrade alternately presented as a bronchoconstrictor or as a bronchodilator drug. 8 inhalations of the same diluent without any psychic stimulus were used as a control test. 7 patients reacted with bronchoconstriction to both positive and negative suggestion and to the control test. Further, this group of patients showed a lower methacholine PD10 when compared with the other Ss. In this study, the effects of suggestion on bronchial reactivity were not observed and bronchoconstriction belonged to an individual hyperactivity of the airways.

## 1979

Di Piano, Frank A.; Salzberg, H. C. (1979). Clinical applications of hypnosis to three psychosomatic disorders. Psychological Bulletin, 86, 1223-1235.

Studies of hypnosis in the treatment of skin disorders, headaches, and asthma were reviewed in terms of outcomes and methodological soundness. Some studies focused on changing physiological functions, others on increasing insight in their patients, and still others on altering patients' perceptions of their symptoms. Methodological weaknesses included lack of control groups, nonrandom assignment of patients to treatment conditions, and confounding of treatment effects or lack of control for placebo effects. Additional weaknesses centered around the use of single outcome measures and the failure to assess the specific roles of mediating variables. Most of the studies reviewed showed positive treatment effects. However, there is equivocal evidence that hypnosis can directly influence autonomic functioning. Hypnosis may be valuable in facilitating one's capacity to gain insight into how one's symptoms developed and are maintained. In addition, hypnotic procedures have resulted in some success when used to indirectly alleviate symptoms by altering how individuals perceive their disorders and how these disorders affect their lives.

**1978**

15 asthmatic and 19 non-asthmatic Ss were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) and accordingly assigned to one of three susceptibility groups -- low, medium, or high. Subsequently, all Ss were exposed to a hypnotically suggested asthma experience. Subjective and physiological measures of respiratory efficiency were administered before, during, and after the hypnotically suggested asthma experience. Ss did respond significantly differently in these three conditions, but the physiological measures did not reveal typical asthma physiological patterns. High and medium susceptible Ss were ostensibly convinced that they "experienced" asthma, but the low susceptible Ss were uniformly unimpressed. One of the most noteworthy findings was that Ss' ability to respond differentially (according to the asthma suggestions) was enhanced by greater susceptibility to hypnosis yet not "enhanced" by their history of previous asthma.

**1975**

Retrospective analysis of 121 asthmatic patients who were treated by hypnotherapy. Subjects were first broken down into one of three possible groups: "light," "medium," or "deep," according to the depth of trance typically achieved. Hypnoidal states were included in the light trance group and somnambulistic state in the deep trance. All sessions concentrated on suggesting physical and mental relaxation since we know this is one of the causes of the appearance of the "asthma attack." The actual wording varied however, and this involved discussion under hypnosis, of the main personalities of the environment, fears, failures, aims, hopes and frustrations. Post-hypnotic suggestions of continued relaxation and ability to cope with the various situations of life were given in all the cases. Auto-hypnosis was taught to enable the patient to reinforce the above suggestions and to remain in or selectively achieve a relaxed state. Results were classified into four different categories: "excellent," "good," "poor," and "nil." It was found that those patients who experienced a "high" trance depth were more likely to show excellent improvement than those who were measured as "medium" or "low" trance subjects

**1972**

Alexander, A. Barney; Miklich, Donald; & Hershkoff, Helen (1972, September-October). The immediate effects of systematic relaxation training on peak expiratory flow rates in asthmatic children . Psychosomatic Medicine, 34 (5), 388-393.

Clinical experience has often suggested that having asthmatic patients sit quietly and/or relax during asthma attacks is helpful. The present study was an attempt to provide a controlled experimental demonstration of the effect of systematic relaxation on peak expiratory flow rate in asthmatic children. Eighteen male and 18 female asthmatic children were divided into two groups matched for mean age, sex composition and asthma severity. One group of subjects underwent three sessions of

modified jacobsonian systematic relaxation training, while the second group sat quietly for three sessions. Peak expiratory flow rate measures were obtained prior to and following each session. It was found that relaxation "subjects manifested a significant mean increase in peak expiratory flow rate over sessions compared to a nonsignificant mean peak expiratory flow decrease for control subjects. It was suggested that these results have important implications both for the clinical treatment and the understanding of bronchial asthma.

1971

Moorefield, C. W. (1971). The use of hypnosis and behavior therapy in asthma. American Journal of Clinical Hypnosis, 13, 162-163.

Nine patients with asthma were treated with hypnosis and behavior therapy. All of these patients showed subjective improvement to a rather marked degree, except for one patient who has had three slight attacks of asthma since the onset of her treatment. These patients have been followed from eight to approximately 24 months. The results so far have been rather encouraging and the author believes this form of treatment will prove to be of benefit in the treatment of asthma and possibly many other related conditions.

Luparello, Thomas; Leist, Nancy ; Laurie, Cary; Sweet, Pauline (1970, September-October). The interaction of psychologic stimuli and pharmacologic agents on airway reactivity in asthmatic subjects. Psychosomatic Medicine, 32 (5), 509-513.

Two bronchoactive substances, isoproterenol and carbachol were presented by inhalation to 20 asthmatic subjects in a double blind study. Each drug was given under two conditions: in one case, the subject was told the drug was a bronchodilator; in the other, he was told it was a bronchoconstrictor. The bronchodilator effect of isoproterenol was greater when the subject was told it was a bronchodilator than when told it was a bronchoconstrictor. Similarly, the bronchoconstricting effect of carbachol was greater when the subject was told it was a bronchoconstrictor than when told it was a bronchodilator.

Maher-Loughnan, G. P. (1970). Hypnosis and auto-hypnosis for the treatment of asthma. International Journal of Clinical and Experimental Hypnosis, 18 (1), 1-14.

Conducted 2 controlled studies into the use of hypnosis in 252 asthma patients. Several different control procedures were used. Methods and results were summarized, and the same conclusion was reached: That hypnosis supplemented by autohypnosis was significantly more effective than control procedures. An outline is given of details of treatment methods. A current analysis of Ss involving up to 6 yr. of follow-up, is presented to provide a working guide to the regime in regular practice. To be fully effective hypnosis should be employed before steroids are started. Steroid-dependent asthma is rarely totally relieved by hypnotherapy. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Chong, Tong Mun (1969, September). The value of hypnotherapy as an adjunct in the treatment of bronchial asthma. Singapore Medical Journal, 10 (3), 182-186

[Introductory paragraphs] Bronchial asthma is a disorder characterised by recurrent spontaneous attacks of dyspnea and wheezing, and remissions either spontaneously or as a result of treatment. Two problems clearly exist in the treatment of bronchial asthma, (1) Treatment of acute attacks and (2) Prevention of future attacks.

Hypnotism has been used in the treatment of diseases for hundreds if not thousands of years. Success was claimed for the hypnotic treatment of asthma about 60 years ago by Gerrish (1909). Varying reports have appeared in literature about the efficacy of hypnotherapy. Marchesi (1949), Magonet (1955), Asher (1956), Stewart (1957), Fry (1957), Ambrose and Newbold (1958), Diamond (1959), Meares (1960), Edwards (1960), Sinclair-Gieben (1960), Maher-Loughnan et al (1962), Chong (1964, 1965, 1966, 1968), Maher-Loughnan (1965), McLean (1965), Houghton (1967), British Tuberculous Association (1968). Most authors used various degrees of psychotherapy, and believed that psychotherapy is an essential part of the treatment. However, Maher-Loughnan et al in a controlled study, using only symptom-removal suggestions, found that hypnosis is of value in the symptomatic treatment of asthma. Sinclair-Gieben (1960) reported a case of Status Asthmaticus resistant to all physical therapy and as a final resort, hypnosis was tried and found to cut short the attack instantaneously. Here also only symptom-removal suggestion had been used.

#### CONCLUSION:

Hypnotherapy is of value as an adjunct in the prevention of future attacks of asthma. It has also been shown to be a useful adjunct in other branches of medicine by the author elsewhere.

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#### **CONCLUSION**

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**1968**

**British Tuberculosis Association (1968). Hypnosis for asthma: A controlled trial: A report to the research committee of the British Tuberculosis Association. British Medical Journal, 71-76.**

An investigation of hypnosis in asthma was made among patients aged 10 to 60 years with paroxysmal attacks of wheezing or tight chest capable of relief by bronchodilators. One group of patients was given hypnosis monthly and used autohypnosis daily for one year. Comparisons were made with a control group prescribed a specially devised set of breathing exercises aimed at progressive relaxation. Treatment was randomly allocated and patients were treated by physicians in nine centres. Results were assessed by daily diary recordings of wheezing and the use of bronchodilators, and by monthly recordings of F.E.V. and vital capacity. At the end of the year independent clinical assessments were made by physicians unaware of the patients' treatment.

There were 252 patients (127 hypnosis and 125 controls) accepted for analysis, but a number of them did not continue the prescribed treatment for the whole year: 28 hypnosis and 22 control patients failed to cooperate, left the district, or had family problems; one hypnosis and one control patient died. Seven hypnosis and 17 control patients were withdrawn as treatment failures, the difference between the two groups being statistically significant.

As judged by analyses based on the daily "score" of wheezing recorded in patients' diaries, by the number of times bronchodilators were used, and by independent clinical assessors, both treatment groups showed some improvement. Among men the assessments of wheezing score and use of bronchodilators showed similar improvement in the two treatment groups; among women, however, those treated by hypnosis showed improvement similar to that observed in the men, but those given breathing exercises made much less progress, the difference between the two treatment groups reaching statistical significance. Changes in F.E.V. and V.C. between the control and hypnosis groups were closely similar.

Independent clinical assessors considered the asthma to be "much better" in 59% of the hypnosis group and in 43% of the control group, the difference being significant. There was little difference between the sexes. Physicians with previous

experience of hypnosis obtained significantly better results than did those without such experience.

**1959**

**Diamond, H. H. (1959). Hypnosis in Children: The Complete Cure of Forty Cases of Asthma. American Journal of Clinical Hypnosis, 1, 124-129.**

**NOTES**

**1:**

This paper was originally presented by the physician, an instructor at George Washington University Medical School, at the First Annual Meeting of the American Society of Clinical Hypnosis in 1958. He treated 55 cases, beginning in 1954, with 40 having complete remission. He gives 3 case histories where early childhood experiences gave rise to the asthma, and the symptoms were quickly relieved when the repressed material was reviewed by the patient.

**ATTITUDES**

**2002**

**Sapp, Marty (2002). Implications of Barber's Three Dimensional Theory of Hypnosis [Abstract]. Sleep and Hypnosis, 4 (2), 70-76.**

Recently, Barber has presented a three dimensional paradigm of hypnosis. He proposed that there are three types of hypnosis clients- the fantasy-prone, amnesic-prone, and positively-set. This paper discusses the major theoretical implications of this new paradigm, and, if Barber is correct, his new theory should bridge a gap between the special process (state) and nonstate theorists. Finally, only research will determine if Barber's new theory will actually unify the previous disagreements between the state and nonstate theorists.

**2000**

**Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies;

(3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and

patients'' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**1999**

**Wickramasekera, Ian (1999).** How does biofeedback reduce clinical symptoms and do memories and beliefs have biological consequences? Toward a model of mind-body healing. Applied Psychophysiology and Biofeedback, 24 (2), 91-105.

Changes in the magnitude and direction of physiological measures (EMG, EEG, temperature, etc.) are not strongly related to the reduction of clinical symptoms in biofeedback therapy. Previously, nonspecified perceptual, cognitive, and emotional factors related to threat perception (Wickramasekera, 1979, 1988, 1998) may account for the bulk of the variance in the reduction of clinical symptoms. The mean magnitude of these previously nonspecified or placebo factors is closer to 70% when both the therapist and patient believe in the efficacy of the therapy. This powerful placebo effect is hypothesized to be an elicited conditioned response (Wickramasekera, 1977a, 1977c, 1980, 1985) based on the memory of prior healing. These memories of healing are more resistant to extinction if originally acquired on a partial rather than continuous reinforcement schedule. High and low hypnotic ability in interaction with threat perception (negative affect) is hypothesized to contribute to both the production and reduction of clinical symptoms. High and low hypnotic ability respectively are hypothesized to be related to dysregulation of the sympathetic and parasympathetic arms of the autonomic nervous system. Biofeedback is hypothesized to be the most effective for reducing clinical symptoms in people of low to moderate hypnotic ability. For people high in trait hypnotic ability, training in self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

**1997**

**Lynn, Steven Jay (1997).** Automaticity and hypnosis: A sociocognitive account. International Journal of Clinical and Experimental Hypnosis, 45 (3), 239-250.

This article provides an overview of a new theory of suggested involuntariness in hypnosis, developed in conjunction with Irving Kirsch. The theory is based on the following ideas. First, high hypnotizable participants enter hypnosis with a conscious intention to feel and behave in line with suggested experiences and movements. Second, people who are easily hypnotized hold firm expectations that they will succeed in following the suggestions of the hypnotist. Third, the intention and expectation in turn function as response sets in the sense that they trigger the

hypnotic response automatically. Fourth, given the intention to feel and behave in line with the hypnotist's suggestions, hypnotized individuals show no hesitation to experience the suggested movements as involuntary because (a) these movements are actually triggered automatically, and (b) the intention to cooperate with the hypnotist as well as the expectation to be able to do so create a heightened readiness to experience these actions as involuntary. - Journal Abstract

**1996**

**Walling, David P.; Baker, Jeffrey M.; Dott, Sharon G. (1996). A national survey of hypnosis training -- its status in psychiatric residency programs: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (3), 184-188.**

Hypnosis training in psychiatric residency programs has not previously been well documented in the literature. This article examines the extent of such training in residency programs and the attitudes of residency directors to training and the use of hypnosis. A brief survey requesting information on hypnosis training was sent to all psychiatric residency directors in the United States. Sixty-three percent of responding program directors (n = 154) report offering either required or elective coursework in hypnosis. Of programs offering hypnosis training, the mean number of hours was 8, suggesting that many psychiatrists have only limited exposure to hypnosis during residency. The authors conclude that hypnosis training is widely variable within psychiatric residency programs and is dependent on the faculty and training director interests within individual programs.

**Zachariae, Robert; Sommerlund, Bo; Molay, Francine (1996). Danish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 44 (2), 140-152.**

Norms for a Danish adaptation of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) are presented. Four samples tested from 1988 to 1991 (n = 166, n = 54, n = 95, and n = 61) were pooled, resulting in an aggregate sample of 376 participants. The normative data were generally congruent with earlier normative studies with regard to score distribution, item difficulty levels, and reliability. Studies using the Danish adaptation of the HGSHS:A as a screening instrument have shown the predictive value of the instrument in a Danish context. Data for a comparable American sample of volunteers (n = 170) tested by the same hypnotist were included in the analysis. A comparison revealed a marked difference for the posthypnotic suggestion item, hinting that cultural differences between the Danish and American samples with regard to expectancies and attitudes toward hypnosis may play a role. Further studies comparing attitudes toward hypnosis across different cultural contexts are needed to clarify this issue. - Journal Abstract

**1995**

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

1994

Lynn, Steven Jay; Myers, B.; Sivec, H. (1994). Psychotherapists' beliefs, repressed memories of abuse, and hypnosis: What have we really learned?. [Comment/Discussion] .

NOTES

1:

The authors are responding to an article by Michael D. Yapko in the same issue of AJCH, "Suggestibility and repressed memories of abuse: A survey of psychotherapists' beliefs." They are of the opinion that "Yapko's research and data analysis do not justify the conclusion that many, if not virtually all, therapists are naive, credulous, and out of touch with the scientific literature, although it is evident that certain therapists can be so described" (p. 184). They state that "Yapko's research is important insofar as it suggests that unfounded stereotypes of hypnosis persist even among Ph.D.- and M.D.-level clinicians" (p. 184).

Singh, Asha (1994, August). Positive and negative effects in hypnosis: Some contributing variables. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Subjects (N = 155) were randomly assigned to hypnosis with the Harvard hypnotizability scale, hypnosis with neutral imagery instead of the test items in the Harvard scale, and a control condition of a taped chapter read from an Introductory Psychology text. All procedures were taped. Subjects' attitudes toward hypnosis and psychiatric symptoms were first measured. Using self-report

measures, positive and negative effects were assessed at three time periods: (a) retrospective assessment of the experience during the intervention; (b) pre-post testing for assessing state immediately after the intervention; and (c) assessment 2 to 4 days later. Results showed a consistent trend at all three time periods. Hypnosis with imagery was more positive and less negative than the control condition. It was also more positive than the Harvard scale. Hypnosis with the Harvard scale was slightly less negative and slightly more positive than the control condition. Hypnotizability was not correlated with hypnosis effects; however, the intensity of hypnosis, or 'hypnoidal state', predicted positive effects (but not negative effects) at every time period in all three groups. Initial attitude was only slightly associated with effect; a positive attitude predicted an overall positive reaction to the experience for all groups, and negative attitude predicted reduced state anxiety 2 to 4 days later. Psychiatric symptomatology predicted a more negative experience during all conditions, but was associated with less negative feelings, more positive feelings, and reduced state anxiety afterward. In conclusion, hypnosis with a self-selected student population in an experimental setting is no more harmful than a control condition; in fact it is more enjoyable and more positive in its effects than the latter. Hypnosis has more positive and less negative effects when the Harvard test items are replaced by neutral imagery. Subject attributes play a more complex role than hypothesized in determining hypnosis effects. The implications of these findings are discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

Wagstaff, Graham F.; Royce, C. (1994). Hypnosis and the treatment of nail biting: A preliminary trial. Contemporary Hypnosis, 11, 9-13.

A clinical trial was conducted examining the relative efficacy of therapeutic suggestions preceded by and without a hypnotic induction in the treatment of nail biting in 17 students. Outcomes showed a hypnotic induction added significantly to therapeutic benefits and was the only condition that resulted in symptom improvement. Results from only one session showed that 7 of 11 hypnosis subjects stopped nail biting compared to only 1 of 6 control subjects. Reports of "believed in efficacy" predicted treatment success better than ratings of motivation, hypnotic induction per se, or scores on the Creative Imagination Scale. However, within the group receiving hypnotic induction, hypnotic- depth scores significantly correlated with treatment success, suggesting that state factors such as dissociation might be involved.

#### NOTES

1:

The hypnotized Ss were given the T. X. Barber (1969) induction, a request for their depth estimate on a scale of 0-10, and then a set of suggestions to discourage nail biting. The suggestions were of four types: (1) to have a positive attitude, that nail biting is a habit that can be broken and that stopping will enhance attractiveness and self esteem; e.g., 'With just a little self control you will stop biting your nails and feel better about yourself.' (2) to stop the habit; e.g. to say to themselves, 'I will not bite my nails today/tomorrow,' five times each morning and at night, and whenever

the temptation arose. (3) to improve feelings of self-efficacy; e.g., 'If you ever feel the urge to bite your nails tell yourself that you want to break the habit and that you are perfectly capable of doing so. You are not weak.' (4) that the results would be outstanding; e.g. 'After only ten days or so ... you will have no desire to bite your nails, indeed the very thought of doing so will repulse you.'

Control subjects received the same instructions, without a hypnotic induction; the procedure was labeled a 'positive attitude for self discipline' technique.

Judges rated improvement without being aware of the Ss' self-report on whether they had stopped biting their nails. Judges' ratings correlated  $r = .94$  with Ss' statements about whether they had stopped the habit. Improvement scores also correlated significantly with belief the treatment would be effective ( $r = .60$ ) and Creative Imagination Scale scores ( $r = .53$ ), but not with motivation. The hypnosis group had significantly higher belief scores than the control group. Within the hypnosis group itself, hypnotic depth was the only variable to correlate significantly with improvement.

The Discussion stated, "However, taken together, the findings indicate that hypnotic induction added significantly to the therapeutic benefits of suggestions for the cessation of nail biting, and that Johnson and Barber's (1978) concept of 'believed-in efficacy' was more important in accounting for therapeutic success than motivation (at least as measured here), hypnotic induction per se, or the subject's proclivity for imaginative involvement. Nevertheless, belief still accounted for less than 40% of the variance in improvement. This may have been due to measurement error or insensitivity in the measures. Alternatively, or additionally, other factors may have been influential. For example, if CIS scores are considered to be indirect measures of hypnotic susceptibility, then belief was more influential than hypnotic susceptibility; however, from a hypnotic state theory perspective, the significant correlation between hypnotic depth (LSS scores) and improvement within the hypnosis group might suggest that some further feature of the 'hypnotic state' could still have been at work, such as a dissociative process (Hilgard, 1986). On the other hand, from a non-state perspective, perhaps subjects receiving hypnotic induction and reporting high depth scores might have felt more obliged to respond to the demand characteristics of the study, and tried harder to please the experimenter (Wagstaff, 1981); the general motivation questions used here could have been insensitive to such an effect" (p. 12).

1992

Pekala, R. J.; Kumar, V. K.; Cummings, J. (1992). Types of high hypnotically susceptible individuals and reported attitudes and experiences of the paranormal and the anomalous. Journal of the American Society for Psychical Research, 86, 135-150.

A total of 575 subjects were given the Harvard Group Scale of Hypnotic Susceptibility and completed two self-report questionnaires that assessed the frequency of paranormal and unusual experiences and attitudes and beliefs towards such experiences. Subjects highly susceptible to hypnosis endorsed a significantly

greater number of the psi- related items and anomalous and unusual beliefs and experiences than did subjects who were not highly susceptible to hypnosis. Subsequent cluster analyses of the responses of the highly-susceptible subjects suggested that about 10% of the high susceptibles (about 1% of the total subject population) were especially likely to report psi-related and unusual experiences. The implications of using such individuals in parapsychological research to increase the effect size associated with paranormal events are discussed.

**Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.**

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

**1991**

**Court, John (1991). Lord of the trance. Journal of Psychology and Christianity, 10 (3), 261-265.**

A verbatim account of hypnotically-based therapy utilizing Christian imagery serves as the basis for illustrating some of the benefits of this approach where therapist and client share the same value system. The interactions challenge some of the familiar objections to Christian involvement with hypnosis.

**Daglish, Mark R. C.; Wright, Peter (1991). Opinions about hypnosis among medical and psychology students. Contemporary Hypnosis, 8, 51-55.**

A survey was undertaken of opinions about hypnosis among first year medical and psychology students at the University of Edinburgh. Data are presented on the effects of self-estimated hypnotizability and sex, on opinions about hypnosis. The results are compared with those from similar studies conducted in Australia and the USA. Overall, the surveyed population showed a similar level of knowledge about hypnosis to that found among the general public.

Spanos, Nicholas P.; DuBreuil, Susan C.; Gabora, Natalie J. (1991). Four-month follow-up of skill-training-induced enhancements in hypnotizability. Contemporary Hypnosis, 8, 25-32.

Low hypnotizability subjects were exposed to skill training aimed at enhancing hypnotizability, and post-tested 2 weeks later. Those in a short delay condition were administered a second hypnotizability post-test within 2 weeks of the first, whilst those in a long delay condition were administered the second post-test 16-18 weeks after the first post-test. Skill-trained subjects in the two delay conditions did not differ on the first post-test. Skill-trained subjects in the two delay conditions did not differ significantly on behavioural or subjective indices of hypnotizability at either post-test. However, skill-trained subjects attained significantly higher hypnosis scores on both post-tests than did no-treatment control subjects. Attitudes towards hypnosis were also significantly enhanced by skill training, and these enhancements were maintained across the post-test intervals. Among the skill-trained subjects, post-tested hypnotizability was predicted by subjects' attitudes and by the trainer's ratings of subjects' receptivity and resistance towards the training.

#### NOTES

1:

"Immediately before each hypnotizability test, subjects' attitudes towards hypnosis were assessed with a 14-item questionnaire taken from Spanos, Cross et al. (1987). On this instrument higher scores indicate more positive attitudes" (p. 27).

"Immediately following each skill-training session, the trainer evaluated the subject's receptivity to the training using a nine-item checklist. The items described aspects of the training which experienced trainers in our laboratory have judged to be indicators of successful modification. The items (e.g. 'Does the subject volunteer that they found the ideas presented interesting/fun?') were scored dichotomously (yes/no), and summed to yield a receptivity to training score for each subject. The trainer also rated the degree to which each subject displayed resistance to the training on a global three-point scale" (p. 27)

The correlation between receptivity towards the skill training procedure and baseline attitudes toward hypnosis was .50.

"Some evidence indicates that untrained subjects (high hypnotizables included) exhibit substantial decrements in responsiveness to suggestions when they are exposed between testings to negative information about hypnosis (Barber & Calverley, 1964; Spanos & McPeake, 1975) or to information that alters their expectations about their responsiveness (Spanos, Gabora, Jarrett & Gwynn, 1989)" (p. 30)

"These findings suggest that the subjects who initially hold the most negative attitudes towards hypnosis are the least receptive to skill-training procedures. After training, these subjects continue to hold relatively negative attitudes towards hypnosis which limit the extent of their hypnotizability gain" (p. 30).

Spanos, Nicholas P.; DuBreuil, Susan C.; Gwynn, Maxwell I. (1991). The effects of expert testimony concerning rape on the verdicts and beliefs of mock jurors. Imagination, Cognition and Personality, 11, 37-51.

Mock jurors heard one of 4 versions of a 'date rape' case and deliberated in small groups, to a verdict. Exposure to the direct examination of an expert who testified about rape myths undermined belief in the defendant's testimony that sex with the complainant had been consensual, and increased the frequency of guilty votes. However, exposure to the expert's cross-examination reversed the effects of the direct examination on the frequency of guilty votes. Women jurors disbelieved the defendant and voted him guilty to a greater extent than male jurors, while in both sexes profeminist attitudes correlated with disbelief in the defendant's testimony but failed to correlate significantly with final verdicts. Implications are discussed.

Spanos, Nicholas P.; Gabora, Natalie J.; Hyndford, Christine (1991). Expectations and interpretations in hypnotic responding. Australian Journal of Clinical and Experimental Hypnosis, 19, 87-96.

A total of 304 subjects rated the extent to which they expected to respond to hypnotic suggestions immediately before being administered an hypnotic induction procedure. After the induction procedure, but before administration of the test suggestions, subjects again rated their expectations, and also rated the extent to which they planned to adopt each of three interpretations of suggestions: (a) resisting suggestions, (b) actively generating suggested effects, and (c) passive waiting. Subjects were then assessed on behavioural and subjective indexes of hypnotizability. Post- induction expectancies correlated with hypnotizability more highly than did pre-induction expectancies. The extent to which subjects adopted an active set towards suggestions also correlated with hypnotizability and, contrary to the response expectancy hypothesis, active interpretation scores predicted hypnotizability above and beyond the effects of post- induction expectancies. Theoretical implications are discussed.

#### NOTES

1:

"The most important findings of the study indicate that the extent to which subjects held active pre-suggestion interpretations predicted hypnotizability above and beyond the effects of post-induction expectancies. Relatedly, subjects with uniformly high expectancies continued to exhibit variability on both behavioural and subjective indexes of hypnotizability, and this residual variability correlated significantly with the degree to which subjects planned to adopt an active interpretation of suggestions. ....

"The present findings, along with those of Spanos, Gwynn, Gabora, and Jarrett, (1990), are inconsistent with the hypothesis that response expectancies are the direct determinant of responsiveness to suggestion. A number of other recent studies have also obtained results than [sic] run counter to the predictions of the response expectancy hypothesis. For example, two recent studies found that suggestion-induced wart regression was unrelated to subjects' post-suggestion expectations of treatment success (Spanos, Stenstrom, & Johnston, 1988; Spanos, Williams, & Gwynn, 1990). Relatedly, Spanos, Perlini, and Robertson (1989) found that suggestions produced significantly greater reductions in reported pain than did a

placebo, even though subjects in the suggestion and placebo treatments reported equivalent post-treatment expectations. Finally, Johnston, Chajkowski, DuBreuil, and Spanos (1989) found that false feedback substantially raised subjects' hypnotic response expectancies but failed to influence their level of subjective responding on tests of hypnotizability" (p. 93).

[Although ] "the extent to which subjects endorsed passive interpretations correlated in a negative direction to a slight but significant degree with hypnotizability ... at least some of the subjects who reported passive interpretations attained relatively high hypnotizability scores" (pp. 93-94). [The authors go on to give possible reasons why, on p. 94.]

Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

1990

Appel, Philip R. (1990). Clinical applications of hypnosis in the physical medicine and rehabilitation setting: Three case reports. American Journal of Clinical Hypnosis, 33 (2), 85-93.

Hypnosis is useful in the rehabilitation setting to help patients master skills, to increase their sense of self-efficacy and self-esteem and, in general, to facilitate and accelerate their rehabilitation program. I used hypnosis with three patients where patient behaviors and beliefs were interfering with the rehabilitation treatment goals set by the patient and the health care team. Collectively, these cases demonstrate the use of hypnotic techniques in diagnosing and treating problems with patient compliance and assisting patients to gain greater benefit from their rehabilitation regimen. - Journal Abstract

Baker, Elgan L.; Hulsey, Timothy L.; Glenn, Michael B. (1990). Attitudes and practices regarding clinical hypnosis with psychotic patients--a survey: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (3), 162-167.

Attitudes toward and actual use of hypnotherapeutic techniques with psychotic patients were assessed. Results are discussed in light of historical and current attitudes toward the use of hypnosis with psychotics. Respondents were selected

from the 1980 membership directory of the Society for Clinical and Experimental Hypnosis (SCEH). 80 respondents completed and returned the survey. Results indicate that the perceived usefulness of hypnosis with psychotics is currently quite high and negative attitudes toward its use quite low. The growth of the use of hypnotherapeutic techniques and the need for further research are discussed.

Labelle, L.; Lamarche, M. C.; Laurence, Jean-Roch (1990). Potential jurors' opinions on the effects of hypnosis on eyewitness identification: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (4), 315-319.

The present study examined a selected group of potential jurors' opinions on the effects of hypnosis on eyewitness identification and testimony. A group of 78 undergraduate psychology and optometry students completed a 2-part multiple choice questionnaire. The first part assessed Ss' knowledge of several issues concerning eyewitness testimony. The second part of the questionnaire contained 11 items which assessed Ss' beliefs and expectations concerning the effects of hypnosis on eyewitness identification and testimony. It was found that Ss' opinions on the effects of hypnosis on eyewitness testimony and identification were at odds with current empirical findings. These results, in accord with the previous literature, suggest that it is imperative that the courts be informed of the use of hypnosis during police work and that adequate precautions be taken to avoid a potential source of miscarriage of justice.

Ross, Colin A. (1990). Twelve cognitive errors about multiple personality disorder. American Journal of Psychotherapy, 44 (3), 348-356

Presents 12 cognitive errors made by mental health professionals regarding multiple personality disorder. The errors include the mistaken idea that (1) multiple personality patients actually harbor more than one personality, (2) these patients can evade responsibility for their behavior because of their diagnosis, and (3) the disorder will disappear if treated with benign neglect. The errors are corrected by argument and by reference to research findings.

1989

Van Denberg, Eric J.; Kurtz, Richard M. (1989). Changes in body attitude as a function of posthypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 37, 15-30.

Hypothesized that highly hypnotizable subjects who remained amnesic for posthypnotic suggestions to improve body attitude would show greater changes than subjects who were not amnesic. Subjects given simulating instructions were used as a comparison group to assess experimental demands. 48 females were screened with the Harvard and assigned to one of 4 conditions: (a) high hypnotizable with amnesia suggestions, (b) high hypnotizable without suggested amnesia, (c) low hypnotizable simulator with amnesia, and (d) low hypnotizable simulator without suggested

amnesia. A fifth group was formed of those high hypnotizable subjects who remembered the suggestion despite instructions to the contrary. The Body Attitude Scale (Kurtz, 1966) was administered prior to and 3 days after the experimental suggestions. Results generally demonstrated that high hypnotizable amnesic subjects manifested the greatest attitudinal and phenomenological changes as a result of the posthypnotic suggestion, although conclusions were tempered by performance of simulating subjects. The implications for hypnosis research and clinical practice are discussed.

#### NOTES

1:

"The hypothesis that hypnotized subjects would report greater positive changes in affect, self-esteem, and social functioning than simulators was tested using a brief structured questionnaire. An analysis of Subjects responses to the questionnaire while with the 'blind' research assistant (simulators in role) revealed number significant differences between groups (N = 48) on six of the seven questions. ... An analysis of Subjects' responses to the questionnaire while being debriefed by the primary investigator (simulators out of role) revealed significant differences among groups (N = 48) on three of the seven questions. ... High hypnotizable subjects with maintained amnesia demonstrated a strong tendency to be the most responsive of all groups of subjects on the first and second assessment. In contrast, the high hypnotizable Ss for whom amnesia 'broke down' reported the fewest phenomenological changes of any of the five groups during the first assessment, and comparatively few during the second assessment. Also of note is that once out of their role, simulators in both conditions dramatically reduced their reporting of positive change" (pp. 23-24).

"Moreover, a closer examination of the data demonstrated that phenomenological and behavioral differences in the groups did appear at several points during the experiment. For example, the 10 high hypnotizable subjects told to explicitly remember the suggestion did so, while 3 of the 10 simulators in this condition claimed to have forgotten it. On debriefing, these Subjects reported they did this because they believed 'really hypnotized subjects wouldn't be able to remember anything, even if they were told they could.' Further, no simulator in the amnesia condition reported they could recall the suggestion, in contrast to the high hypnotizable subjects, 44% of whom said they did remember it. With regard to phenomenological differences, simulators stated during debriefing with the primary investigator that they intentionally faked changes on BAS, and that they experienced no true effects from the suggestion for positive body attitude change. In contrast, high hypnotizability amnesic subjects reported global, pervasive changes in their mood and self-esteem that went beyond specific alterations in attitudes toward their appearance. By comparison, high hypnotizable subjects told to remember the suggestion reported greatly increased self-absorption and acute awareness of the suggestion, 'sort of like a broken record in my head'" (pp. 25-26).

"As shown by the present study, amnesia maintenance can be quite problematic. Of 18 high hypnotizable subjects for whom amnesia was suggested, only 10 remained fully amnesic for the suggestion after 3 days. In addition, those 8 subjects for whom amnesia 'broke down' showed minimal shifts on BAS, or in reports of

phenomenological changes. Such frequent amnesia failure has been reported by other researchers, although the effectiveness of the suggestion is not always so compromised" (p. 26).

e Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

1:

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

1988

Donovan, David (1988). Factor analytic structure of attitudes towards hypnosis, guided imagery, and relaxation. [Unpublished manuscript] (Paper written for Comrey's Factor Analysis Course, UCLA)

#### NOTES

1:

Factor analysis of semantic differential responses of 212 adults regarding 3 terms (hypnosis, imagery, relaxation) placed imagery in an intermediate position between the extremes of hypnosis and relaxation. Both common and unique factors extracted are discussed.

Tobacyk, Jerome; Milford, Gary; Springer, Thomas; Tobacyk, Zofia (1988). Paranormal beliefs and the Barnum effect. Journal of Personality Assessment, 52 (4), 737-739.

Examined in 128 college students the hypothesis that paranormal beliefs emphasizing divinatory procedures that produce personalized feedback are associated with greater susceptibility to the Barnum effect, which is acceptance of bogus personality feedback consisting of relatively trivial statements with a high base rate. 76% of the Ss rated the accuracy of their personality descriptions favorably, showing a robust Barnum effect

1987

Spanos, Nicholas P.; de Groh, Margaret; de Groot Hans (1987). Skill training for enhancing hypnotic susceptibility and word list amnesia. British Journal of Experimental and Clinical Hypnosis, 4 (1), 15-23.

Subjects who pretested as low on hypnotic susceptibility received either cognitive skills training aimed at inculcating positive attitudes and interpretations concerning hypnotic responding, or no treatment. Trained subjects scored significantly and substantially higher on subjective and behavioral dimensions of susceptibility than controls. A second posttest assessed amnesia for a previously learned word list. Trained subjects showed more word list amnesia than either no treatment controls

or subjects who had been matched to the trained subjects in terms of posttest susceptibility. Theoretical implications for theories of hypnotic susceptibility are discussed.

**1986**

Judd, Fiona K.; Burrows, Graham D.; Dennerstein, Lorraine (1986). Clinicians' perceptions of the adverse effects of hypnosis: A preliminary study. Australian Journal of Clinical and Experimental Hypnosis, 14, 49-60.

Questionnaires were sent to all members of the Australian Society of Hypnosis and responses obtained from 202 members and associate members who used hypnosis clinically. Respondents' experience in the use of hypnosis and the frequency of use of hypnosis as a treatment modality varied. Overall 43.5% of respondents reported adverse effects with one or more patients over the preceding year. Most adverse effects attributed to hypnosis were transient and included development of panic or extreme anxiety, development of excessive dependence and difficulty in terminating hypnosis. Exacerbation or precipitation of significant depression was an infrequent but serious adverse effect attributed to hypnosis. Other infrequent adverse effects included symptom substitution, acting out behaviour, fantasied sexual seduction, precipitation or worsening of psychotic illness or difficulties in the management of organic conditions. The difficulties were acknowledged of differentiating between the effects of hypnosis itself and other components of the therapeutic transaction, but the results of this survey suggested both that hypnosis be employed clinically by properly trained professionals and that further sensitive clinical research is needed in the area.

**1986**

Madigan, R. J.; Bollenbach, A. K. (1986). The effects of induced mood on irrational thoughts and views of the world. Cognitive Therapy and Research, 10 (5), 547-562.

Sixty college students participated in an experiment concerning the influence of somatic mood induction statements on measurements of irrationality as defined by Ellis. Subjects were randomly assigned to depression, elation, and neutral mood induction groups. There were significant differences between groups on mood and irrationality. Results are discussed in terms of the Ellis and Beck cognitive models of depression, the Isen cognitive loop model, and the relationship between irrationality and depression. This study added irrational thinking as defined by Ellis to the growing list of cognitions that have been manipulated by mood, and it supports a body of findings that demonstrate the reciprocal influence of cognition and mood in depression. The study also has implications for the Beck and Ellis hypothesis that cognitions are the dominant causes of depression.

McConkey, Kevin M. (1986). Opinions about hypnosis and self-hypnosis before and after hypnotic testing. International Journal of Clinical and Experimental Hypnosis, 34, 311-319.

Before hypnotic testing, Ss completed a questionnaire on their opinions about hypnosis and self-hypnosis. Approximately 1 week later, they completed a similar questionnaire that included questions about their experiences of hypnotic testing. Data are presented concerning Ss' agreement with statements about hypnosis and self-hypnosis. Findings are discussed in terms of their generality and in terms of whether Ss' opinions are consistent with scientific evidence.

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J. (1986). Component analysis of cognitive skill training for the enhancement of hypnotic susceptibility. Journal of Abnormal Psychology, 95, 350-357.

Four treatments to enhance the hypnotic responsiveness of subjects who pretested as low in hypnotic susceptibility were compared. Complete skill training included information aimed at encouraging (a) positive attitudes, (b) the use of imagery strategies, and (c) an interpretation of hypnotic behavior as active responding. Partial training included only components (a) and (b). Both training packages enhanced attitudes toward hypnosis to an equivalent degree. However, complete training was much more effective than either partial training or no treatment at enhancing behavioral and subjective responding on two different posttest scales of hypnotic susceptibility. More than half of the subjects who received complete training, but none of the partial training or control subjects, scored in the high-susceptibility range on both posttests. Subjects explicitly instructed to fake hypnosis and those in the complete skill-training treatment exhibited significantly different patterns of posttest responding. Findings support social psychological perspectives that emphasize the importance of contextual factors in hypnotic responding.

1986-87

Spanos, Nicholas P.; Voorneveld, Peggy W.; Gwynn, Maxwell I. (1986-87). The mediating effects of expectation on hypnotic and nonhypnotic pain reduction. Imagination, Cognition and Personality, 6, 231-245.

High and low hypnotically susceptible subjects were assigned to three treatments and administered a baseline trial and two posttest trials of finger pressure pain. Subjects in one treatment received hypnotic analgesia on both posttest trials while those in a second treatment received hypnotic analgesia before their first posttest trial and waking instructions to "do whatever you can to reduce pain" before their second posttest trial. Controls received their two posttest trials without intervening treatment instructions. During hypnotic analgesia high susceptibles reduced reported pain, increased pain tolerance and rated themselves as more deeply hypnotized than low susceptibles. Low susceptibles reduced pain to a significantly greater degree under waking instruction than under hypnotic analgesia. Importantly, lows given waking instruction reduced pain to the same degree as highs given hypnotic analgesia. These findings underscore the importance of attitudes and expectations in hypnotic pain reduction. However, they are inconsistent with the view that high susceptibles are intrinsically more able than low susceptibles to cognitively control pain.

## NOTES

1:

"Social psychological accounts of suggested analgesia emphasize the role of subjects' attitudes and expectancies in the cognitive control of pain. According to this perspective high susceptible subjects usually hold positive attitudes and expectancies toward hypnosis and are strongly invested in validating their role as 'good' hypnotic subjects. ... [while Lows] often hold negative attitudes about hypnosis and negative expectations about their responsiveness to hypnosis even before they are tested [and their poor performance] only confirms their already negative attitudes and expectancies. Standard analgesia suggestions and the suggestions employed on scales hypnotic susceptibility are often similarly constructed. In both cases these suggestions are typically worded in the passive voice to imply that things are happening to rather initiated by subjects (e.g., 'Your hand is becoming numb dull and insensitive,' 'Your arm is stiff and rigid.'). Furthermore, both types suggestions usually invite subjects to imagine specific events (e.g. 'Imagine Novocain being injected into your hand,' 'Imagine your arm is held tightly by a cast.'). Thus the usual superiority of high susceptibles at suggested analgesia may occur because expectations from the hypnotic susceptibility test situation are carried over to the pain testing situation" (p. 232).

"Low susceptibles subjects may fail to exhibit hypnotic responding for at least two different reasons. Some lows may be quite willing to cooperate with the proceedings, but hold negative or inaccurate expectations that interfere with appropriate responding. Other low susceptibles, however, may be purposefully uncooperative. They may become actively invested in presenting themselves as unresponsive to hypnotic procedures because they wish to be seen as independent-minded and nongullible. ...

"Alternatively we anticipated that the low susceptibles would attempt to validate their status as independent-minded and nonsuggestible. To this end they would show little pain reduction under a hypnotic condition but large pain reductions when the situation was divorced from hypnosis and pain reduction was defined in terms of independent self- control. Unlike the high susceptibles, we expected the low susceptibles to rate themselves as un hypnotized under both the hypnotic and nonhypnotic situations" (pp. 233-34).

"Our major finding, however, was that the low susceptible subjects instructed to try and reduce pain in a context that was divorced from hypnosis and defined in terms of self control exhibited just as much pain reduction as high susceptible subjects. In sum, hypnotic susceptibility correlated either positively with degree of pain reduction (under hypnosis) or negatively with degree of pain reduction (under instruction), depending upon the expectations conveyed to subjects by their experimental instructions" (p. 241).

"The present findings clearly contradict the hypothesis that low susceptibles lack the cognitive capacities required to reduce pain to the same degree as high susceptibles. ... In short, low susceptibles usually exhibit less hypnotic analgesia than high susceptibles not because of intrinsic deficiencies in the pain-reducing capacities of low susceptibles, but instead, because low susceptibles hold negative attitudes and

expectations about hypnosis that interfere with the use of their pain reduction abilities" (p. 242).

1986

Wagner, Mark T.; Khanna, Prabha (1986). A neuropsychological model of hypnosis. International Journal of Psychosomatics, 33 (3), 26-28.

NOTES

1:

Authors refer to an unpublished article by Budzynski (Twilight-state learning: A biofeedback approach to creativity and attitude change, 1973) in which he "tested the effect of attitude change when information is presented via a tape recording, during waking, drowsy, and sleep conditions. He found that attitude change only occurred during drowsy conditions. ... He maintained that while Ss were in the 'twilight state' their logical/analytical faculties were temporarily suspended. Furthermore, he stated that the information processing in this state was quite different from that in the waking state. Susceptibility was increased and critical thinking was decreased" (p. 28).

NOTES

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Wilson, L.; Greene, E.; Loftus, Elizabeth F. (1986). Beliefs about forensic hypnosis. International Journal of Clinical and Experimental Hypnosis, 34 (2), 110-121.

The beliefs people hold about hypnosis have an impact on the behavior of a witness who is hypnotized and on juries who hear these witnesses and weigh hypnotically influenced testimony. Students in Experiment 1 and registered voters from the community in Experiment 2 responded to questions about forensic hypnosis. Over 70% of the students as compared to about 50% of the community members were favorable toward the use of hypnosis by police for memory enhancement. In both groups, however, twice as many people reported that they would put less faith rather than more faith in the testimony of someone who had been hypnotized. A substantial portion of the students affirmed common myths about the effects of hypnosis on memory and behavior.

1985

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

**1984**

372 preclinical medical students from the University of Sydney, Australia were surveyed concerning their beliefs about hypnosis and its medical use. Several "myths" concerning hypnosis emerged (e.g., hypnosis is a passive state, there are sex differences in hypnotizability, posthypnotic amnesia is inevitable, and there is automatic obedience to the hypnotist). Sex differences in expectations of hypnotizability were found. Relatively few physical problems were perceived as being amenable to treatment by hypnosis and the proportion of medical practitioners in the national professional hypnosis society was grossly underestimated.

Spanos, Nicholas P.; Kennedy, Sharon; Gwynn, Maxwell I. (1984). The moderating effects of contextual variables on the relationship between hypnotic susceptibility and suggested analgesia. Journal of Abnormal Psychology, 93 (3), 285-294.

Assessed 75 undergraduates high, medium, or low on hypnotic susceptibility (the Carleton University Responsiveness to Suggestion Scale) on the cold pressor task before and after 1 of 3 instructional treatments. The treatments were (a) brief instructions to try to reduce pain, (b) the same analgesia instructions preceded by a hypnotic induction procedure, and (c) no hypnotic induction or instructions. In the hypnotic treatment, susceptibility correlated significantly with reductions in reported pain, and high-susceptible Ss reported significantly larger pain reductions than did control ss. In the instruction-alone treatment, there was no significant relationship between susceptibility and pain reduction, and Ss at all 3 susceptibility levels reduced reported pain significantly more than did controls and as much as did high-susceptible hypnotic Ss. Findings suggest that the correlation between hypnotic susceptibility and hypnotic analgesia is moderated by Ss attitudes and expectancies concerning their own performance in situations defined as related to hypnosis

**1983**

McIntosh, I. B.; Hawney, M. (1983). Patient attitudes to hypnotherapy in a general medical practice: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (4), 219-223.

A study to investigate public awareness of hypnotherapy planned to identify sources of information and compare their impact on patient acceptance of hypnosis in medical treatment. A structured questionnaire was presented to a random sample of

patients coming to a medical center; the sample was representative of 10% of the total medical center population. 910 people participated and 884 questionnaires were analyzed. 80% of the sample had previously heard of the use of hypnosis in medicine, 36.6% would accept hypnotherapy if recommended by their doctor, 5.5% would refuse treatment by hypnosis, and almost all of the remainder of the sample would request further information before making a decision. There was a significant association between preknowledge of medical hypnosis and acceptance of hypnotherapy as was there between source of information and attitude to treatment. 41% of the sample were unaware of any medical indications for hypnosis.

#### NOTES

1:

An apparent discrepancy in the abstract between "80% of patients had previously heard of the use of hypnosis in medicine" and "41% of the sample were unaware of any medical indications for hypnosis" may be understood from the following statement: "Of the total sample, 41% were unable to name any medical condition appropriate for hypnotherapy and 26% of those previously aware of medical hypnosis were unable to name a disorder suited to such treatment" (p. 221).

Saavedra, Ramon Luis; Miller, R.J. (1983). The influence of experimentally induced expectations on responses to the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 31, 37-46.

: A sample of 75 female and 63 male undergraduates were told that their hypnotizability was predictable through the application of a battery of questionnaires and physiological measures. Three levels of hypnotizability expectations were created, with 3 groups of Ss informed that they were highly hypnotizable, moderately hypnotizable, or low in hypnotizability, respectively. A control group received no such expectations. All Ss were then administered the Harvard. Results indicated a significant main effect due to the assigned hypnotizability expectations. Only Ss in the low expectation group, however, scored significantly differently from the other groups on the Harvard. Four other variables were examined as covariates: locus of control, attitude toward hypnosis, absorption, and self-predictions of hypnotizability. All but locus of control correlated significantly with the Harvard. It also was shown that the degree to which assigned expectations influenced Harvard scores was a function of the confidence Ss had in those expectations.

#### NOTES

1:

The authors state that research has shown that it is easier to lower hypnotizability scores by providing negative expectancies than to increase hypnotizability scores through provision of positive expectancies. In this study, very little of the variance of hypnotizability scores was accounted for by the expectancy manipulation.

1981

Yanchar, R. J.; Johnson, H. J. (1981). Absorption and attitude toward hypnosis: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 29 (4), 375-382.

2 factors which have been found to correlate to a small degree with susceptibility are (a) an individual's attitude toward being hypnotized and (b) an individual's capacity for subjective involvement in an experience (absorption). The present study was an attempt to replicate previous findings by Spanos and McPeake (1975) and to extend these findings to determine if there was a significant interaction between these 2 factors in their relationship to susceptibility. 99 Ss (65 females and 34 males) completed the absorption questionnaire of Tellegen (1979) and the attitude questionnaire of Barber and Calverley (1966). Their hypnotic susceptibility was assessed with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Attitude and absorption were found to have small positive correlations with susceptibility, results which corroborate previous research. The multiple regression analyses indicated that there were no significant interactions between the factors of attitude, absorption, and sex.

1980

Fromm, Erika (1980). Values in hypnotherapy. Psychotherapy: Theory, Research and Practice, 17 (4), 425-430.

Hypnosis is an altered state of consciousness characterized by a regression in the service of the ego along with increased access to the unconscious. This makes it possible to achieve lasting therapeutic results faster in hypnosis than in the waking state. Hypnosis is also a state of decreased vigilance, a vulnerability that involves dangers if a patient is in the hands of a poorly trained, incompetent, or unscrupulous therapist. In general, the same human and moral values that guide responsible therapists with patients in the ordinary waking state must guide them with patients in hypnosis, only more so. Contemporary permissive hypnotherapists do not superimpose their own wills or personalities onto patients but provide support, help patients face the frightening parts of the unconscious, and thus aid them in coping with conflicts and gaining full autonomy and freedom from fear. (11 ref).

1978

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not influenced by social desirability. Factor analysis indicated that subjective and

objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

Spanos, Nicholas P.; Rivers, Stephen M.; Gottlieb, Jack (1978). Hypnotic responsivity, meditation, and laterality of eye movements. Journal of Abnormal Psychology, 87 (5), 566-569.

Right-handed male subjects were pretested on a number of person variables; they then meditated for eight sessions. Measures of hypnotic responsivity, meditating skill, imaginal abilities, and attitudes toward hypnosis loaded on a common factor that was labeled sustained nonanalytic attending. However, laterality of eye movement (left moving) failed to load on this factor. The implications of these findings for current theorizing concerning hypnosis and meditation are discussed.

1976

Gardner, G. Gail (1976). Attitudes of child health professionals toward hypnosis: Implications for training. International Journal of Clinical and Experimental Hypnosis, 24, 63-73.

A survey of child health professionals -- pediatricians, pediatric nurses, child psychologists, and child psychiatrists -- revealed that they have generally positive attitudes toward hypnosis but little knowledge of its specific advantages or applications. Recommendations are made for designing training opportunities in hypnosis which might enhance the probability that the professional will actually use hypnosis or refer a child else where for hypnotherapy.

King, Dennis R.; McDonald, Roy D. (1976). Hypnotic susceptibility and verbal conditioning. International Journal of Clinical and Experimental Hypnosis, 24, 29-37.

18 Subjects highly susceptible to hypnosis and 18 Subjects refractory to hypnosis were studied in a verbal conditioning task modeled after the one used by Taffel (1955). Results indicated that the highly susceptible group showed significantly greater conditioning than the low group. Awareness of the reinforcement contingency by S was not related to the learning task nor to hypnotic susceptibility. A measure of S's attitude toward the reinforcement cue during learning showed that the highly susceptible group had a more positive set toward the cue, whereas the low group tended to respond to it in a neutral or negative manner. Results were interpreted in terms of the theoretical nature of hypnotic susceptibility.

NOTES

hey review literature on attempts to correlate hypnotizability with verbal conditioning ability. 1:

Volunteer students participated; screened by HGSHS:A: highs 10-12, lows 0-4.

**Verbal conditioning procedure:** S viewed 100 3x5 cards on which were a two-syllable, past tense verb, below which typed in upper case letters on one line were the pronouns I, WE, HE, SHE, THEY, and YOU (randomly assigned to different orders). E was blind to hypnotizability. E instructed S to make up a sentence using the verb and a pronoun; gave no response for first 20 trials; said "good" to usage of I or WE during conditioning.

Afterwards, S filled in an Awareness Questionnaire (What was purpose? If E gave cues, what were they? If you noticed cues, what do you think they indicated?) and attitude toward the reinforcement cue (Did you notice that I did anything special? What? Did I say "good" for a special reason? What was the reason for my saying "good"? How did hearing the word "good" affect you during the experiment? IN a positive, negative, or neutral way?)

**Results.** Groups did not differ at baseline but did differ at Blocks 2 (highs 9.7 vs lows 6.3;  $p < .05$ ) and 3 (highs 10.4 vs lows 6.3;  $p < .05$ ). Although the High group continued to maintain a somewhat higher level of responding than the Low group during extinction (9.8 vs 7.6), this difference did not reach statistical significance. (The graph shows an increase for Lows during extinction!)

Using a liberal definition of awareness and a learning index computed for each S by subtracting his operant level of response from the mean number of correct responses shown during the 3 blocks of acquisition trials, Subjects were ordered and a median test applied; contingency coefficient of .28 not significant ( $p < .10$ ).

Attitude significantly differentiated High and Low hypnotizability groups (see Table 2) with Highs more often responding in positive manner to reinforcement cue and Lows giving a neutral rating. Awareness of reinforcement contingency was equally represented in High and Low groups. The Aware High Positive groups learning index differed significantly from Aware Low Neutral group ( $p < .01$ ); the Unaware Low Positive group ( $p < .05$ ); and the Unaware Low Neutral group ( $p < .001$ ).

Thus, the Aware High Positive group's learning index score was significantly higher than that of the 3 Low groups. Also, the Unaware High Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ). No other High groups differed from the Low groups and none of the High groups differed among themselves.

Among the Low groups, only the Unaware Low Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ).

**Discussion.** Data show that hypnotizability is important in response to verbal conditioning, extending findings of Das (1958) by showing that primary suggestibility is associated with operant as well as classical conditioning but also those of Weiss et al. (1960) in illustrating that higher hypnotic susceptibility leads to enhanced verbal conditioning, using an improved measure of hypnotic susceptibility.

Awareness of reinforcement contingencies is not sufficient to account for subject differences in verbal conditioning; the characteristics tapped by HGSHS:A produce conditioning which cannot be accounted for by awareness alone.

The fact that high susceptible Subjects here rated E's cue more positively than low susceptible Subjects is further consistent with some of the personological descriptions associated with hypnotic susceptibility which have been offered by

Hilgard (1968). In addition, Cairns and Lewis (1962) and Spielberger et al. (1962) found that persons who assigned more positive value to the kind of reinforcement present in verbal conditioning experiments produced greater conditioning than Subjects whose attitudes were less favorable or non-committal toward the reinforcement. This relationship is not clear-cut in the present data in that although the High groups had an overall more positive attitude regarding reinforcement, only the Aware High Positive group learned better than all the Low groups, while the only other High group learning better than a Low group was the Unaware High Positive which had a significantly better learning index score than the Unaware Low Neutral group. Moreover, positive attitude did not differentiate learning within the High groups or the Low groups. Thus, the present data are unclear regarding the role attitude plays in the acquisition of verbally conditioned responses.

The roles of awareness and attitude could probably be better defined in future research using larger experimental groups. The attitude measure employed here was a gross one and a more sophisticated assessment of the valence characteristics of reinforcement cues could reveal more complex relationships in subsequent research. In addition, a more careful assessment than was done here of the role of cooperation and demand characteristics would contribute substantially to understanding more completely the effect of awareness on these phenomena.

The general indications regarding attitude may in part account for the increased interest in production of conditioned responses in Figure 1 shown by the Low group (graph) during the extinction phase of this experiment. Although highly susceptible Subjects show a decrease in the correct response with nonreinforcement, low susceptible Subjects begin to evidence an increase in the correct response. The attitude measure indicates that Subjects in the Low group did not respond positively to the reinforcement cue, and one of these Subjects reported in the interview that he did not like being told what to do by the E. It can be speculated that these Subjects were aware of the reinforcement contingency but did not "cooperate" until the reinforcement was absent. This follows the interpretation of Farber (1963) who found that aware Subjects who conformed to the demand characteristics of the experimental situation showed greater verbal conditioning than those who were aware and nonconforming. It thus appears that a willingness to go along with E's expectations and a positive, cooperative attitude are common features in individuals who make good hypnotic Subjects and who evidence an enhanced propensity for verbal conditioning.

1975

Mather, Marcia; Degun, Gian S. (1975). A comparative study of hypnosis and relaxation. British Journal of Medical Psychology, 48, 55-63.

NOTES

1:

The results of this research are as follows: Hypothesis 1. Post hypnotic suggestions would be performed better than post-relaxation suggestions ( $p < .05$ )

Hypothesis 2. Learning would be an important variable in the efficacy of post-hypnotic suggestions (n.s.) Hypothesis 3. Suggestions made towards the end of the

experimental session would be more effective than suggestions at the beginning; the assumption being that the trance might deepen with the passage of time (n.s.) Hypothesis 4. There would be a significant difference in heart rate between the waking and hypnotic states (n.s.) Hypothesis 5. There would be a shift in attitudes of the subject in favor of hypnosis from pre- to post-experiment due to an increase in susceptibility following training. (p.<.01)

The study employed 3 groups, 2 subject groups; there were 1 hypnosis and 1 relaxation session per subject, in a randomized AB, BA design. The relaxation condition only asked the subject to lie on a couch and relax; no relaxation instructions were given, therefore it is not really analogous to relaxation training given in clinical settings. A posthypnotic suggestion was given - to dream on a subject related topic, then to awaken, and to carry out an action.

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

1:  
Borderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1969

Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, 12 (2), 100-130.

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

1968

Goss, Allen; Morosko, Tom (1968). Stanford Hypnotic Susceptibility Scale, Form A: Score distribution of volunteer subjects. International Journal of Clinical and Experimental Hypnosis, 237-242.

Investigates the applicability of the reported norms of the Stanford Hypnotic Susceptibility Scale, Form A to a population which differs from the normative sample. 40 "true volunteer" dental students were found to score well above the 533 "volunteer" normative sample due mainly to the reduced percentages of low hypnotic susceptibility Ss. The effects of schooling, volunteering, and implications concerning the relationship between personality and hypnotic susceptibility in the volunteer sample are discussed. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Barber, Theodore Xenophon (1967). Reply to Conn and Conn's 'Discussion of Barber's 'Hypnosis as a causal variable...'. International Journal of Clinical and Experimental Hypnosis, 3, 111-117.

A REPLY TO J. H. CONN AND R. N. CONN (SEE 42:1). IT IS MAINTAINED THAT (1) INVESTIGATORS HAVE NOT AS YET SUCCEEDED EITHER IN DENOTING THE HYPNOTIC STATE WITHOUT CIRCULARITY OR IN DEMONSTRATING THAT IT PLAYS A ROLE IN ELICITING THE PHENOMENA THAT ARE TO BE EXPLAINED; AND (2) RECENT EXPERIMENTS HAVE SHOWN THAT S'S TESTIMONY THAT HE IS "IN" OR "OUT" OF HYPNOSIS IS DEPENDENT UPON MANY DENOTABLE ANTECEDENT VARIABLES INCLUDING WHAT S BELIEVES HYPNOSIS IS SUPPOSED TO INVOLVE AND WHETHER E IMPLIES TO S THAT HE JUDGES HIM TO BE "IN" OR "OUT." IT REMAINS TO BE DEMONSTRATED THAT S'S TESTIMONY IS ALSO FUNCTIONALLY RELATED TO THE PRESENCE OR ABSENCE OF THE HYPNOTIC STATE. (SPANISH + GERMAN SUMMARIES) (16 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hartman, B. J. (1967). Hypnotizability as affected by attitudinal and motivational variables. International Journal of Clinical and Experimental Hypnosis, 86-90.

ATTEMPTED TO DISCOVER WHETHER TASK-MOTIVATED SS WOULD BE MORE HYPNOTIZABLE THAN THOSE NOT GIVEN TASK-MOTIVATION INSTRUCTIONS, AND WHETHER THE ATTITUDE OF THE E WOULD AFFECT SS" HYPNOTIZABILITY. THE BARBER SUGGESTIBILITY SCALE WAS EMPLOYED FOR MEASURING SUSCEPTIBILITY TO HYPNOSIS. SS WERE DIVIDED RANDOMLY INTO 6 GROUPS OF 10: TASK-MOTIVATED, E NEUTRAL; NON-TASK-MOTIVATED, E NEUTRAL; TASK-MOTIVATED, E FRIENDLY; TASK-MOTIVATED, E HARSH; NON-TASK-MOTIVATED, E FRIENDLY; AND NON-TASK-MOTIVATED, E HARSH. ANALYSES OF VARIANCE, BOTH FOR OBJECTIVE AND SUBJECTIVE SCORES, DID NOT YIELD SIGNIFICANT RESULTS FOR THE TASK-MOTIVATION VARIABLE BUT DID YIELD SIGNIFICANT RESULTS ( $P = .01$ ) FOR THE VARIABLE DEALING WITH E ATTITUDE. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Moss, C. Scott; Rigger, G.; Coyne, L.; Bishop, W. (1965). Some correlates of the use (or disuse) of hypnosis by experienced psychologist-therapist. International Journal of Clinical and Experimental Hypnosis, 13, 39-50.

147 psychologist-psychotherapists were compared on the basis of their attitude towards the employment of hypnosis as a technique in psychotherapy. 1 finding was the absence of extensive differences between the 2 groups in the use of most other therapy techniques, though the hypnosis-favorable group made somewhat more active use of a wider variety of approaches. Doctrine and experience level per se were not significant determinants of the behavior in question. A major finding was that those favorably disposed were inclined to represent themselves as significantly more objective (rather than clinical or intuitive) in their frame-of-reference. A number of significant biographical correlates were found which led to the advancement by speculation of vignettes of the 2 extreme attitude groups. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Zamansky, H. S.; Brightbill, R. F. (1965). Attitude differences of volunteers and nonvolunteers and of susceptible and nonsusceptible hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 13 (4), 279-290.

A form of the Semantic Differential, containing 9 concepts related to hypnosis and research, was administered to 96 hypnotically inexperienced male Ss. The Ss were later asked to volunteer for a hypnotic experiment, and the hypnotic susceptibility of all volunteers ( $N = 51$ ) was then determined. Semantic Differential responses of volunteers and nonvolunteers and of highly susceptible and unhypnotizable Ss were compared. Differences between groups, in both comparisons, were generally not statistically significant, a finding which suggests that there is no simple relationship

between paper-and-pencil measures of attitudes and volunteering for hypnotic experiments or hypnotizability. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Leckie, F. H. (1964). Hypnotherapy in gynecological disorders. International Journal of Clinical and Experimental Hypnosis, 12 (3), 121-146.

The attitude and position of a gynecologist employing hypnotherapy in clinical practice is emphasized. Particular consideration is given to dysmenorrhea (25 cases), dyspareunia (30 cases), vaginismus (15 cases), frigidity (12 cases), and anxiety states encountered in gynecological practice (26 cases). An indication is given of the general method and of the specific pattern of treatment, which initially is directed to symptom removal by direct suggestion. When this method proves ineffective, special techniques are employed to carry out therapy at a deeper level. Details of clinical data of all cases are presented together with evaluation of the percentage of success achieved. Results have proved encouraging. Several illustrative cases are described.

Levitt, Eugene E.; Brady, J. P. (1964). Expectation and performance in hypnotic phenomena. Journal of Abnormal and Social Psychology, 69, 572-574.

Expectations concerning the occurrence of 7 phenomena through hypnotic suggestion were solicited from 12 female Ss, all of whom scored high on the Stanford Hypnotic Susceptibility Scale. Attempts were then made to induce these phenomena in the Ss. The results indicate that performance and expectation were discordant about as often as they were in accord. There appeared to be an interaction between task and expectation-performance accord. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

NOTES

1:

When Ss were not manipulated into their expectations, the relationship between expectancy and hypnotic behavior was minimal.

Melei, Janet P.; Hilgard, Ernest R. (1964). Attitudes toward hypnosis, self-predictions, and hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 12, 99-108.

Correlation of questionnaire results from a sample of 1326 students with hypnotic susceptibility scores of 340 of these later hypnotized showed (a) that those volunteering for hypnosis were more favorable in attitude than those who did not volunteer; (b) attitudes toward hypnosis were predictive of susceptibility for females, not for males; and (c) self-predictions yielded significant low positive correlations with actual susceptibility for both sexes. Other findings concern differences between those having prior experience with hypnosis and those without such experience.

Rosenhan, D. L.; Tomkins, S. S. (1964). On preference for hypnosis and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 109-114.

44 male and 44 female coerced volunteers, who either preferred or did not prefer to participate in hypnosis experiments, were compared with regard to (a) scores on the EPPS, (b) birth order, and (c) performance on the Harvard Group Scale of Hypnotic Susceptibility. Sex-specific personality differences were obtained between Ss who preferred and did not prefer hypnosis, but these personality differences were not apparently relevant to hypnotizability. However, for females, preference for hypnosis correlated .41 with hypnotizability; for males no relationship was obtained. Some theoretical and methodological implications of these data are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Shor, Ronald E. (1964). The accuracy of estimating the relative difficulty of typical hypnotic phenomena. International Journal of Clinical and Experimental Hypnosis, 12 (3), 191-201.

College student Ss with little or no reported prior knowledge about hypnosis were able to estimate with reasonably high objective accuracy the relative difficulty levels (pass percents) of a standardized set of carefully described typical hypnotic items. The correlation between the estimated percentages and the actual test responses as derived from 4 college student reference samples was .73. Subsidiary normative data are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Brightbill, Roger; Zamansky, Harold S. (1963). The conceptual space of good and poor hypnotic subjects: A preliminary exploration. International Journal of Clinical and Experimental Hypnosis, 11, 112-121.

A form of the Semantic Differential, containing 8 concepts related to hypnosis and research, was administered to 12 deeply hypnotizable and 14 nonsusceptible Ss. The good hypnotic Ss evaluated all the concepts more favorably than did the poor hypnotic Ss, with the greatest differential between the 2 groups occurring on the concept hypnosis. Moreover, the susceptible Ss perceived hypnosis as closer in connotative meaning to such concepts as experiment and professor, than did the nonsusceptible Ss. All differences between the 2 groups of Ss were of small absolute magnitude, however. Therefore, while the results suggest a relationship between hypnotic susceptibility and attitude toward hypnosis, they appear to preclude the use of the Semantic Differential as a practical predictor of hypnotic susceptibility.

(PsycINFO Database Record (c) 2002 APA, all rights reserved)

Farberow, N. L. (1963). Taboo topics. New York: Atherton Press (Prentice-Hall). (Reviewed in American Journal of Clinical Hypnosis by Leo Wollman, 1964, 6, 373-374)

## NOTES

1:

Includes chapter by J. G. Watkins on hypnosis, along with other socially taboo topics such as sex, suicide, death, etc. Watkins notes the reluctance of scientists to study hypnosis, the magical or mystical meanings people attach to hypnosis, the death fears activated by hypnosis for some people, the negative impressions conveyed by Sigmund Freud and Anna Freud. He also lists research problems to be addressed as: "1. What is 'depth' in hypnosis? 2. What is the extent of the confusion among investigators of hypnotic phenomena with 'simulation' and 'role-playing'? 3. Can hypnotic regression be validated sufficiently to be used as a research method in the study of other psychological problems? 4. What are the essential conditions of hypnotizability, and who is hypnotizable? 5. How do induction techniques compare in relative effectiveness? 6. And can we develop some objective way of determining the appropriate technique for a given subject or patient?" p. 374

Ludwig, Arnold M. (1963). Hypnosis in fiction. International Journal of Clinical and Experimental Hypnosis, 11, 71-80.

Some common conceptions of hypnosis found in selected literary works are presented. Many supranormal powers are attributed to hypnosis. The hypnotist is generally viewed as an evil, demonic agent and the S as a naive, but good, hapless victim. The hypnotist is almost inevitably punished for possessing these extraordinary powers. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Stachowiak, J. G.; Moss, C. S. (1963). The hypnotic alteration of social attitudes. Journal of Personality and Social Psychology, 2, 77-83.

Measures the effectiveness of influencing S attitudes toward Negroes through the medium of a hypnotically administered communication. Precision was added by conceptualizing the interaction between 2 variables, the concept to be influenced (Negro) and the source of the influence (hypnotist), within the theoretical model provided by Osgood's principle of congruity. Ss who were exposed to a positive communication about Negroes while they were hypnotized showed significantly greater attitude change than did Ss who were exposed to the same communication in the "waking state." Predictions generated by the congruity principle held up well with respect to direction of attitude change, but insufficiencies were evident with regard to predictions of the magnitude of the changes. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Levitt, Eugene E.; Lubin, Bernard; Brady, J. P. (1962). On the use of TAT Card 12M as an indicator of attitude toward hypnosis. International Journal of Clinical and Experimental Hypnosis, 10 (3), 145-150. (Abstracted in Psychological Abstracts, 63: 5233)

This investigation indicates that responses to TAT Card 12M do not predict attitude toward hypnosis in female Ss, though such predictiveness has been reported for male respondents. The basis for this differential predictiveness may be that the latter give a significantly greater proportion of themes involving hypnosis. An explanatory hypothesis, based on perceptual theory and the stimulus properties of the card, is advanced. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

London, Perry; Cooper, Leslie M.; Johnson, Harold J. (1962). Subject characteristics in hypnosis research. International Journal of Clinical and Experimental Hypnosis, 13-21.

**ABSTRACT:** Items of experiences, interests, and attitudes, in London's Survey, tended to cluster among themselves, suggesting a separate factor for each. The items were compared to several objective tests, but correlations were low. The Survey and Shor's Personal Experiences Questionnaire combined, correlated .64 with Stanford Scale A, suggesting the possible development of a paper-and-pencil predictor of hypnotic suggestibility. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Orne, Martin T. (1962). On the social psychology of the psychological experiment, with particular reference to demand characteristics and their implications. American Psychologist, 17 (11), 776-783.

#### NOTES

1:

"In summary, we have suggested that the subject must be recognized as an active participant in any experiment, and that it may be fruitful to view the psychological experiment as a very special form of social interaction. We have proposed that the subject's behavior in an experiment is a function of the totality of the situation, which includes the experimental variables being investigated and at least one other set of variables which we have subsumed under the heading, demand characteristics of the experimental situation. The study and control of demand characteristics are not simply matters of good experimental technique; rather, it is an empirical issue to determine under what circumstances demand characteristics significantly affect subjects' experimental behavior. Several empirical techniques have been proposed for this purpose. It has been suggested that control of these variables in particular may lead to greater reproducibility and ecological validity of psychological experiments. With an increasing understanding of these factors intrinsic to the experimental context, the experimental method in psychology may become a more effective tool in predicting behavior in nonexperimental contexts" (p. 783).

Shor, Ronald E.; Orne, Martin T.; O'Connell, D. N. (1962). Validation and cross-validation of a scale of self-reported personal experiences which predicts hypnotizability. Journal of Psychology, 53, 55-75. (Abstracted in Psychological Abstracts, 62: 4 II 55S)

A paper-and-pencil self-report questionnaire was designed to measure the incidence

of "hypnotic-like" experiences which have occurred naturally in the normal course of living. The questionnaire as evolved was found to predict hypnotizability, especially in the deepest region of the hypnotizability, especially in the deepest region of the hypnotizability continuum. Ramifications of the data are presented in terms of theoretical formulations where both ability factors and nonability factors (such as attitudes and motives) are viewed as components of achieved hypnotizability. From Psyc Abstracts 36:04:4II55S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

1959

Conn, Jacob H. (1959). Cultural and clinical aspects of hypnosis, placebos, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 7 (4), 175-185.

NOTES

1:

The author traces the history of hypnosis, suggestion, and placebo, noting that popularity of hypnosis with professionals waxes and wanes over the years. When practitioners lose faith in a drug, it becomes less effective with their patients. The same holds true for hypnosis. Frequently illness is ameliorated or cured by suggestion without hypnosis.

"Hypnosis is nothing more than the suggestive, placebo effect presented in a specific inter-personal setting. It is not just a state of mind, but the end result of various psychologic processes. (2) A patient may be more suggestible when fully awake. ... Another patient may be more suggestible when asleep. There are those who respond best to suggestions in the light stage of hypnosis, while about 10% of subjects are capable of developing the deeper, somnambulistic phase" (p. 181).

Rosenberg, Milton J. (1959). A disconfirmation of the descriptions of hypnosis as a dissociated state. International Journal of Clinical and Experimental Hypnosis, 7 (4), 187-204.

NOTES

1:

"SUMMARY. An experiment is described in which each of a group of hypnotic

subjects received a posthypnotic suggestion reversing his affective response on an attitude issue of high interest. The consequent changes in the subjects' affect-related beliefs are compared to 'belief-changes' achieved by members of a group of subjects who were required to role-play the occurrence of 'affect reversal'.

"The data are interpreted as disconfirming the description of hypnosis as a dissociated state. Some reasons for the persistence of the dissociation description of hypnosis and some theoretical implications of the demonstration of non-dissociation are briefly discussed" (pp. 202-203).

The 11 hypnotic subjects were capable of achieving posthypnotic amnesia. Direct suggestions were given, in the opposite direction from attitudes detected with a 'cognitive structure test'. "For example one of the subjects, having expressed strong negative affect toward Negroes moving into white neighborhoods, was given exactly the following hypnotic instructions: 'When you awake you will be very much in favor of Negroes moving into white neighborhoods. The mere idea of negroes moving into white neighborhoods will give you a happy, exhilarated feeling. You will have no memory for this suggestion having been made until the signal to remember is given'" (p. 193).

Wagner, Frederik F. (1959). A clinical study of attitudes towards hypnotic induction. International Journal of Clinical and Experimental Hypnosis, 7 (1), 3-8.

## NOTES

1:

### "Summary and Conclusion

"In spite of the supposed interest in hypnosis, less than one fourth out of 53 psychiatric residents volunteered as subjects in a research project on hypnotic induction. The immediate impression of a general attitude of anxious hesitancy was confirmed through the subsequent projective testing, interviews and the hypnotic experiment. The subjects' attitude as revealed through the different sources of information, showed a considerable consistency.

"Hypnosis was frequently fantasied as a controlling powerful instrument and the hypnotic induction as a 'battle between minds'. The underlying conflict: Dominance versus submission or independence versus dependence was easily discernible. This finding supports the results of a review made by LeCron (4) among psychologists and psychiatrists who use hypnosis for therapeutic purposes.

"The subjects' responses to the hypnotic situation varied from strong resistance to consistent co-operation. Mixed responses frequently reflected attempts by the subject to harmonize conflicting motives and fantasies. Some typical examples are described to illustrate the uniqueness of such compromise solutions, characteristic for the individual. The closer the subject's preconceived ideas came to the actual experimental situation, the more 'successful' were his responses. No direct connection between 'maturity' or 'neurotization' and 'susceptibility' could be demonstrated. No common character trait could be found or related to the subjects' ability to follow the suggestions. The responses could, however, be understood in terms of the individual's attempt to gratify, or ward off, needs, and anxiety aroused in the interpersonal relationship as structured by the experimental setting" (p. 8).

Wilcox, Warren; Faw, Volney (1959). Social and environmental perceptions of susceptible and unsusceptible hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 7 (3), 151-160.

#### NOTES

1:

1. The purpose of this study was to test the hypothesis that hypnotic susceptibility was positively related to the perception of fundamental aspects of the social and environmental milieu and, further, to consider the nature of hypnosis itself.
2. Ss for this study, 44 women and 36 men, were employed from a previous study (Faw and Wilcox, 1958). A mass hypnotic technique was used and susceptibility was operationally defined by the use of rating scales. The susceptible were found to have better personality adjustment than the unsusceptible.
3. New for this study were self-rating scales of the Ss' perception of parents, personal worries and problems, social activities as group or individually oriented, social activities in school, and physical care. The rating scales were administered several months prior to and independently of the hypnotic induction.
4. Interpretation of results support the hypothesis that the susceptible perceived their social and environmental milieu in more positive terms than did the unsusceptible. The susceptible perceived their parents in significantly stronger affectional and supportive relationships than did the unsusceptible. The susceptible were less concerned about adjustment to the opposite sex, not as worried about personal appearance, were more group oriented and more likely to engage in social activities than were the unsusceptible. Susceptible males were less frequently hospitalized than were unsusceptible males while susceptible females were more frequently hospitalized than were unsusceptible females.
5. Hypnosis was defined as a tendency to accept suggestions and to actualize, maintain and affirm them in the form of perceptual experiences activated by the stimulus situation as interpreted by the S and formulated by the hypnotist. The suggestions arouse expectancies or personal hypotheses which become a gauge to test the efficacy of the suggestions. Perceptualization is shaped by motives and past stimulation of the social and environmental milieu" (p. 158).

1957

Martin, R. M.; Marcuse, F. L. (1957). Characteristics of volunteers and non-volunteers for hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (4), 176-180.

#### NOTES

103 introductory psychology students were tested with the Taylor Manifest Anxiety Scale, the Levinson Ethnocentrism Scale (score already on file), and the Bernreuter Personality Inventory. Later a request for volunteers for an experiment dealing with hypnosis was made (with no reward promised). A week later the same experimenter informed the class that due to a redesign of the experiment, it was necessary to go through the request for volunteers again (a reliability check for volunteering).

"Discussion and Conclusion. There were significant differences between volunteers and nonvolunteers on the variables of intelligence, anxiety, ethnocentrism, dominance-submission, and sociability. Volunteers for hypnosis as a group were

found to have a higher mean intelligence score and to be less ethnocentric than nonvolunteers. Male volunteers for hypnosis were more and not, as commonly supposed, less dominant in face-to-face relations and less and not, as commonly supposed, more anxious than nonvolunteers. Female volunteers tend to be more solitary and independent. The very fact that no significant differences were found in any comparison between volunteers and nonvolunteers for hypnosis in self-sufficiency and introversion-extroversion is considered important in that popular belief suggests the contrary.

" ... The data from this study, far from supporting the popular image of the hypnotic subject in terms of inferiority, might be argued to suggest superiority" (p. 178).

1956

Wagner, Frederik F. (1956). The Interpersonal Relationship Test, (IRT): A suggested picture device for the evaluation of initial attitudes towards individual psychotherapy and hypnotic induction. Journal of Clinical and Experimental Hypnosis, 4 (3), 99-108.

NOTES

1:

Based on R. W. White's 1937 research using card 12 M of the TAT to assess needs and attitudes toward hypnosis, the author experimented with four less specific stimuli pictures. He posited that the attitudes and needs measured would influence hypnotizability. The four stimulus pictures were :

"I. Two people looking at each other, seen in profile. There is a double door in the background. Three alternative pictures are available: Male-Female, Male-Male and Female-Female. ...

II. A sitting person facing the observer, but looking at somebody who is completely hidden in a huge chair. Alternative combinations: M-? and F-? ...

III. The person facing the observer is sitting in a slightly bent forward position looking at a person sitting relaxed in a deep chair. The face of the latter can not be seen but the sex can be identified by the hands, feet and hair. Combinations: F-m, F-f, m-f, and M-m (m and f refer to the 'hidden' person). ...

IV. A person in a bent forward position with the back to the observer of the picture, leaning over the upper part of a person who is lying in supine position on a couch or divan. Both sexes can be identified but the faces can not be seen. Combinations: F-m, M-f and M-m (m and f refer to the 'hidden' person on the couch) (pp. 100-102).

1955

Fisher, Seymour (1955). An investigation of alleged conditioning phenomena under hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (2), 71-103.

NOTES

1:

"Summary and Conclusions.

"The primary objective of the present investigation was to present rational and empirical evidence supporting a reinterpretation of a number of alleged 'conditioning' studies performed under hypnosis. An experiment which contained

no explicit verbal posthypnotic suggestion was conducted. The study was designed to expose the presence of characteristic features of an explicit posthypnotic act in hypnotically induced 'conditioned responses'; two responses, an olfactory hallucination and a coughing reaction, were induced under hypnosis by a conditioning procedure, and were examined under various experimental conditions in the subsequent waking state.

"Although the results are based upon a relatively small sample of Ss, the overall data seem to warrant the following principal conclusions:

"(1) Responses induced under hypnosis by means of a conditioning procedure do not conform to some of the expected principles of contemporary conditioning theory.

"(2) These responses do, however, show a marked similarity to behavior induced by explicit posthypnotic suggestion. Inasmuch as no significant discrepancies between these two classes of phenomena (posthypnotic behavior and the responses induced by a conditioning procedure) were observed, the results are interpreted as supporting the dual hypothesis that (a) evocation of the cough and olfactory hallucination by their respective stimuli is a function of hypnotically determined suggestive factors, and (b) aside from the omission of an explicit verbal suggestion, these responses differ in no essential way from a typical posthypnotic act.

"(3) As a corollary to the preceding conclusion, it follows that some deeply hypnotized Ss are capable of performing posthypnotic behavior solely on the basis of implicit hypnotic suggestion. Hence, the frequently accepted assumption that explicit verbal instructions are required to effect posthypnotic behavior seems untenable.

"(4) To the extent that these conclusions are valid, it seems doubtful whether the concept of 'conditioned response' is any more appropriate when applied to these hypnotically determined responses than when applied to typical posthypnotic behavior. It would appear, rather, that the only fundamental difference between these two forms of behavior lies in the degree to which E explicitly communicates his suggestions.

"The major implications of the results are discussed, and several secondary conclusions are suggested:

"(5) The results are interpreted to support the possible existence of 'operator attitude' as a significant variable in research with hypnosis.

"(6) The results seem best understood within a framework of role-taking theory which takes into consideration both S's expectations and the hypnotist's expectations.

"(7) Recognition of the active participation of hypnotic Ss prescribes extreme caution in the interpretation of results whenever hypnosis is utilized as a technique for controlling psychological variables" (p. 101).

Meares, Ainslie (1955). A note on the motivation for hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 222-228. (Abstracted in Psychological Abstracts 57: 1129)

NOTES

1:

"Summary. The logical reasons of the patient for desiring hypnosis, and of the therapist in advising it, operate on a background of unconscious mechanisms. These

mechanisms are important factors in determining whether or not the logical reasons become effective. An understanding of such motivation helps the therapist in the selection of cases and the choice of the particular form of hypnotherapy to be used" (p. 228).

Patient motivations for hypnosis include magical expectations, paranoid belief that one is under the control of a malevolent influence, a (paradoxical) belief that hypnosis will be ineffective with neurotic symptoms and therefore justify continuation of the symptoms, latent aggression ("hypnotize me if you can" attitude) or an excess of passivity ("humiliate me"), erotic motivation or a wish for a more intimate relationship with the therapist, search for new or unusual experiences in life, a last ditch effort to cope with chronic pain and illness, etc.

Patient motivations against hypnosis include fear of being overpowered or the threat of authority, aggressive feelings that would be motivated if the hypnotist seems to be an authority, or association of hypnosis with the erotic. The author has observed "a surprising number of people" with the latter association. "With these people, it is more of an attitude of mind in which any close or intimate relationship is regarded as erotic. They see in hypnosis an intimate relationship with the therapist, and they avoid it without being aware of their reasons for doing so" (p. 226).

Therapist motivations for hypnosis include unconscious mechanisms as well, such as a drive for power (sometimes manifested in desire to demonstrate the technique to a wider audience than simply colleagues in a workshop). When tinged with eroticism the drive can become sadistic. Also, erotic drives can find vicarious expression as "The intensity of the rapport between patient and psychotherapist in waking psychotherapy, is increased many times in hypnosis" (p. 227).

Therapist motivations against hypnosis include fear of failure (which is more obvious when a patient doesn't follow a suggestion than in lack of response to medicine), fear of erotic involvement, fear of one's own aggression, etc.

1954

Meares, Ainslie (1954). History-taking and physical examination in relation to subsequent hypnosis. Journal of Clinical and Experimental Hypnosis, 2 (4), 291-295.

NOTES

1:

"Summary. The history-taking and physical examination of the initial interview can be so structured as to facilitate the subsequent induction of hypnosis. Rapport is established, and negative transference feelings are not allowed to develop. There must be no holding back or hiding of the real complaint with screen symptoms. Physical examination is a symbolic surrender and paves the way for the real surrender of passive hypnosis. If induction by an active method is anticipated, authoritative attitudes are introduced into the history-taking and physical examination" (p. 295).

1953

Ellis, Albert (1953). Reactions of psychotherapy patients who resist hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 12-15.

## NOTES

1:

"When one of my psychotherapy patients has difficulty in remembering or bringing forth salient material, I or the patient sometimes suggests the use of hypnosis. At such times, I usually find one of two major modes of reaction: either the patient comfortably accepts the idea of hypnosis, and we proceed forthwith to establish a hypnotic relationship; or else the patient, even though he has himself first suggested using hypnosis, is visibly uncomfortable about engaging in it, and in one way or another resists being hypnotized.

"In the latter case, particularly where the patient backs down completely and manages to structure the therapeutic relationships so that hypnosis is never actually attempted, I frequently find that the threat of being hypnotized is so intense that, rather than submit to it, the patient begins to surrender some of his neurotic symptoms or makes unusual psychotherapeutic progress without it."

The author presents three case studies.

Glasner, Samuel (1953). Two experiments in the modification of attitude by the use of hypnotic and waking suggestion. Journal of Clinical and Experimental Hypnosis, 1, 71-75.

## NOTES

1:

Author's Conclusions: "In the light of the results, the following conclusions would appear to be justified:

1. Prestige suggestion can effect changes in an individual's response to an attitudes test.
2. Repeated prestige suggestion produces no more marked effect than does a single suggestion in changing social attitudes. However, the results seem to be more lasting with repeated suggestion.
3. Repeated hypnotic suggestion is considerably more effective than repeated waking suggestion in modifying social attitudes. But waking suggestion also seems to have some effect.
4. The effects of both hypnotic and waking suggestion vary greatly with different individuals.
5. The effect of repeated prestige suggestion in changing social attitudes apparently does not follow the pattern of the usual learning curve.
6. The changes noted seem to represent changes in basic attitude, and not merely changes in the response to a particular test" (P. 74).

The attitudes involved nationality preferences ("Negro, Turk, Hindu, or Chinamen" p. 71). The prestige suggestion, given in light hypnosis, was "The results on the test I gave you were rather disappointing. Most people think that we in the South are deeply prejudiced against the colored races. But that is a mis-understanding of our position. Certainly we University people have no actual dislike of Negroes, Chinamen, or Hindus. And it is our hope, in giving this test, to demonstrate our true attitude, which is far more tolerant than most people give us credit for. I am therefore going to give you the test again. I want you, of course, to give your honest preferences. But where you find a choice difficult, give the 'underdog' the benefit of the doubt. Do you understand? Give the 'underdog' the benefit of the doubt!" (p. 72).

## AUDIOTAPE/VIDEOTAPE

1995

Enqvist, Bjorn; von Konow, L.; Bystedt, H. (1995). Pre- and perioperative suggestion in maxillofacial surgery: Effects on blood loss and recovery. International Journal of Clinical and Experimental Hypnosis, 43 (3), 284-294.

The basic assumption underlying the present study was that emotional factors may influence not only recovery but also blood loss and blood pressure in maxillofacial surgery patients, where the surgery was performed under general anesthesia. Eighteen patients were administered a hypnosis tape containing preoperative therapeutic suggestions, 18 patients were administered hypnosis tapes containing pre- and perioperative suggestions, and 24 patients were administered a hypnosis tape containing perioperative suggestions only. The patients who received taped suggestions were compared to a group of matched control patients. The patients who received preoperative suggestions exhibited a 30% reduction in blood loss. A 26% reduction in blood loss was shown in the group of patients receiving pre- and perioperative suggestions, and the group of patients receiving perioperative suggestions only showed a 9% reduction in blood loss. Lower blood pressure was found in the groups that received pre- and perioperative and perioperative suggestions only. Rehabilitation was facilitated in the group of patients receiving perioperative suggestions only.

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

1993

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.

1992

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

Excluded: Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

Music: Herb Ernst, Dreamflight II. Suggestions: Music background, permissive, based on Evans & Richardson's study.

Outcome Measures: Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

Grant, Carolyn D.; Nash, Michael R.; Roberts, Laura L.; Lynch, Greg V. (1992, August). The validation and standardization of the Computer-Assisted Hypnosis Scale. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

**ABSTRACT:** This research investigates the reliability and validity of the Computer-Assisted Hypnosis Scale (CAHS), a twelve-item computer administered hypnotic ability scale. In a counter-balanced, within-subjects, repeated measures design, 130 subjects experienced both a computerized hypnosis (CAHS) and hetero-hypnosis (SHSS:C). For each hypnosis session, responsiveness was assessed along three dimensions: Behavioral (using the CAHS and SHSS:C), subjective depth (using the Field Depth Inventory), and relational involvement (using the Archaic Involvement Measure). Subjects also completed a SHSS:C self-scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the SHSS:C across the three dimensions assessed. However, an unexpected interaction was noted: For the three dimensions of hypnotic responsiveness assessed, SHSS:C scores were lower when the SHSS:C was preceded by a CAHS than when the SHSS:C administration was first. CAHS scores for the three dimensions were not significantly affected regardless of whether or not a SHSS:C administration preceded the CAHS administration. Results are discussed in terms of the theory and practice of hypnotic ability assessment, and directions for future research are noted. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1992, Vol. 1, No.3.)

Sheehan, Peter W. (1992). The phenomenology of hypnosis and the Experiential Analysis Technique. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 364-389). New York: Guilford Press.

#### NOTES

1:

The problem with behavioral assessment methods such as hypnotizability scales is that similar behavioral responses to hypnotic suggestions may occur for very different reasons. It is important to assess the phenomenological experience of hypnotic Ss. The Experience Analysis Technique (EAT) is a method for assessing the phenomenology of hypnosis. The EAT "consists of gathering the comments of hypnotic subjects about their hypnotic behavior and experience, as they view the video playback of their hypnotic sessions" (p. 372). The EAT draws its origins from Kagan's method of Interpersonal Process Recall [IPR], in which "counselors in training could review and react to, their contact with clients immediately after

therapy sessions. An independent person, present at the review of the session, would inquire into the interaction between the counselor and client by stopping the tape and questioning the client about his or her underlying feelings and thoughts, so facilitating and clarifying the information being recalled" (p. 371). It is important that the interviewer be a different person than the hypnotist.

1978

Hammer, Walker & Diment (1978) applied the IPR to hypnosis, using audiotape.

Using the videotape EAT with hypnosis, Sheehan & McConkey (1982; Sheehan, McConkey & Cross, 1978) noted that hypnotic Ss might exhibit any of three different response styles, sometimes related to hypnotic task complexity: 1. Concentrative/cooperative style - S focuses on hypnotist's words, imagining a literal interpretation 2. Independent style - S interprets hypnotist's words in a way that is meaningful to them 3. Constructive style - S considers the communications "from a position of preparedness to process incoming stimuli in a schematic way, so as to structure or re-organize events according to the hypnotist's suggestions"

Some Ss who are high in susceptibility show greater flexibility in the use of cognitive styles than low susceptibility Ss.

Examples of the use of the EAT to evaluate several phenomena observed in experimental and clinical settings are provided: 'duality' during age regression, trance logic, posthypnotic amnesia, pseudomemories, and rapport.

The author reviews the concept of 'countering.' "Countering occurs when a S responds in accord with the wishes of the hypnotist when social influences to respond otherwise are also present in the situation. ... Counterers display a constructive (i.e. active and idiosyncratic) style of cognizing which enables them to make personal sense of the conflicting demands by preserving the integrity of each. ... Counterers, even though they demonstrate a higher degree of involvement with the hypnotist, fail reliably to score as highly on standard tests of susceptibility (e.g. the Stanford Hypnotic Susceptibility Scale, Form C) as subjects who do not counter (Sheehan, 1980). This second finding points to differential effects of rapport on Ss which are not explicable in terms of level of hypnotic susceptibility or simple willingness to comply with anticipated, obvious suggestions. Techniques like the EAT, which are sensitively attuned to detect the personal commitment of subjects to the hypnotist, are needed to detect subtle processes of this kind" (pp. 385- 386).

The author evaluates different reporting techniques used to examine the phenomenological experience of hypnosis (the Chicago Paradigm of Fromm & Kahn, 1990; Shor's phenomenological method; the Field's Inventory Scale of Hypnotic Depth) and evaluates the effects of rapport with the E on the measurement of subjective response. He suggests various experimental controls (e.g. disguising the true aims of the experiment). A measure of rapport or psychodynamic transference to the hypnotist, the Archaic Involvement Measure (AIM) has been developed by Nash and Spinler (1989).

"Experience cannot simply be observed objectively; it may not be reported spontaneously by the experiencer; and it may not even be elicited through ordinary forms of interaction" (p. 388).

"What phenomenological research has shown over the last decade is that hypnotic experience is both multifaceted and complex. It has given us a view of the hypnotic subject as a person who participates actively in the hypnotic process, who is susceptible to the influence of motivations and expectations, and who employs a variety of cognitive strategies so as to manage and respond to multiple levels of communication received in the hypnotic setting. Standard techniques of assessment, especially those emphasizing the primacy of behavioral data and those offering structured choices, are not equipped to reveal the full meaning of hypnotic responsiveness" (p. 388).

"If an instrument of assessment assumes a unidimensional underlying process when there are multiple dimensions operating, then that instrument will be deficient in measuring experience by producing equivalent ratings for very different experiences, and thus will be deficient in measuring overall experience. Measurement of trance-depth poses just such a problem, and measurement of hypnotic experience in its full complexity even more so" (pp. 388-389).

1991

Kirkeby, Judith L.; Payne, Paul A.; Hovanitz, Christine; Moser, Steven (1991). Increasing hypnotizability: A comparison of a multimedia form of the Carleton Skills Training Program with a self-administered written form. Contemporary Hypnosis, 8, 161-165.

Compared a group-administered form of the multimedia Carleton Skills Training Program (CSTP) to a self-administered training program similar in content, but limited to written materials. One hundred and forty-one female subjects were administered one of four conditions: (1) the multimedia CSTP; (2) the self-administering booklet training; (3) a practice-only condition; or (4) a no-practice control condition. Subjects then responded to a shortened form of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A). [6 items: arm lowering, arm rigidity, hands together, fly hallucination, eye catalepsy, and amnesia.] Results indicated that objective and subjective hypnotizability measures were higher in both of the training conditions than in the practice-only or control conditions. In comparisons of the two training conditions, the booklet program was judged to be equal in effectiveness to the multi-media group form of the CSTP.

NOTES

1:

Group Hypnotizability Scale: Means for Behavioral (B), Experiential (E), Involuntariness (I) and Behavioural/Involuntariness (B/I) measures

GROUP n B E I B/I

Range 0-6 0-18 0-18 0-6 CSTP 39 4.67 12.46 11.54 3.64 Booklet 39 4.62 12.18 11.31 3.77 Practice 31 3.58 9.81 8.42 2.32 Control 32 3.44 10.66 9.22 2.75

1990

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

McLintock, T. T.; Aitken, H.; Downie, C. F.; Kenny, G. N. (1990). Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. British Medical Journal, 301 (6755), 788-790.

Sixty-three women undergoing elective abdominal hysterectomy were randomly assigned to a tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the women. Postoperative analgesia was provided through a patient-controlled analgesia system for the first 24 hours. Pain scores were recorded every 6 hours. The outcome measures were morphine consumption in the first 24 hours and pain scores. Mean morphine requirements were 51.0 mg in women who were played positive suggestions, and 65.7 mg in those played a blank tape ( $p = 0.028$ ). Pain scores were similar in the two groups. It was concluded that intraoperative suggestions seem to have a positive effect in reducing patients' morphine requirements in the early postoperative period.

Wood, W. E.; Gibson, W.; Longo, D. (1990). Moderation of morbidity following tonsillectomy and adenoidectomy: A study of awareness under anesthesia. International Journal of Pediatric Otorhinolaryngology, 20, 93-105.

In a double-blind study, 67 children, ages 3-10, were randomly assigned to one of three groups: tape recorded therapeutic suggestions repetitively recited in English or in French, and a control of continuous white noise. The English condition was associated with more favorable outcome on all parameters, although statistical significance could not be demonstrated. Favorable outcomes appeared most significant for those patients at highest risk for poor convalescence (i.e., poor status preoperative patients).

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

NOTES

1:

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the

behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Grant, Guy (1989, June). An investigation of hypnotic susceptibility in self-hypnosis and imagery (Dissertation, University of Utah). Dissertation Abstracts International, 49 (12), 5517-5518-B.

#### NOTES

1:

"There were two phases in the study. In Phase One hypnotic susceptibility scores were assessed for 43 graduate student subjects by the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A). In addition, the Self-Hypnosis Research Questionnaire (an experimental scale) provided performance scores for subjects under three hypnosis conditions: heterohypnosis, self-directed self-hypnosis, and tape-assisted self-hypnosis. The first purpose in Phase One was to calculate correlations between hypnotic susceptibility and each of the hypnosis conditions. The second purpose was to determine if there were significant differences across the three types of hypnosis. The third purpose was to discover if any existing differences were dependent on level (e.g., low, medium, or high) of hypnotic susceptibility. Analysis of the data yielded significant correlations between hypnotic susceptibility and (a) heterohypnosis, (b) self-directed self-hypnosis, and (c) tape-assisted self-hypnosis. There were significant performance differences across the three hypnosis conditions with heterohypnosis being somewhat superior to tape-assisted self-hypnosis, and tape-assisted self-hypnosis being slightly superior to self-directed self-hypnosis. This relationship held true regardless of level of hypnotic susceptibility (e.g., low, medium, and high).

"In Phase Two, 49 graduate student subjects were administered the shortened form of the Betts' Questionnaire Upon Mental Imagery (QMI) as well as the HGSHS:A, and to determine if mental imagery is an important component of hypnotic susceptibility. Analysis yielded a significant correlation between the two measures.

"Based on the current data, it was concluded that the HGSHS:A had some utility for predicting performance in hypnosis. It was noted that, as compared with self-hypnosis, heterohypnosis provided the greatest chance of eliciting a positive hypnotic response from subjects not trained or experienced in hypnosis. It was also concluded that the QMI was correlated with and had some utility for predicting performance on the HGSHS:A. It had difficulty, however, differentiating between low and medium hypnotizability" (pp. 5517- 5518).

**Hammond, D. Corydon; Haskins-Bartsch, Catherine; Grant, Claude W.; McGhee, Melanie (1988). Comparison of self-directed and tape-assisted self-hypnosis. American Journal of Clinical Hypnosis, 31, 129-137.**

Previous research on self-hypnosis has concentrated on the relationship between heterohypnosis and either self-directed self-hypnosis or self-initiated self-hypnosis. Despite widespread use of audiotapes to assist the process of self-hypnosis, no previous research has compared tape-assisted and self-directed self-hypnosis. Forty-eight inexperienced volunteers were hypnotized and taught self-hypnosis by posthypnotic suggestion and immediate practice in the office. They were randomly assigned to one of two experimental orders to practice self-directed and tape-assisted self-hypnosis. No differences were found between heterohypnosis or either type of self-hypnosis in response to behavioral suggestions. Experiential ratings, however, consistently favored heterohypnosis over either type of self-hypnosis. Tape-assisted self-hypnosis was consistently evaluated as superior to self-directed practice by newly trained subjects.

#### **NOTES**

**1:**

The tapes were more or less identical with the in-office hypnosis, including voice of the hypnotist, except that those doing self-directed self hypnosis received a posthypnotic suggestion for how to enter hypnosis by themselves. (All Subjects received written instructions to remind them about the procedures for home practice.)

When self hypnosis was evaluated, use of a tape produced greater concentration and absorption, less distraction, greater subjective depth, greater perception of nonvoluntary response to suggestion, and more changes in body perception (e.g. loss of awareness of the body, feelings of heaviness or of floating). Therefore, the tape-assisted experience could be viewed as more convincing to the Subjects. People tended to fall asleep more when they did self-directed self hypnosis than when they used a tape. However, people enjoyed heterohypnosis more than either self hypnosis experience, and reported more nonvoluntary experiences. The more positive response to heterohypnosis replicates research by Johnson et al. (1983), in which preceding self-hypnosis by a heterohypnosis induction may results in less positive experiences with the self-directed self hypnosis.

In their Discussion, the authors note that finding no differences between self hypnosis and heterohypnosis in the number of behavioral suggestions successfully passed replicates earlier research (Shor & Easton, 1973; Ruch, 1975; Johnson, 1979; Johnson, Dawson, Clark, & Sikorsky, 1983).

"Thus, our present study has replicated previous findings concerning the relationship of heterohypnosis and self-directed self-hypnosis. In clinical practice, it appears that a heterohypnosis experience virtually always precedes training in self-hypnosis. Our findings and those of the Johnson (1983) study suggest, however, that generally patients will experience self-hypnosis as significantly less powerful than their previous office experience. But, by using a tape to assist the patient in initial practice, the discrepancy between the quality of the experiences appears reduced. It should be noted that Johnson et al. (1983) provide the innovative suggestion that

there may be something gained by having self-hypnotic instruction and practice precede a hypnotic experience by a therapist. Initial self-hypnotic experience may create a mental set of being more actively involved" (p. 136).

"However, we know nothing about how tape-assisted vs self-directed experiences are perceived by Ss with more self-hypnotic and heterohypnotic experience, and particularly if they are utilizing the same tape recording(s) over and over again. Other research (Hammond, 1987) recently followed up premenstrual syndrome patients who were trained in self-hypnosis. In this study, patients showed a clear preference for using tapes to assist them in self-hypnosis shortly after initial training. However, on 6-month follow-up, patients were found to be utilizing self-directed self-hypnosis much more frequently than tapes, with which they may have become somewhat bored. The issue of boredom has thus far not been adequately addressed in the self-hypnosis literature" (p. 136).

Omer, H.; Darnel, A.; Silberman, N.; Shuval, D.; Palti, T. (1988). The use of hypnotic-relaxation cassettes in a gynecologic-obstetric ward. In Lankton, S. R.; Zeig, J. K. (Ed.), Research, comparisons and medical applications of Ericksonian techniques (pp. 28-36). New York: Brunner-Mazel.

#### NOTES

1:

They did three studies in which they gave women having gynecologic procedures tapes with a Rapid Induction Analgesia hypnosis experience.

STUDY 1. Women heard tapes before a painful Fallopian tube procedure (salpingography). The patients reported less pain, tension, anxiety, and fear than control patients. (N.B. Physicians' ratings did not show that difference.)

STUDY 2. Women practiced with the tapes at home before labor and delivery. One day after delivery, there was no difference in pain report or experience report between treated and control patients.

STUDY 3. Women used the tapes during labor. They reported worse pain and labor experiences than the control patients.

The authors conclude that their research does not support the hypothesis that Rapid Induction Analgesia is useful for acute pain.

#### 1986

Aronson, David M. (1986). The adolescent as hypnotist: Hypnosis and self-hypnosis with adolescent psychiatric inpatients. American Journal of Clinical Hypnosis, 28 (3), 163-169.

This paper describes the theoretical rationale, pragmatic implementation issues, and procedure for a particular technique of clinical hypnosis which is designed as an adjunctive therapy within a multidisciplinary adolescent inpatient treatment program. A model of combined auto- and heterohypnosis which features collaborative production of audiocassettes is presented. Advantages and indications for this technique are discussed, and a case study is presented. - Journal Abstract

#### 1984

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

1983

Brattberg, G. (1983). An alternative method of treating tinnitus: Relaxation-hypnotherapy primarily through the home use of a recorded audio cassette. International Journal of Clinical and Experimental Hypnosis, 31 (2), 90-97.

32 patients, variously diagnosed as suffering from tinnitus, were treated with hypnosis. Treatment consisted of a 1-hour consultation with the physician followed by 4 weeks of daily home practice while listening to an audio-tape recording of approximately 15 minutes duration. 22 of the patients treated learned in 1 month to disregard the disturbing noise, a considerable gain in the ratio of therapy to time required.

NOTES

1:

The audio tape was of a 15-minute hypnotherapy session done on the first office visit, so that the home practice was more or less the same as the first visit in office. "The hypnotherapy was aimed at inducing the patient into as relaxed a state as possible, and thereafter implanting the suggestio that the patient would no longer be troubled by the noise" (p. 93).

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology.

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-

observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

1982

Lehrer, Paul M. (1982). How to relax and how not to relax: A re-evaluation of the work of Edmund Jacobson: I. Behaviour Research and Therapy, 20 (5), 417-428.

Contrasts E. Jacobson's (1928-1970) method of progressive relaxation with modified techniques that emphasize suggestion, brevity, and the feeling of large differences between tension and relaxation. The literature suggests that the modifications may have been premature. The psychophysiological effects of suggestion are weaker than those of progressive relaxation. Tape-recorded instruction appears to be completely ineffective as a method for teaching relaxation as a skill that can be used across situations. Live training contributes more than simple feedback; its effectiveness may lie in individualized adaptation of training technique. EMG biofeedback makes taped training more effective but contributes nothing to intensive live training. Despite its greater length, Jacobson's original technique is preferred to the modified techniques, particularly when psychophysiological effects are important. Length of training does not appear to be a critical factor. (116 ref)

1981

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

1980

Crasilneck, Harold B. (1980). The case of Dora. American Journal of Clinical Hypnosis, 23, 95-97.

#### NOTES

1:

This is the introduction to a film about a woman who was indicted for murder in the alleged fatal shooting of her husband. The woman was amnesic, had been drinking alcohol before the shooting. The author also provides a verbatim account of what the patient said following suggestions that "you are going to remember every detail." On the basis of the woman's hypnotically refreshed recall, the charge was changed from first degree murder to self-defense.

Hart, R. (1980). The influence of a taped hypnotic induction treatment procedure on the recovery of surgery patients. International Journal of Clinical and Experimental Hypnosis, 28, 324-331.

A study of 40 open heart surgery patients assigned to 1 of 2 equal size treatment groups sought to evaluate the efficacy and utility of a tape-recorded hypnotic induction procedure that preoperatively prepared patients for surgery. The dependent variables included daily blood pressure measurements and postsurgical outcome data pertaining to postoperative units of blood required, state/trait anxiety, and locus of control dimensions. Results of the study tended to provide some support for the tape-recorded hypnotic induction procedure in lessening state anxiety and in promoting a more self-directed attitude toward surgical recovery.

1979

Johnson, L. S.; Wiese, K. F. (1979). Live versus tape-recorded assessments of hypnotic responsiveness in pain control patients. International Journal of Clinical and Experimental Hypnosis, 27 (2), 74-84.

This study compared the effectiveness of live versus tape-recorded hypnotic procedures in producing general hypnotic responsiveness in hospitalized pain patients. 30 patients individually received in counterbalanced order both a live and an audiotaped presentation of the Stanford Hypnotic Clinical Scale (Hilgard & Hilgard, 1975), which contains an induction and a 5-item test of hypnotic susceptibility suitable for bed-ridden patients. The live presentation produced a significantly higher total score than the taped procedure ( $p < .05$ ), with no significant order effects. The correlation between modes of presentation was .66. Order effects were not significant but a trend in that direction was discussed. The differences were found to hold for the high and medium ranges of susceptibility. Tentative conclusions were drawn that one cannot assume taped procedures to be equivalent to live in hypnotic analgesia research with clinical populations. The non-equivalence of live and taped procedures need not invalidate the clinical use of the latter, should they prove empirically effective. A case study of low back pain is added to illustrate effective tape-induced analgesia for patients unsuccessful with self-hypnosis.

1978

Shipley, R. H.; Butt, J. H.; Horowitz, B.; Farbry, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

1977

Lick, John R.; Heffler, David (1977). Relaxation training and attention placebo in the treatment of severe insomnia. Journal of Consulting and Clinical Psychology, 45 (2), 153-161.

This study compared the effectiveness of progressive relaxation training with and without a supplementary relaxation recording, which the subjects played at home, and an attention placebo manipulation in the modification of severe insomnia in adult volunteers. The results indicated that the relaxation training procedures were significantly more effective than placebo and no-treatment controls in modifying several parameters of sleeping behavior, in reducing consumption of sleep-inducing medication, and in influencing a self-report anxiety measure. The supplementary relaxation tape did not increase the effectiveness of relaxation training conducted in the clinic, and there was no difference in the efficacy of the placebo and no-treatment conditions. Physiological data gathered during the last treatment session indicated few significant correlations between reductions in arousal associated with relaxation training and treatment outcome.

1975

Bean, Bruce W.; Duff, James L. (1975). The effects of video tape, and of situational and generalized locus of control, upon hypnotic susceptibility. American Journal of Clinical Hypnosis, 18 (1), 28-33.

This study examined the effects of mode of induction (video tape vs. live), general locus of control, and situational locus of control upon hypnotic susceptibility. A total of 62 student volunteers was hypnotized in eight small groups using the Harvard Group Scale of Hypnotic Susceptibility. Results confirmed that video taped

inductions were as effective as live inductions. None of the other variables, singly or in interaction, significantly affected susceptibility scores. An analysis of variance was also performed upon subjects' subjective ratings of having experienced hypnosis. Results revealed that subjects with an external general locus of control (Rotter's I-E scale) rated themselves as having experienced hypnosis more fully. This was interpreted as a greater response to the demand characteristics of the hypnosis situation by externally controlled subjects. Discussion explores the potential flexibility provided by video tape hypnosis.

**Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.**

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### **NOTES**

**1:**

Berderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

**1974**

**Field, Peter B. (1974). Effects of tape-recorded hypnotic preparation for surgery. International Journal of Clinical and Experimental Hypnosis, 22, 54-61.**

The day before surgery, 30 patients heard a tape recording that gave suggestions of relaxation, drowsiness, comfort during the operation, and quick recovery, and which also gave simple information about the forthcoming operation. A control

group of 30 additional surgical patients heard a recording describing facilities available in the hospital. No differences between the 2 groups were found on surgeons' ratings of degree of nervousness on the day of the operation, or on speed of recovery. However, there was a significant correlation within the experimental group between depth of relaxation while listening to the recording and absence of nervousness the day of the operation, and also between depth of relaxation and speed of recovery. Verbal reports of benefit from listening to the recording were unrelated to depth of relaxation.

#### NOTES

1:

The surgeons and other ward staff were unaware of group assignment. Patients were rated by observer for: eye closure, relaxation vs. restlessness, change to a slow and regular breathing pattern, and whether they complied with a recorded instruction to take a deep breath.

In terms of results, degree of rated relaxation related to nervousness during surgery, to faster recovery from the operation, but not to length of hospital stay. No significant differences between the experimental and control groups were found. Contrary to expectations, there was a tendency for more nervousness in the experimental group. Thus, though patients who relaxed more easily were less nervous during surgery and recovered more rapidly than expected, the difference cannot be attributed to the experimental intervention.

In contrast to objective outcome measures, verbal reports indicated that 17 of 30 experimental group patients but only 1 of 30 control patients felt that the tape had helped them. (In the experimental group, 25% used terms like "wonderful," "terrific," "very helpful," statements never made by the control group patients.) Also, 73% of experimental vs. 23% of control patients said that they would like to hear (or wouldn't mind hearing) the recording again if they had another operation. Extensive post-operative interview data did not support a conclusion that the intervention influenced postoperative pain, anorexia, or insomnia; postoperative dreams; or self-reported anxiety during the operation. Thus, patients who claimed the intervention was helpful did not necessarily report reduced anxiety or pain. They reported greater relaxation, better knowledge of what would happen, or better ability to cope with the stress.

In his Discussion the author notes that the variable of "depth of relaxation" was supposed to reflect depth of hypnosis but may not be actually a measure of hypnotic depth or of hypnotizability. The results might be due to an individual difference effect (people who can relax easily would find surgery a less stressful experience whether or not they heard a tape recording), or to the interaction between such an individual-difference variable and the experimental treatment. In the latter case, the recording might have some added effect on its own.

Finally, results suggest that recordings with suggestions of this nature influence patient satisfaction rather than postoperative course.

1973

Wickramasekera, Ian (1973). Effects of electromyograph feedback on hypnotic susceptibility: More preliminary data. Journal of Abnormal Psychology, 82 (1), 74-77.

The purpose of this double-blind study was to determine if taped verbal relaxation instructions and response-contingent electromyographic feedback training would increase suggestibility or hypnotic susceptibility over that obtained with instructions and false or noncontingent feedback, The present data appear to confirm the hypothesis

1963

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, 11, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Jacoby, James D. (1960). Statistical report on general practice hypnodontics: Tape-recorder conditioning. International Journal of Clinical and Experimental Hypnosis, 8 (2), 115-120.

NOTES

1:

Author's Summary: Interest of the dental profession in the use of hypnosis for dentistry has increased a thousandfold in the past several years. Periodicals and dental meetings reflect this increased interest and acceptance.

Discussion is made of 308 dental patients in 1214 appointments, including all types of dentistry. The use of the tape-recorder in patient-conditioning is recommended to conserve both time and energy of the dentist.

1953

Horan, John S. (1953). Hypnosis and recorded suggestions in the treatment of migraine: Case report. Journal of Clinical and Experimental Hypnosis, 1 (4), 7-10. Psychological Abstracts 54: 6399)

NOTES

1:

Author's Discussion: "The case above is presented because of its rather bizarre features. It is notable in that in the hypnotic sessions no attempt was made to explore the dynamics of the patient's resentment or her illness, no insight was given into psychic mechanisms connected with the migraine. This had been done before, in conventional psychiatric interviewing, without much result. Under hypnosis, the only suggestions given were concerned with direct symptomatic relief of headache,

insomnia and anorexia. For the patient's purposes, these were sufficient. Just how the pathological physiological state causing the migraine attacks was altered by direct and recorded suggestion is a mystery to this writer. It may be that hypnotic states can cause a dissociation of the subject from the emotional stress related to the attacks. Or perhaps the strangeness and the mystery of hypnosis was sufficient. It would be absurd to make any claims about the efficacy of hypnosis in migraine patients in general on the basis of this one case. In a disease which causes as much disability and suffering as migraine, however, it is profitable to report any safe means that gives a satisfactory result" (pp. 9-10).

## AUTITION

1999

Kallio, Sakari; Revonsuo, Antti; Lauerma, Hannu; Hdmldinen, Heikki; Lang, Heikki (1999). The MMN amplitude increases in hypnosis - a case study. Neuroreport, 10 (17), 3579-3582.

The neural mechanisms associated with hypnosis were investigated in a single highly hypnotizable subject by measuring the mismatch negativity (MMN) component of auditory ERP, reflecting the preattentive discrimination of change in stimulus flow, in normal baseline state and under hypnosis. It has been proposed that the frontal inhibition associated with hypnosis can be measured as a decrease in MMN. ERPs were elicited using the passive oddball paradigm with standard and deviant sine tone stimuli of 500 and 553 Hz respectively. The measurement was repeated in five separate sessions. In hypnosis the MMN was significantly larger compared to baseline. The results indicate that hypnosis can give rise to altered information processing in the brain even at a relatively early, i.e. preattentive level and that the larger MMN measured under hypnosis does not support frontal inhibition theory.

1995

Mason, J.; Rogerson, D. (1995). Client-centered hypnotherapy for tinnitus: Who is likely to benefit?. American Journal of Clinical Hypnosis, 37 (4), 294-299.

## NOTES

1:

The study involved 41 patients, mean age 54, who had three sessions of hypnosis. On three-month followup evaluation, those who benefitted most from hypnosis had less hearing loss in their better-hearing ear.

Matthews, William J.; Isenberg, Gail L. (1995). A comparison of the hypnotic experience between signing deaf and hearing participants. International Journal of Clinical and Experimental Hypnosis, 43 (4), 375-385.

This study compared the hypnotic responsiveness of 17 hearing and 34 deaf individuals, all of whom received visual induction and hypnotic suggestions via some form of signing. The comparison between deaf and hearing participants was analyzed on five dependent measures: (a) the Stanford Hypnotic Susceptibility

Scale, Form C (SHSS:C); (b) participants' individual item performance; (c) overall trance depth; (d) a rapport scale; and (e) a resistance scale measuring attitudes of participants toward the hypnotist. Although all participants showed at least a moderate level of hypnotic responsiveness, the data did not indicate a significant main effect between deaf and hearing participants on any of the dependent measures. However, there was a tendency ( $p < .08$ ) for hearing participants to show a greater hypnotic responsiveness than deaf participants. Additionally, there was a significant difference between all the signing participants combined when compared to the norming population on three items of the SHSS:C. Clinical and theoretical implications of these data are discussed.

**1993**

**Dabic-Jeftic, Mirjana; Barnes, Graham (1993). Event-related potentials (P300) during cognitive processing in hypnotic and non-hypnotic conditions. Psychiatria Danubina, 5 (1-2), 47-61.**

In this study authors investigated to find out if there were any specific changes of event related potentials in subjects before hypnosis, entering hypnosis, in deep hypnosis and leaving hypnosis, and to compare mental activities of subjects such as capability of correctly calculating and remembering the exact number of unexpected stimuli delivered by stimulator with their verbal or nonverbal reports during any of the conditions investigated. The methodology was of testing the cognitive evoked potentials elicited by auditory stimuli, using the oddball paradigm. Obtained results show that the most constant values of shortest latency and highest amplitudes of the cognitive waves, especially P300 were found during deep hypnosis. All five subjects in the investigation answered with the exact number of delivered target stimuli only after deep hypnosis. Conversely, in all other conditions their answers were approximate to the correct number of delivered target stimuli. (Author abstract.)

**NOTES**

**1:**

In this experiment, 5 adult volunteers were told to attend to one of two tones delivered through headphones. The tones were randomly delivered but one occurred 85% of the time (the 'frequent, non-target tone') and the other occurred 15% of the time (the 'rare, target tone'). The subjects were to notice, remember, and count the target tone. Measures were taken during five periods: pre-hypnosis, entering hypnosis, deep hypnosis, leaving hypnosis, and post-hypnosis.

Some subjects had extensive hypnosis experience prior to the experiment; others had little.

The EEG P300 wave was sensitive to condition. Latency of P300 was significantly shorter in deep hypnosis compared with other periods. Higher amplitude of P300 also occurred during deep hypnosis compared with other periods. (Notes taken from secondary reference, Ericksonian Newsletter.)

**Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical**

processes of the brain and performance. International Journal of Psychophysiology, **14**, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

1992

Matthews, William J.; Isenberg, Gail L. (1992). Hypnotic inductions with deaf and hearing subjects - an initial comparison: A brief communication. International Journal of Clinical and Experimental Hypnosis, **40** (1), 7-11.

17 volunteer deaf Ss were compared with 18 volunteer hearing Ss on the Stanford Hypnotic Clinical Scale (SHCS) of Morgan and J. R. Hilgard (1975), and the Indirect Suggestion Scale (ISS) of Matthews and Mosher (1985) in a 2 x 2 ANOVA design. 5 dependent measures: (a) objective scale score; (b) self-report scale score; (c) S rapport with the hypnotist; (d) S resistance to the hypnotist; and (e) overall subjective rating of trance experience were employed to measure any differences between the 2 groups. For SHCS behavioral items, the two-way ANOVA failed to reveal any significant main effect or interaction differences between either group (deaf/hearing) or method of induction (direct/indirect). There was a significant main effect for deaf/hearing groups in level of resistance to the hypnotist. Deaf Ss reported feeling more resistant to the hypnotist than did hearing Ss. This may be due to the mode of communication or the fact that the hypnotist was hearing. Implications and limitations of the study are discussed.

Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, **101**, 192-199.

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of

blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

**1991**

Cochrane, Gordon J. (1991). Client-therapist collaboration in the preparation of hypnosis interventions: Case illustrations. American Journal of Clinical Hypnosis, 33, 254-262.

Therapists can use hypnosis in a variety of situations to help clients utilize their own resources effectively. In both heterohypnosis and tape-assisted self-hypnosis, the respectful collaboration of therapist and client in the development of specific intervention strategies can be effective. I have described four cases to illustrate the collaborative aspect of heterohypnosis in a surgical setting and tape-assisted self-hypnosis for anxiety, tinnitus, and situational depression. In each case the clients were willing and able participants.

**NOTES**

**1:**

"Hypnotic interventions as adjunctive therapeutic modalities for a variety of surgical procedures have been well documented (Frankel, 1987; Gravitz, 1988; Nathan, Morris, Goebel, & Blass, 1987). The availability, relative safety, dependability, and ease of use have made chemical agents the anesthetic of choice in the majority of surgical situations, but hypnosis, either alone or in conjunction with chemical agents, can have a number of advantages for some patients (Udolf, 1987, p. 248). Some patients who have extreme preoperative pain and anxiety can learn to use self-hypnosis (Frankel, 1987); others may use hypnosis when experiencing postoperative nausea and other uncomfortable side effects of chemical anesthetics. Some may fear death under general anesthesia or react to a previous trauma arising from general anesthesia and the operating room procedures in general (Udolf, 1987, p. 250) and therefore choose hypnotic strategies. In the following case illustration the patient feared general anesthesia because of a previous negative postoperative experience" (p. 255).

While collaboratively planned hypnosis often empowers the patient, contributing to a sense of personal control and well being, some patients are not able to participate in that manner. Cochrane cites patients who are severely depressed or "who struggle with narcissism and other severe pathologies" (p. 260). He notes that audiotapes are useful for supplementing in-session therapy, contributing to skill development, attitude change, and a sense of self-worth. He cites Eisen and Fromm (1983) as indicating that self hypnosis is also useful for clients "who struggle with issues of control and intimacy" (p. 260).

**1990**

Wood, W. E.; Gibson, W.; Longo, D. (1990). Moderation of morbidity following tonsillectomy and adenoidectomy: A study of awareness under anesthesia. International Journal of Pediatric Otorhinolaryngology, 20, 93-105.

In a double-blind study, 67 children, ages 3-10, were randomly assigned to one of three groups: tape recorded therapeutic suggestions repetitively recited in English or in French, and a control of continuous white noise. The English condition was associated with more favorable outcome on all parameters, although statistical significance could not be demonstrated. Favorable outcomes appeared most significant for those patients at highest risk for poor convalescence (i.e., poor status preoperative patients).

1989

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

1988

Aravindakshan, K. K.; Jenner, F. A.; Souster, L. P. (1988). A study of the effects of hypnotic regression on the auditory evoked response. International Journal of Clinical and Experimental Hypnosis, 36, 89-95.

Hypnotic regression in 6 hypnotizable Ss experienced in regression was studied by means of the auditory evoked response (AER). AER latency and amplitude is affected by arousal, attention, stimulus strength, and age. Ss aged between 27 and 61 years were regressed to the age of 7-9 years, and AERs were compared among three states of consciousness: normal awareness, hypnotic relaxation, and hypnotic regression. There was no change in AER morphology in the direction of that seen in children. Thus, age regression is not seen as a reversion to an earlier stage of neurological development but perhaps as role playing which is spontaneous and uninhibited, with the benefit of innocent belief in its accuracy.

NOTES

1:  
Raikov (1982) regressed 2 experienced Ss, comparing his results with those of actors acting as children and low hypnotizable subjects; he claimed to be able to reproduce

neonatal reflexes in the highly hypnotizable Ss but not in the actors and low hypnotizable subjects.

AER's were used "because latency of the major waves and amplitude of the response is affected by level of arousal and attention..., strength of the stimulus, and, more importantly for this study, by age.... Surwillo (1981) noted that peak latencies of AERs were 16-21 msec longer in children aged 9-13 than in adults..." (p. 90)

DISCUSSION reviews the literature. "Changes in the intensity of light stimulation can cause significant shifts in the amplitude and latency of the visual evoked response, but neither the amplitude nor the latency have been changed by suggested alterations in stimulus intensity during hypnosis (Andreassi, Balinsky, Gallichio, de Simone, & Mellers, 1976; Beck & Barolin, 1965; Beck, Dustman, & Beier, 1966; Zakrzewski & Szelenberger, 1981). Similarly, significant changes were seldom found in the AER with suggested variations of sound intensity during hypnosis (Amadeo &

Yanovski, 1975) and in somatosensory responses to electrical stimuli applied to the fingers with suggested anesthesia during hypnosis (Halliday & Mason, 1964). Deehan and Robertson (1980) were able to abolish the AER completely during hypnosis, but their stimuli were very different from that used in the present study.

"In all such studies, hypnosis and suggestions were aimed at changing the intensity of the stimulus to S's awareness, while the actual intensity of the stimulus was unaltered. In the present study, the authors attempted to find whether the morphology of the AER in children could be reproduced by age regression, without altering the nature or intensity of the stimulus in its delivery.... Like previous investigators, the present authors noticed that the tracings were cleaner and easier to produce during hypnosis (see Figure 1), although the changes in neurological development observed by Raikov (1982) were not evident" (pp. 93-94).

1987

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern- masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

**NOTES**

**1:**

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

**Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials**

Response Category	S	Group	N	Related	Unrelated	Total
Hypnotized	9	7.22	10.78	18		
	(40.13%)	(59.88%)	(100%)			
Simulating	15	12.13	5.87	18		
	(67.43%)	(32.61%)	(100%)			
Baseline	19	8.79	9.21	18	Controls	(48.82%) (51.17%) (100%)

**Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials**

Related Responses	S	Group	Phonetic	Semantic
Hypnotized	1.78	5.44		
	(9.89%)	(30.24%)		
Simulating	7.07	5.07		
	(39.27%)	(28.16%)		
Baseline	4.21	4.58	Controls	(23.38%) (25.44%)

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.) In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In

fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

Spellacy, F.; Wilkinson, R. (1987). Dichotic listening and hypnotizability: Variability in ear preference. Perceptual and Motor Skills, 64, 1279-1284.

28 right-handed, English-speaking Ss were administered the SHSS:C and a whole-word dichotic listening test, which was given in both waking and hypnotized states. Lows showed the usual right-ear advantage in both waking and hypnotized states. Highs showed a different pattern of ear advantage: half of them showed left-ear advantage in the waking state, but all showed right-ear advantage in the hypnotized state. Results are interpreted to show that for subjects of high hypnotizability the narrowed attention characteristic of hypnosis produces the expected lateralizing effect. Ss of low hypnotizability showed a consistent right-ear preference in both the hypnotized and nonhypnotized conditions. The results suggest that much of the atypical ear preference shown in dichotic listening experiments may be associated with the variability in cognitive states found in persons of high hypnotic susceptibility.

1985

Marks, N. J.; Onisiphorou, C. (1985). A controlled trial of hypnotherapy in tinnitus. Journal of Otolaryngology, **10**, 43-46.

#### NOTES

1:

14 patients with unilateral tinnitus were selected because of the constant nature of their tinnitus, and its resistance to all other forms of therapy. They were subjected to hypnosis in 3 forms in random order. The induction of a trance state alone formed the control arm of the trial. Compared to this were the effects of 'ego boosting' and active suppression of tinnitus whilst in a trance state. One of the 14 patients showed a highly significant response to the latter treatment as judged by visual analogue scales. Five of the 14 patients (35%) found the induction of a hypnotic state of value. This seemed to help them tolerate their tinnitus better, although its loudness and quality were unaltered.

1984

Hogan, Marjorie; MacDonald, John; Olness, Karen (1984). Voluntary control of auditory evoked responses by children with and without hypnosis. American Journal of Clinical Hypnosis, **27** (2), 91-94.

Reports ability of children to voluntarily change brainstem auditory evoked responses (BAER). Fifteen children were studied. Both control and hypnosis groups showed changes in interwave latencies after verbal suggestions when compared to a normal control group. These findings suggest that children may be able to modify peripheral auditory input into the brainstem through simple suggestion alone. Children in the formal hypnosis group did have more specific control for the task suggested. However, it is possible that children in the control group moved into an altered state of consciousness after listening to a taped story, reading a book, or spontaneously. They may have attained the observed changes in BAER while in a hypnosis-like state. This study encourages additional research in self-regulatory skills of autonomic processes in children.

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, **56**, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.

**Brattberg, G. (1983). An alternative method of treating tinnitus: Relaxation-hypnotherapy primarily through the home use of a recorded audio cassette. International Journal of Clinical and Experimental Hypnosis, 31 (2), 90-97.**

32 patients, variously diagnosed as suffering from tinnitus, were treated with hypnosis. Treatment consisted of a 1-hour consultation with the physician followed by 4 weeks of daily home practice while listening to an audio-tape recording of approximately 15 minutes duration. 22 of the patients treated learned in 1 month to disregard the disturbing noise, a considerable gain in the ratio of therapy to time required.

#### **NOTES**

1:

The audio tape was of a 15-minute hypnotherapy session done on the first office visit, so that the home practice was more or less the same as the first visit in office. "The hypnotherapy was aimed at inducing the patient into as relaxed a state as possible, and thereafter implanting the suggestion that the patient would no longer be troubled by the noise" (p. 93).

**Smyth, Larry D.; Lowy, Doug (1983). Auditory vigilance during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (2), 67-71.**

Attention during hypnosis was measured by means of auditory vigilance tasks which Ss performed while being administered the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Hypnotic responsivity was significantly and negatively correlated with Ss' performance of the tasks, indicating that relatively responsive Ss detected fewer extraneous environmental stimuli in the form of vigilance task signals than did the less responsive Ss. Discussion ensued as to how this apparent reduction in attention to environmental stimuli came about.

#### **1982**

**Macleod-Morgan, Crisetta; Court, John; Roberts, Russell (1982). Cognitive restructuring: A technique for the relief of chronic tinnitus. Australian Journal of Clinical and Experimental Hypnosis, 10 (1), 27-33.**

A combination of relaxation and imagery was used to teach an altered perception of their chronic tinnitus to a series of clients, for all of whom medical intervention had proved ineffective. Over a number of visits to the Flinders Psychology Clinic, the hum which had been troubling them became a cue for relaxation and peace. Thus, whenever they became aware of their tinnitus it came to be welcomed where prior to intervention it had been a constant irritant

#### **1980**

**Erickson, Milton H. (1980). Hypnotic alteration of sensory, perceptual and psychophysical processes. (2 ). New York: Irvington Publishers, Inc..**

## NOTES

1:

This second volume of four has five sections, with chapters as follows. I. Visual Processes

1. The hypnotic induction of hallucinatory color vision followed by pseudonegative afterimages (written with E. M. Erickson)
2. Discussion: Critical comments on Hibler's presentation of his work on negative afterimages of hypnotically induced hallucinated colors (written by E. M. Erickson)
3. The induction of color blindness by a technique of hypnotic suggestion
4. An experimental investigation of the hypnotic subject's apparent ability to become unaware of stimuli
5. The development of an acute limited obsessional hysterical state in a normal hypnotic subject
6. Observations concerning alterations in hypnosis of visual perceptions (written by E. M. Erickson)
7. Further observations on hypnotic alteration of visual perception (written by E. M. Erickson)
8. An investigation of optokinetic nystagmus
9. Acquired control of pupillary responses II. Auditory Processes
10. A study of clinical and experimental findings on hypnotic deafness: I. Clinical experimentation and findings
11. A study of clinical and experimental findings on hypnotic deafness: II. Experimental findings with a conditioned response technique
12. Chemo-anaesthesia in relation to hearing and memory
13. A field investigation by hypnosis of sound loci importance in human behavior III. Psychophysiological Processes
14. Hypnotic investigation of psychosomatic phenomena: Psychosomatic interrelationships studied by experimental hypnosis
15. Hypnotic investigation of psychosomatic phenomena: The development of aphasiatic reactions from hypnotically induced amnesias (written with R. M. Brickner)
16. Hypnotic investigation of psychosomatic phenomena: A controlled experimental use of hypnotic regression in the therapy of an acquired food intolerance
17. Experimentally elicited salivary and related responses to hypnotic visual hallucinations confirmed by personality reactions
18. Control of physiological functions by hypnosis
19. The hypnotic alteration of blood flow: An experiment comparing waking and hypnotic responsiveness
20. A clinical experimental approach to psychogenic infertility
21. Breast development possibly influenced by hypnosis: Two instances and the psychotherapeutic results
22. Psychogenic alteration of menstrual functioning: Three instances
23. The appearance in three generations of an atypical pattern of the sneezing reflex
24. An addendum to a report of the appearance in three generations of an atypical pattern of the sneezing reflex IV. Time Distortion
25. Time distortion in hypnosis, I (written by L. F. Cooper)
26. Time distortion in hypnosis, II (written with L. F. Cooper)

- 27. The clinical and therapeutic applications of time distortion
- 28. Further considerations of time distortion: Subjective time condensation as distinct from time expansion (written with E. M. Erickson) V. Research Problems
- 29. Clinical and experimental trance: Hypnotic training and time required for their development
- 30. Laboratory and clinical hypnosis: The same or different phenomena?
- 31. Explorations in hypnosis research (with a discussion by T. X. Barber, R. Dorcus, H. Guze, T. Sarbin, and A. Weitzenhoffer)
- 32. Expectancy and minimal sensory cues in hypnosis
- 33. Basic psychological problems in hypnotic research
- 34. The experience of interviewing in the presence of observers

1979

Bennett, Henry L.; Giannini, Jeffrey A.; Kline, Mark D. (1979, September). Consequences of hearing during general anesthesia. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

A double blind 2X2 study exposed 23 herniorrhaphy and cholecystectomy patients to either a 45 minute suggestion tape or to the actual sounds of the operation. Structured interviews conducted postoperatively assessed hypnotic susceptibility and regressed patients under hypnosis to operative events. Ten patients accurately recalled significant events from surgery but only under hypnosis. Recall was greater and more accurate in patients scoring high on the Stanford Clinical Hypnosis Scale. Fewest number of pain medications were given postoperatively to patients receiving the suggestion tape. Hernia patients showed better recall than gallbladder patients.

1977

Ryan, M. L.; Sheehan, Peter W. (1977). Reality testing in hypnosis - subjective versus objective effects. International Journal of Clinical and Experimental Hypnosis, 25, 27-51.

90 unselected Ss were assigned to a 2 x 3 (Request for Honesty x Suggestibility Instruction) factorial design to test the hypothesis that hypnotic Ss would show pronounced impairment of reality testing by expressing a degree of conviction substantially out of phase with their objective performance. Barber's operational model of hypnosis was adopted to test the prediction on an unusually distinctive auditory comprehension task. The 2 interdependent measures, confidence and accuracy, were highly positively related indicating that, generally speaking, hypnotic Ss performed adaptively, as did task motivated and control Ss. Results for the difficult aspects of the task were most distinctive. Here, degree of confidence about behavior as expressed by Ss who performed well on the suggestibility tests was relatively greater than the confidence expressed by those who performed poorly; further, hypnotic Ss were distinctively willing to respond on the least intelligible parts of the task. The inconsistent nature of certain features of hypnotic behavior was discussed in some detail.

Trustman, R.; Dubovsky, S.; Titley, R. (1977). Auditory perception during general anesthesia -- myth or fact. International Journal of Clinical and Experimental Hypnosis, 25 (2), 88-105.

Reports have appeared periodically in the literature indicating that surgical patients can hear and be influenced by remarks occurring while they are under general anesthesia. Much of the evidence has been obtained by postoperatively studying patients under deep hypnosis. The present article discusses the empirical status of this phenomenon, "auditory perception during anesthesia." 14 selected studies regarding auditory perception during general anesthesia were critically reviewed. All were found to have serious deficiencies as evidence for or against the occurrence of auditory perception during general anesthesia. Methodological and theoretical difficulties of conducting research into auditory perception during general anesthesia were discussed, and suggestions for future research were offered.

1976

Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations.

1968

Scheibe, Karl E.; Gray, Arne L.; Kleim, C. Stephen (1968). Hypnotically induced deafness and delayed auditory feedback: A comparison of real and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 16, 158-164.

PRELIMINARY RESEARCH INDICATES THAT HYPNOTICALLY INDUCED DEAFNESS MAY REDUCE THE SPEECH INHIBITING EFFECTS OF DELAYED AUDITORY FEEDBACK (DAF). REAL AND SIMULATING HYPNOTIC SS WERE COMPARED WITH RESPECT TO THE IMPROVEMENT IN SPEECH CONSEQUENT TO THE SUGGESTION OF DEAFNESS. RESULTS INDICATE VERY SIMILAR IMPROVEMENTS OF DAF SPEECH FOR BOTH GROUPS. AN INCIDENTAL FINDING IS THAT REAL SS HAD LONGER SIMPLE READING TIMES UNDER HYPNOSIS THAN DID

1954

Kline, Milton V.; Guze, Henry; Haggerty, Arthur D. (1954). An experimental study of the nature of hypnotic deafness: Effects of delayed speech feedback. Journal of Clinical and Experimental Hypnosis, 2 (2), 145-156.

NOTES

1:

The research subject was a 29 year old college student who was given delayed speech feedback in both the waking state and deeply hypnotized with suggestions of deafness. (Clinically, during hypnotic deafness he lacked the startle reflex in response to auditory stimuli and lost a conditioned response based on auditory stimulus.) Following the experimental procedures, the authors concluded:

"1. Delayed feed-back in the state of hypnotically induced deafness produces distinct impairment in speech performance. This impairment involves loss of motility, increased errors in enunciation and increasing impairment in proportion to increasing difficulty of vocabulary.

2. The speech impairment found in hypnotically induced deafness is very significantly less than the impairment found in waking feed-back performance.

3. The pattern of speech performance in hypnotic deafness shows a pattern very similar to that of non feed-back with respect to constancy of performance and the linear relationship between performance efficiency and difficulty of verbal stimuli.

4. Waking feed-back performance is significantly more variable and erratic than the non feed-back or hypnotic deafness series.

5. Hypnotic deafness does not appear to follow the same neurophysiological pattern as organic deafness with regard to auditory feed-back.

6. Hypnotic deafness does alter certain behavioral [sic] responses to audition and appears to alter the character and nature of hearing.

7. Hypnotically induced deafness would appear to represent a valid alteration of hearing function but not a state akin to organic deafness.

8. Hypnosis appears to be capable of altering feed-back mechanism of an auditory nature" (p. 155).

Malmo, Robert B.; Boag, Thomas J.; Raginsky, Bernard B. (1954). Electromyographic study of hypnotic deafness. Journal of Clinical and Experimental Hypnosis, 2 (4), 305-317.

NOTES

1:

The main purpose of the present study was to investigate the question of similarities and differences between hysterical deafness, previously studied, and hypnotically induced deafness. The study was designed to repeat the objective physiological tests previously carried out with a case of 'total hysterical deafness.' There was also the more general aim of securing objective data to enrich our general understanding of hypnosis.

"Similarities between hysteria and hypnosis which we observed may be listed as follows: (a) Significantly reduced motor reaction (exclusive of blink) to strong

auditory stimulation in the deaf state. (b) Complete hearing loss in the hysteric and in one of the hypnotic subjects, even with strong auditory stimulation (i.e., denial of any auditory sensation). (c) With elicitation of strong startle reaction to the first stimulus in the deaf state, much smaller reaction to the next stimulus than would have been predicted on the basis of habituation. (d) Suggestion of substitution of somesthetic for auditory sensations in all subjects (although this was much less definite in the hypnotic subjects than the hysteric).

"The most outstanding dissimilarity lay in the absence of emotional reaction when 'hypnotic defense against sound' was broken through, in contrast to marked affective reaction in the hysterical subject under these conditions.

"The question of inhibitory mechanisms in hysteria and hypnosis was discussed" (pp. 316-317).

Schneck, Jerome M. (1954). A hypnoanalytic investigation of psychogenic dyspnea with the use of induced auditory hallucinations and special additional hypnotic techniques. Journal of Clinical and Experimental Hypnosis, 2, 80-90.

This paper describes in detail and with discussion the hypnoanalytic session which was instrumental in relieving a patient of severe dyspnea and fatigue based on intense, long standing psychological conflict. The conflict entailed the intermingling of past concerns and current pressing problems. These had to do with the patient's long repressed feelings about having been told that her birth had been unplanned. They related to current indecision about becoming pregnant. Attitudes toward her parents were significant and these involved mixed feelings with the significance of her conscious and unconscious images of them. Into this picture there were projected the patient's attitudes toward herself and her methods of functioning somatically as well as psychologically. The symbolic connotation of her symptoms as deterioration and dying in relation to needs for self-destruction were clarified. The symptoms of one and a half to two years duration were dissipated within a few hours and improvement had been maintained for more than a year at the time of writing.

"The use of induced music associations in order to make inroads into the core of the conflict is described. The dynamic significance of spontaneous choice of such theme [sic] is discussed. Other hypnotic techniques involve visual imagery with dream-like qualities and in the form of scene visualizations (8, 9). Attention is centered on induced auditory hallucinations and interesting facets of such experiences are discussed in relation to subjective and objective qualities of such hallucinations and the issue of dynamic validity" (p. 90).

Schneck, Jerome M. (1954). An experimental study of hypnotically induced auditory hallucinations. Journal of Clinical and Experimental Hypnosis, 2, 163-170.

"Summary. An experimental study of hypnotically induced auditory hallucinations was incorporated into therapeutic contact with a patient at a time when an exploratory phase of treatment process seemed appropriate. The study was divided roughly into ten parts, nine of which involved attempts to induce hallucinations on

an auditory level following an initial control procedure involving 'imagined' conversation. Choice of persons to be hallucinated was made at times by the therapist and at times this was left for spontaneous development by the patient. Some of the episodes involved marked emotional participation by the patient. Others were less intense. 'Imagined' conversations were distinct from hallucinated comments. Her own voice when hallucinated emanated from within herself. Other hallucinated voices had external origins. Some were far away. Her aunt's voice was in the same room. Spatial and temporal elements were divorced from their conventional relationships and distorted in keeping with psychodynamic needs. The patient was able to discuss her experiences and evaluate certain descriptive and dynamic qualities. Certain parts of the total experience served as controls in the evaluation of other parts. The beginning of hallucinatory behavior did not set a pattern for continuous similar activity. Responsive behavior varied from time to time. A hallucinatory episode might be followed by an 'imagined' conversation, although instructions remained the same. Deceased persons were hallucinated on an auditory level. This type of episode with her mother had considerable emotional impact. Her aunt died twenty years ago. Her husband was not hallucinated. Responses involving her daughter showed greater complexity.

"Further studies are in order in connection with the neuropsychological and neurophysiological elements in such hypnotic hallucinatory activity. Such elements as they play a role in visual imagery as described here and in visual hallucinations are also to be examined further. Aside from extensions of the type of investigation presented here, inroads may be made into an understanding of spontaneous hallucinatory activity among psychotic patients through the utilization of hypnotic exploratory methods. This would have to be preceded by more extensive studies of hypnosis in relation to psychotic patients than have been attempted thus far. The procedure discussed here and many potential ramifications makes possible a wide variety of investigations which can be planned for the future" (pp. 169-170).

## **AUTOGENIC TRAINING**

**1999**

Wickramasekera, Ian (1999). How does biofeedback reduce clinical symptoms and do memories and beliefs have biological consequences? Toward a model of mind-body healing. *Applied Psychophysiology and Biofeedback*, 24 (2), 91-105.

Changes in the magnitude and direction of physiological measures (EMG, EEG, temperature, etc.) are not strongly related to the reduction of clinical symptoms in biofeedback therapy. Previously, nonspecified perceptual, cognitive, and emotional factors related to threat perception (Wickramasekera, 1979, 1988, 1998) may account for the bulk of the variance in the reduction of clinical symptoms. The mean magnitude of these previously nonspecified or placebo factors is closer to 70% when both the therapist and patient believe in the efficacy of the therapy. This powerful placebo effect is hypothesized to be an elicited conditioned response (Wickramasekera, 1977a, 1977c, 1980, 1985) based on the memory of prior healing. These memories of healing are more resistant to extinction if originally acquired on

a partial rather than continuous reinforcement schedule. High and low hypnotic ability in interaction with threat perception (negative affect) is hypothesized to contribute to both the production and reduction of clinical symptoms. High and low hypnotic ability respectively are hypothesized to be related to dysregulation of the sympathetic and parasympathetic arms of the autonomic nervous system. Biofeedback is hypothesized to be the most effective for reducing clinical symptoms in people of low to moderate hypnotic ability. For people high in trait hypnotic ability, training in self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

**1994**

Ter Kuile, Moniek M.; Spinhoven, Philip; Linssen, A. Corry G.; Zitman, Frans G.; et al. (1994). Autogenic training and cognitive self-hypnosis for the treatment of recurrent headaches in three different subject groups. *Pain*, 58 (3), 331-340.

The aims of this study were to (a) investigate the efficacy of autogenic training (AT) and cognitive self-hypnosis training (CSH) for the treatment of chronic headaches in comparison with a waiting-list control (WLC) condition, (b) investigate the influence of subject recruitment on treatment outcome and (c) explore whether the level of hypnotizability is related to therapy outcome. Three different subject groups (group 1, patients (n = 58) who were referred by a neurological outpatient clinic; group 2, members (n = 48) of the community who responded to an advertisement in a newspaper; and group 3, students (n = 40) who responded to an advertisement in a university newspaper) were allocated at random to a therapy or WLC condition. During treatment, there was a significant reduction in the Headache Index scores of the subjects in contrast with the controls. At post-treatment and follow-up almost no significant differences were observed between the 2 treatment conditions or the 3 referral sources regarding the Headache Index, psychological distress (SCL-90) scores and medication use. Follow-up measurements indicated that therapeutic improvement was maintained. In both treatment conditions, the high-hypnotizable subjects achieved a greater reduction in headache pain at post-treatment and follow-up than did the low-hypnotizable subjects. It is concluded that a relatively simple and highly structured relaxation technique for the treatment of chronic headache subjects may be preferable to more complex cognitive hypnotherapeutic procedures, irrespective of the source of recruitment. The level of hypnotic susceptibility seems to be a subject characteristic which is associated with a more favourable outcome in subjects treated with AT or CSH.

**1992**

Zitman, Frans G.; Van Dyck, Richard; Spinhoven, Philip; Linssen, A. Corrie G. (1992). Hypnosis and autogenic training in the treatment of tension headaches: A two-phase constructive design study with follow-up. *Journal of Psychosomatic Research*, 36, 219-228.

Tension headaches can form a chronic (very long duration) condition. EMG biofeedback, relaxation training and analgesia by hypnotic suggestion can reduce the pain. So far, no differences have been demonstrated between the effects of various psychological treatments. In a constructively designed study, we firstly compared an abbreviated form of autogenic training to a form of hypnotherapy (future oriented hypnotic imagery) which was not presented as hypnosis and secondly we compared both treatments to the same future oriented hypnotic imagery, but this time explicitly presented as hypnosis. The three treatments were equally effective at post-treatment, but after a 6- month follow-up period, the future oriented hypnotic imagery which had been explicitly presented as hypnosis was superior to autogenic training. Contrary to common belief, it could be demonstrated that the therapists were as effective with the treatment modality they preferred as with the treatment modality they felt to be less remedial.

## NOTES

1:

An earlier review by these authors found that EMG biofeedback and relaxation training were equally effective with headache [Zitman, 1983, Biofeedback and chronic pain, In *Advances in Pain Research and Therapy* (Edit by Bonica, Lindblom, Iggo) V. 5, pp 794-809. N. Y.: Raven Press]. Other authors also found that hypnotic suggestion, EMG biofeedback and EMG biofeedback plus progressive relaxation training were equally effective [Schlutter, Golden, Blume, 1980, A comparison of treatments for prefrontal muscle contraction headache. *Br J. Med Psychol*, 53, 47-52.]. The authors raise the question whether any treatment element or perhaps combination of elements can enhance a basic relaxation training procedure, with respect to chronic headache.

The first phase of this research compared autogenic training (AT) and future oriented hypnotic imagery (FI) which was not labeled as hypnosis. Results were the same for both groups, and were reported earlier [van Dyck, Zitman, Linssen et al. *International Journal of Clinical and Experimental Hypnosis*, 1991, 39, 6-23]. The current study added a third group which received future oriented hypnotic imagery but also was told that they were getting hypnosis (FI-H). Thus the AT and FI groups were 'historical' comparison groups for the FI-H group in this study.

Patients were described as having headache complaints of at least 6 months (76% had been suffering for >2 years), were over 18 years old, had no drug dependence and no psychiatric disorder, and no previous therapy with autogenic training or hypnosis; no other treatment during the project; fluent in Dutch.

The autogenic training consisted of six exercises learned in a fixed order. The FI method, in which the hypnotized patient imagines himself in a future, pain-free, situation, had been described by Milton Erickson [1954, Pseudo-orientation in time as a hypnotherapeutic procedure. *JCEH*, 2, 261-283]. For that future situation the investigators used descriptions that the patients provided. Both kinds of intervention taught patients muscular and mental relaxation. Both methods required home practice of the technique, using audio cassettes.

In order to substantiate the labeling of the hypnotic procedure as hypnotic future oriented imagery (FI-H) "hand levitation induction was employed during session two with the purpose of inducing positive expectancies concerning hypnosis as a

procedure capable of changing ordinary experiences in an unexpected way [17]. This hand levitation procedure, however, was not presented on tape. Except for the labeling as hypnosis and the hand levitation induction, the hypnotic future oriented imagery procedure was identical to the future oriented imagery procedure in the first phase" (p. 221).

Treatment lasted for 8 weeks and provided 2 1/2 hours of therapist and 24 1/2 hours of home training with taped instructions. The outcome measures included: 1. Budzinsky-type headache index (mean daily sum of intensity rating for each hour of headache activity recorded during 3 separate days of the week of an assessment session) 2. State Anxiety 3. Zung-type Self-rating Depression Scale 4. Perceived credibility of treatment (4 Question's developed by Borkovec & Nau using a visual analogue scale) 5. Neuroticism from the CPI

**RESULTS.** Of 96 patients who agreed to participate, 17 dropped out before the post-treatment assessment. Of the remaining 79, 28 completed AT treatment, 27 FI, and 24 FI-H. Sixty-six attended the follow-up assessment; there were no dropouts from the FI-H, and the drop-outs were equally divided between the AT and FI condition. The headache index scores were logarithmically transformed because the distribution was positively skewed.

Using ANOVA, in terms of post-treatment scores, there were no significant main effects for therapist or treatment, nor were there any significant interaction effects when analyzing headache index, state anxiety, and depression. There was a significant main effect for Time for three outcome measures: headache index score, state anxiety, and depression.

Post-treatment, neither amount of medication used nor subjective estimates of headaches differed by treatment or by therapist. However, over time there were beneficial results for both treatment groups. "Patients rated their headaches as significantly reduced compared to pre-treatment (a mean pain reduction of 40%). ...they had significantly reduced their use of analgesic medication (a mean decrease of 14%)" (p. 224).

Using ANOVA, in terms of follow-up scores, again there were no significant main effects for Treatment or Therapist on the outcome measures of headache index, state anxiety, or depression. There now were three time periods (pre-, post-, and follow-up), and once again there was significant main effect for Time for headache index (though not for state anxiety). That is, people benefitted over the time of the treatment and follow-up. Moreover, there was a significant interaction effect between Therapy and Time on the headache index measure. "A posteriori contrasts revealed that the patients from the FI-H condition showed a greater reduction in their headaches between pre-treatment and follow-up than patients from the AT condition" (p. 225).

The authors write in their Discussion, "Our data indicate that at least in tension headache patients, defining a procedure explicitly as hypnotherapy may not lead to greater effects at post-treatment, but does lead to longer lasting effects" (p. 226).

"The paucity of differences between the three conditions may be a consequence of the study design: the small number of patients and the large SD may have prevented the detection of more differences in effect between the three conditions" (p. 226).

"Other critical remarks are related to the difference in headache reduction at follow-up between AT and FI-H. Firstly, the differences at follow-up were found only with respect to the headache index and not with respect to the subjective estimate of the pain. Secondly, in defining future oriented hypnotic imagery explicitly as hypnosis, we hoped to enhance the efficacy via increased credibility. We found increased efficacy, but we did not find enhanced credibility. Therefore, the differences in effect at follow-up must have another cause. The different effects at follow-up could be linked to the fact that the FI-H condition was the only one without drop-outs. This absence of drop-outs was due to a new research assistant who tried extraordinarily hard to make the patients return for follow-up. By doing so, she may have prevented the patients who gained much from the treatment from dropping out as well as those who gained little" (p. 226-227).

"In this study, despite the differences in therapists' preferences, both therapists were equally effective with all three treatments. This is an intriguing finding which goes against the belief commonly held by clinicians that therapists are more effective with the type of therapy they prefer" (p. 227).

"The effects were modest, but it must be kept in mind that most of our patients referred by a neurologist were chronic headache sufferers (76% had been suffering for > 2 yr). In such a group of patients even small effects are important, especially when these effects are long-lasting" (p. 227).

#### 1991

Van Dyck, Richard; Zitman, Frans G.; Linssen, A. Corry G.; Spinhoven, Philip (1991). Autogenic training and future oriented hypnotic imagery in the treatment of tension headache: Outcome and process. International Journal of Clinical and Experimental Hypnosis, 39, 6-23.

The aim of the present study was (a) to investigate the relative efficacy of autogenic training and future oriented hypnotic imagery in the treatment of tension headache and (b) to explore the extent to which therapy factors such as relaxation, imagery skills, and hypnotizability mediate therapy outcome. Patients were randomly assigned to the 2 therapy conditions and therapists. 55 patients (28 in autogenic therapy and 27 in future oriented hypnotic imagery condition) completed the 4 therapy sessions and 2 assessment sessions. Patients were to practice at home. No significant main effect or interaction effects for treatment condition or therapist was revealed. A significant effect for time in analyzing scores for headache pain, pain medication usage, depression, and state anxiety was found. In the self-hypnosis condition, pain reduction proved to be associated with depth of relaxation during home practice (as assessed with diaries) and capacity to involve in imagery (as assessed with the Dutch version of the Creative Imagination Scale). After statistically controlling for relaxation and imagery, hypnotizability scores (assessed by Stanford Hypnotic Clinical Scale) were significantly correlated with ratings of pain reduction. Results are discussed in the context of the neo- dissociation and social-cognitive models of hypnoanalgesia. The clinical relevance and the methodological shortcomings of the present study are also critically assessed.

## NOTES

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" Unexpectedly, pain reduction occurring in AT [autogenic training] appears to be brought about by different means than in hypnotic treatment. Not only imagery skills and hypnotizability, but also level of relaxation were unrelated to pain reduction achieved during AT. Since the first two therapy sessions of AT and hypnosis were identical and in both treatment conditions patients are explicitly instructed to relax, the absence of a relationship between depth of relaxation and pain reduction in AT cannot be easily explained" (p. 19).

1988

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

1987

Meyer, von H. K.; Diehl, B. J. M.; Ulrich, P.; Meinig, G. (1987). Kurz- und langfristige Änderungen der kortikalen Durchblutung bei Autogenem Training[Short and long-term changes in cortical circulation caused by autogenic training]. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 33 (1), 52-62.

The well-known hyperfrontal pattern of hemispheric blood flow measured with 133-Xenon is not found in 12 healthy resting men who have been practicing Autogenic Training at least six months. This might indicate a long-term decrease in the level of activation. Successfully practiced exercises of Autogenic Training lead to an increased blood flow in the Rolandic area representing the body scem (sic) and to a decreased blood flow in regions related to acoustical attention and to autonomic functions. Left hemispheric cerebral blood flow is lower in rest. The relative activation of the left hemisphere during Autogenic Training is discussed.

Ulrich, P.; Meyer, H. J.; Diehl, B.; Meinig, G. (1987). Cerebral blood flow in autogenic training and hypnosis. Neurosurgery Review, 10, 305-307. (Abstracted in American Journal of Clinical Hypnosis, 1989)

In 12 healthy volunteers with at least an experience of 6 months in autogenic training (AT), the cerebral blood flow (CBF) was measured at rest, in AT, and in hypnosis (H). The results were correlated with individual test profiles. The cortical flow pattern at rest of our AT-trained volunteers did not show the hyperfrontality which is described in the literature. This may be interpreted as an effect of better and habitualized relaxation in long-trained AT practitioners. This flow pattern corresponds to the low grades of neuroticism and aggressivity found in the tests. Furthermore, an activation in central cortical areas and a deactivation in regions which are associated with acoustic and autonomous functions occur. Possible explanations for these phenomena as well as for the relatively low perfusion of the left hemisphere at rest and activation in AT are discussed. The global rise of CBF in Hypnosis may be an activation effect caused by resistance against the hypnotizer: the deeper the trance, the smaller the catalepsy of the right arm and in temporal cortical fields processing acoustic inputs.

1986

Lehrer, Paul M.; Woolfolk, Robert L.; Goldman, Nina (1986). Progressive relaxation then and now. In Davidson, Richard J.; Schwartz, Gary E.; Shapiro, David (Ed.), Consciousness and self regulation: Advances in research and theory (4, ). New York: Plenum Press.

NOTES

1:

Reviews changes that have occurred in progressive relaxation training and their effects. The authors conclude:

"Jacobson's original progressive relaxation technique differs from the types of progressive relaxation used by many current practitioners in a number of fundamental respects. Jacobson emphasized relaxation as a method of learning to control one's excess muscle tension 24 hours per day. In his mind, progressive relaxation was not a method by which something is done\_ to\_ a person. Rather, it is a method by which the individual learns to control his or her own body. Jacobson, therefore, rejected the use of suggestion and of various biofeedback instruments and conditioning techniques that may induce relaxation during a training session. Empirical evaluations of most elements of the two progressive relaxation techniques have not yet been done. Thus, although many studies have compared progressive relaxation with a number of hypnotic, cognitive, and combined somatic-cognitive techniques, no one has dismantled the progressive relaxation technique Jacobson's or modified versions, in order to study the exact contribution of suggestion or cognitive interventions to the modified progressive relaxation technique, or of teaching one muscle at a time. The evidence reviewed above, however, does lead us to hypothesize that Jacobson's original technique would be relatively more effective in producing lasting somatic changes, whereas the revised technique might be more effective in producing cognitive changes or even short-term somatic changes. If

these hypotheses are borne out, we predict that for many applications in behavioral medicine Jacobson's original technique will be found to be preferable. This will be especially true for those disorders which cannot be assessed by asking the patient how he or she feels but must be evaluated physiologically (e.g., hypertension and various cardiac arrhythmias, where the patient may sometimes even feel worse when the problem is controlled than when it is not).

"In the 'big picture' of therapy, of course, the distinctions between the two techniques may be overshadowed by such overriding issues as whether relaxation therapy is even relevant for the individual. We have extensively discussed this issue elsewhere (Woolfolk & Lehrer, 1984b) but we reemphasize here that we see relaxation training as a specific method for overcoming definable problems and not as a panacea nor as a way of life. Nevertheless, we believe that the various approaches to the progressive relaxation technique are sufficiently different, both in practice and in philosophy, that we would do well to evaluate these differences in a rigorous fashion" (Lehrer, Woolfolk, Goldman 209- 210).

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

1985

Stumpfe, Von Klaus-Dietrich (1985). Psychosomatic reactions of near-death experiences. A state of affective dissociation. Zeitschrift fur Psychosomatische Medizin, 31, 215-225.

The feelings of persons who had encountered life-threatening danger were analyzed and compared with the feelings of persons, who are in hypnoses or trained in autogenic training. The symptoms are widely alike. The result of the comparison is, that there exists a state of affective dissociation, which can be caused by conscious or unconscious actions.

1984

Krenz, Eric W. (1984). Improving competitive performance with hypnotic suggestions and modified autogenic training: Case reports. American Journal of Clinical Hypnosis, 27, 58-63.

Although traditionally trainers of athletes have emphasized physiological refinements for the optimal performance of complex motor skills, research has revealed that heightened levels of stress and anxiety may adversely affect performance. As a result, many athletic training programs, taking into consideration the complex interrelationship of the mind and the body, include "mental training" in an attempt to reduce the negative effects of excess stress. These programs have incorporated various psychological interventions such as post hypnotic suggestions, sensory conditioning, and mental imagery and rehearsal. Modified Autogenic Training, a teaching model based on Standard Autogenic Training, synthesizes the strengths of hypnotic techniques to achieve optimal athletic performance. Athletes trained in these concepts can manage unexpected incidences during competition. The concepts of Modified Autogenic Training are described and four case studies are reported.

1982

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

NOTES

1:

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...

"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).

The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.

"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).

"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).

## 1978

Raikov, V. L. (1978). Specific features of suggested anesthesia in some forms of hypnosis in which the subject is active. International Journal of Clinical and Experimental Hypnosis, 26 (3), 158-166.

Experiments are reported in which highly hypnotizable Ss while imagining themselves, during hypnosis, to be cosmonauts with "jammed legs" in a space capsule did not feel an unannounced needle prick that pierced the skin. Control

experiments with nonhypnotizable, professional actors showed that imagination alone was unsuccessful in producing this result. Additional experiments using autogenic training showed that the autogenic training alone, without analgesia training, did not alleviate the pain but may have reduced the anxiety connected with the pain; further training involving analgesia reduced the felt-pain as well. Theoretical discussion stresses the importance of attention, imagination, and orientation for experiencing analgesia as well as the added and decisive role played by the modifications of consciousness brought about in deep hypnosis.

1975

Cowings, Patricia S. (1975, September). Observed differences in learning ability of heart rate self-regulation as a function of hypnotic susceptibility. [Paper] Presented at the 3rd Congress of the International College of Psychosomatic Medicine, Rome.

Three groups of eight men and women were given personality tests and were taught to control their own heart rates. Experimental group I and the control group had low hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale), and subjects in experimental group II had high hypnotic susceptibility. The experimental groups received autogenic therapy and biofeedback, while the control group was given biofeedback only. Subjects who received autogenic therapy and biofeedback performed better than the control group. Significant differences, however, were found in all psychological test scores between high and low hypnotic susceptibles.

## AUTOMATIC NERVOUS SYSTEM

1999

Rainville, P.; Carrier, B.; Hofbauer, R. K.; Bushnell, M. C.; Duncan, G. H. (1999). Dissociation of sensory and affective dimensions of pain using hypnotic modulation. Pain, 82 (2), 159-171.

Understanding the complex nature of pain perception requires the ability to separately analyze its psychological dimensions and their interaction, and relate them to specific variables and responses. The present study, therefore, attempted to selectively modulate the sensory and affective dimensions of pain, using a cognitive intervention, and to assess the possible relationship between these psychological dimensions of pain and changes in physiological responses to the noxious stimuli. In three experiments, normal subjects trained in hypnosis rated pain intensity and pain unpleasantness produced by a tonic heat-pain stimulus (1-min immersion of the hand in 45.0-47.5 degrees C water). Two experiments were designed to test hypnotic suggestions to decrease (Experiment one (Section 2.5.1)), or increase and decrease (Experiment two (Section 2.5.2)) pain affect. Suggestions in Experiment three (Section 2.5.3) were directed towards an increase or decrease in pain sensation. In Experiments one and two (Sections 2.5.1 and 2.5.2), the significant modulation in pain unpleasantness ratings was largely independent of variations in perceived pain intensity. Moreover, in Experiment two (Section 2.5.2), there was a significant correlation between the stimulus-evoked heart-rate increase and ratings

of pain unpleasantness, but not of pain intensity, suggesting a direct functional interaction between pain affect and autonomic activation. In Experiment three (Section 2.5.3), suggestions to modulate the sensory aspect of pain produced significant modulation of pain intensity ratings, with secondary changes in pain unpleasantness ratings. Hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale form A) was specifically correlated to pain unpleasantness modulation in Experiment two (Section 2.5.2) and to pain intensity modulation in Experiment three (Section 2.5.3), suggesting that this factor relates to the primary process toward which hypnotic suggestions are directed. The specific pain dimension on which hypnotic suggestions act depends on the content of the instructions and is not a characteristic of hypnosis itself. Results are consistent with a successive-stage model of pain perception (e.g. Wade JB, Dougherty LM, Archer CR, Price DD. Assessing the stages of pain processing: a multivariate analytical approach. *Pain* 1996;68:157-167) which provides a conceptual framework necessary to study the cerebral representation of pain perception.

Abstract from National Library of Medicine, PubMed

1998

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. *Pain*, 75 (1), 85-92.

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

Abstract from National Library of Medicine, PubMed

Wickramasekera, Ian E.; Kolm, Paul; Pope, Alan; Turner, Marsha (1998). Observation of a paradoxical temperature increase during cognitive stress in some chronic pain patients. Applied Psychophysiology and Biofeedback, 23 (4), 233-241.

A total of 224 chronic pain somatoform disorder patients without obvious pathophysiology or psychopathology were found to have colder hands than nonpatients. A paradoxical temperature increase (PTI) in response to a cognitive stressor (mental arithmetic) was noted in a subset of these chronic pain patients. Patients were defined as "PTI" responders if, during cognitive stress, an increase in digital temperature occurred over a prior eyes closed resting condition. It was found that 49.4% of males and 42.6% of females in a total sample of 224 patients demonstrated PTI. The PTI patients had significantly colder hands than non-PTI patients prior to stress. A concurrent SCL measure of sympathetic activation found no difference between the PTI and non-PTI groups either at baseline or during cognitive stress. It appears from this data that PTI is specific to the peripheral vascular system of these patients and may be a marker of psychophysiological dissociation or trauma blocked from consciousness.

1995

Enqvist, Bjorn; von Konow, L.; Bystedt, H. (1995). Pre- and perioperative suggestion in maxillofacial surgery: Effects on blood loss and recovery. International Journal of Clinical and Experimental Hypnosis, 43 (3), 284-294.

The basic assumption underlying the present study was that emotional factors may influence not only recovery but also blood loss and blood pressure in maxillofacial surgery patients, where the surgery was performed under general anesthesia. Eighteen patients were administered a hypnosis tape containing preoperative therapeutic suggestions, 18 patients were administered hypnosis tapes containing pre- and perioperative suggestions, and 24 patients were administered a hypnosis tape containing perioperative suggestions only. The patients who received taped suggestions were compared to a group of matched control patients. The patients who received preoperative suggestions exhibited a 30% reduction in blood loss. A 26% reduction in blood loss was shown in the group of patients receiving pre- and perioperative suggestions, and the group of patients receiving perioperative suggestions only showed a 9% reduction in blood loss. Lower blood pressure was found in the groups that received pre- and perioperative and perioperative suggestions only. Rehabilitation was facilitated in the group of patients receiving perioperative suggestions only.

Olness, Karen N.; Lee, Lai (1995, November). Effects of self-induced mental imagery on autonomic reactivity in children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

1:

NOTES: One study that shows an IgA increase with hypnotic suggestion has been replicated and is in press.

The present study emerges from work using hypnosis with biofeedback. Morgan's work with athletes has suggested the relationship between imagery and physiological activation. This has been observed clinically but not heretofore documented.

We are not using formal hypnosis. Each child was asked to think about being in a quiet place, doing exciting activities, baseline, etc. The children exhibited no neurological disorders, cognitive dysfunction, nor were they on medications at time of the study.

We confirmed our clinical experience: there was an increase in pulse rate when imagery changed to activity. Skin temperature continued to go up during the period (despite imagery of being active like being on roller coaster). Skin conduction went down during baseline. EDA [electrodermal activities] was higher during active imagery.

How do average daily thinking processes impact on autonomic changes over long periods of time? Do these changes affect cardiovascular status?

Clinically we observed that some children are more labile in different modalities, and under stress they react more in that system.

**1994**

DeBenedittis, Giuseppe; Cigada, Mario; Bianchi, Anna; Signorini, Maria Gabriella; Cerutti, Sergio (1994). Autonomic changes during hypnosis: A heart rate variability power spectrum analysis as a marker of sympatho-vagal balance. International Journal of Clinical and Experimental Hypnosis, 42 (2), 140-152.

Spectral analysis of beat-to-beat variability in electrocardiography is a simple, noninvasive method to analyze sympatho-vagal interaction. The electrocardiogram is analyzed by means of an automatic, autoregressive modeling algorithm that provides a quantitative estimate of R-R interval variability by the computation of power spectral density. Two major peaks are recognizable in this specter: a low-frequency peak (LF, -0.2 Hz), related to the overall autonomic activity (ortho + parasympathetic) and a high-frequency peak (HF, -0.25 hz), representative of the vagal activity. The LF/HF ratio is an index of the sympatho-vagal interaction. This technique was applied, using a computer-assisted electrocardiograph, to 10 healthy volunteers (6 high and 4 low hypnotizable subjects as determined by the Stanford Hypnotic Susceptibility Scale, Form C) in randomized awake and neutral hypnosis conditions. Preliminary results indicated that hypnosis affects heart rate variability, shifting the balance of the sympatho-vagal interaction toward an enhanced parasympathetic activity, concomitant with a reduction of the sympathetic tone. A positive correlation between hypnotic susceptibility and autonomic responsiveness during hypnosis was also found, with high hypnotizable subjects showing a trend toward a greater increase of vagal efferent activity than did low hypnotizables

**1993**

Harris, Ruth M.; Porges, Stephen W.; Carpenter, Myrna E. Clemenson; Vincenz, Lilli M. (1993). Hypnotic susceptibility, mood state, and cardiovascular reactivity. American Journal of Clinical Hypnosis, 36 (1), 15-25.

In this study we explored the relationship between hypnotic susceptibility measured with the Harvard Group Scale of Hypnotic Susceptibility (HGSHS) and cardiovascular parameters. After assessing their degree of hypnotic susceptibility, we induced 21 female students into happy mood states and into sad mood states. During the mood state induction we monitored blood pressure, heart rate, and cardiac vagal tone continuously. The study demonstrated a strong relationship between hypnotic susceptibility and both cardiac vagal tone and heart rate reactivity. Subjects with lower heart rate and greater vagal tone during baseline and greater heart rate increases during mood induction were more susceptible to hypnosis. Multiple regression analyses indicated that approximately 40% of the individual difference variance of hypnotic susceptibility was accounted for by baseline cardiac vagal tone and heart rate reactivity during mood state. The data demonstrate that autonomic tone, assessed by cardiac vagal tone and heart rate reactivity, are related to hypnotic susceptibility as measured by the HGSHS. - Journal Abstract

1992

Gainer, Michael J. (1992). Hypnotherapy for reflex sympathetic dystrophy. American Journal of Clinical Hypnosis, 34, 227-232.

Reflex sympathetic dystrophy (RSD) is an unusual, debilitating, chronic pain syndrome thought to be the result of a continuous excessive discharge of regional sympathetic nerves. Supportive and stress-reduction psychotherapies are commonly recommended as adjunctive treatments. Biofeedback is a more direct symptomatic treatment. Although hypnotherapy is effective in altering sympathetic reflex and pain responses, there are no reports of its use for the treatment of RSD. This article reviews some promising results of hypnotherapy with three RSD sufferers. I discuss the role of hypnotherapy as a supportive adjunct to medical treatment. I also explore the possible role of hypnotherapy as a complementary treatment.

NOTES

1:

"Hypothetically, RSD represents a continuous excessive discharge of the regional sympathetic nerves. Such discharge normally occurs in response to an injury. In RSD this reflex response is unremitting despite the cessation or absence of an external stimulus" (p. 227).

The psychosomatic aspects of RSD are highly disputed. Some studies suggest a relationship between RSD and various psychopathological conditions. Also proposed is a predisposing character type, sometimes termed 'Sudeck personality' ... patients who are generally anxious, inactive, and hypertensive. ... Others cite chronic pain as the cause, not the result, of certain 'typical' behavior patterns and emotional responses (Abram, 1990; Ecker, 1984)" (p. 228).

"Reports of four cases described RSD treatment with temperature biofeedback. These studies suggest that the patients learned to warm the affected limb through increasing cutaneous circulation. The temperature change was associated with decreased regional sympathetic activity and decreased pain. Complete remission of symptoms is reported in three of these cases; significant improvement is reported in the fourth" (p. 228).

"Abram (1990) reported that in two independent studies the incidence of RSD was 6.3% and 10.7% of patients admitted to pain clinics" (p. 228).

"I hypothesized that hypnotic interventions could facilitate a decrease in local sympathetic nervous discharge. This would result in vasodilation and warming of the affected limb, decreased spasticity, and decreased pain. The following is a report of the effective treatment of three RSD cases with hypnotherapy" (p. 228).

Case #1. "The eventual resolution of her RSD symptoms was due, in part, to resolution of psychodynamic conflicts. ... She had a grade-four profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). In later sessions she readily demonstrated superior hypnotic capacity, achieving such phenomena as spontaneous amnesia, negative hallucination, and somnambulism" (p. 229).

Case #2. ... "She had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978) Because of the success with the first patient, I used visualization techniques initially. ... She responded more readily to kinesthetic and tactile suggestions. ... These interventions produced dramatic improvement in the RSD symptoms" (p. 230).

Case #3. ... "He had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). He was readily able to use visualization techniques. He was able to affect dramatic temperature changes (8-10 degrees F) by visualizing 'warm' vacation scenes and imagining the feeling of the 'warm sun' on the affected limb" (p. 231).

DISCUSSION mentioned, "The patients presented in this report were all highly motivated and demonstrated an above-average to superior hypnotic capacity. Despite the obvious limitations of such a selective sample, the actual treatment results support the initial hypothesis. The treatment results of these three cases indicate that hypnotherapy can be an adjunctive treatment to alleviate pain. Moreover, these results indicate that hypnotherapy can be a complementary treatment in RSD.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Spanos, Nicholas P.; Brice, Peter; Gabora, Natalie J. (1992). Suggested imagery and salivation in hypnotic and non-hypnotic subjects. Contemporary Hypnosis, 9, 105-111.

Salivation was measured in 100 subjects on both a baseline and post-test trial. Subjects in hypnotic, relaxation, and suggestion alone treatments were asked to imagine tasting a lemon during the post-test trial. Subjects in the suggestion alone and relaxation treatments exhibited significant baseline to post-test increments in salivation and, on the post-test trial suggestion alone subjects exhibited greater salivation than either hypnotic subjects or no treatment controls. Neither hypnotizability nor imagery vividness correlated significantly with suggestion-induced increments in salivation.

#### NOTES

1:

"Our findings, like those of numerous earlier studies (reviewed by White, 1978) indicate that instruction to imagine food substances enhance salivation. The fact that imagery-alone instructions were more effective in this regard than hypnotic imagery instructions was unexpected, but this finding is certainly consistent with the large body of evidence which indicates that hypnotic procedures are no more effective than non-hypnotic procedures at enhancing responsiveness to suggestions. Moreover, the present findings, along with those concerning wart regression (Spanos et al., 1988), contradict the hypothesis that hypnotic procedures are particularly effective at enhancing responsiveness to suggestion when the target response is not under direct voluntary control.

"The reasons for the superiority of the imagery-alone treatment to the hypnotic treatment at inducing saliva production remain unclear. Subjects in the three treated groups reported equivalent levels of suggested imagery vividness and, therefore, differences on that variable could not have mediated treatment differences in the amount salivated. On the post-test trial the two treatments that received relaxation instructions (hypnosis and relaxation groups) failed to differ significantly from controls in amount salivated, whereas imagery alone subjects did differ from controls in this respect. Perhaps high levels of relaxation produce a slight inhibition of salivation which at least partly offsets the enhancement produced by suggested imagery. This hypothesis is, of course, highly tentative, and the finding of somewhat less salivation in groups administered relaxation instructions requires replication before further speculation is warranted.

"The finding that controls exhibited a significant decrease in salivation was also unexpected, and the reason for this finding remains unclear.

"Neither the Betts QMI nor any of the hypnotizability indexes correlated significantly with the suggestion induced increments in salivation. On the one hand, these findings are consistent with those of previous studies, which reported no relationship between imagery and/or hypnotizability and suggestion-induced changes in target responses that were not under subjects' direct control (e.g. Surman et al., 1973; Swirsky-Sacchetti & Margolis, 1986; Spanos et al., 1988). On the other hand, our results failed to replicate White's (1978) finding of a significant correlation between suggestion-induced salivation and Betts QMI scores. Our study

differed from that of White (1978) in several important respects. White asked subjects to imagine several foods which they preferred to differing degrees. Significant differences in salivation for subjects classified as high, medium or low on the QMI were found only when subjects imagined preferred foods. Furthermore, subjects classified as high and medium on the QMI tended to salivate to similar degrees when imagining preferred foods, but salivated more under these conditions than low QMI scorers. In the present study all subjects imagined the same food stimulus regardless of preference, and subjects were not selected for extreme scores on the QMI. These differences between our study and that of White (1978) may account for our failure to obtain a significant relationship between QMI scores and imagery-induced salivation" (p. 109).

**1991**

Van Der Kolk, Bessel; Van Der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. American Imago, 48, 425-454.

Describes the work of Janet concerning narrative versus traumatic memory, dissociation, and subconscious fixed ideas. Janet (1904) believed PTSD patients suffer from a phobia for the traumatic memory. Repression and dissociation are distinguished. Contemporary concepts of memory processing and the concept of schemas are then reviewed. Finally, a model is presented about how the mind freezes some memories. Evidence for the involvement of autonomic hyperarousal, triggering, and state dependent learning in PTSD is reviewed. They conclude that helplessness and the inability of the PTSD victim to take action (psychological and physical immobilization) facilitates dissociation. Includes practical ideas for the working through of trauma.

NOTES

1:

p. 443 "Traumatic memories are triggered by autonomic arousal ... and are thought to be mediated via hyper-potentiated noradrenergic pathways originating in the locus coeruleus of the brain... The locus coeruleus is the 'alarm bell' of the central nervous system, which properly goes off only under situations of threat, but which, in traumatized people, is liable to respond to any number of triggering conditions akin to the saliva in Pavlov's dogs. When the locus coeruleus alarm gets activated, it secretes noradrenaline, and, if rung repeatedly, endogenous opioids. These, in turn, dampen perception of pain, physical as well as psychological (van der Kolk et al. 1989). These neurotransmitters which are activated by alarm affect the hippocampus, the amygdala and the frontal lobes, where stress-induced neurochemical alterations affect the interpretation of incoming stimuli further in the direction of 'emergency' and fight/flight responses" (p. 443).

**1990**

Ader, Robert; Felton, David; Cohen, Nicholas (1990). Interactions between the brain and the immune system. In Cho, Arthur K.; George, Robert; Blaschke, Terrence (Ed.), null (30, pp. 561-602). Palo Alto, CA: Annual Reviews Inc..

NOTES:

**"Without attempting to cover all the literature, we have used stress effects and conditioning phenomena as illustrations to point out that behavior can influence immune function. We have also described data indicating that the immune system can receive and respond to neural and endocrine signals. Conversely, behavioral, neural, and endocrine responses seem to be influenced by an activated immune system. Thus, a traditional view of immune function that is confined to cellular interactions occurring within lymphoid tissues is insufficient to account for changes in immunity observed in subhuman animals and man under real world conditions.**

**"These data question seriously the notion of an autonomous immune system. ... The immune system is, indeed, capable of considerable self-regulation, and immune responses can be made to take place in vitro. The functions of that component of adaptive processes known as the immune system that are of ultimate concern, however, are those that take place in vivo. There are now compelling reasons to believe that in vivo immunoregulatory processes influence and are influenced by the neuroendocrine environment in which such processes actually take place ... . The immune system appears to be modulated, not only by feedback mechanisms mediated through neural and endocrine processes, but by feedforward mechanisms as well. The immunologic effects of learning, an essential feedforward mechanism, suggest that, like direct neural and endocrine processes, behavior can, under appropriate circumstances, serve an immunoregulatory function in vivo. Conceptually, the capacity to suppress or enhance immune responses by conditioning has raised innumerable questions about the normal operation and modifiability of the immune system via neural and endocrine processes.**

**"We do not yet know the nature of all the channels of communication between the brain and the immune system or the functional significance of the neural and endocrine interrelationships that have been established....**

**"This integrated circuitry has extensive ascending and descending connections among the regions cited. These regions also share many similarities. They are sites intimately involved in visceral, autonomic, and neuroendocrine regulation. The cortical and limbic forebrain regions mediate both affective and cognitive processes and may be involved in the response to stressors, in affective states and disorders such as depression, in aversive conditioning, and in the emotional context of sensory inputs from the outside as well as the inside world. From an immunologic perspective, these regions are the sites in which lesions result in altered responses of cells of the immune system; they are the regions that respond to immunization or cytokines by altered neuronal activity or altered monoamine metabolism; and they are the regions that possess the highest concentration of glucocorticoid receptors and link some endocrine systems with neuronal outflow to the autonomic and neuroendocrine systems. Thus, this circuitry is the major system of the CNS suspected to play a key role in responding to immune signals and regulating CNS outflow to the immune system" (pp. 587-589).**

**1989**

**Kramer, Richard L. (1989). The treatment of childhood night terrors through the use of hypnosis - a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37 (4), 283-284.**

Night terrors are nocturnal episodes of intense autonomic arousal which are manifested by loud shouting or screaming in terror. The sufferer is not awake and is generally completely amnesic for the episodes. Night terrors and other sleep disturbances, such as somnambulism, are disorders of arousal (Broughton, 1968; Fisher, Kahn, Edwards, & Davis, 1973; Guilleminault, 1987). A 10-year-old white male was treated for a 6-year-long bout of night terrors. The hypnotic induction consisted of the finger lowering technique where the middle 2 fingers were raised and the individual was asked to watch the fingers as they "go to sleep." He was given suggestions for dropping off to sleep gradually and for rotating cycles of sleep. The regularity and continual movement of the cycles of sleep were emphasized. He was also given direct suggestions for not dropping too quickly into an extremely deep stage of sleep. He has not had a recurrence of night terrors since that time (approximately 2 years). Psychodynamic issues are discussed as is the need for further research.

**1987**

**Meyer, von H. K.; Diehl, B. J. M.; Ulrich, P.; Meinig, G. (1987). Kurz- und langfristige Änderungen der kortikalen Durchblutung bei Autogenem Training[Short and long-term changes in cortical circulation caused by autogenic training]. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 33 (1), 52-62.**

English Summary. The well-known hyperfrontal pattern of hemispheric blood flow measured with 133-Xenon is not found in 12 healthy resting men who have been practicing Autogenic Training at least six months. This might indicate a long-term decrease in the level of activation. Successfully practiced exercises of Autogenic Training lead to an increased blood flow in the Rolandic area representing the body scem (sic) and to a decreased blood flow in regions related to acoustical attention and to autonomic functions. Left hemispheric cerebral blood flow is lower in rest. The relative activation of the left hemisphere during Autogenic Training is discussed.

**Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, 7-8.**

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10

on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

#### NOTES

1:

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0. Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

#### 1986

Olness, Karen N. (1986, March). Hypnotherapy in children: New approach to solving common pediatric problems. Postgraduate Medicine, 79 (4), 95-105.

Hypnotherapy, once thought of as magical and mysterious, is rapidly becoming accepted as an appropriate form of treatment for a wide range of disorders. Some primary care physicians are beginning to discover the value of hypnotherapy in controlling chronic disease and pain, in changing negative behavior, and in facilitating self-regulation of autonomic responses. Dr. Olness explores such use of hypnotherapy in children, the age-group that most readily acquires self-hypnosis skills and in which this technique has had dramatic results.

Omer, Haim; Friedlander, Dov; Palti, Zvi (1986). Hypnotic relaxation in the treatment of premature labor. Psychosomatic Medicine, 48, 351-361.

Hypnotic relaxation was used as an adjunct to pharmacologic treatment with 39 women hospitalized for premature contractions in pregnancy. The control group received medication alone and consisted of 70 women. Treatment was started at the time of hospitalization and lasted for 3 hr on the average. Patients were also given cassettes with a hypnotic - relaxation exercise for daily practice. The rate of pregnancy prolongation was significantly higher for the hypnotic - relaxation than for the medication-alone group. Infant weight also showed the advantage of the hypnotic - relaxation treatment. Background variables of the two groups were compared and it was shown that they could not have explained the treatment effect obtained.

Wickramasakera, Ian (1986). A model of people at high risk to develop chronic stress-related somatic symptoms: Some predictions. Professional Psychology: Research and Practice, 17, 437-447.

Certain measurable high-risk factors that predispose people to develop functionally based somatic disorders are identified. These risk factors compose a multidimensional model that encompasses variables involved in the predisposition, the precipitation, and the buffering of stress-related symptoms. These high-risk factors are (a) high or low hypnotic ability, (b) habitual catastrophizing cognitions and pessimistic belief systems, (c) autonomic lability or neuroticism, (d) multiple major life changes or multiple minor hassles over a short period of time, and (e) a deficit in support systems or coping skills or both.

1985

Tranel, Daniel; Damasio, Antonio R. (1985, June). Knowledge without awareness: An autonomic index of facial recognition by prosopagnosics. Science, 208 (4706), 1453-1454.

Prosopagnosia, the inability to recognize visually the faces of familiar persons who continue to be normally recognized through other sensory channels, is caused by bilateral cerebral lesions involving the visual system. Two patients with prosopagnosia generated frequent and large electrodermal skin conductance responses to faces of persons they had previously known but were now unable to recognize. They did not generate such responses to unfamiliar faces. The results suggest that an early step of the physiological process of recognition is still taking place in these patients, without their awareness but with an autonomic index.

1984

Conn, Lois; Mott, Thurman, Jr. (1984). Plethysmographic demonstration of rapid vasodilation by direct suggestions: A case of Raynaud's Disease treated by hypnosis. American Journal of Clinical Hypnosis, 26, 166-170.

Raynaud's Disease is a painful vasospastic disorder of the fingers and toes precipitated by cold or emotional stimuli. Treatment has usually included protection from cold stimuli and vasodilators. Biofeedback, imagery, relaxation, and hypnosis have also been used. The relationship between response to treatment and hypnotizability has been inconclusive. A case of Raynaud's Disease was treated using hypnosis. The patient was highly hypnotizable and responded rapidly to direct suggestion with a fourfold increase in her blood volume. The implications of this rapid response and its relationship to hypnotizability are discussed with suggestions for further studies.

NOTES

1:  
The authors review experimental literature on the usefulness of hypnosis in modifying peripheral circulation, finding both positive (Barabasz and McGeorge, 1978, Roberts, Kewman, and MacDonald, 1973) and negative (Peters, Lundy, and

Stern, 1973; Black, Edholm, Fox, and Kidd, 1963) outcomes. Experiments relating outcome to hypnotizability also have positive (Block, Levitsky, Teitelbaum, and Valletta, 1977) and negative (Crosson, 1980; Roberts et al, 1973) results.

Clinical literature found that peripheral circulation could be influenced (Crasilneck & Hall, 1975; Norris & Huston, 1956; Jacobson et al., 1973) but none of those studies reported the hypnotizability of the patients. In the Crasilneck and Hall (1975) investigation, 60% of their 48 Raynaud's patients experienced marked improvement in symptoms or remission.

Hypnotizability has been investigated with respect to biofeedback results, finding both no relationship (Holroyd et al., 1982) and a positive relationship (Andreychuk and Skriver, 1975).

In this investigation, the highly hypnotizable (Stanford Hypnotic Susceptibility Scale, Form A, score = 11) female patient was treated with hypnosis when the blood vessels in her hands were constricted. Either she had arrived at the office with poor circulation, or a Raynaud's attack was induced with ice water. Hypnosis involved progressive relaxation followed by suggestions to visualize the blood vessels in her hand opening up, the blood warming and nourishing her hands. "With each beat of your pulse your hand becomes warmer as more blood reaches your fingers. It is as though you are lying in the warm sun. Try to visualize the blood vessels in your hand opening up...." (P. 168).

The patient was asked to use self hypnosis and a cassette of the office session twice a week between sessions, but in fact she either failed to practice or did the exercise once between weekly sessions.

With neutral hypnosis (no specific suggestions about circulation) there was little change in pulse volume; with suggestions to open up her blood vessels, there was an increase in blood volume that began within 20 seconds, reaching four times the baseline in 45 seconds. This increase was reproduced in later sessions, and a somewhat lesser degree of change could be produced with self hypnosis.

In their Discussion, the authors question whether the positive results depend on someone who is high in hypnotizability, and/or on someone with a labile vascular system. They refer to a model of biological information processing to explain how suggestions might have been incorporated by the patient. "Bowers (1977) has speculated that hypnotized patients process information in a way different from when they are not hypnotized. He presents a number of different studies which have shown a significant relationship between hypnotizability and treatment response in patients with illnesses with a clear cut physiological component, including asthma, warts, and ichthyosis. He then speculates that 'suggestions delivered to deeply hypnotized subjects can be transduced into information that is somatically encodable, thereby producing a selective and specific impact on body function and structure.' This kind of processing of information could explain the very rapid response described in the patient presented here.

"In reviewing the cases in which blistering has been produced by hypnotic suggestion, Chertok (1981) states, 'It therefore clearly emerges that these experiments have all been conducted with highly hypnotizable subjects, including a very large proportion of true somnambulists. Inversely, there is not a single

known case where a blister has been produced without the subject having been deeply hypnotized beforehand" (p. 169).

1983

Braun, Bennett G. (1983). Psychophysiological phenomena in multiple personalities and hypnosis. American Journal of Clinical Hypnosis, 26 (2), 124-137.

NOTES

1:

"Conclusion. As can be seen from the above example, the final common pathway, physiologic expression, which is seen in multiple personality is not bizarre when compared with physiologic changes achieved in non-multiples using hypnosis or, in certain cases, non-multiples without the use of hypnosis. A form of hypnosis/autohypnosis\* may be a common denominator. The neurophysiologic changes shown by Putnam et. al. (1982), but not observed by Coons (1982), may well have a similar explanation. The question of the neurophysiologic effect of hypnotic suggestion has not as yet been studied with appropriate controls or safeguards.

"That multiples do show significant changes in their psychophysiological response patterns cannot be denied. To consider that the psychophysiological changes of multiple personality are so rare or different as to make multiples 'freaks' is not only a disservice to them, but to medical science, since it blocks thinking. The study of multiple personality will further our understanding, theorizing, and treatment of mental and physical illness" (p. 134). "\*These terms are being used here in the generic sense" (p. 134).

1980

Bauer, K. E.; McCanne, T. R. (1980). Autonomic and central nervous system responding during hypnosis and simulation of hypnosis. International Journal of Clinical and Experimental Hypnosis, 28 (2), 148-163.

Heart rate, electrodermal responding, respiratory rate, frontalis muscle tension, and occipital electroencephalographic activity were monitored while 6 female Ss were experiencing hypnosis and while 6 other female Ss simulated the experience of hypnosis. Physiological data were collected during 7 sessions on 7 consecutive days. The results indicated no differences in physiological responding between hypnotized and simulating Ss. Both groups of Ss exhibited significant decreases in heart rate and amount of electroencephalographic alpha activity during their experiences, relative to pre- and posthypnotic or simulating levels. In addition, both groups of Ss exhibited significant increases in electroencephalographic beta activity during their experiences. Both groups of Ss also displayed lowered levels of electrodermal activity, skin conductance, and respiratory rate during their experiences. The changes in these modalities, however, were significant for hypnotized Ss, but were generally not significant for simulating Ss. Both groups of Ss also manifested lowered levels of muscle responding during their experiences, but these changes in responding were not significant for either group of Ss. The results are discussed in terms of several current theories of the nature of the hypnotic experience.

1975

Cowings, Patricia S. (1975, September). Observed differences in learning ability of heart rate self-regulation as a function of hypnotic susceptibility. [Paper] Presented at the 3rd Congress of the International College of Psychosomatic Medicine, Rome.

Three groups of eight men and women were given personality tests and were taught to control their own heart rates. Experimental group I and the control group had low hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale), and subjects in experimental group II had high hypnotic susceptibility. The experimental groups received autogenic therapy and biofeedback, while the control group was given biofeedback only. Subjects who received autogenic therapy and biofeedback performed better than the control group. Significant differences, however, were found in all psychological test scores between high and low hypnotic susceptibles.

1974

Bloom, Richard F. (1974). Validation of suggestion-induced stress.

NOTES

1:

Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1957

Schneck, Jerome M. (1957). Hypnoanalytic observations on the psychopathology of fainting. Journal of Clinical and Experimental Hypnosis, 5 (4), 167-171. (Abstracted in Psychological Abstracts 62: 3 II 67S)

NOTES

1:

"Summary

Varieties of fainting have been described as hysterical syncope, vasodepressor syncope, and carotid sinus reactions, among others. Fainting has been linked in general with personality problems, emotional instability, and immaturity. It has been called a mechanism for blocking of ego functions in its role of primitive defense against overwhelming stimuli. The present paper gives in greater detail the specific dynamics in a patient with fainting episodes. A crucial event incorporating major dynamic ingredients was an operative procedure in childhood. The psychological

impact of this trauma was revived during a spontaneous hypnotic regression. The personality matrix significant for this patient in relation to the fainting episodes consisted of passive, masochistic submission to a dominant, highly influential mother whose pressure was felt by the patient as pervasive and stifling. Circumstances associated psychologically with this feeling apparently triggered the fainting reactions. As he matured through the years and cast off increasingly this type of maternal influence, the tendency toward fainting reactions diminished" (p. 170).

1956

Bigelow, Newton; Cameron, G. H.; Koroljow, S. A. (1956). Two cases of deep hypnotic sleep investigated by the strain gauge plethysmograph. Journal of Clinical and Experimental Hypnosis, 4 (4), 160-164.

NOTES

1:

"Two subjects, studied by means of a strain gauge plethysmograph, have shown greater changes in the peripheral pulse and the finger volume during deep hypnosis than they did immediately before or after. In the absence of external stimuli, the presence and the degree of such changes reflect the activity of the autonomic nervous system. This result suggests that in hypnosis the inhibiting tendency of the cortex on the autonomic nervous system is reduced or nullified" (p. 164).

1955

Stolzenberg, Jacob (1955). Clinical application of hypnosis in producing hypno-anesthesia control of hemorrhage and salivation during surgery. A case report. Journal of Clinical and Experimental Hypnosis, 3 (1), 24-27.

NOTES

1:

The patient was a 14 year old male with an impacted mandibular left first molar. A series of surgical interventions were required to remove granulation tissue, overlying bone, and fibrotic tissue prior to orthodontic procedures. Hypnoanesthesia and suggestions to stop bleeding and salivating were successfully employed. In fact "It was noticeable with the last two procedures that spontaneous dryness occurred without any suggestion by the operator" (p. 26).

1952

West, Louis Jolyon; Niell, Karleen C.; Hardy, James D. (1952). Effects of hypnotic suggestion on pain perception and galvanic skin response. A. M. A. Archives of Neurology and Psychiatry, 68, 549-560.

A study is reported in which pain perception and galvanic skin responses of seven subjects were measured before and during hypnosis. The depths of hypnotic trance varied from light to deep. Stimuli of measured intensity were administered, and changes in pain threshold were measured. Quantitative estimates of pain intensity were made by the subjects. Alterations in ability to discriminate between pains of differing intensities were noted. Quantitative records of galvanic skin responses

were utilized, permitting statistical analysis of data from matched pairs. Data were collected at 45 experimental sessions, during which a total of 478 painful stimuli were administered, the stimuli varying in intensity from threshold to blister-producing levels. At each session, the subject's sensations from and responses to stimuli during a control period were compared with sensations from and responses to identical stimuli administered after hypnotic suggestions of anesthesia. The following observations were made: 1. Hypnotic suggestions of anesthesia influence pain perception by causing elevation of pain threshold, hypalgesia, and analgesia. 2. When hypnotic suggestions of anesthesia caused hypalgesia and elevation of pain threshold, ability to discriminate among stimuli of different intensities was impaired. 3. There was a general correlation between the depth of hypnotic trance and the degree to which pain perception was altered by hypnotic suggestion. 4. The galvanic skin response to noxious stimulation was diminished, and it sometimes disappeared, as a result of hypnotic suggestions of anesthesia. The galvanic skin response was affected even when there was no alteration in pain perception, according to subjective reports.

**NOTES:** The authors review literature on the effects of analgesia suggestions on the galvanic skin response and other autonomic nervous system responses. The present study differs from previous studies in the following ways: "1. The subjects were studied in various stages of hypnosis. 2. Quantitatively determined noxious stimuli were used instead of pinching or pinprick. 3. Changes in pain threshold were measured. 4. Quantitative estimates of pain intensity were made by the subject in the hypnotized and the un hypnotized state. 5. Changes in ability to discriminate between pains of differing intensity were noted. 6. Quantitative records of galvanic skin responses in the control and in the hypnotized state were utilized" (p. 552).

Analgesia was defined as "that state in which none of the noxious stimuli administered were reported as painful;" hypalgesia was defined as "a state in which noxious stimuli were reported as less painful than would be expected on the basis of reports of the same subject regarding the same stimuli in control situations" (p. 554).

In their Discussion, the authors state, "As a result of hypnotic suggestions of anesthesia, the following effects on sensation were observed: (1) no alteration in reports of pain intensity; (2) hypalgesia for higher-intensity stimuli without elevation of the pain threshold; (3) definite elevation of pain threshold with hypalgesia; (4) analgesia; (5) disturbances in pain discrimination.

" The third effect was observed in the majority of trials. The threshold elevation in light trances may be similar to that which can be produced by suggestion in the un hypnotized subject, but in deeper trances the effectiveness of hypnotic suggestion is much greater. The progression of effects 1 through 4 appears to be directly related to the depth of trance. The fifth effect was variable and was seen only in conjunction with the third effect. It is described as a separate phenomenon because the disturbance of ability to discriminate relatively between stimuli of differing intensities was only clearly observed when we were remeasuring pain thresholds. In actuality, it may merely represent a facet of altered pain perception, and the variability of its appearance may be related to the variable psychological state of the

subject. It must be kept in mind that the hypnotic trance is not a static state" (p. 558). For one Subject, analgesia decreased in successive hypnotic sessions, while for four Subjects analgesia increased; a sixth Subject exhibited overall variability in hypnotic depth and analgesia from session to session.

The authors indicate that their review of the literature found no evidence that hypnosis, absent suggestions for analgesia, affects the galvanic skin response. In the present study, diminishment of the GSR is related to, though not dependent on, the effectiveness of the suggestion of anesthesia. "Thus, in Subject 2, with only moderate hypalgesia, the GSR to noxious stimuli was diminished by 64%; in S 6, with analgesia on nearly all trials, only 57%. It is particularly interesting that S 1 had a reduction in GSR of 26% after hypnotic suggestions which apparently had no effect upon his pain perception, and which seemed even to make him anxious. S 5 showed a direct correlation between depth of trance and decrease of GSR while Subjects 6 and 7 showed no such correlation" (p. 559).

"It is important to realize that on some occasions hypnotic anesthesia apparently led to complete disappearance of the GSR to all stimuli during a given session, such stimuli evoking pain of 6 or 7 dols in the control period. This phenomenon was seen twice with Subject 3, twice with Subject 5, and once with Subject 6. In several trials there was only a very slight GSR to the higher stimuli during hypnosis. In all the control periods there was only one occasion on which a stimulus evoking pain of 6 or 7 dols failed to produce a GSR, while equally intense stimulation failed to produce a GSR on 14 occasions after hypnotic suggestions of anesthesia. This observation is stressed because it suggests a need for caution in the clinical use of the GSR to distinguish organic from hysterical anesthetics" (pp. 559-560).

## **B RESEARCH**

### **Body Image**

**1989**

**Van Denberg, Eric J.; Kurtz, Richard M. (1989). Changes in body attitude as a function of posthypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 37, 15-30.**

Hypothesized that highly hypnotizable subjects who remained amnesic for posthypnotic suggestions to improve body attitude would show greater changes than subjects who were not amnesic. Subjects given simulating instructions were used as a comparison group to assess experimental demands. 48 females were screened with the Harvard and assigned to one of 4 conditions: (a) high hypnotizable with amnesia suggestions, (b) high hypnotizable without suggested amnesia, (c) low hypnotizable simulator with amnesia, and (d) low hypnotizable simulator without suggested amnesia. A fifth group was formed of those high hypnotizable subjects who remembered the suggestion despite instructions to the contrary. The Body Attitude Scale (Kurtz, 1966) was administered prior to and 3 days after the experimental suggestions. Results generally demonstrated that high hypnotizable amnesic subjects manifested the greatest attitudinal and phenomenological changes as a

result of the posthypnotic suggestion, although conclusions were tempered by performance of simulating subjects. The implications for hypnosis research and clinical practice are discussed.

**NOTES:**

"The hypothesis that hypnotized subjects would report greater positive changes in affect, self-esteem, and social functioning than simulators was tested using a brief structured questionnaire. An analysis of Subjects responses to the questionnaire while with the 'blind' research assistant (simulators in role) revealed number significant differences between groups (N = 48) on six of the seven questions. ... An analysis of Subjects' responses to the questionnaire while being debriefed by the primary investigator (simulators out of role) revealed significant differences among groups (N = 48) on three of the seven questions. ... High hypnotizable subjects with maintained amnesia demonstrated a strong tendency to be the most responsive of all groups of subjects on the first and second assessment. In contrast, the high hypnotizable Ss for whom amnesia 'broke down' reported the fewest phenomenological changes of any of the five groups during the first assessment, and comparatively few during the second assessment. Also of note is that once out of their role, simulators in both conditions dramatically reduced their reporting of positive change" (pp. 23-24).

"Moreover, a closer examination of the data demonstrated that phenomenological and behavioral differences in the groups did appear at several points during the experiment. For example, the 10 high hypnotizable subjects told to explicitly remember the suggestion did so, while 3 of the 10 simulators in this condition claimed to have forgotten it. On debriefing, these Subjects reported they did this because they believed 'really hypnotized subjects wouldn't be able to remember anything, even if they were told they could.' Further, no simulator in the amnesia condition reported they could recall the suggestion, in contrast to the high hypnotizable subjects, 44% of whom said they did remember it. With regard to phenomenological differences, simulators stated during debriefing with the primary investigator that they intentionally faked changes on BAS, and that they experienced no true effects from the suggestion for positive body attitude change. In contrast, high hypnotizability amnesic subjects reported global, pervasive changes in their mood and self-esteem that went beyond specific alterations in attitudes toward their appearance. By comparison, high hypnotizable subjects told to remember the suggestion reported greatly increased self-absorption and acute awareness of the suggestion, 'sort of like a broken record in my head'" (pp. 25-26).

"As shown by the present study, amnesia maintenance can be quite problematic. Of 18 high hypnotizable subjects for whom amnesia was suggested, only 10 remained fully amnesic for the suggestion after 3 days. In addition, those 8 subjects for whom amnesia 'broke down' showed minimal shifts on BAS, or in reports of phenomenological changes. Such frequent amnesia failure has been reported by other researchers, although the effectiveness of the suggestion is not always so compromised" (p. 26).

Barabasz, Marianne (1987). Trichotillomania: A new treatment. International Journal of Clinical and Experimental Hypnosis, 35 (3), 146-154.

The details of easily replicable interventions using hypnosis and restricted environmental stimulation therapy in the treatment of 4 cases of trichotillomania are presented. Hypnosis or hypnosis combined with brief restricted environmental stimulation appeared to be effective in 3 of the 4 cases. Factors affecting treatment outcomes are discussed.

#### NOTES

1:

Patients were given practice with hypnosis and also restricted environmental stimulation sessions to maximize response to hypnotic suggestions, as previous research indicated that only highly hypnotizable people responded to hypnotherapy for trichotillomania. The treatment itself consisted of simple posthypnotic suggestions, as "You will be acutely aware whenever you put your hand to your head, then it is entirely up to you, you have the power, the control, no one else, no habit controls you. You can pull your hair if you want to or you can choose to control the habit" (p. 149).

#### 1984

Gross, Meir (1984). Hypnosis in the therapy of anorexia nervosa. American Journal of Clinical Hypnosis, 26, 175-181.

Hypnosis was used successfully in treating 50 patients suffering from anorexia nervosa. Hypnotherapeutic intervention is most effective in treating such symptoms of this disorder as hyperactivity, distorted body image, failure of interoceptive awareness, feelings of inadequacy, perfectionist tendencies, and resistance to therapy.

Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

#### 1965

**Halpern, Seymore (1965). Body-image symbols of repression. International Journal of Clinical and Experimental Hypnosis, 13 (2), 83-91.**

Hypnointrospection, a method of hypnoanalysis which emphasizes self-perception during voluntary immobilization, is of demonstrable value in the elucidation of the problem of body-image. Hypnointrospective fragments of a case history showing the reorganization of the body-image during therapy are presented. The sequence of body-image phenomena is interpreted as an expression of attitudinal compromises among conflicting wishes implemented through neuromuscular channels. The continuous reorganization of the physical self as perceived by the patient during hypnointrospective analysis appears to be of significance for a general theory of body-image. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

**Fisher, S. (1963). Body image and hypnotic response. International Journal of Clinical and Experimental Hypnosis, 11, 152-162.**

This study had 2 principal objectives: (a) To test the hypothesis that hypnotizability is negatively related to the definiteness of the individual's body image boundary, as measured by barrier and penetration scores derived from the Rorschach. (b) To ascertain what body image experiences are characteristic of the hypnotic state. Hypnotizability was evaluated with the Stanford Hypnotic Susceptibility Scale. In the male group only, hypnotizability was negatively correlated with boundary definiteness. Depersonalization proved to be the most characteristic body image change. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1953**

**Guze, Henry (1953). Posture, postural redintegration and hypnotherapy. Journal of Clinical and Experimental Hypnosis, 1, 76-82. (Abstracted in Psychological Abstracts 53: 6559)**

**SUMMARY.** The use of postural analysis, and directives regarding posture and their importance in hypnotherapy are discussed. Theoretically, it is indicated that a chronic postural condition may act to elicit an emotional state with which it was originally associated. Such an emotional condition may have caused the posture in the first place, and then established a feed-back relationship with it. The breaking of feed-back mechanisms of this kind depends largely upon postural change when a chronic situation is established in the absence of realistic cause for the emotion. Posture may also act redintegratively, when directly suggested, in rearousing traumatic memories. Several clinical cases are reported.

**Brain**

**1995**

**Barabasz, Arreed F.; Barabasz, Marianne; Jensen, Stacia (1995, November). Effects of hypnosis on cortical event-related potentials during visual and olfactory hypnotic**

**hallucinations.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES:** Slotnick and London showed that different wording of suggestions led to very different results, which explains why our study on negative hallucinations and Spiegel's study had opposite results.

This study is still ongoing. Screened for highs who passed visual and olfactory hallucinations and lows who passed only motoric items on hypnotizability tests. Trained Ss with eyes open induction, and lows had instructions to simulate hypnosis. (Used the eyeroll induction, eyes open.)

Did waking administration of alternating checkerboard pattern on computer screen. Then did eyes open hypnotic induction plus a depth check to make sure they were deep (assign number; then instructed raise a finger when you double it; then again, raise a finger when you double it). Then used checkerboard design again.

Obstructive visual hallucination - "imagine traveling through space, a dark nebula" (better than imagining you are blind. Lows had no difference in waking, obstructive hallucination, and negative hallucination. The highs did--looks like they had to see it before they couldn't see it. "The dark nebula envelopes you completely, and now you can see nothing."

De Pascalis, Vilfredo (1995, November). **Psychophysiological correlates of hypnosis and hypnotic susceptibility.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES**

**STUDY 1 and STUDY 2.**

They recorded 40-Hz EEG temporal density (35-45 Hz band) from the left and right temporo-parietal-occipital scalp regions in four emotional conditions (gladness, happiness, fear, and anger). When measures were made in the waking state, for Highs, during positive emotions they found increase in left and right hemisphere activity compared with resting condition. During fear and anger there was reduction in the left hemisphere and an increase in the right, but for some subjects no left hemisphere change.

Low hypnotizables did not show large or reliable differences across emotions. With the hypnotic state, they found the trend was even greater for Highs.

Jasiukaitis, Paul; Spiegel, David (1995, November). **Relateralizing hypnosis, or have we been barking up the wrong hemisphere?.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES**

The association between the right hemisphere and hypnotizability dates to the Gurs and Bakan; and to Hilgard and Morgan who developed a measure based on EEG power spectrum. Results from the body of research using alpha are conflicting. De Pascalis, 1988, also couldn't show a large alpha difference between hemispheres.

Research on hypnotic hallucination with Pribram found Highs in a visual obstruction condition reduced P200 and P300; there was a slightly greater response

at O2 than O1 EEG leads, leading us to think it was maybe a Right hemisphere task. But it was a foveal stimulus.

We tested with hemifield stimuli, blocking perception of 1/2 of the visual monitor; had them do the obstruction hallucination. P200 had the greatest reduction, with stimuli presented on the left. With obstruction of left visual field, we got little response. So ERP results were greater in right visual field (left hemisphere). This suggests the earlier observation was predominantly due to left, not right, hemisphere influence.

Martha Farah's work on imagery is instructive. Also Steve Kosslyn. The Right hemisphere answers "Where" do you see something. The Left answers "What is it you see?" The left hemisphere generates image patterns that match what you see. When you ask people to generate an image, the activity is in O1 area. Also, patients with left hemisphere damage can't generate images; callosotomy patient also gave evidence. Many inductions use generation of images (left occipital and temporal regions). So when asking subjects to generate a hallucinated image blocking the screen, they are using that area.

The cortex can serve as an amplifier or a suppressor of response. In earlier study of somatosensory potential we observed bigger response when asking person to be more aware of pain. The cortex has an arousal system. There are two relevant systems in the brain (see Posner)--posterior and anterior. Hypnotizability is correlated with a metabolite of dopamine, which is associated with the anterior system which is dopaminergic.

Tucker & Williamson, in article in Psychological Review, 1984, write that activation is "the determination of information control by previous, stored internal representations" as opposed to arousal which is the "determination by novel [missed words...]"

Kinsbourne, in Consciousness and Contemporary Science, 1988. wrote that if at any time a hemisphere works like an automaton, it is the left hemisphere. With R. Davidson, he has shown the left hemisphere elevates affect, the right depresses it. Many people report that hypnosis is a pleasurable thing to do, maybe because it elevates mood.

One obstacle to this formulation is the idea that the left hemisphere governs logical thought.

We may disturb the relationship between words and images in hypnosis; you start to manipulate images and passively receive words, so that language is now a passive, receptive experience and images are active (instead of the usual pattern of actively using words and passively using images).

## 1994

Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs)

possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics. Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Crawford, Helen J. (1994). Brain systems involved in attention and disattention (hypnotic analgesia) to pain. In Pribram, Karl H. (Ed.), Origins: Brain and self organization (pp. 661-679). Hillsdale, NJ: Lawrence Erlbaum Associates.

Data are reviewed from regional cerebral blood flow, EEG, and somatosensory event-related potential (SERP; both scalp and intracranial) studies of attention to and disattention (hypnotic analgesia) of painful stimuli to provide further evidence for two neurophysiological systems of pain involving the cortex: (1) the epicritic, sensory system of pain associated with the parietal, posterior region, and (2) the protocritic, distress, comfort-discomfort system of pain associated with the far fronto- limbic region. Studies of neurophysiological changes accompanying suggested hypnotic analgesia support the hypothesis that the executive controller of the far frontal cortex, via the far fronto-limbic attentional system, acts as a gate against the ascent of painful stimuli into conscious awareness by 'directing' downward the inhibition of incoming somatosensory information coming from the thalamic region. In hypnotically responsive individuals who could eliminate the perception of pain, reviewed studies demonstrated increased regional cerebral blood in the frontal and somatosensory regions, shifts in hemispheric dominance of EEG theta power, differential surface SERP topographical patterns in the anterior and posterior regions of the brain, and reduction of the intracranial SERP P160 waveform in the gyrus cingulus.

#### NOTES

Paradoxically, there may be physiological reactivity to pain stimuli while the hypnotized Subject reports they are not consciously aware of pain. Posner's proposal of two different attentional systems may account for why there is physiological reactivity concurrent with lack of awareness of pain. Posner suggested that the posterior brain is involved with engaging and disengaging attention while the anterior brain is involved in attention for action or effortful attention. "Thus, the posterior region is involved in space and time, the epicritic processes, whereas the anterior region is involved in comfort- discomfort, the protocritic processes (Pribram, 1991)" (p. 665).

In parallel, there appear to be two systems of pain involving the cortex, as revealed in positron emission tomography research. Also relevant is clinical data showing that "removal of the frontal or cingulate cortex in patients with intractable pain leads to the amelioration of distress while not eliminating sensory pain (Bouckoms, 1989)" (p. 665).

The author proposes a neuropsychophysiology of hypnotic analgesia based on Hilgard's (1986) neodissociation theory of hypnosis, together with Pribram and McGuinness' (1975, 1992) attention model. In this view, "Hilgard's executive control system is the far frontal cortex 'directing' the inhibition of incoming painful stimuli" (p. 666) after determining that the somatosensory signal is 'irrelevant.'

"Highly hypnotizable individuals ('highs') have greater attentional and disattentional abilities than low hypnotizable individuals ('lows'). ... Recent neuroimaging techniques (PET, SPECT, CBF) that assess regional brain metabolism have found no differences in waking conditions between low and highly hypnotizable individuals, but have consistently reported that only highs show increased cerebral blood flow during hypnosis, suggestive of enhanced cognitive effort (Crawford, Gur et al., 1993; Halama, 1989; Meyer, Diehl, Ulrich, & Meinig, 1989; Walter, 1992)" (p. 666).

The hippocampus appears to be involved as a gating mechanism in selective attention (Crowne, Konow, Drake & Pribram, 1972; Isaacson, 1982, Isaacson & Pribram, 1986; R. Miller, 1991; Pribram, 1991; Arnolds et al., 1980) This gating function may be promoted "through a cortico-hippocampal relay [that] transmits information by theta wave modulation and Hebbian synaptic modification so that there is selective disattention" (p. 667). The author suggests that hypnotic pain control may involve directing attention away from pain sensory signals.

Highly hypnotizable people generate more EEG theta than low hypnotizables whether they are hypnotized or not, and Crawford (1990) observed marked hemispheric shifts in theta when highs (but not lows) were attempting to control pain with hypnosis.

This paper reports on preliminary results of SERP studies of people given hypnotic analgesia suggestions to reduce electric shock stimulus evoked pain. The results were analyzed individual by individual, because group data obscured pronounced shifts in SERP patterns (e.g. habituation rates differed among Subjects). For highs, the SERP tended to be reduced, and the lower amplitudes were observed as early as the N100-P200 components. This did not occur for low hypnotizables.

Different kinds of mechanisms may be operative for high hypnotizables, however. "In over half of the high hypnotizable subjects the far frontal region (Fp1, Fp2) showed strong arousal during attention to pain, but during hypnotic analgesia there was a flattening out of the SERPs to the point they are hard to measure. By contrast, the more posterior SERPs (including F3 and F4), while reduced in amplitude, were still evident. The other half of highs showed little SERP activity in the far frontal region in either attend or disattend conditions, but substantial reductions of SERPs at all locations during hypnotic analgesia" (p. 670). Additionally, some of the highs evidenced a contingent negative variation (CNV) or a late 400-500 msec negativity in the far frontal region, which author is inclined to interpret as "a preparation for a response or for an inhibition of a response" (p. 670).

Case studies of two patients with intracranial electrodes and scalp electrodes recording SERPs are presented in support of the experimental data. The two female patients were diagnosed with obsessive compulsive disorder; one was highly hypnotizable and one was not. They received 30 moderately painful stimuli to the left middle finger under sequential conditions: waking attention, hypnosis with analgesia suggestions, and hypnosis with attention instructions. The highly hypnotizable patient reported significantly less pain during suggested analgesia, and that reduction in pain was associated temporally with reduction of SERP at P160 in the gyrus cingulus (and at no other recording sites). The 'unhypnotizable' patient showed no SERP changes. As an aside, the author notes that "Subsequent to the hypnotic analgesia, when the pain was attended to again during waking this patient showed a significant enhancement of the same positivity wave at Fz, as if there was a rebound effect (something we have also observed in some of our SERP subjects at the BRAINS Center)" (p. 674).

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall sequence of light changes that occurred during 60 sec when arm was in the cold water.

Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)

Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.

Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.

30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).

60 second pain scores: Showed same trend

There was no difference whatsoever for the lows.

Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).

Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.

## RESULTS

Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.

Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.

P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.

State and trait differences are apparent.

The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory

The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."

Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.

Lynn, Steven Jay (1994, October). Toward an integrative theory of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES: This is a re-evaluation of neodissociation and cognitive models of hypnosis, and an attempt to be integrative. This paper focuses more on ideomotor behaviors but we will extend the model to other hypnotic behaviors in the future.

Automaticity of behavior in hypnosis can be accounted for without using a concept of divided consciousness or weakened consciousness. Parapraxes (doing one behavior while intending another) are not instances of decreased control of behavior, but relate to where attention is drawn. This requires a different use of the hierarchy concept from Hilgard's model (which in turn comes from Hull's concept of habit hierarchy).

Here hierarchy is a concept drawn from Miller, Galanter, & Pribram: acts are comprised of molecular units, that are comprised of even more molecular units. Behavior only needs to be processed at an executive level when unusual events occur. But one or more hierarchies may be set into motion at the same time.

Dissociation is not an infrequent event. Behavior is controlled by subroutines rather than by an executive control structure; subroutines operate in parallel rather than in a hierarchy. Parapraxes are due to an overlap between two subfunctions.

Parapraxes are different from ideomotor responses, where we pay close attention and involuntariness is reported not just post facto but as part of the experience.

### 1993

Attias, J.; Shemesh, Z.; Sohmer, H.; Gold, S.; Shoham, C.; Faraggi, D. (1993). Comparison between self-hypnosis, masking and attentiveness for alleviation of chronic tinnitus. Audiology, 32, 205-212.

A total of 45 male patients close in age with chronic tinnitus related to acoustic trauma were assigned to three matched subgroups: self-hypnosis (SH), masking (MA), and attentiveness to the patients' complaints (AT). The therapeutic stimuli in the SH and MA sessions, recorded on audio cassettes, were given to the patients for use when needed. SH significantly reduced the severity of tinnitus, AT partially relieved the tinnitus, and MA had no significant effect.

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, 15, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

De Pascalis, Vilfredo (1993). EEG spectral analysis during hypnotic induction, hypnotic dream and age regression. International Journal of Psychophysiology, 15, 153-166.

EEG was recorded monopolarly at frontal (F3, F4), central (C3, C4) and posterior (in the middle of O1-P3-T5 and O2-P4-T6 triangles) derivations during the hypnotic induction of the Stanford Hypnotic Clinical Scale (SHCS) and during performance following suggestions of hypnotic dream and age-regression as expressed in the before-mentioned scale. 10 low-hypnotizable and 9 highly-hypnotizable and right-handed female students participated in one experimental session. Evaluations were Fast-Fourier spectral analyses during the following conditions: waking-rest in eyes-open and eyes-closed condition; early, middle, and late phases of hypnotic induction; rest-hypnosis in eyes closed condition; hypnotic dream and age regression. After spectral analysis of 0 to 44 Hz, the mean spectral amplitude estimates across seven Hz bands (theta 1, 4-6 Hz; theta 2, 6-8 Hz; alpha 1, 8-10 Hz; alpha 2, 10-13 Hz; beta 1, 13-16 Hz; beta 2, 16-20 Hz; beta 3, 20-36 Hz) and the 40-Hz EEG band (36-44 Hz) for each experimental condition were extracted. In eyes-open and -closed conditions in waking and hypnosis highly-hypnotizable subjects produced a greater 40-Hz EEG amplitude than did low hypnotizable subjects at all frontal, central and posterior locations. In the early and middle hypnotic induction highly-hypnotizables displayed a greater amount of beta 3 than did low hypnotizables and this difference was even more pronounced in the left hemisphere. With posterior scalp recordings, during hypnotic dream and age regression, high hypnotizables displayed, as compared with the rest-hypnosis condition, a decrease in alpha 1 and alpha 2 amplitudes. This effect was absent for low hypnotizables. Beta 1, beta 2 and beta 3 amplitudes increased in the left hemisphere during age regression for high hypnotizable; low hypnotizables, in contrast, displayed hemispheric balance across imaginative tasks. High hypnotizables during the hypnotic dream also displayed in the right hemisphere a greater 40-Hz EEG amplitude as compared with the left hemisphere. This difference was even more evident for posterior recording sites. This hemispheric trend was not evidenced for low hypnotizable subjects. Theta power was never a predictor of hypnotic susceptibility, 40-Hz EEG amplitude displayed a very high main effect ( $p < 0.004$ ) for hypnotizability in hypnotic conditions by displaying a greater 40-Hz EEG amplitude in high hypnotizables with respect to lows.

#### NOTES:

In the Discussion section, the authors indicate that they have no idea why they didn't replicate results of other theta studies, including their own, except maybe due to complex interaction among personality, subject selection, situation-specific factors, and hypnotizability.

They observe that the alpha results conform with previous findings (p. 163). Beta bands were sensitive. Highs showed left-hemisphere prevalence in all beta bands during age regression; they also showed hemispheric balance in the hypnotic dream condition. Beta 3 amplitude was also greater among highs than lows. "among high hypnotizables, beta 3 amplitude in the early hypnotic condition was greater in the left hemisphere as compared to the right and as the hypnotic induction proceeded hemisphere balancing, with reduced beta 3 amplitude, was displayed. This result appears in agreement with the predictions of the neurophysiological model proposed by Gruzelier et al. (1984) and Gruzelier (1988) as well as with other studies in which

beta rhythm was found to discriminate performances between high and low hypnotizables (e.g., Meszaros et al., 1986, 1989; Sabourin et al., 1990)" (p. 163-164). 40 Hz amplitude was higher in highs and increased in right hemisphere during the hypnotic dream, especially in posterior areas. "This pattern of hemispheric activation may be interpreted as an expression of the greater right-hemisphere activation and of the release of posterior cortical functions during the hypnotic dream and is compatible with the predictions of the Gruzelier model of hypnosis, however, the results obtained in this study for 40-Hz EEG amplitude failed to reveal an inhibition of the left-hemisphere activity with the progress of the hypnotic induction" (p. 164).

(They note that De Pascalis & Penna, 1990, agreed with the Gruzelier 1988 model: highs in early induction had increase of 40-Hz in both hemispheres, but as induction proceeded they had inhibition of left and increase in right hemisphere activity. In this current experiment, only beta 3 showed the hemispheric trend of Gruzelier's model. They cite other details of current study, p. 164, not consonant with Gruzelier.)

"The 40-Hz EEG rhythm, which according to Sheer (1976) is the physiological representation of focused arousal, appeared to discriminate between differential patterns of high and low hypnotizables. Both during hypnotic induction and during hypnotic dream and age regression highly hypnotizables exhibit greater 40-Hz EEG amplitude with respect to the lows. These findings support the validity of the assumption that hypnosis is characterized by a state of focused attention (Hilgard, 1965) and that 40-Hz EEG activity reflects differential attentional patterns among subjects high and low in hypnotizability. On the basis of these findings it would appear that 40-Hz EEG and beta 3 spectral amplitudes may prove to be useful measures of individual hypnotizability" (p. 164).

Gruzelier, John; Warren, Kristen (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. Psychological Medicine, 23, 93-101.

Individuals with high and low susceptibility to hypnosis were compared in a baseline condition and after instructions of hypnosis on tests of anterior left and right hemispheric functions of word fluency to letter categories, word fluency to semantic categories, design fluency and bilateral finger tapping dexterity. With hypnosis high susceptibles showed a reduction in word generation to letter categories, no significant change in word generation to semantic categories, an improvement in design fluency, and bilateral reductions in finger tapping dexterity. Low susceptibles showed the opposite changes except for the improvement in design fluency. These results, together with correlational results, were interpreted as evidence of central inhibitory processes, particularly of the left hemisphere, in response to instructions of hypnosis in high susceptibles.

#### NOTES:

The authors discussion of their study includes the following statements. "The main result of the study was the differential influence of instructions of hypnosis on high

and low susceptibles for word fluency to letter designated categories, as distinct from semantic categories, and design fluency" (p. 98).

"The absence of effects of hypnosis on word generation to semantic categories (left fronto-temporoparietal) versus letter categories (left frontal) has a bearing on evoked potential evidence (Gruzelier et al. 1987). Bilateral comparisons at temporal lobe and central locations showed that high susceptibles were characterized by asymmetric changes in evoked potential amplitude (N116 component) with hypnosis. Activity at the central electrodes was compatible with a left-to-right hemispheric shift of function, but this was not the case at the temporal electrodes. Instead of an inhibition of left temporal activity with hypnosis activation was maintained. Maintenance of activity in the left temporal lobe follows consideration of the fact that hypnosis requires sustained attention to the voice of the hypnotist, which is predominantly a left temporal function" (p. 99).

"The absence of differences in the pre-hypnotic condition between high and low susceptibles indicates that hemisphericity *per se* may not be a factor that characterizes susceptibility. The fact that lateral differences were found in some experiments (e.g. Gruzelier et al. 1984; Gruzelier & Brow, 1985) but not others (e.g. Cikurel & Gruzelier, 1990; McCormack & Gruzelier, 1993) may indicate that such effects, when apparent, were secondary to another factor such as cognitive flexibility as conceptualized by Crawford (1989)" (p. 99).

Jutai, Jeffrey; Gruzelier, John; Golds, John; Thomas, Martin (1993). Bilateral auditory-evoked potentials in conditions of hypnosis and focused attention. International Journal of Psychophysiology, 15, 167-176.

Brain event-related potentials (ERPs) evoked by auditory stimulation were used to study cerebral hemispheric activity during hypnosis. ERPs were recorded from bilateral central (C3 and C4) and temporal (T3 and T4) scalp locations in response to tone pips in 6 medium-high and 6 low-susceptible subjects in three conditions: baseline (tones only), hypnosis (tones plus hypnotic induction), and a focused attention control (tones plus a newspaper story read by the hypnotist). Task asymmetries were individually adjusted for baseline asymmetries. Responses from central locations did not differentiate hypnosis from focused attention for either group. The same was true of temporal locations for the low-susceptible group. The predominant temporal lobe pattern for both conditions and groups was larger left than right responses. The exception was the hypnosis condition for the medium-high susceptible group where there was an increase in responses in the right temporal lobe.

Lindsay, Suzanne; Kurtz, Richard M.; Stern, John A. (1993). Hypnotic susceptibility and the endogenous eyeblink: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 92-96.

This study investigated the relationship between hypnotic susceptibility, hypnotic state, and the endogenous eyeblink with 36 undergraduates, who were assigned to four independent groups (waking-low, hypnotized-low, waking-high, and hypnotized- high susceptibles) on the basis of combined cutoff scores on both the

Creative Imagination Scale and the Stanford Hypnotic Clinical Scale for Adults. The auditory vigilance task required subjects to discriminate between 200 ms and 300 ms tones over a 35-minute period. Hypnotic depth was controlled across trials using the Long Stanford Scale of Hypnotic Depth. As predicted, high-susceptible subjects had a significantly lower blink rate than low-susceptible subjects. The predicted interaction between susceptibility and hypnotic state was also confirmed. High-susceptible subjects showed a significant decrease in blinking for the hypnotized condition, whereas low-susceptible subjects did not. The need for replication with more adequate measures of susceptibility is discussed.

**NOTES:**

"In a preliminary study, Weitzenhoffer (1979) found significant differences between high- and low-susceptible subjects following a hypnotic induction. The highs showed a 66% decrease in blink rate from a baseline reading. More recently, Tada, Yamada, and Hariu (1990) reported a series of studies suggesting that blink rate was dramatically reduced during the hypnotic state, as well as finding a relationship between high susceptibility and decreased blink rate. Although these studies tend to support Weitzenhoffer's (1979) research, they are poorly controlled and report no quantitative data" (p. 93).

In the present study, "to assure that subjects kept their eyes open, they were required to maintain their gaze on a dimly lighted box (12" x 12") placed one meter in front of them. Subjects in both conditions were asked to rate their hypnotic depth by using the Long Stanford Scale of Hypnotic Depth (Tart, 1970) before being given a practice trial of 20 tones. Following the practice trial, participants were again asked to rate their hypnotic depth, and the trial period began. Subjects gave subsequent depth ratings every 10 minutes for the remainder of the 35-minute trial. The hypnotic state was maintained across time periods by using deepening instructions when necessary" (p. 94).

In their Discussion, the authors noted that "High-susceptible subjects in the hypnotized state have a significantly lower blink rate and presumably greater attentional focus than lows. Although the interaction was significant and in the predicted direction, it accounted for only a small portion of the overall variance, suggesting that trait differences are more robust than those for state" (p. 95).

Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical processes of the brain and performance. International Journal of Psychophysiology, 14, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100

were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

## 1992

Atkinson, Richard P.; Crawford, Helen J. (1992). Individual differences in afterimage persistence: Relationships to hypnotic susceptibility and visuospatial skills. American Journal of Psychology, 105 (4), 527-539.

To investigate the moderating role of individual differences in hypnotic susceptibility and visuospatial skills on afterimage persistence, we presented a codable (cross) flash of light to 40 men and 46 women who had been dark adapted for 20 minutes. In an unrelated classroom setting, subjects had previously been given two standardized scales of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Shor & Orne, 1962; Group Stanford Hypnotic Susceptibility Scale, Form C, Crawford & Allen, 1982) and the Mental Rotations Test (Vandenberg & Kuse, 1978). The first afterimage interval and the afterimage duration correlated significantly with hypnotic responsiveness, supporting Wallace (1979), but did not show the anticipated relationships with mental rotation visuospatial skills. Individuals in the high hypnotizable group had (a) significantly longer afterimage intervals between its first appearance and first disappearance than did those in low groups, but those in medium groups did not differ significantly from the other groups. Discriminant analysis using the afterimage persistence measures classified correctly 65.2% of high hypnotizables, 37.5% of medium hypnotizables, and 54.8% of low hypnotizables. Hypothesized cognitive skills that assist in the maintenance of afterimages and underlie hypnotic susceptibility include abilities to maintain focused attention and resist distractions over time and to maintain vivid visual images.

## NOTES

"Because there is no apparent evidence for physiological differences of the visual system between low and high hypnotizables (e.g., Wallace, 1979), cognitive factors are suggested as possible moderators of afterimage persistence.

"Hypnotic susceptibility per se is not the moderator of afterimage duration. Rather, we argue that hypnotic susceptibility represents a constellation of underlying cognitive skills (e.g., for reviews, see Crawford, 1989; Kihlstrom, 1985) that assist an individual to respond to hypnotic suggestions as well as assist in the persistence of afterimages by interacting with more primary casual mechanisms that are physiological in origin. These cognitive skills are thought to include the abilities to focus attention selectively upon both external stimuli and internally generated images, to maintain vivid visual images, to sustain attention over time and remain absorbed in the experience at hand, and to resist distractions. The relationships between these cognitive skills and hypnotic susceptibility are reported in a large body of literature (e.g., Crawford, 1982, 1989; Crawford et al., 1991; Crawford &

Grumbles, 1988; Finke & Macdonald, 1978; Grumbles & Crawford, 1981; Mitchell, 1970; Tellegen & Atkinson, 1974)....

"Sustained and selective attention without interference from extraneous stimuli plays an important role in hypnosis. Individuals who are responsive to hypnosis demonstrate greater skills in extremely focused and sustained attention (e.g., Crawford et al., 1991; Tellegen & Atkinson, 1974). Electrophysiological research had found that high hypnotizables often generate substantially more theta electroencephalogram (EEG) power than do low hypnotizables (e.g., Crawford 1990, 1991; Crawford & Gruzelier, 1992; Sabourin, Cutcomb, Crawford, & Pribam, 1990). Such a relationship may be interpreted as further evidence of greater attentional skills in highs, because certain theta waves have been correlated with enhanced problem solving and attentional task performance (e.g., Crawford & Gruzelier, 1992; Schacter, 1977)....

"Hypnosis is seen often as a condition of amplified attention, where attention can be either more focused or diffuse dependent upon set (e.g., Krippner & Binder, 1974). Increases in vigilant performance during hypnosis have been reported, albeit inconsistently (e.g., Barabasz, 1980; Fehr & Stern, 1967; Kissen, Reifler, & Thaler, 1964; Smyth & Lowy, 1983). Fehr and Stern's results suggest that hypnotized subjects devote more attention to a primary task with less available attentional resources for a secondary task. Hypnosis has been found to have an enhancing effect on the imaginal processing of information-to-be-remembered that consists of literal or untransformed representations of pictorial or nonverbal information for high but not low hypnotizables (Crawford & Allen, 1983; Crawford, Nomura, & Slater, 1983; Crawford, Wallace, Nomura, & Slater, 1986). This may possibly be the result of increased attention and/or shifts in cognitive strategies. Supportive of the hypothesis that sustained attention can be enhanced during hypnosis, Atkinson (1991) recently found that high but not low hypnotizables report significantly more persistent afterimages in hypnosis than in waking.

"Although we have argued for a cognitive explanation for individual differences in afterimage persistence and their possible relationship to hypnotic susceptibility and sustained attentional abilities, as has Wallace (1979, 1990), we must point out the possibility that high hypnotizables may be more suggestible to imagery instructions or more willing to discuss or experience imagery than low hypnotizables, particularly in the context of hypnosis and hypnotic susceptibility testing (e.g., Zamansky, Scharf, & Brightbill, 1964). A contextual account of the longstanding relationship between hypnotic susceptibility and absorption was raised by Council, Kirsch, and Hafner (1986), but was not supported by two independent, and more methodologically sound, studies reported by Nadon, Hoyt, Register, and Kihlstrom (1991). The context of hypnosis was not an issue in the present study, because none of the subjects was aware of the investigated relationship between afterimage persistence and hypnotic susceptibility at the time of recruitment or participation" (pp. 533-535).

Barinaga, Marcia (1992). Giving personal magnetism a whole new meaning. Science, 256, 967.

**NOTES:** Cited in Noetic Sciences Review, Autumn, 1992. This geobiologist has discovered that the human brain contains billions of tiny magnets--some 7 billion of them, each so small that their total weight is only one/millionth of an ounce. In magnetite- containing bacteria, the crystals are used as a compass needle which orients the bacteria with respect to the Earth's magnetic field. In birds, bees, and fish, where concentration of the mineral is a few orders of magnitude higher than he found in the human brain, it is used as a navigational aid. He plays down the possible connection to weak electromagnetic fields that supposedly cause cancer (unless fields could induce very weak electrical fields inside the cells, disrupting cellular function). Other possible interpretations: a means for cells to store excess iron, or part of a magnetic sensing system, or a vestigial system left over in evolution from when we were more directly connected with the earth's magnetic field and may have relied on it for navigation or migratory movement.

**Greenwald, Anthony G. (1992). New Look 3: Unconscious cognition reclaimed. American Psychologist, 47, 766-779.**

**ABSTRACT:** Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long- term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

**Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.**

#### **NOTES**

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential

aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social-cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

Lippincott, Brian (1992). Owls and larks in hypnosis: Individual differences in hypnotic susceptibility relating to biological rhythms. American Journal of Clinical Hypnosis, 34, 185-192.

In 1986 Coleman developed the Owl and Lark Questionnaire to differentiate morning people from evening people, with owl individuals being more alert during the evening phase and lark individuals being more alert during the morning phase. Rossi has hypothesized that the bimodal peaks of hypnotizability found by Aldrich and Bernstein in 1987 were caused by alterations in owl and lark circadian rhythms. In the current study I used the Harvard Group Scale of Hypnotic Susceptibility, Form A to test compliance with hypnotic suggestions among 42 graduate students at three times of the day: in the morning, in the evening, and, as a control, in the middle of the night. Owls were more hypnotizable than larks in the morning, and larks were also significantly more hypnotizable in the evening than owls. There was no difference between the two groups in the middle of the night. A possible implication of this study is that one fundamental mechanism of therapeutic hypnosis is the entrainment of psychobiological rhythms.

NOTES: The author tested Subjects at 8-10 a.m., 4-6 p.m., and midnight to 2 a.m. because they were the times when owls and larks could be most easily differentiated (morning and late afternoon) or were most equal (night). The goal was "to determine if individuals differentiated by the Owl and Lark Questionnaire have different peaks of hypnotizability associated with the rest phases of their biological rhythms." (P. 187).

"To control for practice effects (Cooper, Banford, Schubot, & Tart, 1967), one third of the subjects started rotating at each of the three test times and proceeded in clockwise order (morning-evening-night; evening-night-morning; night-morning-evening).

"There were at least 24 hours between tests to assure that boredom from the testing was not a factor" (p. 188).

#### DISCUSSION.

"Rossi has extended Erickson's naturalistic approach and has hypothesized the entrainment of the ultradian biological rhythms as a possible factor in therapeutic hypnosis. ... Rossi states: 'The ultradian theory of hypnotherapeutic healing

proposes that (1) the source of psychosomatic reactions is in stress-induced distortions of the normal periodicity of ultradian cycles and, (2) the naturalistic approach to hypnotherapy facilitates healing by permitting a normalization of these ultradian processes.' (Rossi, 1982, p. 23)" (pp. 189-190).

"If owls and larks were not separated, the results of this study would show no differences in hypnosis. Perhaps this is why Hollander et al. (1988) found no change in hypnotizability using a direct-suggestion measure after a 2-day training in Ericksonian techniques" (p. 190).

## 1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory)

... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.

## NOTES

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Brown, Peter (1991). Ultradian rhythms of cerebral function and hypnosis. Contemporary Hypnosis, 8, 17-24.

As a consequence of his observations of the clinical work of Milton Erickson, Ernest Rossi has proposed an 'ultradian rhythm theory of hypnosis'. Rossi demonstrated that the spontaneous changes in cognition, affect and behaviour which occur as part of the ultradian cycle (which Erickson referred to as 'the common everyday trance') are similar to the changes which occur during hypnosis. A review of studies of the phasic changes in hemispheric function suggests that ultradian changes do parallel the changes found in hypnosis.

**NOTES:** Falling asleep and waking up are regulated by two separate mechanisms rather than being opposite poles of one mechanism (Winfrey, 1980). Kleitman (1961) suggested a 90-min cycle, the basic rest-activity cycle (BRAC). In addition to physiological alterations, there are alterations in cognition, mood and behavior (Rossi & Cheek, 1988); vigilance (Okawa, Matousek & Petersen 1984); peripheral blood flow (Ramano & Gizdulich, 1980); respiratory amplitude (Horne & Whitehead, 1976); visual evoked potentials (Zimmerman, Gortelmeyer & Wiemann, 1983); pupillary diameter, stability and reactivity to light, and saccadic eye movements (Lavie & Kripke, 1981).

These diurnal variations may relate to hypnotic behavior. There is a recurring increase in daydream and fantasy, as well as visual imagery (Kripke & Sonnenschein, 1978). "There is evidence for a parallel recurring cognitive and emotional cycle with increased emotional responsiveness and a more subjective cognitive processing of information (Evans, 1972; Holloway, 1978; Overton, 1978; Thayer, 1987). Subjects appear to repeat the cycle approximately 16 times per day, with a range of 70-120 minutes. Kripke and Sonnenschein (1978) noted that the subjects were personally unaware of any repeating cycle in their mental lives" (p. 19).

The brainstem arousal mechanisms seem to be implicated in periodic changes in the EEG. Ultradian rhythms are "more easily detected under conditions of increased sleep need, reduced external performance demand and lowered motivation to focus externally (Broughton, 1985)" (p. 20). Sterman (1985) observed that the rhythm was most marked in resting state and disappears during complex visuomotor tasks. Relationship of EEG patterns to attentional patterns indicate there may be two different forms of attention, one for focused awareness (often thought to be associated with trance state) and the other a generalized vigilance (which would be reduced in hypnosis). Ultradian changes in consciousness reflected in the EEG may suggest increased internal absorption associated with visual imagery, a feature of the trance state.

"There has recently been a partial direct confirmation of Rossi's hypothesis. Aldrich and Bernstein (1987 [International Journal of Clinical and Experimental Hypnosis]) reported a bimodal distribution of Harvard Group Scale Hypnotic Susceptibility (HGSHS) scores when they are done at different times throughout the day. They note the parallel of the changes in HGSHS scores and the circadian variations in body temperature which suggest changes in hypnotic responsiveness coinciding with the fluctuations of physiological rhythms.

"Other support comes from some highly original work involving breathing rhythms. There are cyclic alterations in relative air flow between the left and right nostrils with an average period of 2-3 hours (Hasegawa & Kern, 1977). This nasal ultradian rhythm is correlated with an increase in contralateral cerebral hemispheric activity (Werntz, Bickford, Bloom & Shannahoff-Khalsa, 1981, 1983; Klein, Pilon, Prosser & Shannahoff-Khalsa, 1986). The alterations in hemispheric function do appear to be related to changes both in the style of cognition, particularly in an increase in vivid visual imagery, and in performance on specific tasks (Klein et al., 1986). Thus these studies support the notion of an ultradian rhythm of cerebral function which is associated with characteristic physical manifestations mediated by the autonomic nervous system. Whether or not these changes are directly related to the findings reported by Aldrich and Bernstein has yet to be established" (p. 21).

The authors conclude that "the most consistent evidence for ultradian rhythms is demonstrated by the mechanisms of the hypothalamic-limbic system and by brain-stem mechanisms that regulate arousal and attention processes (Parmeggiani, 1987); neuroendocrine regulatory mechanisms (Follenius, Simon, Brandenberger & Lenzi, 1987) and autonomic nervous system function (Bossom, Natelson, Levin & Stokes, 1983; Gordon & Lavie, 1986). These studies also suggest an ongoing dynamic interaction between cortical and subcortical structures throughout the ultradian cycle (Parmeggiani, 1987), and suggest that these interactions may be of great significance in hypnosis" (p. 21).

Graffin, N. W. (1991, October). EEG concomitants of hypnotic susceptibility and hypnosis (Dissertation, Pennsylvania State University). Dissertation Abstracts International, 52 (4), 2296.

"Many previous studies of EEG and hypnosis were completed prior to development of spectral analysis and typically included data from a limited number of electrode sites. The categorization of subjects as high and low hypnotizables was often done inappropriately, and disparate findings were obtained. In this study, subjects scoring 10 or more and 3 or less on the Stanford Hypnotic Susceptibility Scale, Form C were defined as high and low respectively. EEG was monitored during resting baseline, mental arithmetic, and mental spatial rotation, and before, during, and after hypnotic induction. EEG was recorded monopolarly at frontal (F3,F4), parietal (P3,P4), temporal (T3,T4), and occipital (O1,O2) derivations, and data were fast Fourier analyzed. Mental arithmetic and mental spatial rotation did not produce differential hemispheric activation. High hypnotizables had greater frontal and temporal theta at baseline than lows. All subjects showed increases in parietal and occipital theta during hypnotic induction. During prehypnotic induction baseline, highs had greater parietal and occipital theta than lows, but this difference was smaller after induction. Baseline temporal alpha was greater for highs than lows, but after hypnotic induction, all subjects had less alpha at all sites than before induction. Increases in alpha at all sites for all subjects occurred during hypnotic induction. Beta activity was unrelated to susceptibility but was greater in waking than in hypnotic states for all subjects at all sites. Increases in alpha at all sites for

all subjects occurred during hypnotic induction. The theta activity observed suggests that high hypnotizables have a greater capacity for selective attention and imagery and that during hypnosis all subjects experience enhancement of these abilities. The alpha results may suggest an increase in the focusing of subjects on internal processes during hypnosis and greater scanning of the environment after induction" (p. 2296).

**Kleinhauz, Moris (1991). Prolonged hypnosis with individualized therapy. International Journal of Clinical and Experimental Hypnosis, 39 (2), 82-92.**

A therapeutic approach is presented which involves the use of prolonged hypnosis for the treatment of diverse medical and/or psychological conditions, including intractable pain. This approach may be indicated either as a complementary tool used in conjunction with other treatment approaches or as the only method of intervention. The technique is based on achieving a prolonged hypnotic response, during which hypno-relaxation serves as the foundation for the delivery of an individualized therapeutic plan which includes self-hypnosis, suggestive procedures, metaphors, and constructive imagery techniques. In debilitated patients, medical supervision and nursing care are essential, and hospitalization is recommended if necessary. Theoretical assumptions underlying this approach are presented, and clinical implications are discussed. The method is illustrated through case presentations.

#### **NOTES:**

The general procedure involves: 1. A flexible plan concerning the duration of treatment: days, weeks, or longer. 2. Information is given to the patient, the family and the medical staff if in hospital. Emphasize that while the patient may be in a 'twilight-like' state, most of the time he/she is able to fulfill his or her basic physiological needs, (drinking, eating, taking care of personal cleanliness, etc.). 3. The method of hypnotic induction is individualized. 4. The patient is trained in self-hypnosis, and for using signals for induction and dehypnotization either for self hypnosis or for the hypnotist to use. Thus if there is a physiological or emotional need for self-hypnosis the patient can do it. Suggestions and training are given and reinforced concerning the patient's capability to fulfill his/her basic physiological needs. 5. The family and/or the medical staff are instructed and trained in induction and dehypnotization, until the patient responds to them satisfactorily. 6. At this stage, therapeutic suggestions aimed at ego-boosting and a change of attitudes and meanings towards the symptom and symptom removal/amelioration/substitution are added. 7. Metaphoric constructive imagery is introduced when indicated. 8. If required, other hypnotic phenomena are elicited and used (e.g. dissociation, time distortion, age regression, rehearsal, hypno/analgesia, change of muscular tonus, displacement of emotions, abreaction, etc.). 9. An audio cassette which contains the wording of the therapeutic intervention is used with some patients. 10. The family and/or the medical staff are instructed to supervise the patient properly and to avoid potential complications. 11. Termination of prolonged hypnosis with

individualized therapy is gradual to permit appropriate re-orientation towards reality. 12. Treatment is evaluated and a posttreatment plan is outlined.

They provide case reports and discuss precautions. All the cases reported were treated while the patients were hospitalized for their physical condition (although in Case 3, prolonged hypnosis with individualized therapy was also continued at home after the patient's discharge from the hospital), and the patients were monitored by the medical staff. In very debilitated patients, special care should be taken to avoid potential complications arising from their passivity, mainly the development of decubitus ulcer and of aspiration/choking while drinking or eating. Although precaution is taken routinely with these patients, these measures should be emphasized while the patient is in a state of prolonged hypno-relaxation.

Lubar, J. F.; Gordon, D. M.; Harrist, R. S.; Nash, M. R.; Mann, C. A.; Lacy, J. E. (1991). EEG correlates of hypnotic susceptibility based upon fast Fourier power spectral analysis. Biofeedback and Self-regulation, 16, 75-85.

Examined whether there were differences between high and low hypnotic susceptible subjects based upon fast Fourier power spectral analysis of the EEG recorded both before and during hypnotic tasks. Significant differences were obtained based upon EEG recording electrode location, EEG frequency within six different frequency domains, and hypnotic tasks. However, no main effect differences were obtained based upon hypnotic susceptibility. In contrast to some evoked potential studies in which a few differences have been obtained based on hypnotic susceptibility, the lack of any EEG differences in this study even when positive and negative hallucination tasks were employed may have implications for the role of the neocortex in mediating hypnotic phenomena.

#### NOTES:

When this study was presented at the annual meeting of the Society for Clinical and Experimental Hypnosis in 1988, in Ashville, the authors remarked that, "Since EEG comes from cortex, the results might be due to subcortical levels. Therefore one should look at cerebral blood flow and metabolism."

#### 1990

Ader, Robert; Felton, David; Cohen, Nicholas (1990). Interactions between the brain and the immune system. In Cho, Arthur K.; George, Robert; Blaschke, Terrence (Ed.), null (30, pp. 561-602). Palo Alto, CA: Annual Reviews Inc..

#### NOTES:

"Without attempting to cover all the literature, we have used stress effects and conditioning phenomena as illustrations to point out that behavior can influence immune function. We have also described data indicating that the immune system can receive and respond to neural and endocrine signals. Conversely, behavioral, neural, and endocrine responses seem to be influenced by an activated immune system. Thus, a traditional view of immune function that is confined to cellular

interactions occurring within lymphoid tissues is insufficient to account for changes in immunity observed in subhuman animals and man under real world conditions.

"These data question seriously the notion of an autonomous immune system. ... The immune system is, indeed, capable of considerable self-regulation, and immune responses can be made to take place in vitro. The functions of that component of adaptive processes known as the immune system that are of ultimate concern, however, are those that take place in vivo. There are now compelling reasons to believe that in vivo immunoregulatory processes influence and are influenced by the neuroendocrine environment in which such processes actually take place ... . The immune system appears to be modulated, not only by feedback mechanisms mediated through neural and endocrine processes, but by feedforward mechanisms as well. The immunologic effects of learning, an essential feedforward mechanism, suggest that, like direct neural and endocrine processes, behavior can, under appropriate circumstances, serve an immunoregulatory function in vivo. Conceptually, the capacity to suppress or enhance immune responses by conditioning has raised innumerable questions about the normal operation and modifiability of the immune system via neural and endocrine processes.

"We do not yet know the nature of all the channels of communication between the brain and the immune system or the functional significance of the neural and endocrine interrelationships that have been established....

"This integrated circuitry has extensive ascending and descending connections among the regions cited. These regions also share many similarities. They are sites intimately involved in visceral, autonomic, and neuroendocrine regulation. The cortical and limbic forebrain regions mediate both affective and cognitive processes and may be involved in the response to stressors, in affective states and disorders such as depression, in aversive conditioning, and in the emotional context of sensory inputs from the outside as well as the inside world. From an immunologic perspective, these regions are the sites in which lesions result in altered responses of cells of the immune system; they are the regions that respond to immunization or cytokines by altered neuronal activity or altered monoamine metabolism; and they are the regions that possess the highest concentration of glucocorticoid receptors and link some endocrine systems with neuronal outflow to the autonomic and neuroendocrine systems. Thus, this circuitry is the major system of the CNS suspected to play a key role in responding to immune signals and regulating CNS outflow to the immune system" (pp. 587-589).

Badia, Pietro (1990). Memories in sleep: Old and new. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and cognition (pp. 67-76). Washington, DC: American Psychological Association.

#### NOTES:

Reviews literature. Conclusion: First, with reinforcement for responding, control of learned behavior can be maintained reliably by stimuli presented during sleep. Second, when stimuli are presented 4 min or more apart, behavioral control results in little or no change in sleep structure, in daytime sleepiness, or in perceptions of sleep quality. Neither perceived wakefulness nor wakefulness as it is scored on the sleep record are necessary for responding, although stimulus/response events

typically result in brief EEG or EMG change. Third, within-subject, within-night variance in responsiveness is complexly related to time of night, sleep stage, and REM/NREM cycle.

Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.

In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.

De Pascalis, Vilfredo; Penna, Pietronilla M. (1990). 40-Hz EEG activity during hypnotic induction and hypnotic testing. International Journal of Clinical and Experimental Hypnosis, 38 (2), 125-138.

Edmonston, William E., Jr.; Moscovitz, Harry C. (1990). Hypnosis and lateralized brain functions. International Journal of Clinical and Experimental Hypnosis, 38, 70-84.

Bilateral EEG measures were obtained on 16 high hypnotizable Ss (scores of >8 on the Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962), while performing hemisphere-specific tasks during hypnosis and a no-hypnosis control condition. Conditions and tasks were presented in counterbalanced order, and Ss served as their own controls. The data call into question the right hemisphere activation interpretation of lateralized brain function during hypnosis; rather, the data suggest a lack of task appropriate activity during hypnosis. The failure to attend to baseline activity measurements and the use of ratios to evaluate interhemispheric lateralization may contribute to potential misinterpretations of data. It is critical that activity changes of the separate hemispheres be taken into account in the interpretative process.

Henninger, Polly (1990, August). Conditional handedness: Handedness changes in multiple personality disordered subject reflect shift in hemispheric dominance. [Unpublished manuscript] Presented at the annual meeting of the American Psychological Association, Boston.

**This study investigates whether the host personality (Pe) and the primary alter personality (Pa) of a woman with multiple personality disorder are controlled by the left and right hemispheres respectively. Results support the hypothesis. Behavioral and preference measures indicate that Pe is strongly right-handed and Pa is left-handed. Verbal and musical dichotic tests show significantly greater accuracy for stimuli presented to the left ear for Pa and to the right ear for Pe. It is concluded that shifts in hemisphericity involve redistribution of attentional resources and callosal suppression. "Conditional handedness" is proposed as a handedness subtype characterizing persons who alternate personalities and consistently display alternate hand preferences linked to specific personality characteristics.**

**NOTES:**

**She uses the model of the split brain subject for dissociation in personality. The shift in personality reflects a shift in hemispheric dominance. "Dichotic testing of children suggests greater right hemisphere involvement in cognitive processing in children than in adults (Henninger, 1991). This finding suggests that in cases of dual personality, the younger alternate personality is more likely than the older to be lateralized to the right hemisphere." [N.B. Jancke et al's meta analysis doesn't say this about children.] She also indicates that Henninger-Pechstedt, 1986, 1989, found that commissurotomy Ss tested with increasing strings of digits showed increased volume to the left ear shifted attention to the left side when task demands were low, but as task demands increased, right ear performance increased and left ear performance decreased.**

**Putnam et al (1986) indicates 37% of 100 MPDs changed handedness across alters, suggesting a relationship between MPD and lateralized functioning.**

**Patient was 19 yr old woman with six alters, a typical history of abuse, amnesia of primary personality for the 9 yr old alter tested here with the adult alter. Method included a cutting exercise, drawing exercise, verbal dichotic test, and music test.**

**Dichotic test used monosyllabic digits (1-12, excluding 7 and 11) of 307 msec duration, in which number of stimuli to be encoded increased from one to four as the test progressed (Henninger-Pechstedt, 1989). Presented in blocks of single, double, triple and quadruple pairs at rate of two pairs per second. Volume was set where S said stimuli presented to each ear sounded equal and appeared to be located at the center of her head.**

**On the initial tests Pa (child) asked for a decrease in volume in the left ear (6 dB); Pe requested a slight increase (2 dB). On the music test, the overall volume level on Pe's initial test inadvertently was lower than that used for Pa, and she was recalled for a second testing at the same level as Pa. To make the volume equivalent, Pa (child) asked for a slight increase in the left channel (2 dB) and Pe (adult) asked for a greater increase (y dB).**

**Results: 1. Drawings were at same developmental level for both alters. 2. Adult alter was less accurate in cutting than child alter. All cuttings made by child's left hand were superior to those made by right hand; all cuttings made by adult's right hand were superior to those made by her left hand. The child was more accurate when cutting with left hand; adult was more accurate when cutting with right hand.**

Difference in dexterity between alters was statistically significant. 3. Dichotic listening: child showed a small right ear advantage; adult showed a large right ear advantage. The child's small REA resulted from a shift from left to right ear report at the highest level of task difficulty; at the lower levels of difficulty (1-3 digit pairs) she showed a left ear advantage.

On music test the child more accurately identified melodies presented to her left ear and adult more accurately identified melodies presented to her right ear. In summary, on the lateralized tests the two personalities differed significantly with the child performing the tasks better on the left side and the adult performing them better on the right side.

Her explanation is that the results indicate a difference in hemisphericity, i.e. the preferential use of one hemisphere over the other. When one or the other personality is in control, the corresponding hemisphere is more active and controls processing. As Kinsbourne (1973) has shown, the more active hemisphere draws the subject's attention to the contralateral side of space. Control is most visible in the side of greater manual preference and dexterity. The change in personality reflects a switch in hemispheric control.

In the dichotic tests, each personality requested that the volume be decreased on the side which subsequently performed better, suggesting that the differential activity of the hemispheres increased the perceptual salience of the stimuli contralateral to the active hemisphere which was perceived as increased volume. ... That the child began the verbal test with a LEA but shifted to a REA when the task load increased suggests conflict between the hemisphere that is in control of the personality (right) and the hemisphere that is specialized to do the task (left). It suggests that when the task is simple and cognitively undemanding, the subject's preferred mode of processing (hemisphericity), and thus the corresponding hemisphere, controls behavior. However, when a task becomes more cognitively demanding, the hemisphere specialized to do the processing takes control. Similar performance on this task has been observed in commissurotomy subjects (Henninger-Pechstedt, 1986, 1989) and learning disabled boys (Henninger & Bloch, in preparation).

The adult's chance level of performance in the left ear on the musical dichotic test, when compared to that of the child who identified 3/4 of the left ear melodies, suggests that the adult's dominance involves suppression of the right hemisphere. It suggests that personality changes are modulated by the degree of callosal suppression produced by one hemisphere over the other.

She mentions only one study (Burrows, Collison & Dennerstein, 1979--in Proceedings of the 8th International Congress of Hypnosis and Psychosomatic Medicine, Melbourne, Australia)--indicating that the more hypnotizable a person is, the greater the relative difference in hemispheric activation while performing hemispheric specific tasks.

She suggests that her results suggest that shifts in hemisphericity involve both a redistribution of attentional resources and callosal suppression. The shift in the child's ear advantage as the task load increased suggests that perceptual advantages in laterality tests reflect effects due to both hemisphericity and hemispheric specialization. IN most laterality experiments perceptual differences due to

hemispheric specialization are confounded with those due to hemisphericity. Experiments need to be designed in which these effects can be deconfounded.

There are no data on callosal function in persons with MPD, and the shift in ear advantage as difficulty increases suggests possible atypical callosal function in patients with MPD.

Although the commissurotomy model informs these results, there are areas in which it does not fit the data. In the callosally disconnected patient, each hemisphere may be unaware of the perception and cognition of the other hemisphere, but the patient is not amnesic for the behaviors. When he or she observes contradictory behavior in him/herself, he/she tries to interpret it. No commissurotomy patient manifests multiple personalities and none changes personality when he or she changes from operating his/her right to left hand. Most patients with MPD have more than two personalities which does not fit the commissurotomy model. This woman has six or more. Perhaps the initial two personalities are lateralized to opposite hemispheres and additional personalities align within this primary subdivision. Co-consciousness between personalities might indicate co-existence in the same hemisphere. Lastly, in a person with intact commissures, laterality differences reflect changes in the balance of brain activity between the two hemispheres, not the exclusive use of one. Shifts in consciousness in MPD patients may utilize the corpus callosum. It is likely that the inhibition of processing and suppression of awareness observed in this study are functions of the patient's intact corpus callosum.

It is proposed that early severe trauma in some cases leads to the development of an extreme form of hemisphericity, marked by conditional handedness, as a means of escaping the emotional pain. Whether early trauma influences the development of ambilaterality or whether people born predisposed to bilateral representation of function are better able to use disassociation as a means of coping with abuse is an important question for further research to investigate.

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189.

#### NOTES:

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

**DISCUSSION.** The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

**1989**

Alexieva, A.; Nicolov, N.A. (1989). Brain mechanisms in classical conditioning. Behavioral and Brain Sciences, 12, 137.

**NOTES:**

This is a Commentary on article by J. S. Turkkan (1989), Classical Conditioning: The new hegemony. In Behavioral and Brain Sciences.

Commentators note that the objective of the target article is to show how current thinking about Pavlovian conditioning differs substantially from the historical view; also that this has been recently emphasized by Rescorla (1988). Commentators note that the neural pathways and neural mechanisms involved in Pavlovian conditioning are of great interest and are investigated by many neuroscientists all over the world (Grigoryan & Tchilingaryan 1988; Kositsyn N.S. & Dorochoy 1986; Onifer & Durkovic 1988; Storzhuk 1986; Vartanyan & Pirrgov 1986). Commentators also note the work of Ramachandran & Pearce (1987) and Uryvaev Yu.V. et al. (1988).

They express the opinion that Turkkan's review affords a thorough description and interpretation not only of basic data and new conceptual views, but also of certain key notions in the modern theories of Pavlovian associative learning.

Bick, C. H. (1989). An EEG-mapping study of 'laughing': Coherence and brain dominances. International Journal of Neuroscience, 47, 31-40.

Laughter is triggered by pleasurable psychoemotional stimuli and may have healing potential. According to split-brain studies, psychoemotional stimuli are bound up with emotional activity in the right side of the brain. This suggested the idea of studying laughter generated by different sources with regard to electrical brain activity in the right and left hemispheres. This study first used subjects in normal consciousness and with laughter under hypnosis to study the neurophysiological processes connected with laughter.

De Pascalis, Vilfredo; Marucci, Francesco S.; Penna, Pietronilla M. (1989). 40-Hz EEG asymmetry during recall of emotional events in waking and hypnosis: Differences between low and high hypnotizables. International Journal of Psychophysiology, 7, 85-96.

#### NOTES

1:

Sixteen high and thirteen low hypnotizability women, who had participated in our previous study (De Pascalis et al., 1987), were enrolled in a hypnotic session. After the hypnotic induction they were requested to recollect 2 positive and 2 negative personal life experiences. IN our previous study subjects performed similar tasks in a waking-state. Hypnotizability was evaluated the first time with the HGSHS and, a second time, individually, with the Stanford C. The State Trait Anxiety Inventory, Maudsley Personality Inventory, and Tellegen Absorption Scale were administered. Upper-trapezius electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 35-45 Hz band were recorded. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EEG amplitude and the left and right hemisphere 40-Hz EEG densities were obtained.

The data collected in hypnosis were compared with those in the waking-state. High hypnotizables, while they were in hypnosis, showed an increase of 40-Hz EEG density during emotional recall compared with rest periods. In contrast, low hypnotizables, after hypnotic induction, showed no density during emotional recall compared with rest periods. In contrast, low hypnotizables, after hypnotic induction, showed no density change during tasks compared to the rest conditions. Different hemispheric trends were found between groups. Highs showed an increase of 40-Hz EEG density over both hemispheres during positive emotions and a density increase in the right and a density reduction in the left during negative ones. This hemispheric trend was found in waking and hypnotic conditions although in the hypnotic condition more pronounced hemispheric patterns were observed. The Tellegen Absorption Scale was found positively related to hypnotizability and with the level of 40-Hz density increase on the right hemisphere during emotional tasks. High hypnotizables, with respect to the lows, were able to access affects more readily. They also showed a greater hemispheric specificity in waking and hypnotic conditions.

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried

in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

Holroyd, Jean; Hill, Alexis (1989). Pushing the limits of recovery: Hypnotherapy with a stroke patient. International Journal of Clinical and Experimental Hypnosis, 37, 189-191.

Hypnotherapy was used to assist recovery of left arm function following stroke in a 66-year-old woman. Treatment protocol is described, and results are discussed in terms of how hypnosis may facilitate voluntary motor movement. Recent literature on cortical changes in hypnosis and motor improvement during hypnosis is discussed in relation to the present results.

#### NOTES:

The patient was 6 months post-stroke and physicians did not expect much additional improvement. She improved despite the fact that she measured as a low hypnotizable on the Stanford Scale, Form C. However, she appeared very absorbed in the hypnotic imagery, and she was highly motivated and exhibited much hope or positive expectation. Also, the author notes that "remarkable improvements in brain functioning have been reported through the use of sophisticated behavioral technology," (p. 124), as in the use of EEG biofeedback to treat untractable seizures (Sterman & Lanz, 1981).

In rehabilitation cases, hypnotic dissociation may enhance pain control during the performance of exercises; more vivid hypnotic imagery may facilitate mental rehearsal of movements; attitudes may be reframed using hypnotic suggestion; and focusing attention on bodily sensations may be enhanced with hypnosis. Hypnosis also may improve expectancy, reduce anxiety, increase hope, provide general relaxation (reducing involuntary spasticity), increase cerebral blood flow, or in other ways promote healing.

Research by Pajntar, Roskar, & Vodovnik (1985) has demonstrated improved motor response during hypnosis for patients with hemiparesis. They attributed EMG changes under hypnosis "to a facilitory influx from supraspinal motor centers. They hypothesized that new motor units of paretic muscles were being activated or that there was an increased recruitment of the motor units already active, and they suggested that relaxation of the spastic antagonist muscle permits the paralyzed muscle to move" (p. 125).

#### 1988

Borgens, Richard B. (1988). Stimulation of neuronal regeneration and development by steady electrical fields. In Waxman, S. G. (Ed.), Functional recovery in neurological disease (47, pp. 547-564). New York: Raven Press.

#### NOTES:

At the end of the review, author notes that a combination of electromyography and computer modeling of agonist-antagonist, flexor-extensor muscle contraction

patterns in the functional body parts of hemiparetic patients, artificially imposed on the paralyzed portions of the body using repetitive electrical stimulation to effect more normal movement, sometimes leads to functional recovery. Such recovery has been observed in some chronic cases of paralysis associated with head injury, stroke, and cerebral palsy. These clinical observations challenge the way we should view paralysis in general. Perhaps there are many redundant pathways in the CNS that will support certain kinds of functional return in the absence of the original pathways destroyed by trauma. Perhaps CNS-associated paralysis is a problem, at least in part, of too much competing signal in spared pathways, not one of impoverished signal. Can use of these neuronal pathways be entrained or retrained? Is the return of function in patients who experience repetitive functional electrical stimulation due to a reorganization within the CNS? These are exciting questions whose answers will possibly lead to our ability to further modify the plasticity of the brain and spinal cord.

[This would fit with the inhibition model of hypnosis, and with the high theta power findings during hypnosis, the implication being that hypnosis facilitates filtering out non-essential competing stimuli.]

De Pascalis, Vilfredo; Silveri, Alessandra; Palumbo, Giovanni (1988). EEG asymmetry during covert mental activity and its relationship with hypnotizability. International Journal of Clinical and Experimental Hypnosis, 36, 38-52.

Parietal-occipital EEG was recorded bilaterally while 20 high and 20 low hypnotizable Ss performed, in the eyes-closed condition, 2 covert right-hemisphere tasks (visual long-term memory and fantasy) and 2 covert left-hemisphere tasks (multiplication and verbal long-term memory). Ss were not, however, hypnotized during any aspect of the psychophysiological testing. After each task, Ss rated orally their degree of involvement in the tasks. The integrated amplitude alpha, the alpha density, and the alpha ratio as a measure of hemispheric asymmetry, were evaluated. Finally, the proportion of relatively greater right activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks was used as index of hemispheric specificity. The high hypnotizable Ss showed significantly higher alpha amplitude than the low hypnotizables; the alpha amplitude was correlated with hypnotizability, while the alpha density was not. The alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than the same amplitude during left-hemisphere tasks, while no significant differences related to task-type were detected in the left hemisphere. The pattern of task-effect on alpha ratio scores was the same as that on alpha amplitudes. Verbal and multiplication ratings were related to the alpha ratio, imaginative- visual memory ratings were not. No differences in hemispheric specificity between high and low hypnotizable Ss were found to exist, and no relationship between hypnotizability and hemispheric specificity was observed.

#### NOTES:

The authors review the literature on differences between the two hemispheres' involvement during hemisphere-specialized tasks. The ratio between left- and right-

hemisphere alpha amplitudes has been shown to be a reliable measure of hemisphere lateralization as a function of task demands (Amochaev & Salamy, 1979).

They also review the literature on EEG asymmetry and hypnotizability. Most investigations used tasks with a problem solving component, whereas this study used "a covert numeric task and other covert self-generated tasks in which the range of cognitive activities resembled natural thinking" (p. 40).

Purposes of this research were "to investigate whether (a) the amount of alpha in EEG is correlated with hypnotizability, (b) high hypnotizable Ss would reveal higher hemispheric specificities during covert mental tasks than low hypnotizable Ss, and (c) verbal-numeric tasks involve more left-hemisphere activation and imaginative-visual tasks more right-hemisphere activation" (p. 40).

The subjects were 40 women (from an original pool of 71), aged 19-23, with no previous experience using hypnosis. To minimize the possible effects of expectation, hypnosis was not mentioned in the invitation to participate in research. All subjects were tested first with the Harvard Group Scale of Hypnotic Susceptibility, then with the Stanford Scale of Hypnotic Susceptibility (SHSS:C). The SHSS:C was used to select 20 high hypnotizables (defined as having a score 1 standard deviation above the group mean of 6.51) and 20 low hypnotizables (with scores 1 standard deviation below the group mean). The mean score for highs was 10.05 (S.D. = .88) and mean score for lows was 2.75 (S.D. = 1.49).

Although subjects were selected on the basis of their measured hypnotizability, hypnosis was not used during the investigation's psychophysiological testing. However, they were required to relax and keep eyes closed during trials on the tasks. After each trial, the subjects rated their involvement in the task.

Tasks used for this research were: 1. Visual long-term memory. Ss were asked to recall from memory pictures, places, faces, or visual scenes that were in a movie, but not scenes with a negative content. 2. Fantasy. Ss were requested to fantasize about something new that they like (nothing from past experience, and nothing sexual). 3. Multiplication. Ss were asked to multiply 2 serially, as,  $2 \times 2 = 4$ ,  $\times 2 = 8$ , etc., and to do it verbally without visual representation. 4. Verbal long-term memory. Ss were requested to think of some poem, speech, or other verbal material that they could recall from memory, and to repeat it mentally, to themselves.

Results can be summarized as follows.

Hypnotizability correlated .38 and .35 with right alpha amplitude and left alpha amplitude during baseline (statistically significant).

There was a significant association between alpha density and hypnotizability, when the group was divided at the median on density. (Alpha density = the time periods in which the alpha was present over the 6-second epochs accumulated during each 1-minute period which preceded the tasks). This association may be seen in the Table that follows:

SHSS:C Alpha Density Low High

+ 6 13

- 14 7

Chi Square = 3.61,  $p < .05$

There was a significant interaction between type of task (verbal-numeric, imaginative-visual memory) and hemisphere, which was attributable to changes in alpha amplitudes in right hemisphere, according to tasks. "Alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than during left-hemisphere tasks, while no significant differences were detected in the left hemisphere as a result of the differences between left- and right-hemisphere tasks" (p. 44)

Alpha ratio = (Right-hemisphere alpha - Left-hemisphere alpha) / (Right-hemisphere alpha + Left-hemisphere alpha) exhibited the same pattern as for alpha amplitudes. The ANOVA 2 (high/low) x 2 (right tasks/left tasks) repeated measures on alpha ratio revealed a significant main effect for tasks, and a significant interaction between right-left tasks and hypnotizability. "During right-hemisphere tasks there were no significant differences ( $p < .5$ ) [sic] in alpha ratio between high and low hypnotizable groups, while during the multiplication task, the low hypnotizable Ss evidenced a higher mean alpha ratio ( $p < .05$ ) than the high hypnotizable group (.08 & .04, respectively); identical ratios were found during verbal tasks" (p. 45).

Task involvement was expected to be positively related with left-hemisphere tasks, but negatively related to right-hemisphere tasks (i.e. greater subjective involvement in the task would be associated with more negative alpha ratios, showing a bias towards right-hemisphere activation. "Verbal ratings were substantially related to alpha ratios ( $\rho = 0.82$ ;  $p < .01$ ), and multiplication ratings moderately related to alpha ratios ( $\rho = 0.31$ ;  $p < .05$ ); visual memory and fantasy ratings were not related to alpha ratios ( $r = -.04$  &  $r = -.18$ , respectively)" (p. 45).

Hemispheric specificity was defined as the proportion of greater relative right-hemisphere activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks. The authors did an analysis to "verify whether the task rating moderates the hemispheric specificity (i.e., the level of subjective involvement in a task is related to the level of hemispheric lateralization, while S is carrying it out)" (p. 46). They concluded that hypnotizability (SHSS:C) is not significantly related to Ss' hemispheric specificity.

In the discussion, the authors present a Table summarizing the results of similar investigations. They mention that the alpha-hypnotizability relationship may depend on which alpha variable is taken into account, or whether eyes-open/closed is varied. They conclude that the different methodological procedures render any comparison of results across studies very difficult.

They note that there was a significant correlation between alpha amplitude and hypnotizability even though Ss did not know in advance that hypnosis would be part of the experiment (the hypothesis proposed by Dumas, 1977, to account for this type of correlation). "One possible explanation of these data might lie in a different level of arousal in the high and low hypnotizable Ss: the high hypnotizable Ss might have been simply more relaxed than the lows.

"Nevertheless, his explanation must be taken with caution. The study of Paskewitz and M. T. Orne (1973), in fact, pointed out that in dark-adapted Ss, the relaxation condition does not produce increases of alpha activity. In a further study, contrary to previous reports, M. T. Orne and Paskewitz (1974) also found that a reduction in

alpha activity is not a necessary consequence of apprehension or heightened arousal. Thus, it is not yet clear whether a decrease in anxiety tends to cause an increase in alpha density and vice versa" (p. 48).

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 96-106.

In an earlier study, DeBenedittis and Sironi (1986) demonstrated that during depth EEG studies, electrophysiological correlates of hypnotic behavior emphasize the role of the limbic system in mediating the trance experience. In the case of a young man who was affected by medically resistant temporal lobe epilepsy and who was a potential candidate for surgical treatment, diagnostic depth EEG in hypnotic and non-hypnotic conditions offered a unique opportunity to stimulate limbic structures. This permitted an evaluation of the subjective and behavioral responses, as well as of the electrophysiological correlates. During hypnosis, repeated stimulations of the left and the right amygdala produced arousal from the hypnotic state each time, whereas the stimulation of other cerebral structures (e.g., temporal neocortex, Ammon's horn) or pseudostimulations were ineffective on the hypnotic state. These data represent the first experimental, controlled evidence of the amygdala's effects on the arousal from the hypnotic state in man, thus suggesting that hypnotic behavior is mediated, at least in part, by a dynamic balance of antagonizing effects of discrete limbic structures—the amygdala and the hippocampus.

**NOTES:** The patient was a 30-year-old man who had suffered from medically resistant psychomotor temporal lobe epilepsy since age 7; a diagnostic EEG showed right temporal seizure focus, concomitant with independent, contralateral, temporal spiking abnormalities. Hypnotizability was measured at 6 on the SHSS:C; the patient was given two training sessions in hypnosis, with suggestions for "dissociation, rehearsal and reframing of spontaneous seizure events, desensitization of their negative emotional impact, and amnesia" (p. 99).

Electrodes were implanted in deep cerebral structures (amygdala, Ammon's horn) and corresponding superficial areas of temporal cortex, with confirmation of placement by X-ray. Two weeks later the patient's brain was stimulated on two consecutive days, first in the waking state (Session 1) and then in hypnosis (Session 2). (Antiepileptic medication was discontinued three days before the stimulation sessions.) False (placebo) stimulations were randomly provided along with the true stimulations.

The false (placebo) stimulations did not result in subjective or behavioral changes in either the waking or the hypnosis condition.

In the waking condition, a psychomotor seizure was produced by stimulation of Right amygdala and Left Ammon's horn; stimulation of Left amygdala evoked only the aura patient usually had before a seizure, or a brief lapse of consciousness. Stimulating the temporal neocortex did not evoke seizure activity.

In the hypnosis condition, arousal from hypnosis into the waking condition occurred with stimulation of amygdala (either Right or Left). Stimulation of the temporal

neocortex or of the Right Ammon's horn did not arouse the patient. Stimulation of Left Ammon's horn led to abortive seizures, such that it could not be determined whether the hypnotic state had been interrupted. Stimulating the Right amygdala "triggered a psychomotor attack similar to that recorded during the waking stimulation, but with reduced emotional involvement" (p. 100). For the Left Ammon's horn, "waking stimulation always induced clinical seizures with prolonged after-discharge, whereas hypnotic stimulation evoked only abortive seizures, without after-discharge" (p. 100).

In their Discussion, the authors note that animal experimental literature suggests that stimulation of the cortico-medial amygdala facilitates arousal functions, of the baso-lateral amygdala diminishes arousal and produces sleep, and lesions of the amygdala lead to 'amygdala hangover' (Weiskrantz, 1956). "The animal with amygdala destruction appears tame and placid, with reduced social reactivity, insensitive to environmental changes and reluctant to initiate new behavior, unless highly motivated (Isaacson, 1976)" (p. 101-102).

In contrast, the animal research on hippocampus suggests it is involved in inhibitory functions (Isaacson, 1976), and may be the 'internal inhibitor' theorized by Pavlov (1955) to be responsible for animal hypnosis. With lesions, animals are more willing to undertake new behaviors, less inactive, less distractible during goal-oriented behavior (Isaacson, 1976). "Moreover, normal hippocampograms show typical, slow (theta) synchronous activity opposed to the arousal desynchronized activity of the electroencephalogram. During hypnosis, desynchronization of the normal, slow activity of the hippocampal Ammon's horn has been registered as compared with the waking hippocampogram, opposite to the slow synchronous activity of the amygdala" (p. 102).

The authors note that their results are at variance with the finding by Crasilneck et al. (1956) that their patient, during brain surgery for an epileptogenic focus, aroused from hypnosis each time they stimulated the hippocampus. They explain the discrepancy as due to the fact that the hippocampus was not simply stimulated, but in fact there was 'coagulation' of a hippocampal vessel each time. Quoting from Crasilneck et al. "'The patient did not complain of pain during this [brain] excision [in hypnosis] except on one noteworthy occasion, when a blood vessel of the hippocampal region was being coagulated. The patient suddenly awoke from the hypnotic trance ... She was immediately rehypnotized. ... The surgeon then purposefully 'restimulated' the same region of the hippocampus. Once again, the patient abruptly awakened from trance... [p. 1607].'" To the present authors, the description appears misleading and responsible for subsequent misinterpretation of the observation. Because on the first occasion the hypnotic arousal effect followed 'coagulation' of the hippocampal region, it may be assumed that 'restimulation' is a misnomer for repeated coagulation. From this it may be inferred that the arousal effect observed by Crasilneck et al. (1956) could probably be ascribed to a hippocampal microlesion rather than to hippocampal stimulation. This could explain the apparent discrepancy" (p. 104).

**Gabel, Stewart (1988). The right hemisphere in imagery, hypnosis, rapid eye movement sleep, and dreaming: Empirical studies and tentative conclusions. Journal of Nervous and Mental Disease, 176, 323-331.**

Reviews studies that have addressed the issue of whether there is an increased activation or efficiency of right-hemispheric processes during imagery, hypnosis, REM sleep, and dreaming. Evidence strongly supports the notion of increased right-hemispheric activation in simple imaginal or visual states during usual consciousness. There are also studies supporting this view of REM sleep, dreaming, and hypnotic phenomena. It is concluded, however, that the lack of adequate studies, contradictory or negative findings, and moderating variables (e.g., task difficulty, cognitive style) make it difficult to draw definitive conclusions concerning right-hemispheric processes.

**Hawkins, Russell; Le Page, Keith (1988). Hypnotic analgesia and reflex inhibition. Australian Journal of Clinical and Experimental Hypnosis, 16, 133-139.**

The major change in thinking about models of analgesia over the last decade or so may be seen as a shift away from the earlier emphasis on a one-way afferent transmission sequence. Analgesia was effected, according to the older models, by a simple blocking of afferent impulses at some level (as achieved by local anaesthesia). Recent models suggest that there are at least two CNS analgesia control systems, each operating via an active mechanism for the inhibition of nociception which includes reciprocal efferent impulses able to respond to input from lower centres by sending control signals which modify their output. One CNS analgesia system has now been quite well described. This "opiate" analgesia system has proved to be naloxone reversible and seems to be mediated by reciprocal pathways between brain stem structures and the dorsal horn and trigeminal caudalis. This is not likely to be the system responsible for all cases of hypnotic analgesia, since the common experience of continued awareness of some elements of a normally painful stimulus, in spite of a freedom from pain, implicates a higher level involvement such as input from the prefrontal cortex.

#### **NOTES:**

The authors present a surgery case (of a cystoscopy and urethrotomy performed under hypnotic analgesia, with a highly hypnotizable patient) as an illustration of their position. The patient grimaced when the urethrotome was inserted into the urethra and dilated, but she denied discomfort and did not exhibit a reflex adduction of the thighs that is often observed even under standard general anaesthesia. She had spontaneous amnesia for the entire surgery. Later, under hypnosis, the patient could remember "discomfort and a sharp pain" which lasted for "seconds, if that" (p. 134).

The authors refer to Melzack and Wall's (1965) gate control theory as well as Hilgard's (1973) neodissociation interpretation of pain reduction in hypnosis. They review research by Hardy and Leichnetz (1981) with monkeys, in which they "traced the projections of the periaqueductal gray (PAG) to determine the extent of

any possible cortical involvement in the endogenous analgesic system. Their work showed that the prefrontal cortex was the principal source of projections to the PAG" (p. 136). They quote the latter as writing that, "Patients who have had prefrontal lobotomies for relief of chronic pain report that while they still feel the pain they are no longer bothered by it ... the prefrontal cortex by virtue of its projections to the PAG may play a role in modulating nociception at the spinal level" (Hardy & Leichnetz, 1981, p. 99).

"Hardy and Leichnetz have also suggested that there may be more than one analgesic system within the CNS. The first system is a naloxone-reversible mechanism which can be activated by opiates (presumably both endogenous and exogenous) and by acupuncture. Since hypnotic analgesia has shown itself not to be naloxone-reversible (Goldstein & Hilgard, 1975) it may have little to do with the opiate reception analgesia system. Instead the mechanism of hypnotic analgesia may lie in Hardy and Leichnetz's second system which is sensitive to affective and cognitive influences" (pp. 136-137).

The authors include a review of the work by Mayer and Price (1976) which established the importance of brain stem structures in analgesia, especially for eliciting stimulation-produced analgesia. They cite Mayer and Price as drawing a distinction between "analgesia achieved by incapacitating a component in a pain transmission system or by activating a pain inhibition system" (p. 137). They also report that Mayer and Price conclude that stimulation-produced analgesia does not result from a "functional lesion" in the brain stem, but results from stimulation of a pain-inhibiting mechanism, suggesting the dorsal horn and trigeminal nucleus caudalis may be involved. This would be consistent with the inhibition of spinal reflexes (the adductor reflex) observed in their urethrotomy case, and the spinal reflex to nociception has also been reported by Finer (1974).

"The concomitant inhibition of reflexes in humans during hypnotic analgesia can be interpreted as evidence that nociception is probably not ascending to the cerebral cortex and that therefore the source of analgesia can be localized to the brain stem areas. It may be the case, however, that the locus of effect of hypnotic analgesia is not uniform across cases and may be identified by the overall pattern of subjective reports and physiological responses. Hypnotic analgesia may be experienced in more than one way subjectively and these differences may be attributable to differing underlying physiological mechanisms. On some occasions the relevant body part may be experienced as totally anaesthetised and all sensation (not only painful sensation) may be lost. This experience matches well with a brain stem involvement, which presumably inhibits any further afferent action. On other occasions, however, and more commonly, patients are still aware of a variety of sensations, which might include pressure in the case of childbirth or even cutting in the case of surgery, but these sensations are not described as painful. This is reminiscent of the effect of frontal lobotomy and it is tempting to focus on the frontal lobe as the locus of hypnotic analgesia effects in such instances" (p. 138).

Hobson, J. Allan (1988). The dreaming brain. New York: Basic Books.

**NOTES: Hypnosis and Sleep Ramon y Cajal and Freud shared an interest in hypnosis, as an experimental method of inducing an altered state of consciousness, introducing dynamic principles into both neurology and psychiatry (rather than simply static descriptions). The author contrasts the hypnosis "artificially altered state of consciousness" with sleep as a "naturally altered state of consciousness, asking whether similar rules govern the transition of state change in both cases. He notes that induction of both states involve rhythmic stimulation and eye fixation, and both may facilitate gaining control over brain-stem centers implicated in conscious-state regulation.**

**"The brain stem is the nightly battleground of warring neuronal factions, and REM sleep and dreaming are the result of temporary domination of one neuronal population over another. Victorious is a troop of reticular-formation neurons concentrated mainly in the pontine portion of the brain stem; owing to their fusillades of firing in association with REM-sleep events, these pontine reticular neurons are likely to play the executive role in the generation of REM sleep and dreaming. Sharing the white flag of temporary surrender is a population of aminergic neurons located in the locus ceruleus, the raphe nuclei, and the peribrachial regions of the anterior pontine brain stem; hardly a shot is fired by this neuronal phalanx during REM sleep. By virtue of this cease-fire, these aminergic neurons are likely to play a permissive role in the generation of REM sleep" (p. 183).**

**The Reciprocal-Interaction Model suggests that "the continuous competition between the excitatory reticular neurons and the inhibitory aminergic neurons is the basic physiological process underlying sleep-cycle alternation" (p. 184). Neurotransmitters (aminergic for inhibition, cholinergic for excitation) are implicated as well. The width of the brain stem correlates with sleep-cycle. The brain seems to "undergo a periodic shift in neurotransmitter ration, from a predominantly aminergic mode in waking to a predominantly cholinergic mode during REM sleep" (p. 192). Thus, there is a major shift in metabolic orientation as we change from waking externally generated information and action to REM-sleep internally generated information and suppressed action.**

**The author proposes an activation-synthesis hypothesis to account for dreaming and envisions the brain as a "Dream Machine." "The recognition that the brain is switched on periodically during sleep answers the question of where dreaming comes from: it is simply the awareness that is normal to an auto-activated brain-mind. This causal inference is continued in the term activation in the new dream theory's title. The question of why dreams are paradoxically both coherent and strange is in turn suggested by the term synthesis, which denotes the best possible fit of intrinsically inchoate data produced by the auto-activated brain-mind.**

**"The original dream theory thus had two parts: activation, provided by the brain stem; and synthesis, provided by the forebrain, especially the cortex and those subcortical regions concerned with memory. The physiology that is now in hand best supports the first part of the theory; much more work needs to be done on the synthetic aspects of the process. But I now add a third major component to the theory, the concept of node switching, which accounts for the differences in the way the activated fore-brain synthesizes information in dreaming (compared with**

waking): for the twin paradoxes of dream bizarreness and insight failure (where the system has lost self-reference as well as its orientation to the outside world) and for dream forgetting" (p. 204).

The author assumes a formal isomorphism between subjective (dream report) and objective (brain activity) levels of investigation. Thus, the report of experiencing visual images in dreams implicates the brain's visual system.

In terms of psychophysiology, Hobson proposes that "the on-off switch for dream mentation is the reciprocal-interacting neuronal populations comprising the aminergic neurons and the reticular neurons of the brain stem" (p. 205). For sleep (and dreaming) to be maintained, stimulation from the outside world must be minimized. This is accomplished in at least two ways. There is active inhibition of nerves at the pre-synaptic level (e.g. by depolarization by signals coming from the brain stem; Pompeiano, 1978) so that the nerves are less efficient in transmitting information from the environment, as there is less neurotransmitter available. Secondly, there is competition among higher levels of sensory and associative circuits, so that they ignore incoming signals (or incorporate them into internally generated dreaming activity). Hobson refers to these mechanisms as the sensory input blockade.

Hobson also describes the motor output blockade, which prevents us from taking actions based on dream content. There seems to be inhibition of motor-command neurons in the brainstem and spinal cord.

When dreams arise, there seems to be brain activation as evidenced by PGO (Pons, lateral Geniculate, Occipital cortex) waves originating in the brain stem. They are found in association with REM sleep and go via independent pathways to both visual and association cortex. "According to the activation-synthesis hypothesis of dreaming, the now auto-activated, disconnected, and auto-stimulated brain-mind processes these signals and interprets them in terms of information stored in memory" (p. 207).

Hobson states that the activation-synthesis hypothesis can account for five aspects of dreaming: visual and motor hallucinations, the acceptance of these hallucinations as 'real', bizarre spatial and temporal distortion, strong emotions, and amnesia for the events after waking up. The experiences of dreams are accepted as real because there is no concomitant external input.

Jones, Lynette A. (1988). Motor illusions: What do they reveal about proprioception. Psychological Bulletin, 103 (1), 72-86.

Five illusions involving distortions in the perception of limb position, movement, and weight are described in the context of their contribution to understanding the sensory processes involved in proprioception. In particular, these illusions demonstrate that the position sense representation of the body and the awareness of limb movement results from the cross-calibration of visual and proprioceptive signals. Studies of the vibration illusion and phantom-limb phenomenon indicate that the perception of limb movement and position are encoded independently and can be dissociated. Postural aftereffects and the illusions of movement induced by vibration highlight the remarkable lability of this sense of limb position, which is a

necessary feature for congruence between the spatial senses. Finally, I discuss the role of corollary discharges in the central processing of afferent information with respect to the size-weight and vibration illusions.

Kingsbury, Steven J. (1988). Hypnosis in the treatment of posttraumatic stress disorder: An isomorphic intervention. American Journal of Clinical Hypnosis, 31, 81-90.

**NOTES:**

Reviews literature on hypnosis treatment for PTSD and presents a rationale, based on the type of symptoms presented (blunting vs intrusions). Case presentations are provided.

"Several types of physiological processes may underlie dissociation. State-dependent learning, in which that learned during drug-induced alterations in consciousness may only be recalled during later similar alterations, is believed to be dependent upon hippocampal mechanisms (Gerrien & Chechile, 1977). The relationship of state-dependent learning to hypnosis has remained at the level of theory (Hilgard, 1977; Rossi, 1986). A second possible explanatory construct suggests everyday experience is primarily (but not exclusively) mediated by verbal, dominant hemisphere functioning. The images and sets mediating hypnosis, PTSD, and other forms of dissociation may be mediated by analogic processing and the nondominant hemisphere (Carter, Elkins, & Kraft, 1982; Galin, 1974; Hilgard, 1977; Watzlawick, 1978)" (p.83).

Loewenstein, R. J.; Putnam, F. W. (1988). A comparison study of dissociative symptoms in patients with complex partial seizures, MPD, and posttraumatic stress disorder. Dissociation, 1, 17-23.

Depersonalization and dissociative symptoms have been widely reported in chronic seizure disorder patients, especially those with temporal lobe involvement and complex partial seizures (CPS). It has been theorized that development of multiple personality disorder may be related to temporal lobe pathology. We administered the Dissociative Experiences Scale (DES) to 12 male patients with severe chronic epilepsy, primarily of the complex partial type. Patients had epilepsy from 1 to 30 years. Most were being evaluated for intractable seizures occurring several times per week. DES data on the epileptic patients were compared with DES data on 9 male MPD patients and 39 PTSD patients. MPD and PTSD patients were significantly different from CPS patients in median DES scores and all DES subscale scores. MPD and PTSD patients were far more similar on the DES, although MPD patients had a significantly higher score on the dissociation/psychogenic amnesia subscale of the DES. The authors conclude that there is little data to support a relationship between MPD, dissociation, and epilepsy.

Lorig, Tyler S.; Schwartz, Gary E. (1988-89). EEG activity during relaxation and focal imagery. Imagination, Cognition and Personality, 8, 201-208.

EEG activity was recorded in nine volunteer subjects while they engaged in eight cognitive tasks. The tasks involved mental arithmetic, relaxation imagery, food imagery and imagery related to "neutral" stimuli (bicycle and automobile). Period analysis of the EEG indicated significant differences in EEG factor activity related to tension and anxiety for the subtraction, relaxation and food imagery trials. Imagery of heaviness and the subject's favorite dessert produced EEG factor activity most characteristic of relaxation. Results of this study are discussed in terms of the relation of odor to food imagery and the ecological validity of the use of food imagery in relaxation training.

#### NOTES:

Lorig, in a comparison of spectral and period analysis techniques, found that period analysis had greater sensitivity to task-related EEG effects. More recently, Lorig and Schwartz applied factor analysis to EEG period data and found that the factors identified tended to show greater homogeneity and correspondence to self-report than the traditional EEG bands of alpha, theta and beta. Period analysis reduces data to a histogram of the number of waves of various frequencies which occur during each 10 second data collection epoch for each task.

As is evident from Finding 1, the 8 tasks tend to stratify into two groups which either increase or decrease in Factor 1/theta activity over time. Those tasks which decrease over time seem to be performance or practice-related and include Serial subtraction of threes, of sevens, relaxation imagery of heaviness (HVY) and instructions to concentrate on the word "one" as they inhaled and exhaled (BCON). These tasks may change little in their cognitive demands on the subjects over time. The other tasks (imagery of their first bicycle, imagery of their earliest ride in a car, imagery of their favorite main course, imagery of their favorite dessert) may be more evocative to the Ss since they were asked to recall events from their personal experience. The recall of some of these experiences may kindle the subsequent recall of other events and account for the increases in theta and Factor 1. It is also possible that theta and Factor 1 are attention-related. Thus, as the S participates in a task which changes little over time, attention is diminished. If, however, the task continues to evoke other personally relevant events, attention will be maintained and may even increase over time. If this later hypothesis is correct, the Favorite Dessert task may be of use clinically since it produces EEG patterns associated with less tension and anxiety and also less boredom. This task also produced self-reports of greater happiness ( $p = .0001$ ) and was not different from relaxation imagery of heaviness and instructions to concentrate on the word 'one' as they inhaled and exhaled in self reports of relaxation, tension or calm.

The results of this study indicate that imagery of food, especially one's favorite dessert, has relaxation effects apparent in EEG and self-report. These effects may indicate that food-related odorants exert their relaxation effects by producing imagery of food. Such effects should not be surprising given the early history of systematic desensitization training in which food was often used as a competing stimulus for anxiety-provoking stimuli.

De Pascalis, Vilfredo; Marucci, Francesco; Penna, Pietronilla M.; Pessa, Eliano (1987). Hemispheric activity of 40 Hz EEG during recall of emotional events: Differences between low and high hypnotizables. International Journal of Psychophysiology, 5, 167-180.

This study evaluates individual differences in hypnotizability as reflected in waking-state hemispheric engagement during recollection of 3 positively and 3 negatively valenced personal life events. The State-Trait Anxiety Inventory, Maudsley Personality Inventory, Tellegen Absorption Scale and Harvard Group Scale of Hypnotic Susceptibility (Form A) were administered. Electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 40-Hz band were recorded during rest and task conditions in 22 high and 21 low hypnotizable women. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EMG amplitude and both hemisphere 40-Hz EEG densities were obtained. A 40-Hz EEG ratio, as a measure of hemispheric asymmetry, and a hemispheric specificity index were also computed. High hypnotizables showed significantly lower 40-Hz EEG density than low hypnotizables in all experimental conditions. The relationship between lateralization of 40-Hz EEG and emotional processing was moderated by hypnotizability. High hypnotizables, with respect to rest condition, showed an increase of density over both left and right hemispheres during two of the three positive emotional tasks, while they showed a depressed activity over the left and an increased activity over the right during negative emotional tasks. Low hypnotizables, on the other hand, did not exhibit differential hemispheric patterns that could be attributed to different emotional valences. The high group showed greater hemispheric specificity in the predicted direction than the low group. High subjects exhibited greater ratings of absorptive ability and emotional feeling than low subjects. Anxiety and EMG levels did not differ between groups. EMG was dependent on the type of emotion which showed greater activity in the negative emotion condition compared with the positive one.

De Sano, Christine F.; Persinger, M. A. (1987). Geophysical variables and behavior: XXXIX. Alterations in imaginings and suggestibility during brief magnetic field exposures. Perceptual and Motor Skills, 64, 968-970.

12 male and 12 female volunteers were evaluated for their suggestibility before and after an approximately 15-min. exposure to either sham, 1-Hz or 4-Hz magnetic fields that were applied across their mid-superior temporal lobes. During the field application subjects were instructed to view a green light that was pulsating at the same frequency as the field and to imagine countering an alien situation. Results were commensurate with the hypothesis that weak brain-frequency fields may influence certain aspects of imaginings and alter suggestibility.

**NOTES:**

"Subjects who had been exposed to the 4-Hz fields showed a significant decrease ... in heart rate compared to those who had been exposed to either the 1 Hz or sham-field conditions. A significant ... interaction of sex by field ... was noted for the

change in HIP [Hypnotic Induction Profile] scales. Whereas both men and women in the sham-field condition tended to show less induction (~ 1 unit) on the second occasion ... women showed much greater (8.4 + 1.1) induction (= 3 units) if they had been exposed to the 1-Hz field while men showed much greater (8.0 + 1.5) induction (= 3 units) if they had been exposed to the 4-Hz fields. On the protocols, women reported significantly more fear responses than men. In addition, subjects who were exposed during the imaginings to the 4-Hz field showed more imaginings ... and more references to vestibular experiences (e.g., self or entity rising or floating) ... than those exposed to the other conditions" (p. 969).

"Dissociation scores on the HIP were correlated significantly ... with vestibular (0.44), imagery (0.43), and fear (-0.45) scores from the transcripts. Floating responses on the HIP were correlated with the amount of imagery. (0.46). There was a significant positive Pearson correlation between the compliance measure and the amount of arm levitation during the second induction only. These results suggest that hypnotic susceptibility may be increased following magnetic-field exposure but that the effective frequency is not the same for each sex. In addition, the amount of the imagery (particular vestibular experiences) increased if the person observed a light that was flashing at the same frequency as a 4-Hz applied magnetic field" (p. 969).

## 1986

De Pascalis, Vilfredo; Palumbo, Giovanni (1986). EEG alpha asymmetry: Task difficulty and hypnotizability. Perceptual and Motor Skills, 62, 139-150.

Parieto-occipital EEG alpha was recorded bilaterally, while 20 high- and 20 low-hypnotizable women performed one left-hemisphere and one right-hemisphere task of low difficulty and two other comparable tasks of high difficulty. Every task was performed twice, once with eyes open and once with eyes closed. All subjects were right-handed. The tasks were originally selected to be of high and low difficulty. The subjective rating of task-difficulty was also evaluated. The integrated amplitude alpha and the alpha ratio (R- L/R + L) were the dependent variables. The highly hypnotizable women showed significantly higher alpha amplitude in eyes-closed condition than the low scorers; this difference disappeared during task performance and in the eyes-open condition. The left- tasks showed lower alpha amplitude in both hemispheres than right-tasks and baseline. The right-hemisphere alpha amplitude was lower than left in all experimental conditions. On tasks of high and low difficulty there was different hemispheric behavior on right and left tasks. Performance reflecting the right and left hemispheres in the low-difficulty condition showed no changes between baseline, right- and left-tasks, while under high difficulty there was a decrease in alpha amplitude in the right and even more marked decrease in the left hemisphere during left-tasks. The pattern of task effects for ratio scores was the same as for alpha amplitude, however, despite the analysis of alpha scores, an interaction of hypnotizability x task-difficulty was detected. The highly hypnotizable women showed less negative alpha ratio during a task of low difficulty than during tasks of high difficulty; the reverse was true for the low-

hypnotizable women. Finally, the highly hypnotizable subjects showed less subjective difficulty during performance than the low scorers.

**DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.**

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

#### **NOTES:**

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

Experimental Protocol: 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia; arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference

was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of Clinical and Experimental Hypnosis*) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

" In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), *Biofeedback: Behavioral medicine*. New York: Grune & Stratton, Pp. 147-165.

Sterman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), *Biofeedback: Behavioral medicine*. New York: Plenum, 1977, Pp. 167-200.

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Church, Katherine L.; Monty, Richard A. (1986). Hypnotizability and speed of visual information processing. *International Journal of Clinical and Experimental Hypnosis*, 34, 234-241.

Following the determination of the luminance threshold of each S, high and low hypnotizable Ss were tested for speed of information processing using a backward masking paradigm with a bias-free and ceiling-free psychophysical task. No significant relationship between hypnotizability as measured by the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) of Weitzenhoffer and Hilgard (1959) and speed of information processing was observed. The order of administering SHSS:A, pre- or postthreshold task, was significantly related to luminance threshold. Results were compared to other studies wherein some evidence for a relationship between hypnotizability and speed of visual information processing had been offered.

#### NOTES:

106 college students were tested using tachistoscopic presentation of stimuli. 52 Ss received the SHSS:A immediately prior to the experimental tasks, 54 immediately after, and testing was terminated for each Subject after they failed 3 successive items. The test flash was set at 0.3 log units above threshold, i.e. double the threshold intensity. A trial consisted of 2 observation intervals, separated by warning tones. The test flash occurred randomly in one of the two intervals. The S indicated which observation interval contained the test flash by pressing a button. Feedback tones gave S information about the correct response.

"The masking experiment was begun with the suprathreshold test flash occurring 250 milliseconds prior to the onset of the larger bright masking stimulus. As before, a two-interval forced-choice staircase procedure was used, but this time the test intensity was constant, and ISI was changed. If S 'hit' three trials in a row, ISI was decreased by 10 milliseconds. The ISIs continued to decrease in 10-millisecond steps, until S "missed," causing an increase in ISI" (p. 348).

RESULTS were analyzed by 2 x 2 x 2 ANOVA (Hypnotizability, sex, and order of hypnotizability measurement). High hypnotizables = 7-12 on the SHSS:A, and low hypnotizables = 0-6. Ss receiving SHSS:A prior to the tasks had a significantly lower luminance threshold (-1.99 log mL) than did those having it after tasks (-1.93 log mL),  $p < .05$ . None of the other analyses were significant. No significant relationships were observed vis a vis the masking task, and the mean masking thresholds were almost identical for the lows and highs.

DISCUSSION. "Spanos (1982), in studying the effects of hypnotizability and suggestions in altering auditory sensitivity, reviewed the difficulties inherent in the measurement of perceptual accuracy and emphasized the role of response bias in the confounding of results" (p. 239). Secondly, these tasks reflect more fundamental,

central processes and use more neutral stimuli than letter recognition used earlier. "Thus, while the masking effects of both the previous recognition tasks (masking by pattern) and the current detection tasks (masking by nearby contours) are presumably mediated through similar high level central processes, the differences in findings could possibly have been related to additional processing cues required in letter recognition" (p. 239). A footnote mentions, "Other studies have shown that with stimulus configurations similar to that used in the present study, there are significant central masking effects (Battersby & Wagman, 1962; Markoff & Sturr, 1971; Turvey, 1973)" (p. 239).

"Quite intriguing is the luminance threshold finding which, although not as robust as one would desire, suggests that a hypnotic induction procedure given prior to a task may significantly affect sensitivity on that task. Speculatively, the relaxation suggestions inherent in SHSS:A may account for the changes in luminance threshold" (p. 239).

**Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.**

**NOTES: Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.**

**Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical (primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).**

**With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.**

**Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal**

complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses.

The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from thalamus; low level of awareness as in twilight sleep

or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus reticular activating system influences; associated with increased inhibitory thalamic and septal-hippocampal impulses radiating upward to the cortex.

In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit.

The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory septal-hippocampal complex which generates theta-wave activity, thus accounting for the

close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1 sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self-concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

" ... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103). The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

## 1984

Bakker, Dirk J. (1984). The brain as a dependent variable. Journal of Clinical Neuropsychology, 6, 1-16.

The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical, neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

## NOTES:

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right-hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P-type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12).

Gott, Peggy S.; Hughes, Everett C.; Whipple, Katherine (1984). Voluntary control of two lateralized conscious states: Validation by electrical and behavioral studies. Neuropsychologia, 22 (1), 65-72.

A subject is described who can voluntarily select and hold either of two qualitatively different states of consciousness. Evidence is presented which confirmed differential left or right hemisphere dominance in each state. Asymmetries of EEG alpha and task performance scores indicated a state-dependent shift in functional lateralization. Evoked response studies showed directional changes in rate of interhemispheric transmission correlated with state-related hemisphere dominance. These findings demonstrated the capability for voluntary endogenous control of cerebral dominance under natural conditions.

#### NOTES:

A personal communication (letter) from Gott indicates the S switches from one state to the other by visualizing her surroundings and imagining what it would look like

in the other state. Immediately she finds herself in that other state. Her drawings demonstrate that her perspective must differ in the two states.

La Briola, Flora; Karlin, Robert; Goldstein, L. (1984, October). Quantitated EEG changes from prehypnotic to hypnotic periods. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES:**

Hemisphere EEG activation was measured before and during hypnosis, while Ss did tasks described as right-hemisphere (nonverbal) and left hemisphere (verbal). Highs shifted to relatively more task specificity as they went from prehypnosis into hypnosis, with a shift to right hemisphere as they went from prehypnosis to hypnosis periods. This is not due to relaxation, as both highs and lows relax. And the shift occurs not only on verbal-nonverbal tasks but on analgesia studies also.

Versions of this paper were presented at the 93rd Annual Meeting of the American Psychological Association, Toronto, Canada, 1984, at the Annual Meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX, 1984, and at the 6th International Symposium on Clinical Neurophysiological Aspects of Psychiatric Conditions, Izmir, Turkey, 1985.

Lewith, G. T.; Kenyon, J. N. (1984). Physiological and psychological explanations for the mechanism of acupuncture as a treatment for chronic pain. Social Science & Medicine, 1367-1378.

Many suggestions have been made about the possible mechanism of acupuncture as an analgesic therapy. This review provides a comprehensive account of the neurological, neurohumoral and psychologically-based hypotheses put forward. Although the exact mechanism of this treatment remains unclear, it is apparent that reproducible neurological and chemical changes occur in response to acupuncture, and that these changes almost certainly modify the response to, and perception of, pain. The mechanism of chronic pain is incompletely understood, but within this framework we understand acupuncture as completely as most other types of analgesic treatment.

**1983**

Baars, B. J. (1983). Conscious contents provide the nervous system with coherent, global information. In Davidson, Richard J.; Schwartz, Gary E.; Shapiro, David (Ed.), Consciousness and self regulation (3, ). New York: Plenum Press.

**NOTES:**

We are conscious of some content when there exists an internal representation that is global, stable, and informative. Author views nervous system as a distributed information processing system, in which highly complex & efficient processing is performed by specialized processors in a relatively independent way. These processors may be 'data driven'--i.e. they may decide by their own criteria what is

worth processing..." p. 41 [See also Gazzaniga's (1985 Psychology Today article) idea that mind/brain consists of modules.]

p.44 gives references substantiating the above, e.g. Geschwind, Hilgard, La Berge, Shiffrin & Schneider.

p. 45 We are in habit of thinking hierarchically about nervous system rather than distributively.

p. 45 "Consciousness seems to be closely associated with a mechanism that permits interaction between specialized, dedicated processors" The 'global' data base' is like a TV station sending out information that can be processed or not by the viewer. It is not an executive, and in fact can sometimes be controlled by the processors. 'Consciousness ...[is] a certain operating mode of this medium, & consciousness can likewise be used by processors acting as executives, without itself being an executive "(p.49).

The global data base is a lingua franca, so that one sense modality can communicate with others. p. 51. [Synesthesia reported by high hypnotizables implicates this system--either the communicating tracks are greased between color and smell, or the name of the destination, in computer language, is lost, or equivalent.]

p. 52 Repression and the dynamic unconscious. explained in terms of controlled access to the global data base, with certain specialized processors given high priority.

Context, taken by itself, is unconscious; & input, taken by itself & in the absence of the appropriate context, is also unconscious. Only when both of these conditions exist- -when there is input that can be organized within a current context--are we conscious of some percept.

Contextual factors become conscious only when they are challenged.

Blum, Gerald S.; Nash, John K. (1982). EEG correlates of posthypnotically controlled degrees of cognitive arousal. Memory and Cognition, 10, 475-478.

Experimental control over five degrees of cognitive (as opposed to organismic) arousal has been developed by hypnotic programming techniques. Previously these posthypnotic manipulations have been applied to the investigation of diverse topics such as visual discrimination, performance on the Stroop test, selective concentration on color versus form of consonants, and cognitive "reverberation." The present study explored EEG correlates of the five degrees of cognitive arousal in a task requiring participants to visualize objects for one-minute periods while lying on a couch with eyes closed. Analysis of data from the occipital area in left and right hemispheres revealed that the highest degree of arousal was accompanied by larger amplitudes of alpha and beta power and smaller amplitudes of theta. This pattern of results was similar in both hemispheres, although more marked in the left. The findings, which provide an independent source of support for validity of the hypnotic programming, are discussed in relation to EEG literature on cognitive activity.

#### NOTES:

Hypnosis doesn't enhance imagery. It provides the conditions under which mental alertness may be manipulated, and very clear imagery is associated with the alert

condition whereas blurry imagery is associated with the lowest cognitive arousal condition. The other impression comes from clinical work, i.e. that hypnosis enhances imagery. This article is an example of hypnosis used in other research--see last page.

Larbig, W.; Elbert, T.; Lutzenberger W.; Rockstroh, B.; Schnerr, G.; Birbaumer, N. (1982). EEG and slow brain potentials during anticipation and control of painful stimulation. Electroencephalography and Clinical Neurophysiology, 53, 298-309.

Cerebral responses in anticipation of painful stimulation and while coping with it were investigated in a 'fakir' and 12 male volunteers. Experiment 1 consisted of 3 periods of 40 trials each. During period 1, subjects heard one of two acoustic warning stimuli of 6 sec duration signaling that either an aversive noise or a neutral tone would be presented at S1 offset. During period 2, subjects were asked to use any technique for coping with pain that they had ever found to be successful. During period 3, the neutral S2 was presented simultaneously with a weak electric shock and the aversive noise was presented simultaneously with a strong, painful shock, again under pain coping instructions. EEG activity within the theta band increased in anticipation of aversive events. Theta peak was most prominent in the fakir's EEG. A negative slow potential shift during the S1-S2 interval was generally more pronounced in anticipation of the aversive events than the neutral ones, even though no overt motor response was required. Negativity tended to increase across the three periods, opposite to the usually observed diminution. In Experiment 2, all subjects self-administered 21 strong shock-noise presentations. The fakir again showed more theta power and more pronounced EEG negativity after stimulus delivery compared with control subjects. Contrary to the controls, self-administration of shocks evoked a larger skin conductance response in the fakir than warned external application.

#### NOTES:

A published case study by Pelletier (1977) reported EEG theta enhancement during pain control states, which were maintained by EEG feedback of alpha and theta bands. That author concluded that EEG theta was necessary for the control of pain psychologically.

The authors of this article measured slow brain potentials (SBPs) and vertical eye movements (VEMs). Principal components analysis of the EEG wave forms found three components: theta (4-5.6 c/sec), alpha band (9-10 c/sec) and high frequencies (above 14.4 c/sec) plus harmonics loading in frequencies of 3.2-4.5 c/sec, 7.5-9, and above 15 c/sec. Alpha "decreased over periods in the parietal record and was virtually absent in the fakir's EEG during period 3" (p. 301). The fakir had a lot of non-sinusoidal, especially square wave, activity.

"Very pronounced negativity was recorded preceding the aversive S2, greater than under neutral stimulus conditions .... This difference was most pronounced at the vertex ... The late negativity increased over periods in control subjects ... especially in anticipation of the aversive S2 ... . This contrasts with the usually observed decrease of SBP components over trials. As is shown in Figure 2, the PCA [principal components analysis] yielded two components for the 2.0 sec S2 interval, a positive

deflection, which can be assigned to the P300 complex (here not reported), and a negative deflection, labeled post- imperative negative variation. ... This negative component increased over periods, being more pronounced in response to the aversive stimulation ... with increasing differentiation over period ..." (p. 302-303).

The fakir undertook an elaborate self hypnosis or trance induction to achieve analgesia that he had previously demonstrated in the laboratory (thrusting 4 unsterilized metal spikes into his abdomen, tongue, and neck without bleeding). This included "long- continued fixation on a point above the eye-brows. Blank facial expression, staring eyes, and a very low rate of eye-blinks indicated a trance-like state (periods without eye-blinks more than 30 min)" (p. 299). During the experiment itself, the fakir showed few ocular movements during the second and third periods. He also demonstrated large skin conductance responses, recorded from the second phalanges of the index and middle fingers of the left hand, to the aversive S1.

Experiment 2 was designed to emulate the self-administered aversive stimulation that the fakir routinely undertook, by having the volunteer Ss hold a switch that they pressed twice/minute, giving themselves a mild shock and an aversive noise. (These were the same aversive stimuli as were used in Experiment 1.) There were 21 self-paced button presses.

Three additional measures were taken: 1. Bereitschaftspotential (BP) - the mean negative shift during the 0.3 sec interval prior to the motor response of pressing the switch 2. Postimperative component (PINV) - the mean negative shift 0.9 to 1.9 sec after stimulus onset, i.e. elicited by closing the microswitch 3. Skin conductance response (SCR) - maximum change in skin conductance level during five second interval after the motor response of pressing the switch.

The fakir, but not the control Ss, showed a pronounced precentral PINV on each single trial of Experiment 2. He also showed pronounced SCRs (indicating autonomic arousal), which was even greater than the SCRs of control Ss. His subjective pain rating was 1 in Experiment 1 (compared with 6.4 for controls) but 8 during Experiment 2 (compared with 5.7 for controls), on a scale of 1 to 10 maximum. Thus the fakir's pain increased from Experiment 1 to 2, while for many volunteer Ss it decreased 2 or 3 points. When interviewed, he said that "intention and motor commands prevented the fakir from getting into 'trance' satisfactorily. Consequently, he reported to have experienced the aversive stimuli as more painful than in experiment 1. Thus it might be that the observed PINV indicates the noncontingency between the demand for coping and the failure to cope or the discrepancy between expected control and presently experienced control" (p. 307).

In their Discussion, the authors speculate that control of pain such as can be achieved by the fakir may involve dissociation of higher (possibly thalamic and cortical) and lower (reticular formation) arousal structures. Their observation of slow brain potentials (theta) recorded in anticipation of painful or aversive stimuli is in agreement with earlier published studies. However their observation of increasing negativity in anticipation of aversive stimuli is in contrast to previous research findings, in which diminution of negativity is generally observed.

Both the fakir and subjects showed a post-stimulus negative shift in response to the S2; this has been "observed in normal subjects under conditions of change from

controllable to uncontrollable aversive stimuli... and/or from obvious response-consequence contingencies to unpredictable control over the S2... PINVs were associated with an unexpected change in contingency or the inability to resolve ambiguity. Since a relationship was found between PINV amplitude and subjective ratings or experienced aversiveness of the painful stimulation, it may be speculated that obvious failure in coping with pain (i.e. more experienced pain) together with the requirement to cope (induced by instructions and experimental setting, giving rise to increased expectancy for control), produced a PINV (and probably feelings of uncontrollability together with a state of reactance and frustration) in the present experiments. In accordance with this point of view, it is of particular interest that only the fakir showed a more pronounced PINV in experiment 2, in which subjects delivered the painful stimuli to themselves. A postexperimental interview revealed that intention and motor commands prevented the fakir from getting into 'trance' satisfactorily" (p. 307).

## 1981

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6 seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

NOTES: Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold

mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory.

The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum.

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is associated with altered states of consciousness (Tebecis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature

rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that hypnosis has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical pain were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

## 1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, 133 (3), 161-169.

"The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding S2 differed only after the most intense S1. Hypnotic suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

## 1978

Lehrer, Paul M. (1978). Psychophysiological effects of progressive relaxation in anxiety neurotic patients and of progressive relaxation and alpha feedback in nonpatients. Journal of Consulting and Clinical Psychology, 46 (3), 389-404.

Gave 10 anxiety neurotic patients 4 sessions of individual instruction in progressive relaxation; 10 patients served as waiting list controls. 10 nonpatients were assigned to each of the same conditions, and an additional 10 nonpatients were given 4 sessions of alpha feedback. Nonpatients showed more psychophysiological habituation over sessions than patients in response to hearing 5 very loud tones and to a reaction time task. Patients, however, showed greater physiological response to relaxation than did nonpatients. After relaxation, the autonomic responses of the patients resembled those of the nonpatients. The effects of relaxation were more pronounced in measures of physiological reactivity than in measures of physiological activity. Defensive reflexes yielded to orienting reflexes more readily in nonpatients than in patients. There was also a tendency for progressive relaxation to generalize to autonomic functions more than alpha feedback.

**1977**

**Davidson, R. J.; Goleman, D. J. (1977). The role of attention in meditation and hypnosis: A psychobiological perspective on transformations of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 291-308.**

A temporally based scheme for investigation of changes in consciousness, applicable to areas such as meditation and hypnosis, is proposed and is divided into 3 basic epochs: before -- predispositional variables that affect response to consciousness altering techniques; during -- the state effects of the particular technique; and after -- the trait effects of the practice. Research is surveyed which indicates the role of attentional processes during each of these 3 basic epochs in both meditation and hypnosis. Attentional flexibility is a predispositional variable affecting response to both meditation and hypnosis. The state effects of concentrative meditation involve alterations in stimulus set while the state effects of hypnosis may reflect primarily response set. The trait effects elicited by meditation depend critically on the psychobiological systems which are called into play. Evidence is discussed which suggests that concentrative meditation shares with relaxation an autonomic quiescence, but in addition enhances some attentional skills. A mindfulness technique involving the adoption of a particular attentional stance toward all objects of awareness appears to enhance cortical specificity, but a concentration technique does not. Some implications of attentional self-regulation are discussed.

**Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.**

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

## 1976

Cooper, Leslie M.; London, Perry (1976). Children's hypnotic susceptibility, personality, and EEG patterns. International Journal of Clinical and Experimental Hypnosis, 24, 140-148.

19 boys and 16 girls, aged 7 to 16, were given the EEG and then the Children's Hypnotic Susceptibility Scale, while a parent watched. About 1 week later, after some separate tests and interviews, each child was given a puzzle to solve in the parent's presence, while Es recorded offers and requests for help. Hypnotic susceptibility was positively correlated with the alpha duration with eyes open, but not with eyes closed. Both susceptibility and alpha duration tended to be negatively correlated with age. Highly susceptible children tended to wait longer than low susceptibles before asking parents for help with the puzzle, and their parents tended to be more strict, anxious, and impatient than did the parents of low susceptible children.

Lenox, J. R.; Bonny, H. (1976). The hypnotizability of chronic alcoholics. International Journal of Clinical and Experimental Hypnosis, 24, 419-425.

Research on the hypnotizability of alcoholics is rare, contradictory, and fails to consider the age of alcoholic samples, who are much older than college norm groups. 36 male chronic alcoholics were given the Harvard Group Scale of Hypnotic Susceptibility, Forms A and B of Shor and E. Orne (1962, 1963a), administered individually and then averaged. Alcoholics scored lower, but not significantly so, than controls matched for age and sex. An expected negative correlation of age with hypnotizability was not found. The implications of these results for past studies are discussed.

London, Perry (1976). Kidding around with hypnosis. International Journal of Clinical and Experimental Hypnosis, 24 (2), 105-121.

This paper reviews a long term research project relating hypnotic susceptibility to performance and personality variables. Several experiments indicated that people who are low in hypnotic susceptibility try harder than high susceptibles for maximum performances on strength, endurance, psychomotor coordination, and cognitive tests, though high susceptibles are generally more pleased with their own performances. Other experiments indicated that people of high hypnotic susceptibility have slower brain-wave patterns under relaxed, nonhypnotic conditions, than do low susceptibles. These findings, together with a third set of findings on the developmental character of hypnotic susceptibility, led to the theory that hypnotic susceptibility and brain-wave patterns are both inversely correlated

with achievement motivation and with its developmental roots in childhood independence training. An elaborate research program was initiated to investigate the hypothesized relationships.

**1974**

**Galin, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583.**

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanism for at least some instances of repression and an anatomical locus for the unconscious mental contents.

**1970**

**Crasilneck, Harold B.; Hall, James A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18 (3), 152-158.**

Hypnotherapy has been found of value in rehabilitation of many patients experiencing difficulty in the usual procedures which follow cerebrovascular or traumatic brain injury. 3 cases are reported to illustrate the approach taken. Of 25 similar cases seen over a 9-year period, 4 were unresponsive to hypnosis. Although an increase in motivation for recovery seemed to be the major change elicited by hypnotherapy, other theoretical possibilities are mentioned. Hypnosis may be a useful way of approaching motivational problems in rehabilitating patients who manifest negativism toward conventional treatment.

**1968**

**Bartlett, Esther E. (1968). A proposed definition of hypnosis with a theory of its mechanism of action. American Journal of Clinical Hypnosis, 11, 69-73.**

A definition of hypnosis as a control of the normal control of input (information) for the purpose of controlling output (behavior) is proposed. A theory of the mechanism of action of hypnosis as an increasing integration of the neocortex and the subcortical areas of the brain, with the subcortical areas activated to a greater extent than normally, is postulated.

**1964**

**Hammer, A. G.; Arkins, W. J. (1964). The role of photic stimulation in the induction of hypnotic trance. International Journal of Clinical and Experimental Hypnosis, 12, 81-87.**

The relative effectiveness of the ordinary verbal method of trance induction is compared with 2 forms of induction utilizing mechanical photic stimulation, and with methods combining the personal and mechanical features. The criterion of trance adopted was the compulsive carrying out of a difficult suggestion. Results show that mechanical procedures alone are ineffective. On the other hand, the addition of a particular sort of photic driving probably improves trance induction, which suggests that induction is a complex matter involving both social interactions and relatively nonmeaningful impacts on the brain. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

**Levendula, Dezso (1961). Two case presentations: Treatment of central pain with reconstruction of the body-image -- hypnoanalysis of a travel phobia. International Journal of Clinical and Experimental Hypnosis, 9, 283-289.**

**NOTES:**

Uses analogy of phantom limb (hallucinated pain which is a central pain) with a multiple sclerosis patient who had "excruciating" pain between her thighs despite paralysis from waist down due to multiple sclerosis. She valued her sex life though she couldn't feel sexual response, and felt that she "didn't have any legs" and her husband "had to carry her."

In giving her history the patient noted an increasing numbness and weakness in her legs five years earlier. At that time she also entered menopause and developed severe vaginitis. She became depressed when she became increasingly unable control her excretory functions. As the pain in the genital region increased, her ability to feel pleasant vaginal sensations diminished. Ultimately the pain was continually present.

The therapist attributed her problem to a faulty body image because she "denied the existence of her legs which were actually physically present, although, she could neither feel, nor see, nor move them" (p. 285). Secondly, it was most necessary for her to hold on to the myth [sic], that her vagina existed, because it made her feel wanted and needed by her husband. She was unconsciously afraid that by giving up her vagina she would lose the most important bond between herself and her husband" (p. 285).

The therapist speculated that "the pain, which was the last sensation perceived before the total sensory loss occurred, was fixated centrally. This "pain-image" served to maintain the pretense, unconsciously of course, that there was still feeling in the vagina even though it was only pain and not pleasure. The pain permitted her to avoid facing reality, just as in the case of an amputee who develops the fantasy of a phantom limb, because he cannot readjust his pre-existing body-image to the acceptance of mutilation" (p. 285). He offered the patient "the rather simple

explanation... that because she really did not feel where her lower body ended or began, the pain served her need to know where the body halves were separated. If she could learn to imagine and to accept herself as a full, whole person, the pain probably would leave her. This theory seemed very logical and acceptable to the patient" (p. 285).

"Hypnosis was extensively utilized in the following sessions to regress the patient toward her youth. She went again for long walks with her boyfriend, now her husband. It was fun to re-experience the feeling of walking in her father's apple orchard and stretch up for a red apple. Autohypnosis was taught and [he] told her to exercise "walking" while hypnotized twice daily" (p. 285-286). He also tapped on the soles of her feet repeatedly, until she could localize the vibrations. "She finally learned that she did have legs and also that other sensations besides pain could originate below the waist.... Gradually with the acceptance of her "wholeness and tallness" the pain became less and less. She was able to "forget" the pain for a longer period of time. ... Occasionally she does call. She tells [the therapist] that in a stressful situation, such as moving into a new house and not knowing where things are, the pain comes back temporarily, but it is much less and after [they] talk an hour she is relieved" (p. 287). The patient had a total of 20 visits. The author describes a second case, which is not described in these notes.

## 1960

Diamant, J.; Dufek, M.; Hoskovec, J.; Kristof, M.; Pekarek, V.; Roth, B.; Velek, M. (1960). An electroencephalographic study of the waking state and hypnosis with particular reference to subclinical manifestations of sleep activity. International Journal of Clinical and Experimental Hypnosis, 8, 199-212.

(Author's Conclusions) EEG records have been investigated in 10 patients in a waking state and under hypnosis. It was shown that no differences existed between these two states in terms of EEG. EEG signs of decreased wakefulness can be demonstrated in some of the patients, but these were also present without hypnosis. This latter effect appears to be subclinical sleep activity (Roth), frequently seen particularly in neurosis. Reactibility to external stimuli under hypnosis was also, in most cases, equivalent to reactions in the waking state. The authors incline to the view that EEG data does not support the concept that the nature of hypnosis and sleep is qualitatively the same.

Guinazu, S. (1960). Relajacion de Schultz e ionotoforesis calcica trans cerebral. Acta Hipnologia Latino-Americana, 1, 65-67. (Abstracted in American Journal of Clinical Hypnosis, 1962, 5, 75)

The author recommends the use of autogenic training in conjunction with transcerebral calcium iontoforesis for the treatment of neurotic and psychotic disorders. This combined therapy abbreviates treatment time and leads to greater percentage of recoveries. Four cases, taken from over two hundred, are presented and analyzed.

Hernandez-Peon, R.; Dittborn, J.; Borlone, M.; Davidovich, A. (1960). Changes of spinal excitability during hypnotically induced anesthesia and hyperesthesia. American Journal of Clinical Hypnosis, 3, 64. (From 21st International Congress of Physiology, Buenos Aires, 1959, pg. 124, Abstracts)

Although hypnosis is well established, the physiological mechanisms of the hypnotic state and their related sensory phenomena are far from clear. Hernandez-Peon and Donoso have found that the magnitude of photic evoked potentials in the optic radiations of awake human subjects changed in response to previous verbal suggestions concerning the intensity of the expected photic stimulus. This striking observation led the cited authors to propose that certain hypnotic sensory phenomena might be explained, at least partially, by changes occurring as far down as second-order sensory neurons by centrifugal mechanisms controlling the sensory input to the brain. In the intact subject it is impossible to record uncontaminated electrical indexes of afferent impulses from those lower sensory neurons. However, it is possible to gain indirect evidence of tactile sensory inflow to the spinal cord by recording cutaneous reflexes. In young males, a forearm skin reflex evoked by a single square pulse of 0-.1 msec. duration was recorded with cathode-ray oscilloscope. The amplitude of the evoked potentials was often reduced during the hypnotic state, and it was further reduced by verbally suggesting to the hypnotized subject complete anesthesia of the forearm. Reciprocally, during hypnotically suggested hyperesthesia the cutaneous reflex was enhanced. It is concluded that during hypnotic anesthesia and hyperesthesia excitability changes occur at the spinal level, and it is suggested that these changes probably involve the spinal internuncial system interposed between the dorsal root ganglion cells and the motoneurons. (From Abstracts, 21st Internat. Cong. Physiol., Buenos Aires, 1959, p. 124.

**1959**

#### NOTES

"[H]ypnosis is similar to sleep in that it usually begins with muscular relaxation and is accompanied by lack of spontaneous thinking, planning or talking. It is similar to deep concentration in that it excludes from attention everything that is irrelevant" (p. 110). The author summarizes research on brain functions associated with consciousness, especially those of the brain stem activating system, and research evidence of generalized cortical inhibition during sleep (possibly related to the diffuse thalamic system). She views hypnosis as having similar inhibitory effects because the hypnotized person inhibits irrelevant action impulses, "will literally neither act nor think except as the hypnotizer commands or implicitly permits" (p. 115). [Hypnotic] "analgesia can be explained as a depression of the somatosensory limbic cortex which results in appraising the organic sensation as indifferent rather than painful (i.e. as falling within the optimal range of sensitivity)" (p. 115). The author posits a mediating hippocampal action circuit that is associated with the diffuse thalamic system. "The latter mediates the reduction or intensification of neural conduction from sensory areas to limbic cortex and hippocampus, and thus is instrumental in the exclusion of sensory impressions, resulting in lack of pain

or of sensory experience or, conversely, in the production of pain and sensory hallucinations. Suggested action states (e.g. cataplexy) are mediated via the action circuit connecting with the premotor and motor cortex, and represent motor imagination transformed into action. Suggested sensations are mediated via the action circuit connecting with the association and sensory receiving areas, and represent projected memory images which are accepted as real because the impulse to appraise and evaluate has been excluded. Suggested goal-directed actions flow from the suggested situation and are mediated via the action circuit just like any action carried out without hypnosis" (pp. 117-118).

**1953**

**Kline, Milton V. (1953). Hypnotic retrogression: A neuropsychological theory of age regression and progression. Journal of Clinical and Experimental Hypnosis, 1, 21-28.**

**Author's Summary - In a review of the salient aspects of research in hypnotic age regression an evaluation of the data tended to indicate that under certain conditions valid age regression is discussed in the light of a neuropsychological theory of age regression. This theory based upon a concept of hypnotic retrogression views regression and progression phenomena in hypnosis as a form of psychological activity involving disorientation for the subject and a reorganization of his perceptual equilibrium and control mechanisms with particular reference to time-space perception. The term hypnotic retrogression is used to describe the centrally induced state which alters time-space perception and renders hypnotic regression and progression possible.**

**Brain Damage**

**1997**

**Karlin, Robert (1997). Illusory safeguards: Legitimizing distortion in recall with guidelines for forensic hypnosis - two case reports. International Journal of Clinical and Experimental Hypnosis, 45, 18-40.**

**Two amnesic automobile accident victims remembered the information needed for their ongoing lawsuits during hypnosis. Meeting the recording requirements of the Hurd safeguards led to the admission of hypnotically influenced testimony in court in one case, whereas failure to record led to exclusion in the other. In both cases, closed-head trauma almost certainly prevented long-term memory consolidation. Thus adherence to guidelines for forensic hypnosis legitimized distortions in recall instead of preventing them. Hypnosis used to facilitate hypermnesia alters expectations about what can be remembered, makes memory more vulnerable to postevent information, and increases confidence without a corresponding increase in accuracy. Distortion of recall is an inherent problem with the use of hypnosis and hypnotic-like procedures and cannot be adequately prevented by any set of guidelines.**

**1993**

**Laidlaw, Tannis M. (1993). Hypnosis and attention deficits after closed head injury. International Journal of Clinical and Experimental Hypnosis, 31, 97-111.**

**In a controlled study of patients attending a concussion clinic because of ongoing postconcussion symptoms, attention deficits were recorded in the head-injured group for the aspects of alertness, assessed by the Continuous Performance Test (CPT), and processing capacity, assessed by a version of the Paced Auditory Serial Addition Test (PASAT). Selective attention was intact. Hypnotizability was assessed by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), with normal means and standard deviations found in both the concussed and control groups. There was a significant correlation, however, between HGSHS:A scores and PASAT scores in the concussed group only. The results of this preliminary study suggest that slower processing capacity after a closed head injury may predict higher hypnotizability and that hypnosis could be an appropriate rehabilitation technique for these patients who present with postconcussion symptoms.**

**Litwin, R. G.; Cardena, E. (1993, August). Dissociation and reported trauma in organic and psychogenic seizure patients. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.**

**Early detection and differential diagnosis of non-epileptic seizures (NES) versus epileptic seizures (ES) is a major clinical issue in comprehensive epilepsy centers. Recent research suggests that differences in dissociative experiences between NES and ES patients may prove useful for diagnostic purposes. Non-epileptic seizures are frequently conceptualized as a dissociative response to past emotional trauma or abuse; dissociation in ES occurs as a result of electrophysiological abnormalities, most often associated with the temporal lobes. The purpose of this study was to evaluate the effectiveness for the differential diagnosis of NES from ES of several measures of dissociation and of a self-report measure for physical and sexual abuse. Four quantitative measures of dissociation were utilized in this study: the dissociative disorders interview schedule (DDIS), dissociative experience scale (DES), Tellegen absorption scale (TAS) and the Stanford Hypnotic Clinical Scale (SHCS). The incidence of sexual and physical abuse was obtained from structured questions in the DDIS. Forty-one patients being evaluated for intractable seizures participated in this study; 13 ES patients with non-temporal lobe involvement (ES/NTL), 18 ES patients with temporal lobe focus (ES/TLE) and 10 patients with NES spells of psychiatric origin. The main researcher was blind to these diagnoses until the study was completed. Results show a trend toward greater incidence of dissociative experiences in the NES versus ES group on the DDIS, TAS and DES, although these differences tended to be modest and not statistically significant, perhaps given the small N of the study. There were no significant trends or differences in dissociative experiences reported by ES/NTL patients versus ES/TLE patients. Contrary to the study's hypothesis, ES patients were slightly more susceptible to being hypnotized than NES patients. As hypothesized, a significant**

difference was that NES patients reported physical and sexual abuse of higher incidence and longer duration than did ES patients. Logistic regression analysis for prediction of NES using the DES, TAS and SHCS instruments correctly predicted only 10% of NES patients. However, exploratory logistic regression analysis using the demographic variables of gender, months of sexual abuse and years of recurrent seizures suggest that these characteristics may be specific and sensitive in the prediction of NES. Being a female, having a higher incidence and longer duration of abuse and fewer years of recurrent seizures all predicted significantly the existence of non-epileptic seizure events, allowing for a 95% accuracy in diagnostic prediction. Our findings reinforce prior research indicating that dissociation is an important symptom component of both ES and NES events. The trend toward more prevalent dissociative experiences in the NES group suggests that in depth examination of these differences and of key demographic variables may help differentiate between these two groups. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

## 1992

Appel, Philip R. (1992). Performance enhancement in physical medicine and rehabilitation. American Journal of Clinical Hypnosis, 35, 11-19.

Performance enhancement or mental practice is the "symbolic rehearsal of a physical activity without any gross muscular movements" to facilitate skill acquisition and to increase performance in the production of that physical activity. Performance- enhancement interventions have been well known in the area of sports psychology and medicine. However, clinical applications in physical medicine and rehabilitation have not flourished to the same extent, though the demand for improved physical performance and the acquisition of various motor skills are as important. In this paper I will describe how hypnosis can potentiate mental practice, present a model of mental practice to enhance performance, and describe how to help patients access an ideal performance state of consciousness.

Weber, Alison Mary (1992, October). Hypnosis with brain-injured patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES: INTRODUCTION.

The purpose of this paper is a consciousness-raising one. The use of hypnosis with brain-injured people has been relatively neglected with respect to its potential benefit for the patients themselves and also for increasing our knowledge of hypnotic ability. Occasional reports concerning the use of hypnosis with brain-injured patients have appeared (e.g., Crasilneck & Hall, 1970 & 1975; LaClave & Blix, 1989; Manganiello, 1986). However, clinicians often assume that such patients are not able to utilise hypnotic techniques. This assumption appears to derive from three mistaken beliefs: 1. The belief that hypnotic trance ability requires an intact brain. Actually, a fully intact brain is not necessary for entering a hypnotic trance. 2. The belief that brain damage means that the person is totally mentally

incompetent, a "vegetable." In reality there are degrees of brain injury that vary from coma or vegetative state through to relatively mild changes in ability that may not be immediately obvious yet significantly impact the person's functioning in everyday life. 3. The belief that brain-damaged individuals are identical with respect to their type of cognitive disability. In actual fact, the cognitive and other effects of brain injury vary according to location within the brain's functional systems.

#### **CASE EXAMPLES.**

All four cases are people of apparently average or better ability prior to injury as judged from their educational and vocational history. Before discussing these examples, I should point out that the basic induction technique used has generally been the same one that I use with non-brain-injured people. This technique is one that encourages mental and physical relaxation and a mental attitude of passivity and dissociation (Weber, 1981). All were taught to use self-hypnosis as a means of making the benefits available as needed. No hypnotizability scales were used and the issue of using such scales with brain-injured people will be commented upon later.

CASE 1 is a 39 year-old man who fell hitting his head and sustaining a closed head injury. The main effect of that injury was severe slowing of information processing speed. This problem is a common one in cases of closed head injury, is thought to be related to diffuse microscopic axonal injury, and causes experiences of mental fatigue, overload, and stress. The mentally passive, relaxed dissociative state offered through hypnosis helps prevent and reduce these overload problems. In this patient's case, his use of the hypnotic technique enabled him to increase his daily activity level from one of mainly sleeping and resting in darkened rooms to one that included a live-in relationship with his former wife and engaging in hobbies and social activities.

CASE 2 is a 22 year-old man who had a malformation of blood vessels in the left temporoparietal area of the brain. He was undergoing surgical correction of this malformation when it hemorrhaged and he was left aphasic and paralysed down the right side of his body. At the time of hypnotic treatment, he had switched to using his left hand for writing, was able to walk though with a limp, and was able to converse intelligibly but with some underlying language difficulties. He particularly complained of right-sided pain and general numbness of his body. Post-hypnotic suggestions about his body feeling normal and solid together with imagery related to swimming were effective in eliminating the pain and reducing the numbness so that he experienced his body as comfortable and "more normal." He was so comfortable physically that he started earning a living by mowing lawns.

CASE 3 is a 40 year-old man who fell at work, sustained a closed head injury, was unconscious for 1.5 hours, and had no recall of events for 2.5 days after injury. Five years later he still showed a very disorganised and fragmented memory that was suggestive of frontal system dysfunction. He was also able to recall very little of his life prior to injury and this lack of autobiographical memory was very disconcerting to himself and to his family. He was able to benefit from post-hypnotic suggestions concerning his ability to form associations to pictures in the family photo album. These associations were then used as a basis for his making a written autobiographical outline to which he could refer as needed.

**CASE 4 is a 47 year-old man who was showing subtle changes in personality over about 10 years, suddenly had a severe grand mal seizure during which he stopped breathing, and was found to have a large meningioma arising from the falx and extending bilaterally over the top of his brain. There was also evidence of recent hemorrhage within the tumor. The tumor was surgically removed but due to its previous pressure on the brain and to possible anoxia when he stopped breathing, he was left with cognitive problems of poor planning and organizing, slowed mental processing, and memory problems secondary to these other problems. He also showed emotional lability and disinhibition and physical problems that at first involved paralysis but later improved to leg weakness and spasticity and arm weakness and incoordination. Hypnotic techniques helped this patient in several ways: (a) Mental relaxation and dissociation resulted in better emotional control and some relief of the painful knotting of his leg muscles. (b) Age regression was successful in improving his manual coordination for the purpose of accordion playing, an activity of great emotional significance to this patient and his wife. During regression to age 15 years, he reported a twitching of his arm muscles (also observed by the therapist), a feeling that his arms and hands could "move more freely and flexibly as if a resistant force had been removed," and a feeling like "electrical recharging and reconnecting." His accordion playing noticeably improved from about 15 percent to about 90 percent competency and he was able to play again from memory for the first time since his surgery. (c) Post-hypnotic suggestions about his brain connecting to his leg muscles and these muscles working smoothly resulted in his being able to walk around the block without cramping for the first time since his surgery and a few weeks later he was able to walk for four or five hours in the mall instead of being limited to 30 minutes. (d) The patient also reported generally improved well-being as "having more energy, like another veil has been taken off so that things look sharper and more in focus."**

**These four cases represent just a few of the ways brain-injured people can be helped by hypnosis. There are sure to be more ways just as there are for people with normal brains. In order to adapt hypnotic techniques to the needs of brain-injured people, some understanding of their particular brain-function problems is important.**

#### **HYPNOSIS AND BRAIN FUNCTION.**

**Because of time limits only a very quick and simplified overview of brain function can be provided but it should serve to give a general "feel" for a neuropsychological orientation to hypnosis with brain-injured people. It is based partly on Luria's model of brain function (Luria, 1973).**

**1. Arousal and Some Physiological Functions.** These functions involve the brain stem. Arousal functions include sleeping/waking, consciousness/coma, and level of general alertness. The brainstem also controls various physiological functions such as breathing, heart rate, and blood pressure.

**2. Knowledge.** Information from auditory, visual, and somesthetic path ways generally goes to the posterior half of the brain on the side opposite that of stimulus presentation. There are three levels of processing: (a) Primary processing involving initial registration and consciousness of stimuli; (b) Secondary perceptual

elaboration of sensory input so that it makes perceptual sense. For example, in the visual modality the lines and colors registered in the primary area are organized into cohesive shapes in the secondary area. (c) Tertiary processing involves integration of input across modalities, for example, the ability to associate an auditorally heard word with the visually presented object it symbolizes.

**3. Action.** This aspect of brain function includes both motor and mental performance and embraces physical action, speech, and active thinking such as generating ideas and problem-solving. It is located in the anterior half of the brain and also has three levels: (a) Primary control of discrete muscle groups which mainly involves one side of the brain controlling the opposite side of the body; (b) Secondary areas underlie the ability to organize discrete muscle groups into a sequence such as brushing one's teeth; (c) Tertiary executive areas which are critical to the generation of purposive behaviour, goals, plans, self-monitoring and adaptation.

**4. Lateralization of Cognitive Function.** The two cerebral hemispheres are usually specialized in the following way for most right-handed people: (a) Left Hemisphere language; symbolic, analytic, sequential type thinking; and probably motor planning. (b) Right Hemisphere visuospatial, melodic, holistic, synthetic thinking.

**5. Information Processing Speed.** This aspect of mental function seems to depend on the axonal connections that form the white matter of the brain. Speed of information processing refers to the amount of information that can be attended to and processed within a given amount of time and includes both external stimuli like sights and sounds and also internal ones such as thoughts and memories.

**6. New Learning and Memory.** This feature of our abilities involves moving initially registered information into long term storage. The hippocampus is particularly critical in this process. The thalamus is thought to play a part in cued recall. General strategies for encoding and retrieval are probably influenced by frontal system function.

**7. Emotional and Motivational Function.** These functions appear to relate to the limbic system and basomedial frontal areas of the brain. These areas influence emotional intensity, emotional and social self-control, and motivation to initiate action.

**8. Attention.** Attentional function involves several brain areas. The brainstem is responsible for general arousal and level of alertness, white matter connections contribute to how much information a person can attend to and process within a given time, and the frontal cortex and its connections direct and organize the purposive focus of attention.

Any given mental or behavioral ability depends upon a complex system of brain areas and levels of processing. The effects of brain injury vary according to location and severity of damage, and also the person's pre-injury condition and life style.

Obviously, the induction and suggestion techniques of hypnosis need to be based upon a neuropsychological understanding of the patient's cognitive strengths and weaknesses. These factors also need to be considered when interpreting hypnotizability scores on standard scales and perhaps special scales need to be devised for work with such patients. The most common cognitive deficits

encountered when working with brain-injured patients in the post-acute rehabilitation programs with which I have been associated have been those impacting memory, information processing speed, and executive function. Specific comments about these areas of deficit as they impact hypnosis are now given

**Memory.** A person with a defective ability to store new information (related to hippocampal dysfunction) is going to do well with post-hypnotic suggestions of amnesia but is probably not going to recall the items even when the amnestic suggestion is removed or if positive post-hypnotic suggestions are given. The patient with thalamic based memory difficulty may later be able to recall information but only provided a cuing structure of prompts or reminders is built into the suggestions. Whether or not memory ability in those with organically based memory deficit can be enhanced through hypnosis remains unclear. The patient presented earlier whose autobiographical memory difficulties were helped by hypnotic techniques did not have a storage problem per se but rather a very disorganized memory that probably stemmed from frontal type problems.

**Information Processing Speed.** Reduced speed of processing may necessitate giving instructions more slowly or in such a repetitive and redundant manner that some gaps in the patient's registering what is said don't matter. It is also important for such patients not to mentally overload them. For example, case #1 benefitted from the mental relaxation/ dissociation aspects of hypnosis and was able to mentally block out noise to which he was hypersensitive but the mental effort involved in such blocking-out resulted in his feeling mentally exhausted and stressed.

**Executive Function.** Patients with frontal system dysfunction show some deficits that are similar to hypnotic phenomena in people without brain dysfunction. From this point of view, they may be the most promising group to work with to clarify the nature of hypnosis. The hypnotized patient's responses in conforming to suggestion resemble the stimulus-bound and concrete focus and time-distortive aspects of frontally dysfunctional behavior and perhaps also its confabulatory tendencies. The frontal patient may also show a dissociation between knowing and doing that is similar to the split reported by some people in being aware of and observing their own behavior at the same time as they respond to hypnotic suggestions. There is a sense in which the hypnotist acts as the "frontal lobes" of the hypnotized person, giving direction to their perceptions and behavior. The similarities between the two groups certainly invite further exploration and research.

**References:**

Crasilneck, H. B., & Hall, J. A. (1970) The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. *International Journal of Clinical and Experimental Hypnosis*, 18, 145-159.

Crasilneck, H. B., & Hall, J. A. (1975) Hypnosis in neurological problems and rehabilitation. In H. B. Crasilneck & J. A. Hall, *Clinical hypnosis: Principles and applications*. New York: Grune & Stratton, pp. 203-222.

LaClave, L. J., & Blix, S. (1989) Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. *International Journal of Clinical and Experimental Hypnosis*, 37, 6-14.

Luria, A. R. (1973) *The Working Brain: An introduction to neuropsychology*. Harmondsworth (UK): Penguin.

Manganiello, A. J. Hypnotherapy in the rehabilitation of a stroke victim. A case study. *American Journal of Clinical Hypnosis*, 29, 64-68.

Weber, A.M. (1981) Facilitation of dissociation in relation to mental relaxation and hypnosis. *Australian Journal of Clinical and Experimental Hypnosis*, 9, 101-102.

### **1991**

Sapp, Marty (1991, August). The effects of hypnosis in reducing anxiety and stress in adults with neurogenic impairment. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

A repeated measures design was utilized to investigate the effects of hypnosis in reducing anxiety and stress in 16 adults with neurogenic impairment. Seven sessions were used to measure the efficacy of hypnosis. Session one was used to obtain a baseline level of anxiety and stress and to initiate hypnosis. Sessions three and six were used to obtain repeated measures of these emotions. Sessions two, four, and five were the treatment sessions. Session seven was used to conduct a four week follow-up on the effects of hypnosis. Levels of anxiety were measured by the State-Trait Anxiety Inventory, while stress was measured by the State-Trait Anger Expression Inventory. The results indicated a statistically significant decrease in anxiety and stress. Hypnosis also significantly increased levels of self-esteem. Finally, follow-up data demonstrated that the treatment gains were maintained.

### **1989**

Holroyd, Jean; Hill, Alexis (1989). Pushing the limits of recovery: HypnoHypnotherapy was used to assist recovery of left arm function following stroke in a 66-year-old woman. Treatment protocol is described, and results are discussed in terms of how hypnosis may facilitate voluntary motor movement. Recent literature on cortical changes in hypnosis and motor improvement during hypnosis is discussed in relation to the present results.

### **NOTES:**

The patient was 6 months post-stroke and physicians did not expect much additional improvement. She improved despite the fact that she measured as a low hypnotizable on the Stanford Scale, Form C. However, she appeared very absorbed in the hypnotic imagery, and she was highly motivated and exhibited much hope or positive expectation. Also, the author notes that "remarkable improvements in brain functioning have been reported through the use of sophisticated behavioral technology," (p. 124), as in the use of EEG biofeedback to treat untractable seizures (Serman & Lanz, 1981).

In rehabilitation cases, hypnotic dissociation may enhance pain control during the performance of exercises; more vivid hypnotic imagery may facilitate mental rehearsal of movements; attitudes may be reframed using hypnotic suggestion; and focusing attention on bodily sensations may be enhanced with hypnosis. Hypnosis also may improve expectancy, reduce anxiety, increase hope, provide general relaxation (reducing involuntary spasticity), increase cerebral blood flow, or in other ways promote healing.

Research by Pajntar, Roskar, & Vodovnik (1985) has demonstrated improved motor response during hypnosis for patients with hemiparesis. They attributed EMG changes under hypnosis "to a facilitory influx from supraspinal motor centers. They hypothesized that new motor units of paretic muscles were being activated or that there was an increased recruitment of the motor units already active, and they suggested that relaxation of the spastic antagonist muscle permits the paralyzed muscle to move" (p. 125).

LaClave, Linda J.; Blix, Susanne (1989). Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. International Journal of Clinical and Experimental Hypnosis, 37 (1), 6-14.

This paper presents the case of a 6.5-year-old girl with malignant astrocytoma of the left brain hemisphere. During the course of her chemotherapy treatment, severe vomiting developed to the degree that on several occasions she became dehydrated. Discontinuation of chemotherapy was being considered when she was referred for hypnotherapy. Despite severe neurological impairments which excluded many traditional techniques, hypnosis was successful in eliminating emesis. Hypnosis was also utilized to decrease pain and to improve sleep patterns. Drawings are presented to help show how this child resolved anxiety associated with treatment and fears surrounding the knowledge of her impending death.

## 1988

Borgens, Richard B. (1988). Stimulation of neuronal regeneration and development by steady electrical fields. In Waxman, S. G. (Ed.), Functional recovery in neurological disease (47, pp. 547-564). New York: Raven Press.

## NOTES:

At the end of the review, author notes that a combination of electromyography and computer modeling of agonist-antagonist, flexor-extensor muscle contraction patterns in the functional body parts of hemiparetic patients, artificially imposed on the paralyzed portions of the body using repetitive electrical stimulation to effect more normal movement, sometimes leads to functional recovery. Such recovery has been observed in some chronic cases of paralysis associated with head injury, stroke, and cerebral palsy. These clinical observations challenge the way we should view paralysis in general. Perhaps there are many redundant pathways in the CNS that will support certain kinds of functional return in the absence of the original pathways destroyed by trauma. Perhaps CNS-associated paralysis is a problem, at least in part, of too much competing signal in spared pathways, not one of impoverished signal. Can use of these neuronal pathways be entrained or retrained? Is the return of function in patients who experience repetitive functional electrical stimulation due to a reorganization within the CNS? These are exciting questions whose answers will possibly lead to our ability to further modify the plasticity of the brain and spinal cord.

[This would fit with the inhibition model of hypnosis, and with the high theta power findings during hypnosis, the implication being that hypnosis facilitates filtering out non-essential competing stimuli.]

**1986**

**Thompson, Cynthia K.; Hall, Howard R.; Sison, Cecile E. (1986). Effects of hypnosis and imagery training on naming behavior in aphasia. Brain and Language, 28, 141-153.**

The effects of hypnosis and imagery training on the naming behavior of three subjects with Broca's aphasia were investigated using a multiple baseline design across subjects. Treatment consisted of the induction of hypnosis, followed by guided imagery focused on the physical and functional attributes of stimulus objects. Measures of naming ability on both trained and untrained items were taken at baseline, after every training session, and a few hours after training each day. Measures were also taken of imagery ability, hypnotic susceptibility, and psychological state. Results indicated that treatment facilitated improvement in naming ability, over baseline level, for two subjects. In the case of the third subject, the verbal label was incorporated into the imagery procedure following 10 training sessions. Subsequently, this subject's naming behavior improved over baseline level. The results are discussed in terms of current theory and research in neuropsychology and cognitive psychology.

**1985**

**Tranel, Daniel; Damasio, Antonio R. (1985, June). Knowledge without awareness: An autonomic index of facial recognition by prosopagnosics. Science, 208 (4706), 1453-1454.**

Prosopagnosia, the inability to recognize visually the faces of familiar persons who continue to be normally recognized through other sensory channels, is caused by bilateral cerebral lesions involving the visual system. Two patients with prosopagnosia generated frequent and large electrodermal skin conductance responses to faces of persons they had previously known but were now unable to recognize. They did not generate such responses to unfamiliar faces. The results suggest that an early step of the physiological process of recognition is still taking place in these patients, without their awareness but with an autonomic index.

**1984**

**Smith, Mark Scott; Kamitsuka, Michael (1984). Self-hypnosis misinterpreted as CNS deterioration in an adolescent with leukemia and Vincristine toxicity. American Journal of Clinical Hypnosis, 26 (4), 280-282.**

A thirteen year-old girl with leukemia was taught self-hypnosis techniques for symptom control. She was hospitalized with probable vincristine toxicity and a superimposed hyperventilation syndrome. Her spontaneous use of the self-hypnosis technique was misinterpreted as central nervous system deterioration until her apparently comatose state resolved with suggestions from the therapist.

**1981**

Gravitz, Melvin A. (1981). Non-verbal hypnotic techniques in a centrally deaf brain-damaged patient. International Journal of Clinical and Experimental Hypnosis, 29, 110-116.

Non-verbal techniques across several sensory dimensions were utilized with a brain-damaged centrally deaf 36-year-old female patient who had been referred for hypnotherapeutic relaxation. These included optical fixation on the therapist's hand with gradual thumb and fore-finger closure, vibratory stimuli, light shoulder pressures, arm stroking, manually facilitated air currents, and reinforcing homework assignments. With hypnotherapy, the patient's physical and emotional behavior was reported by her to have improved to a significant degree.

**1977**

Lazar, Billie S. (1977). Hypnotic imagery as a tool in working with a cerebral palsied child. International Journal of Clinical and Experimental Hypnosis, 25 (2), 78-87.

Hypnotic imagery was used with a moderately severe athetoid cerebral palsied 12-year-old boy who was mildly retarded and a poor hypnotic subject. Techniques included imagery, observation of the self, revivification of relaxing experiences, proprioceptive feedback about the athetoid movements, and dealing with feelings and motivation. Athetoid movements were reduced, results extended beyond the treatment situation, and improvement was made in practical skills.

**1976**

Cedercrentz, C.; Lahtenmaki, R.; Tulikoura, J. (1976). Hypnotic treatment of headache and vertigo in skull injured patients. International Journal of Clinical and Experimental Hypnosis, 24, 195-201.

Symptoms of headache and vertigo were treated using direct hypnotic suggestions of symptom relief in 155 consecutive skull injured patients. Posttraumatic headache and vertigo were completely relieved after an average observation period of 1 year 10 months in 50% and 58% of the patients, and partially relieved in 20% and 16% respectively. Most of the relief was achieved after about 4 weekly sessions and, particularly with the headaches, only if treatment began within a few weeks of the injury. Therapeutic outcome was correlated with depth of hypnosis achieved for both headache ( $r = .44, p < .0001$ ) and vertigo ( $r = .47, p < .0001$ ) symptoms. Patients who could not even achieve light hypnosis obtained no therapeutic improvement, but patients who experienced only light hypnosis were as clinically responsive as those achieving deep hypnosis.

**1970**

Crasilneck, Harold B.; Hall, James A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18 (3), 152-158.

Hypnotherapy has been found of value in rehabilitation of many patients experiencing difficulty in the usual procedures which follow cerebrovascular or traumatic brain injury. 3 cases are reported to illustrate the approach taken. Of 25 similar cases seen over a 9-year period, 4 were unresponsive to hypnosis. Although an increase in motivation for recovery seemed to be the major change elicited by hypnotherapy, other theoretical possibilities are mentioned. Hypnosis may be a useful way of approaching motivational problems in rehabilitating patients who manifest negativism toward conventional treatment.

#### **1964**

Webb, Robert A.; Nesmith, C. C. (1964). A normative study of suggestibility in a mental patient population. International Journal of Clinical and Experimental Hypnosis, 12 (3), 181-183.

The postural sway technique was used to make suggestibility measurements on a total of 490 Ss of which 279 were hospitalized psychiatric patients. The remaining Ss were "normal" college students. The "normal" Ss were significantly more suggestible than the psychiatric group. Within the psychiatric group, the psychotics, nonpsychotics, and organics differed significantly, with the nonpsychotics being least suggestible, the psychotics most suggestible, and the organics intermediate. The hospital group was further reduced into diagnostic subcategories and postural sway parameters were shown. The sample distributions were essentially normal although the sample drawn from a psychiatric population showed positive skewness. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

#### **1960**

McCord, Hallack (1960). A note on a change in mental age accompanying hypnosis of a teen-age-girl. International Journal of Clinical and Experimental Hypnosis, 8 (4), 259-262.

#### **NOTES**

1:

An adolescent with questionable diagnosis (mental retardation due to organic brain damage or functional psychological disorder) was given the E-G-Y test for an estimate of verbal intelligence. After initial testing, in which attention span was limited and she was very negativistic, she was re-tested in light hypnosis. Her mental age "more than doubled -- went up by six years -- "in the intervening 24 hours. The author ascribes improvement to relaxation from light hypnosis and opined that the 10 year level achieved under hypnosis was close to her "true" level of functioning. Subsequent attempts to hypnotize her were not successful, possibly due to short attention span and negativistic tendencies.

#### **1953**

Kirkner, Frank J.; Dorcus, R. M.; Seacat, Gloria (1953). Hypnotic motivation of vocalization in an organic motor aphasic case. Journal of Clinical and Experimental Hypnosis, 1 (3), 47-49.

**Authors' Summary - A 41 year old male patient with a history of mutism on an organic basis for a year and a half failed to respond to speech retraining efforts. Comprehension was good and motivation poor. With the aid of hypnosis, he was induced to vocalize. Following vocalization, oral speech retraining progress was steady. Retraining efforts in writing met with repeated failure.**

## **Breathing & Respiration**

### **2002**

**Anbar, Ron (2002, Dec 3). Hypnosis in pediatrics: applications at a pediatric pulmonary center.. BMC Pediatrics, 2 (1), 11-18.**

**This report describes the utility of hypnosis for patients who presented to a Pediatric Pulmonary Center over a 30 month period.**

**METHODS: Hypnotherapy was offered to 303 patients from May 1, 1998 - October 31, 2000. Patients offered hypnotherapy included those thought to have pulmonary symptoms due to psychological issues, discomfort due to medications, or fear of procedures. Improvement in symptoms following hypnosis was observed by the pulmonologist for most patients with habit cough and conversion reaction. Improvement of other conditions for which hypnosis was used was gauged based on patients'" subjective evaluations.**

**RESULTS: Hypnotherapy was associated with improvement in 80% of patients with persistent asthma, chest pain/pressure, habit cough, hyperventilation, shortness of breath, sighing, and vocal cord dysfunction. When improvement was reported, in some cases symptoms resolved immediately after hypnotherapy was first employed. For the others improvement was achieved after hypnosis was used for a few weeks. No patients'" symptoms worsened and no new symptoms emerged following hypnotherapy.**

**CONCLUSIONS: Patients described in this report were unlikely to have achieved rapid improvement in their symptoms without the use of hypnotherapy. Therefore, hypnotherapy can be an important complementary therapy for patients in a pediatric practice.**

### **2001**

**Anbar, R. D. (2001). Self-hypnosis for management of chronic dyspnea in pediatric patients. Pediatrics, 107 (2), E21.**

**" ... instruction in self-hypnosis was offered to 17 children and adolescents with chronic dyspnea, which had not resolved despite medical therapy, and who were documented to have normal lung function at rest. ... Chronic dyspnea was defined as recurrent difficulty breathing or shortness of breath at rest or with exertion, which had existed for at least 1 month in patients who had not suffered within a month from an acute pulmonary illness. ... Additionally, imagery relating to dyspnea was developed by coaching patients to change their imagined lung appearance from a dyspneic to a healthy state. ... The mean duration of their dyspnea before learning**

self-hypnosis was 2 years (range: 1 month to 5 years). ... A patient with a history of psychogenic cough declined to learn self-hypnosis. ... Thirteen of the 16 patients reported their dyspnea and any associated symptoms had resolved within 1 month of their final hypnosis instruction session. ... There was no recurrence of dyspnea, associated symptoms, or onset of new symptoms in patients in whom the dyspnea resolved."

PMID: 11158495 [PubMed - indexed for MEDLINE]

## **1996**

**Kohen, Daniel (1996). Relaxation/mental imagery (self-hypnosis) for childhood asthma: Behavioural outcomes in a prospective, controlled study. Australian Journal of Clinical and Experimental Hypnosis, 24 (1), 12-28.**

Twenty-eight 7-12-year-old children entered a controlled study of the effects of self-hypnosis on asthma. Asthma belief and behavioural inventories were collected before, and at one and two years after intervention. Asthma diaries were kept daily and mailed monthly. Subjects were randomly assigned to (a) experimental (self-hypnosis), (b) waking suggestion (no hypnosis), (c) attention placebo (no hypnosis or asthma discussion), or (d) traditional control groups. Twenty-four completed one-month follow-up, 16 completed six months, and 13 completed two years. Results included: (a) fewer emergency room visits in the experimental group ( $p < 0.05$ ); (b) less school missed in the experimental group compared to the traditional control group ( $p < 0.001$ ) and to the waking suggestion group ( $p < 0.005$ ); (c) no differences in psychological evaluations between groups; and (d) surprising findings regarding hypnotic and hypnotic-like experiences among subjects.

**Jones, M. M. (1994). Apnea in postsurgical hypnotherapy of an esophageal cancer patient: A brief communication. International Journal of Clinical and Experimental Hypnosis, 42 (3), 179-183.**

Use of clinical hypnosis in the postsurgical psychotherapy of an esophageal cancer patient who could not swallow involved reenactment of the successful surgery and producing hallucinations of taste and smell, as well as working through emotions relating to the surgery and her disease. An apnea that occurred in a late phase of the treatment was addressed with the familiar arm pumping technique that had been used as a deepening technique, resulting in the patient's resuming normal breathing. The experience reminds the practitioner of the possible unexpected professional demands when working in a medical environment. It also provides clues as to the underlying psychological mechanisms and their role in successful symptom removal. A 6-year follow-up confirmed the lasting effect of this brief psychotherapy.

## **1993**

**Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.**

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

Morgan, William P. (1993, October). Use of hypnosis in exercise and sport psychology. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES:**

Performance of exercise is rated as equal effort with hypnosis and waking conditions; but with hypnotic suggestion they will perceive it as more or less effortful (uphill exercise vs going down the hill). When they think they are going up hill both cardiac and respiratory response increase physiologically, with catecholamine differences.

Mitchell (1981) suggests that respiration changes with exercise do not result from muscle feedback, but that central motor brain signals go to both the cardiovascular centers and to exercising muscle. Actually, it appears that both muscle and cortex give signals, and their synergy governs whether ventilation or heart rate increase.

Wang & Morgan, Psychophysiological responses to imagined exercise, Sport Psychology Lab, University of Wisconsin-Madison. Reported that both external (watching someone else) and internal (imagining oneself) visualizing give responses similar to actual exercise.

We have done research on the prediction of respiratory distress (dyspnea) - work we have done with fire fighters. The best predictor of this on treadmill with air supply is trait anxiety. Sometimes the firefighters who took off face mask even though they had air did not know why they did. It is an opportunity to use hypnotic age regression. SCUBA divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

For active people and athletes there is an "iceberg" profile on the POMS, below average on tension, depression, anger, fatigue, and confusion, but higher on vigor. But the divers who panic have a flat profile, around the 50th percentile on all POMS scales.

Middleman et al used Navy divers in 25 degree C. water and used hypnosis to increase and decrease their body temperature--one of the best papers on the topic. Ss who were best able to use imagery, to think of a beach, had the poorest responses; the ones who could relax did poorest, because shivering produces heat and keeps you warm. It is opposite of what is needed.

In our work, we took 5 highest and 5 lowest anxiety Ss; the latter had higher rates of respiration than the former.

All Ss are similar in oxygen use whether volunteers or not. When people volunteer for research before they know hypnosis will be used, the males are lower than females [on hypnotizability?] when they finally volunteer. [He presents a lot of different tests on which volunteers do not differ from nonvolunteers personality wise.]

Ikai & Steinhaus is a classic study of Disinhibition of Inhibitory Mechanisms. Taking Ss up to their maximum (in weight training) to a plateau, Ikai & Steinhaus said this is a pseudomaximum. They showed that strength increases if - you fire a starter pistol behind them - you ask them to shout just as they do it - they have alcohol - they have amphetamine sulfate - they have hypnosis It is disinhibition of the inhibitory mechanisms.

[He referred to the book Mind of the Marathoner.]

In Tibet an anthropologist was amazed to see a man running into their camp, and he ran straight through--a monk carrying messages. He created a non-cultic form of meditation in the laboratory (trained to visually "fix" on mountaintop, to have respiration in synchrony with locomotion, and to use a pseudo mantra "down" each time they put their foot down). Placebo condition was used also. Ss were tested by blinded lab assistants. Endurance time increased from 16 minutes to 20, while controls decreased a minute.

Now we can predict who will win a race. Elite runners do not dissociate; they use association strategy. They pay close attention to race strategy, they monitor themselves constantly (they slow down when they feel bad), and attempt informally to stay loose, not get tight, and relax. Dissociation has, however, been used for the last 300 meters of a marathon (New Zealander Dixon).

## 1992

Garssen, Bert; de Ruiter, Corine; Van Dyck, Richard (1992). Breathing retraining: A rational placebo?. Clinical Psychology Review, 12, 141-153.

Breathing retraining of patients with Hyperventilation Syndrome (HVS) and/or panic disorder is discussed to evaluate its clinical effectiveness and to examine the mechanism that mediates its effect. In relation to this theoretical question, the validity of HVS as a scientific model is discussed and is deemed insufficient. It is concluded that breathing retraining and related procedures are therapeutically effective, but probably due to principles other than originally proposed, namely decreasing the tendency to hyperventilate. An alternative principle is the induction of a relaxation response, presenting a credible explanation for the threatening symptoms, giving a distracting task to practice when panic may occur, and promoting a feeling of control.

## NOTES:

Goal of treatment is to (1) reduce respiratory rate, and (2) cognitive reattribution of physical symptoms to hyperventilation instead of other more catastrophic causes. Reviews a number of studies, mostly small sample, including panic disorder studies,

and concludes that the majority point to a therapeutic effect of breathing retraining and cognitive reattribution of physical symptoms to hyperventilation for patients suffering HVS and the closely related panic disorder with or without agoraphobia. However, the specificity of these techniques for HVS is questionable. Vlaender-van der Giessen (1986) found relaxation training just as effective as breathing retraining; and Hibbert & Chan (1989) found breathing retraining equally effective as a placebo treatment, and not more effective with patients who had recognized symptoms at a hyperventilation provocation test than with those who had not.

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

Isenberg, S. A.; Lehrer, P. M.; Hochron, S. (1992). The effects of suggestion on airways of asthmatic subjects breathing room air as a suggested bronchoconstrictor and bronchodilator. Journal of Psychosomatic Research, 36, 769-776.

Thirty-three asthmatic subjects were told they were receiving, alternately, an inhaled bronchoconstrictor and inhaled bronchodilator, although they actually were only breathing room air. No subjects showed suggestion-produced effects on FEV1, although two (of the 19 on whom FEF50 was measured) showed effects of greater than 20% on measures of maximal midexpiratory flow. The incidence of the effect is smaller than reported previously, possibly because some subjects in previous studies inhaled saline, a mild bronchoconstrictor, and reversal of effect was not required for classification as a reactor. Higher percentages of subjects in this study showed decreased MMEF in response to the "bronchoconstrictor", but this appeared to reflect fatigue rather than suggestion effects. However, the fact that the effect occurred in a relatively non-effort-dependent measure suggests that real changes occurred in bronchial caliber, not just in test effort. Suggestion had a significant

effect on perception of bronchial changes, but the correlation between actual and perceived changes was minimal. There was an increase in FVC prior to administration of the "bronchoconstrictor", possibly reflecting a preparatory response to the expected drug. Correlations among self-report variables suggested the existence of three personality dimensions among our population related to suggestion and asthma: cognitive susceptibility to suggestion of bronchial change; feeling of physical vulnerability; and anxiety. However, there was no significant relationship between airway response to suggested changes and hypnotic susceptibility, as measured by the Harvard Group Scale of Hypnotic Susceptibility.

### **1991**

**Acosta-Austan, Frank (1991). Tolerance of chronic dyspnea using a hypnoeducational approach: A case report. American Journal of Clinical Hypnosis, 33, 272-277.**

A 48-year-old woman with severe, chronic obstructive pulmonary disease was instructed in the use of peak-flow feedback and hypnotically induced relaxation to reduce the intensity of dyspnea during periods of anxiety. Peak-flow information provided physiologic feedback as well as a safety feature in the event that subjective improvement did not correspond with objective physiologic improvement. I used a progressive relaxation method for inducing hypnosis and gave her suggestions of well-being and muscle relaxation. Peak-flow feedback was useful in enhancing the patient's confidence that hypnotic relaxation was successful in improving respiratory function.

**Kleinhaus, Moris (1991). Prolonged hypnosis with individualized therapy. International Journal of Clinical and Experimental Hypnosis, 39 (2), 82-92.**

A therapeutic approach is presented which involves the use of prolonged hypnosis for the treatment of diverse medical and/or psychological conditions, including intractable pain. This approach may be indicated either as a complementary tool used in conjunction with other treatment approaches or as the only method of intervention. The technique is based on achieving a prolonged hypnotic response, during which hypno-relaxation serves as the foundation for the delivery of an individualized therapeutic plan which includes self-hypnosis, suggestive procedures, metaphors, and constructive imagery techniques. In debilitated patients, medical supervision and nursing care are essential, and hospitalization is recommended if necessary. Theoretical assumptions underlying this approach are presented, and clinical implications are discussed. The method is illustrated through case presentations.

### **NOTES:**

The general procedure involves: 1. A flexible plan concerning the duration of treatment: days, weeks, or longer. 2. Information is given to the patient, the family and the medical staff if in hospital. Emphasize that while the patient may be in a 'twilight-like' state, most of the time he/she is able to fulfill his or her basic

physiological needs, (drinking, eating, taking care of personal cleanliness, etc.). 3. The method of hypnotic induction is individualized. 4. The patient is trained in self-hypnosis, and for using signals for induction and dehypnotization either for self hypnosis or for the hypnotist to use. Thus if there is a physiological or emotional need for self-hypnosis the patient can do it. Suggestions and training are given and reinforced concerning the patient's capability to fulfill his/her basic physiological needs. 5. The family and/or the medical staff are instructed and trained in induction and dehypnotization, until the patient responds to them satisfactorily. 6. At this stage, therapeutic suggestions aimed at ego-boosting and a change of attitudes and meanings towards the symptom and symptom removal/amelioration/substitution are added. 7. Metaphoric constructive imagery is introduced when indicated. 8. If required, other hypnotic phenomena are elicited and used (e.g. dissociation, time distortion, age regression, rehearsal, hypno/analgesia, change of muscular tonus, displacement of emotions, abreaction, etc.). 9. An audio cassette which contains the wording of the therapeutic intervention is used with some patients. 10. The family and/or the medical staff are instructed to supervise the patient properly and to avoid potential complications. 11. Termination of prolonged hypnosis with individualized therapy is gradual to permit appropriate re-orientation towards reality. 12. Treatment is evaluated and a posttreatment plan is outlined.

They provide case reports and discuss precautions. All the cases reported were treated while the patients were hospitalized for their physical condition (although in Case 3, prolonged hypnosis with individualized therapy was also continued at home after the patient's discharge from the hospital), and the patients were monitored by the medical staff. In very debilitated patients, special care should be taken to avoid potential complications arising from their passivity, mainly the development of decubitus ulcer and of aspiration/choking while drinking or eating. Although precaution is taken routinely with these patients, these measures should be emphasized while the patient is in a state of prolonged hypno-relaxation.

**1990**

**Pekala, Ronald J.; Forbes, Elizabeth J. (1990, Spring). Subjective effects of several stress management strategies: With reference to attention. Behavioural Medicine, 39-43.**

This study assessed variations in reported attentional experience associated with several stress management techniques (hypnosis, progressive relaxation, deep abdominal breathing) and baseline (eyes closed) as a function of hypnotic susceptibility. Three hundred nursing students experienced the stress management conditions and afterward completed a self-report inventory, the Dimensions of Attention Questionnaire (DAQ), in reference to each condition. The DAQ quantifies 12 aspects of attentional experience in a reliable and valid manner. The results demonstrated that progressive relaxation, hypnosis, and deep abdominal breathing are characterized by differences in reported attentional experience that are further moderated by an individual's hypnotic susceptibility. The clinical implications of these results are discussed.

## NOTES:

"Significant main effects were found for conditions for perspicacity, absorption, and control, with progressive relaxation associated with increased perspicacity and absorption, but with decreased control vis-a-vis hypnosis.

"Significant main effects for groups were found for perspicacity, locus, direction of attention, absorption, control, and vigilance. ... [Post-hoc comparisons] revealed that high susceptibles (vis-a-vis low susceptibles) reported increased perspicacity, absorption, a more inward-focused attention, more feelings of being out of their bodies, and decreased control and vigilance. High-mediums were also different from lows (in the same direction) for all of the above comparisons except for direction of attention. Low-mediums, along with lows, were different from highs for absorption and control.

"Significant interactions between conditions and groups were found for absorption, control, and vigilance. Whereas low susceptibles reported significantly increased absorption but significantly decreased control and vigilance during progressive relaxation than during hypnosis, high susceptibles reported no significant differences between relaxation and hypnosis for absorption, control, or vigilance" (p. 41).

The authors describe the differences found for deep abdominal breathing on p. 41.

"The interaction effects suggest that the experience of hypnosis and progressive relaxation are moderated by a person's hypnotic susceptibility--low susceptibles experience significantly greater absorption, but decreased control and vigilance during progressive relaxation than during hypnosis, although there are no such differences for high susceptibles. This suggests that progressive relaxation may be a 'better' procedure than hypnosis to use with low susceptibles, at least if one wants to increase absorption and decrease vigilance and control" (p. 42).

The authors also note that "deep abdominal breathing is associated with increased 'calmness of mind,' in reference to a baseline condition, as demonstrated by increased attentional detachment and equanimity, and decreased vigilance and density (the 'amount' of thoughts going through one's mind)" (p. 42).

Sturgis, Laura M.; Coe, William C. (1990). Physiological responsiveness during hypnosis. International Journal of Clinical and Experimental Hypnosis, 38, 196-207.

Four physiological measures - electromyogram, respiration rate, heart rate, and skin conductance - were recorded for 11 high and 11 low hypnotizability Ss. It was hypothesized (a) that physiological responsiveness during hypnosis would vary depending on the nature of the task instructions, and (b) that high hypnotizability Ss would show more physiological responsiveness than low hypnotizability Ss. The first hypothesis was substantiated across all 4 measures. Only heart rate levels supported the second hypothesis. The results are discussed as they relate to the 1 hypotheses and to future research.

## 1989

Murphy, A. I.; Lehrer, P. M.; Karlin, R.; Swartzman, L.; Hochron, S.; McCann, B. (1989). Hypnotic susceptibility and its relationship to outcome in the behavioral treatment of asthma: Some preliminary data. Psychological Reports, 65, 691-698.

#### **NOTES:**

Twelve subjects from an experiment on relaxation therapy for asthma were given the Harvard. Hypnotizability was positively correlated, at a borderline significance, with improvement in the methacholine challenge test, a measure of asthma severity. Performance on the amnesia item of the Harvard was correlated with improvement in self-reported symptoms of asthma.

#### **1988**

Anderson, Edgar L.; Frischholz, Edward J.; Trentalange, Mark J. (1988). Hypnotic and nonhypnotic control of ventilation. American Journal of Clinical Hypnosis, 31, 118-128.

The present study examined the effects of: 1) breathing air versus breathing 5% CO<sub>2</sub>; 2) waking versus self-hypnotic conditions; and 3) neutral versus reduced respiratory rate instructions on four measures of ventilatory functioning (respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Twelve high-hypnotizable normal volunteer subjects were studied in a repeated-measures, multivariate analysis of variance design; Significant main effects were observed for each experimental condition, whereas none of the two or three way interactions proved noteworthy. Breathing 5% CO<sub>2</sub> produced increased ventilatory functions (e.g., increased respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Being in a state of self-hypnosis is associated with reduced respiratory rate, with a significant increase in expired minute ventilation and end-tidal Pco<sub>2</sub>, but with no significant increase in tidal volume. Finally, reduced respiratory rate instructions were effective in significantly reducing respiratory rate and expired minute ventilation when breathing 5% CO<sub>2</sub> as evidenced by increases in end-tidal Pco<sub>2</sub> levels that were used to monitor ventilation outcomes.

Dougherty, John E.; Payne, Paul A. (1988). The use of breathing rhythm to enhance the vividness of mental imagery. Imagination, Cognition and Personality, 8 (2), 175-179.

The study assessed Jencks' claim that responses to certain suggestions are enhanced by being paced with different phases of the breathing cycle. Following hypnotic induction, twenty-four subjects were given four treatments in counterbalanced order: 1) exhalation-enhanced suggestions paced to exhalation, 2) inhalation-enhanced suggestions paced to inhalation, 3) inhalation-enhanced suggestions counterpaced to exhalation, and 4) exhalation-enhanced suggestions counterpaced to inhalation. Subjects' reports of imagery vividness provided marginal support ( $p < .06$ ) for Jencks' hypothesis. Post-experimental inquiry indicated subjects were unaware of the breathing contingency. Results suggest that appropriate pacing may make a greater difference for the energy-confidence group of suggestions (inhalation-paced) than for the calm-relaxation group (exhalation-paced).

Morrison, J. B. (1988). Chronic asthma and improvement with relaxation induced by hypnotherapy. Journal of the Royal Society of Medicine, 81, 701-704.

After one year of hypnotherapy, 16 chronic asthmatic patients inadequately controlled by drugs had a fall in admissions from 44 in the year before starting therapy to 13 in the year after. Duration of stay was reduced for 13 patients by 249 days; prednisone was withdrawn in 6, reduced in 8, and increased in none. Side effects of drugs were reduced. Although 62% reported improvement on a visual analogue scale, observations of air flow gave variable results.

Pagano, Robert R.; Akots, Normund J.; Wall, Thomas W. (1988). Hypnosis, cerebral laterality and relaxation. International Journal of Clinical and Experimental Hypnosis, 36, 350-358.

This study attempted to determine if hypnosis produces a shift towards more dominant right hemisphere functioning and if this increased dominance can be adequately explained by general somatic relaxation rather than being due to some other aspect of the hypnotic process. 14 right-handed, medium to highly hypnotizability Ss performed a dichotic listening task while in a prehypnosis, hypnosis, and post-hypnosis repeated measures design. Throughout the experiment, somatic relaxation was monitored physiologically by recording heart rate, respiration rate, and frontalis EMG. The results showed a highly significant shift toward a greater left ear advantage during hypnosis. There was no change in EMG. Respiration rate increased during the hypnosis condition and remained at an increased rate during the posthypnosis condition. Heart rate decreased during the hypnosis condition and remained at a decreased rate or decreased further during the posthypnosis condition. These results replicate and extend those reported by Frumkin, Ripley, and Cox (1978) and do not support the view that changes in general somatic relaxation can adequately account for this hypnotic effect.

NOTES: Frumkin et al. (1978) presented syllables simultaneously to two ears of subjects, requiring them to state which syllable they heard most clearly (e.g. 'Ka' vs 'Ga'). They found a right ear advantage (REA) during waking conditions, which shifted toward a left ear advantage (LEA) during hypnosis. Their interpretation was that hypnosis results in more right cerebral hemisphere involvement. Two recent investigations did not find the shift in ear with advantage (H. J. Crawford, K. Crawford, & Koperski, 1983; Levine, Kurtz, & Lauter, 1984) but they were not actual replications of the Frumkin et al. (1978) investigation. This study is a replication of Frumkin et al., and is designed to learn whether relaxation could account for the results.

Subjects were 14 volunteer students of medium to high hypnotizability (Stanford Hypnotic Clinical Scale: Adult scores of 3-5). The dichotic listening tape has been used in other research at Haskins Laboratories (Yale University), and was developed by Dr. Terry Halwes. "Each run of the tape consisted of 96 dichotic pairs presented in 4 groups of 24. Six syllables from the English stop consonants k, g, p, d,

b, and t preceded and followed by the vowel a, composed the pairs" (p. 352). The experimenters also recorded heart rate (HR), respiration rate (RR), and EMG.

There were two sessions for each subject: (1) screening and measuring hypnotizability with SHCS: Adult, (2) dichotic listening task within three conditions: pre-hypnosis, hypnosis, and posthypnosis. Table 1 (not shown here) gives for each S the SHCS score and the Laterality Quotient for each of the three conditions.

**RESULTS.** "Laterality quotients were computed for each S by the formula  $(R-L/R+L) \times 100$ , where R = right ear score and L = left ear score. A positive score indicates a predominate REA, and a negative score indicates a predominate LEA" (p. 353).

The analysis by ANOVA for repeated measures indicated that there was a significant shift to LEA during hypnosis; the means were 11.34 prehypnosis, 3.17 hypnosis, 8.93 posthypnosis. All 14 subjects demonstrated this directional shift. Heart rate decreased between prehypnosis (70.4 beats/minute) and hypnosis (67.8) and remained lower (67.9) during posthypnosis. However respiration significantly increased during hypnosis, from 13.5 breaths/minute prehypnosis to 16.2 for hypnosis and 15.2 for posthypnosis. There were no significant changes for EMG.

Self-reported depth of hypnosis remained the same for the first and second sessions. In their Discussion, the authors interpret the shift toward greater LEA during hypnosis (and return to greater REA posthypnosis) as greater right hemisphere involvement, confirming Frumkin et al. They noted that the changes were not due to increased error in the right ear, but to identification of more syllables in the left ear. Several experimental design differences could account for why this study and Frumkin obtained the shift and two other investigations did not. These investigators and Frumkin used a competing response paradigm (requiring that subjects identify which syllable is heard more clearly) and the other two studies did not.

"In evaluating the possible confound of general somatic relaxation with hypnosis per se, the physiological data provide salient information. Davidson & Schwartz (1976) have discussed the limitations in evaluating the relaxation response as a unitary concept and have recommended looking at patterns of multiple physiological measures. Failing this, the best single measure is HR (Davidson & Schwartz, 1976)" (p. 356). In this case, HR decreased over the three conditions, remaining low in posthypnosis when laterality shifted back to REA. If the cerebral shift were due to relaxation, presumably there would not have been low HR during posthypnosis.

The authors note the lack of convergence in physiological measures (EMG showing no change, RR increasing during hypnosis and remaining high, HR decreasing during hypnosis and remaining low). Lack of convergence is typical in physiological studies of the relaxation response (Davidson & Schwartz, 1976). "However, whether the three physiological measures are considered as an overall pattern in determining level of somatic relaxation or whether HR is considered alone, increased somatic relaxation due to hypnosis cannot adequately account for both the shift toward more dominant right hemisphere activity in the hypnosis condition and the shift back to more dominant left hemisphere activity during the posthypnosis condition" (p. 356).

The authors acknowledge that the absence of either a low hypnotizable subject group or a relaxation control group suggests caution in interpretation of the results.

**1987**

**Kotses, H.; Rawson, J. C.; Wigal, J. IK.; Creer, T. L. (1987). Respiratory airway changes in response to suggestion in normal individuals. Psychosomatic Medicine, 49, 536-541.**

Thirty normal individuals were told they were inhaling a substance that would either cause breathing difficulty (N - 15) or not affect breathing (N - 15). Total respiratory resistance was measured prior to and during inhalation. In reality, the subjects inhaled no substances; inhalation consisted of breathing normally into a respiratory resistance recorder. Individuals who received the former suggestion exhibited increased total respiratory resistance, whereas individuals who received the latter suggestion did not. These observations demonstrated that the ability of suggestion to affect the respiratory airway is not limited to asthmatic individuals.

**Pastorello, E. A. (1987). The role of suggestion in asthma. I. Effects of inactive solution on bronchial reactivity under bronchoconstrictor or bronchodilator suggestion. Annals of Allergy, 59, 336-338.**

Twenty-eight Ss affected by perennial asthma were selected in order to investigate the possibility of inducing or relieving an asthmatic attack by means of suggestion. 25 were positive to a methacholine challenge test, and among them, 11 reacted to an ultrasonic nebulized distilled water test. The effect of suggestion on airway response was assessed by 8 inhalations of normal saline at 32 degrees Centigrade alternately presented as a bronchoconstrictor or as a bronchodilator drug. 8 inhalations of the same diluent without any psychic stimulus were used as a control test. 7 patients reacted with bronchoconstriction to both positive and negative suggestion and to the control test. Further, this group of patients showed a lower methacholine PD10 when compared with the other Ss. In this study, the effects of suggestion on bronchial reactivity were not observed and bronchoconstriction belonged to an individual hyperactivity of the airways.

**Pastorello, E. A.; Codecasa, L. R.; Gerosa, A.; Buonocore, E.; Sillano, V.; Zanussi, C. (1987). The role of suggestion in asthma. II. Effects of a bronchoconstrictor drug on bronchial reactivity under bronchoconstrictor or bronchodilator suggestion. Annals of Allergy, 59, 339-340.**

Previous studies have shown that suggestion may modify bronchial reactivity to both inactive diluents and pharmacologically bronchoconstrictor or dilator substances. In our study, 14 patients were subjected to 2 methacholine challenge tests presented, respectively, as a bronchoconstrictor or as a bronchodilator drug. Forced expiratory volumes in one second were recorded and a PD20 was determined. No significant differences were reported in PD20 values of each patient after the 2 kinds of suggestion.

**1985**

**LaRiccia, P. J.; Katz, R. H.; Peters, J. W.; Atkinson, G. W.; Weiss, T. (1985). Biofeedback and hypnosis in weaning from mechanical ventilators. Chest, 87, 267-269.**

Weaning patients from mechanical ventilation can be hindered by both physical and psychologic factors. Biofeedback has been used successfully as an adjunct in difficult weaning problems. We have used a combination of hypnosis and biofeedback to wean a patient with neurologic disease who previously failed weaning by standard procedures. A 30-year-old woman with respiratory failure secondary to multiple sclerosis with transverse myelitis was given eight sessions of biofeedback over 12 days in which the movements of her chest wall, as monitored by magnetometers, were displayed on an oscilloscope. The patient was praised for targeted respiratory rate, amplitude, and rhythm. These sessions included hypnosis in which the patient was given suggestions of well-being and that she could breathe as she had five years earlier. In this manner the patient was successfully weaned. Respiratory biofeedback and hypnosis appear to be useful adjuncts in weaning patients from ventilators.

**Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.**

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novamatrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self-hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

**1984**

**Brown, Erick L.; Kinsman, Robert A. (1984). Resolving intractable medical problems through psychological intervention: A clinical report. Psychotherapy, 21, 452-455.**

Treatment of chronic physical illness is often complicated by psychological factors that maintain and exacerbate the illness. Hypnotic techniques, coupled with insight-oriented psychotherapy comprised an effective strategy for favorably influencing medical outcome. A clinical report illustrates how psychological intervention initiated the resolution of severe medical problems in an asthmatic patient.

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimediation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

Wideman, Margaret V.; Singer, Jerome E. (1984). The role of psychological mechanisms in preparation for childbirth. American Psychologist, 39, 1357-1371.

Psychoprophylactic (Lamaze) preparation for childbirth consists of six to eight classes held during the last trimester of pregnancy. These classes include instruction in the anatomy and physiology of gestation and parturition, respiration techniques, controlled neuromuscular relaxation, visual focusing, and the training of a labor coach. Although the techniques are based upon psychological principles, they have remained largely unstudied by either psychologists or physicians. This article presents a brief history of the development of the training regimen and critically examines the few empirical studies that have been conducted. Because explanations for the efficacy of the preparation, if it exists, are equivocal, literature on the explicit components of the training--that is, information, respiration techniques, conditioned relaxation, cognitive restructuring, and social support--in situations other than child delivery are reviewed and their implications for the Lamaze method discussed. However, because there exist several, more implicit factors that may affect the type of child delivery a prepared woman experiences, the literature concerning social comparison, the effects of commitment and conformity, perceived control, and endorphin secretion are also discussed as they may apply to psychoprophylactic preparation. Problems associated with the study of childbirth preparation are presented, and suggestions for the direction of future research are made.

1979

Di Piano, Frank A.; Salzberg, H. C. (1979). Clinical applications of hypnosis to three psychosomatic disorders. Psychological Bulletin, 86, 1223-1235.

Studies of hypnosis in the treatment of skin disorders, headaches, and asthma were reviewed in terms of outcomes and methodological soundness. Some studies focused on changing physiological functions, others on increasing insight in their patients, and still others on altering patients' perceptions of their symptoms. Methodological weaknesses included lack of control groups, nonrandom assignment of patients to treatment conditions, and confounding of treatment effects or lack of control for placebo effects. Additional weaknesses centered around the use of single outcome measures and the failure to assess the specific roles of mediating variables. Most of the studies reviewed showed positive treatment effects. However, there is equivocal evidence that hypnosis can directly influence autonomic functioning. Hypnosis may be valuable in facilitating one's capacity to gain insight into how one's symptoms developed and are maintained. In addition, hypnotic procedures have resulted in some success when used to indirectly alleviate symptoms by altering how individuals perceive their disorders and how these disorders affect their lives.

Jackson, J. Arthur; Gass, Gregory C.; Camp, Elizabeth M. (1979). The relationship between posthypnotic suggestion and endurance in physically trained subjects. International Journal of Clinical and Experimental Hypnosis, 27, 278-293.

55 male Ss were assigned to 5 groups: control, hypnosis alone, motivation alone, low susceptible hypnosis with motivation, or high susceptible hypnosis with motivation. Ss performed 2 runs on a treadmill to their maximum capacity, as measured by oxygen consumption, blood lactate concentration, and respiratory quotient. Groups involving hypnosis performed in the posthypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.

**1978**

Parwatikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were

subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

Thorne, D. E.; Fisher, A. G. (1978). Hypnotically suggested asthma. International Journal of Clinical and Experimental Hypnosis, 26, 92-103.

15 asthmatic and 19 non-asthmatic Ss were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) and accordingly assigned to one of three susceptibility groups -- low, medium, or high. Subsequently, all Ss were exposed to a hypnotically suggested asthma experience. Subjective and physiological measures of respiratory efficiency were administered before, during, and after the hypnotically suggested asthma experience. Ss did respond significantly differently in these three conditions, but the physiological measures did not reveal typical asthma physiological patterns. High and medium susceptible Ss were ostensibly convinced that they "experienced" asthma, but the low susceptible Ss were uniformly unimpressed. One of the most noteworthy findings was that Ss' ability to respond differentially (according to the asthma suggestions) was enhanced by greater susceptibility to hypnosis yet not "enhanced" by their history of previous asthma.

Collison, David R. (1975). Which asthmatic- patients should be treated by hypnotherapy?. Medical Journal of Australia, 1 (25), 776-781.

Retrospective analysis of 121 asthmatic patients who were treated by hypnotherapy. Subjects were first broken down into one of three possible groups: "light," "medium," or "deep," according to the depth of trance typically achieved. Hypnoidal states were included in the light trance group and somnambulistic state in the deep trance. All sessions concentrated on suggesting physical and mental relaxation since we know this is one of the causes of the appearance of the "asthma attack." The actual wording varied however, and this involved discussion under hypnosis, of the main personalities of the environment, fears, failures, aims, hopes

and frustrations. Post-hypnotic suggestions of continued relaxation and ability to cope with the various situations of life were given in all the cases. Auto-hypnosis was taught to enable the patient to reinforce the above suggestions and to remain in or selectively achieve a relaxed state. Results were classified into four different categories: "excellent," "good," "poor," and "nil." It was found that those patients who experienced a "high" trance depth were more likely to show excellent improvement than those who were measured as "medium" or "low" trance subjects.

### **1973**

**Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)**

#### **NOTES**

**1:**  
Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703.

#### **NOTES**

**2:**  
This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

### **1971**

**Moorefield, C. W. (1971). The use of hypnosis and behavior therapy in asthma. American Journal of Clinical Hypnosis, 13, 162-163.**

Nine patients with asthma were treated with hypnosis and behavior therapy. All of these patients showed subjective improvement to a rather marked degree, except for one patient who has had three slight attacks of asthma since the onset of her treatment. These patients have been followed from eight to approximately 24 months. The results so far have been rather encouraging and the author believes this form of treatment will prove to be of benefit in the treatment of asthma and possibly many other related conditions.

### **1970**

**Maher-Loughnan, G. P. (1970). Hypnosis and auto-hypnosis for the treatment of asthma. International Journal of Clinical and Experimental Hypnosis, 18 (1), 1-14.**

Conducted 2 controlled studies into the use of hypnosis in 252 asthma patients. Several different control procedures were used. Methods and results were summarized, and the same conclusion was reached: That hypnosis supplemented by autohypnosis was significantly more effective than control procedures. An outline is given of details of treatment methods. A current analysis of Ss involving up to 6 yr. of follow-up, is presented to provide a working guide to the regime in regular practice. To be fully effective hypnosis should be employed before steroids are started. Steroid-dependent asthma is rarely totally relieved by hypnotherapy. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1969**

**Baykushev, S. (1969). Hyperventilation as an accelerated hypnotic induction technique. International Journal of Clinical and Experimental Hypnosis, 17, 20-24.**

Describes a rationale and procedure for the use of hyperventilation as a facilitator of hypnotic trance induction. Results with 56 neurotic patients are reported. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1968**

**Summary: An investigation of hypnosis in asthma was made among patients aged 10 to 60 years with paroxysmal attacks of wheezing or tight chest capable of relief by bronchodilators. One group of patients was given hypnosis monthly and used autohypnosis daily for one year. Comparisons were made with a control group prescribed a specially devised set of breathing exercises aimed at progressive relaxation. Treatment was randomly allocated and patients were treated by physicians in nine centres. Results were assessed by daily diary recordings of wheezing and the use of bronchodilators, and by monthly recordings of F.E.V. and vital capacity. At the end of the year independent clinical assessments were made by physicians unaware of the patients' treatment.**

**There were 252 patients (127 hypnosis and 125 controls) accepted for analysis, but a number of them did not continue the prescribed treatment for the whole year: 28 hypnosis and 22 control patients failed to cooperate, left the district, or had family problems; one hypnosis and one control patient died. Seven hypnosis and 17 control patients were withdrawn as treatment failures, the difference between the two groups being statistically significant.**

**As judged by analyses based on the daily " score " of wheezing recorded in patients' diaries, by the number of times bronchodilators were used, and by independent clinical assessors, both treatment groups showed some improvement. Among men the as-sessments of wheezing score and use of bronchodilators showed similar improvement in the two treatment groups; among women, however, those treated by hypnosis showed improvement similar to that observed in the men, but**

those given breathing exercises made much less progress, the difference between the two treatment groups reaching statistical significance. Changes in F E.V. and V.C. between the control and hypnosis groups were closely similar.

Independent clinical assessors considered the asthma to be " much better " in 59% of the hypnosis group and in 43% of the control group, the difference being significant. There was little difference between the sexes. Physicians with previous experience of hypnosis obtained significantly better results than did those without such experience.

Collison, D. R. (1968). Hypnotherapy in the management of asthma. American Journal of Clinical Hypnosis, 11, 6-11.

Following a brief history of the use of hypnosis in the management of asthma, hypnotherapy with 20 ambulant non-hospitalized patients is described. Of 7 females and 13 males, 11 had an excellent response, 5 a good response, and 4 a poor response.

**1967**

Rose, S. (1967). A general practitioner approach to the asthmatic patient. American Journal of Clinical Hypnosis, 10, 30-32.

NOTES

1:

"Of all the conditions which present themselves for treatment under hypnosis, the treatment of asthma, to my mind, yields the most gratifying results, particularly with children, and I believe that were hypnosis in general practice to be restricted to the treatment of the asthmatic patient alone, its use would be more than justified." [No abstract included; first paragraph from the paper.]

**1965**

Agosti, E.; Camerota, G. (1965). Some effects of hypnotic suggestion on respiratory function. International Journal of Clinical and Experimental Hypnosis, 13 (3), 149-157.

Several respiratory indices were measured in 10 Ss in 3 states: at rest, with hypnotic suggestion of relaxation, and with hypnotic instructions to imagine muscular work. The same suggestions were given to 10 control Ss in the waking state. The suggestion of relaxation produced a decrease in pulmonary ventilation in both groups, although it was substantial only in the hypnotic group which started from a higher baseline level. The imagined work produced an increase in ventilation, especially in the hypnotic group. However, in both instances because of compensatory changes in respiratory efficiency the actual uptake of oxygen remained almost unaffected. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1955**

Dorcus, Roy M.; Kirkner, Frank J. (1955). The control of hiccoughs by hypnotic therapy. Journal of Clinical and Experimental Hypnosis, 3 (2), 104-108.

## NOTES

1:

"The present paper is devoted to a discussion of 18 cases ... of hiccoughs that were treated by hypnosis at the Long Beach Veterans Hospital during the course of the past five years. Almost all of these cases had received some kind of medical therapy before hypnosis was employed. ...

"The age range of the patients (27-75 years) indicates that age is not a factor either in the onset of the spasm or in the termination of it by hypnosis. ... While there are some differences in the number of patients in the various [age] decile groups, these differences are in all probability due to sampling. The kinds of physical disorders fit into the table of causes abstracted from Samuels' article and it is evident that hiccough may be associated with a wide variety of physical diseases. With respect to the onset of the hiccoughs, the major number of the spasms seem to be initiated after the central nervous system has been depressed by an anesthetic. When the diaphragm is set in reflex action by some other cause such as vomiting, hiccoughs may be initiated and continue. The hypnotic treatment stressed two points in procedure: (a) an attempt to obtain complete muscular relaxation, and (b) an attempt to relieve the patient of anxiety concerning the spasm and his physical disorder. The number of hypnotic sessions required varied from one session to as many as 8 or 10 sessions. The number of sessions required could not be predicted in advance. No criteria of whether hypnosis would be successful have been evolved other than whether the patient is, generally speaking, a good hypnotic subject. Of the eighteen patients treated by this method fourteen were permanently relieved of their symptoms; three received no benefit and one received temporary benefit. Since other therapies had been tried on most of these patients, it is quite apparent that this form of treatment is very useful and should be applied as soon as possible after the advent of the spasm. This statement is not based on the fact that hiccoughs of shorter duration respond more readily to hypnotic therapy. However, hypnosis should be utilized early to control hiccoughs so that the hiccoughs will not add to the distress of otherwise seriously ill patients" (pp. 107-108).

## Burns

1997

Duhamel, Katherine N.; Difede, Joan; Foley, Frederick; Greenleaf, Marcia (1997, November). Hypnotizability and posttraumatic symptomatology after burn injury. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Washington, D. C..

## NOTES

1:

Investigated the relationship between hypnotizability and post traumatic stress disorder (PTSD) symptoms following burn injury, in 43 hospitalized survivors. Authors found an association between these two variables and suggest that assessment of hypnotizability might help identify post-burn patients at risk for PTSD.

Hillig, Justine A.; Holroyd, Jean (1997-98). Consciousness, attention, and hypnoidal effects during firewalking. Imagination, Cognition and Personality.

Subjective experiences of individuals who walked on hot coals during a firewalking ceremony were investigated. This study extended and partially supported an investigation reported by Pekala and Ersek in this Journal [1]. Twenty-three participants completed retrospective questionnaire assessments concerning their subjective experiences while walking on hot coals. Results from twelve participants were compared with the participants' own experiences during a baseline condition. The data suggested that attention during firewalking is significantly more "one-pointed" than during a baseline condition, and that consciousness may be characterized as more "hypnoidal" than during a baseline condition. Walking on hot coals was further characterized by trends toward reporting increased altered awareness, altered experience, and absorbed attention. Participants who developed a greater degree of blistering reported significantly greater hypnoidal effects during the firewalk than those who developed a lesser degree of blistering.

Patterson, David R.; Adcock, Rebecca J.; Bombardier, Charles H. (1997). Factors predicting hypnotic analgesia in clinical burn pain. International Journal of Clinical and Experimental Hypnosis, 45 (4), 377-395.

The use of hypnosis for treating pain from severe burn injuries has received strong anecdotal support from case reports. Controlled studies provide less dramatic but empirically sound support for the use of hypnosis with this problem. The mechanisms behind hypnotic analgesia for burn pain are poorly understood with this patient population, as they are with pain in general. It is likely that, whatever the mechanisms are behind hypnotic pain analgesia, patients with burn injuries are more receptive to hypnosis than the general population. This article postulates some variables that may account for this enhanced receptivity, including motivation, hypnotizability, dissociation, and regression.

## 1996

Holroyd, Jean (1996). Hypnosis treatment of clinical pain: Understanding why hypnosis is useful. International Journal of Clinical and Experimental Hypnosis, 44 (1), 33-51.

Clinical and experimental research literature indicates hypnosis is very useful for severe and persistent pain, yet reviews suggest hypnosis is not widely used. To encourage more widespread clinical application, the author reviews recent controlled clinical studies in which hypnosis compares favorably with other interventions; links advances in understanding endogenous pain modulation to a neurophysiologic view of hypnosis and hypnoanalgesia; relates the neurophysiology of hypnoanalgesia to management of chronic pain; challenges the view that hypnotic pain control is only for the highly hypnotizable patient; and raises issues about how people learn to control pain with hypnosis. Training in hypnotic analgesia may usefully enhance nervous system inhibitory processes that attenuate pain.

## NOTES:

Hypnosis has been more effective for pain management than other cognitive behavioral interventions in studies of fibromyalgia (Haanen, Hoenderdos, Van Romunde, Hop, Malle, Terwiel, & Hekster, 1991); burn treatment (Patterson, Everett, Burns, & Marvin, 1992); and cancer bone marrow transplant procedures (Syrjala, Cummings, & Donaldson, 1992). Central nervous system gating or downward modulation of pain impulses may account for hypnotic pain control. "Hypnosis enables both amplification and attenuation of cortical response subsequent to sensory registration and prior to consciousness, depending on whether suggestions are for increasing or decreasing awareness (Blum & Barbour, 1979)" (p. 36). This type of inhibition may even be observed in the peripheral nervous system (see Hernandez-Peon, Dittborn, Borlone, & Davidovich, 1959/1960; Sharev & Tal, 1989; Kiernan, Dane, Phillips, & Price, 1995). Work by Helen Crawford (1994) suggests that frontal and limbic areas of the brain are involved in inhibitory patterns of brain activity, and that generation of theta EEG rhythms by lower centers is associated with the suppression of awareness of pain.

Some very low hypnotizable people have been able to learn to control pain with hypnosis, suggesting that it is a skill that can be learned. However, few investigations of improvement of hypnoanalgesia were located. Rather, one must generalize from the fact that other kinds of hypnosis skills have been improved using special training programs, such as the Carleton University program developed by Gorassini & Spanos, 1986). Although most research on improving hypnotic response has been based on operant learning principles, a model that incorporates respondent (classical conditioning) principles might be more useful when it comes to understanding the training of a neurophysiological response, such as inhibitory brain patterns associated with hypnoanalgesia. "Historical success with clinical pain, taken together with newer findings in the neurophysiology of hypnosis, indicate that we should be spending more energy investigating how learning may improve hypnotic analgesia" (p. 43). "We should acknowledge that there are advantages to hypnosis beyond those of relaxation, a good placebo, and psychotherapy. ... Responsible care demands that we provide training or practice in hypnotic analgesia when treating pain, and especially whenever a chronic pain patient initially appears to be nonresponsive" (p. 43).

Patterson, David; Goldberg, Myron; Ehde, Dawn (1996). Hypnosis in the treatment of patients with severe burns. American Journal of Clinical Hypnosis, 38 (3), 200-213.

Burn injuries are a frequent form of trauma, the care for which typically involves repeated, intrusive procedures and acute, excruciating levels of pain. Although research in the use of hypnosis with burn patients is largely anecdotal there is emerging evidence that the burn unit may be one of the most useful arenas for the clinical application of this technique. The acute, identifiable nature of burn care procedures and the emotional state of patients in trauma care both provide an often receptive setting for the use of this intervention.

## 1995

Ptacek, J. T.; Patterson, D. R.; Montgomery, B. K. (1995, August). Hypnosis versus Lorazepam in the treatment of burn pain. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

The pain from burn dressing is substantial and is best treated with interventions that supplement opioid medication. This study compares the use of hypnosis with the benzodiazepine lorazepam (Ativan). Thirty-eight patients were randomly assigned to groups that received hypnosis or lorazepam as supplements to opioid (e.g., morphine) medication. The control group received opioid drug alone. The results indicated that relative to baseline levels with opioid drugs alone, the lorazepam group showed a significant reduction in pain ratings at post-test. The hypnosis group demonstrated a 10% reduction in pain ratings, although this change was not significant. The results suggest that hypnosis is useful, but not necessarily as powerful as a pharmacological anxiolytic. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

## 1994

Holroyd, Jean (1994, January 27). Hypnosis and the mind-body relationship. [Lecture]

### NOTES:

Historically, hypnosis has been associated with mental healing (e.g. Mesmer's salon), and clinical literature has been well reviewed by T. X. Barber (1984); Di Piano & Salzberg (1979); E. Hilgard & J. Hilgard (1975); Mott (1979); Paul (1963); and Perry, Gelfand, & Marcovitch (1979). Recently psychoneuroimmunology research has provided some support for the clinical evidence of healing. Research in this area should provide for determining whether the results are due to relaxation, to suggestion (waking or hypnotic), to personality (high hypnotizability), and should lead to an understanding of the basic physiological processes.

Clinical studies are sometimes given more credence by basic laboratory studies in a closely related area. For example, irritable bowel syndrome responded better to hypnosis with direct suggestions than to a combination of psychotherapy and a placebo pill (Whorwell, Prior, and Faragher, 1984). In the laboratory, Klein and Spiegel (1989) showed that secretion of stomach acid could be controlled by hypnosis and suggestion. Chapman, Goodell, & Wolff (1959) demonstrated that hypnotic suggestions could not only decrease but could increase the inflammatory response to burns, and that the response probably was mediated by a histamine-type substance.

Warts have been removed not only by hypnotic suggestion but by waking suggestion (Spanos, Stenstrom, & Johnston, 1988; Spanos, Williams, & Gwynn, 1990), and the hypnosis was more effective than potent placebo comparison treatment conditions. The elimination of warts may be related to control of blood flow or to a change in the immunological response. Chaves, Whilden, & Roller, 1979 (and Chaves, 1980) showed that dental patients could reduce the blood loss associated with dental

surgery, using hypnosis and imagery suggestions. Bennett, Benson, & Kuiken (1986) helped back surgery patients to reduce blood loss using waking suggestions. The immune response also can be modified using hypnotic suggestion (Zachariae, Bjerring, & Arendt-Nielsen, 1989).

In the research on mind-body healing, the following considerations also apply: 1. People's psychosomatic reactivity may affect the results obtained with hypnosis. Research on the immune response has sometimes used patients with psychosomatic disorders as the research subjects, to assure reactive physiological systems. 2. Severity of the disease may affect outcome (e.g. in the Spanos studies, those with the most warts responded best to the hypnosis intervention). 3. Hypnotizability sometimes relates to outcome and sometimes does not, in these investigations. In general, among very highly hypnotizable people, some can perform one hypnotic task such as develop amnesia while others can perform other, different hypnotic tasks.

In summary, there is an extensive clinical literature on hypnosis and healing, and experimental laboratory studies can offer support and some understanding of hypnosis effects on blood flow, histamine release, acid release, immune cell function, etc. In order to establish the effect of hypnosis one needs to start with the best chances for finding an effect: use high hypnotizable subjects. But later you either need to see if results correlate with general hypnotizability or with some other ability or experience, and often waking suggestion is sufficient.

### 1993

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

Patterson, David R. (1993, October). Managing burn pain through hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES:

Since 1955 there were 13 published reports on managing burn pain through hypnosis, with generally positive results; but almost all were anecdotal, with a lack of standardized measures. Time, location, and duration of the hypnotic interventions were not specified, cost-effectiveness was hard to detect, and medications used were not reported. Publications don't even report the type of hypnotic intervention used.

Hypnosis is indicated for procedural pain more than for during resting periods. Going through dressing changes is typically more painful than the burn itself. Opioid medications don't control all the pain. In our research we use J. Barber's Rapid Induction Analgesia, which entails suggestions for: 1. Slow breathing 2. Going down 20 steps 3. Confusion and amnesia 4. Anchoring post-hypnotic suggestions 5. Touching cue for reinstating the hypnosis 6. Relaxing scenario (Patterson added this to the Barber script) 7. Returning up the steps

This intervention is good because it's replicable, and it's easy to train students to use it. The hypnosis is done the morning before the dressing change.

Instructions for nurses are: 1. Read the card 2. Have patient lie down comfortably, etc. 3. Provide post hypnotic cue (usually a touch on the shoulder)

In the first study we used patients refractory to opioids, and also used a historical control group. This was published in the American Journal of Clinical Hypnosis. Our subsequent study was published in the Journal of Consulting and Clinical Psychology (1992). We stabilized administration of opioids; then patients had hypnosis or anxiolytics or were in the control condition. There was significant reduction in pain for hypnosis.

Patterson et al (current study). Compared Benzodiazepines to hypnosis using four groups: Hypnosis plus Lorazepam Hypnosis and placebo Lorazepam Hypnosis attention control and Lorazepam Placebo hypnosis and placebo pills

Analgesia stabilized on 2 days. There was not an effect, no significant drop in pain scores for either hypnosis or Lorazepam. Perhaps we didn't get a significant drop in pain ratings because in this study we were taking all patients who applied and their initial pain ratings were not as high as in the other study. We have found no relationship or pain reduction with hypnotizability either.

Why did we not get the positive results found previously for hypnosis? There are several possibilities. There is always a trend toward a drop in pain ratings over time. People generally bottom out with a rating of 3 or 4, and it looks like a floor effect. Also, the efficacy of hypnosis may be partly contingent on baseline pain level, and motivation to cooperate with the intervention.

Could there be the same relation to baseline for benzodiazepines?

We have noted that improved application of opioids early on means pain is lower. Marks & Sacher, Annals of Internal Medicine, 1973, indicate physicians under-prescribe opiates. Also Melzack in the Scientific American states this.

We feel that we should not push hypnotherapy so much that we feed in to opioidphobia. Hypnosis is a useful adjunct to opiates. We believe that you should stabilize the patient with opioids, and if they are not responding well, then use hypnosis.

In future research we want to find out which patients do best with hypnosis.

**Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.**

**This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n - 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.**

**NOTES:**

**About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.**

**Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the \_subjective sense\_ of \_altered state\_ --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.**

**Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in**

rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Patterson, David R.; Everett, John J.; Burns, G. Leonard; Marvin, Janet A. (1992). Hypnosis for the treatment of burn pain. Journal of Consulting and Clinical Psychology, 60, 713-717.

The clinical utility of hypnosis for controlling pain during burn wound debridement was investigated. Thirty hospitalized burn patients and their nurses submitted visual analog scales (VAS) for pain during 2 consecutive daily wound debridements. On the 1st day, patients and nurses submitted baseline VAS ratings. Before the next day's wound debridement, Subjects received hypnosis, attention and information, or no treatment. Only hypnotized Subjects reported significant pain reductions relative to pretreatment baseline. This result was corroborated by nurse VAS ratings.

Findings indicate that hypnosis is a viable adjunct treatment for burn pain. Theoretical and practical implications and future research directions are discussed.

**NOTES:**

The treatment of burn patients involves a number of very painful procedures, including frequent removal of necrotic tissue, application of antiseptics, and bandaging. "Dressing changes often present pain so severe that the maximum dosages of opioids, even when supplemented by anxiolytics or inhalants, are often inadequate (Everett et al., 1990; Perry et al., 1981)" (p. 713). Previous research on the use of hypnosis with burn pain patients demonstrates many of the limitations found in the literature on clinical hypnosis and pain: nonrandomization of samples, nonstandardized hypnotic inductions, unreliable pain measures, inadequate control groups, unreported levels of analgesias used.

The present research controls for experimenter/therapist attention as well as 'expectancy' of both patient and hospital staff. (Both patients and their nurses were blind to group assignment.)

Patients who rated their most recent dressing change as 5 or greater (on a 1-10 scale) were invited to participate and then were randomly assigned to one of three groups: hypnosis, attention/information (pseudo hypnosis), or no treatment control. Interventions began within three days of admission to the acute burn care unit (though some had previously been on an intensive care unit). The patients were continued on opioid medication during the two days of the study, and an attempt was made to keep medication dosage constant. On Day 1 the patients received opioid medication before the dressing change, and on Day 2 they received the same medication plus their assigned treatment.

Hypnosis - Induction was administered by psychologist in patient's room before the dressing change. It was based on Barber's Rapid Induction Analgesia, modified specifically for burn wound debridement as described by Patterson, Questad, and deLateur (1989), and required 25 minutes

Attention and information (pseudo hypnosis) - The psychologist told patients they would get hypnosis, then spent 25 minutes with them, during which time the psychologist took a history of the accident and their emotional response; educated them about burn pain; encouraged them to differentiate sensations felt during dressing changes from signals of harm or danger; and informed them that their "sensation" indicated the presence of viable tissue and was a sign of healing. Toward the end of the session, patients were told "we have found that it is useful to close your eyes, count to 20, and imagine yourself in a relaxing place prior to dressing change" and were given 30 seconds to practice the "hypnosis." They were told after that brief practice session that the nurse would prompt them to begin hypnosis before their next dressing change by giving them some instructions and touch them on the shoulder.

No-treatment control condition - Patients received only the opioid medication.

"A standard set of instructions for dressing changes was given to the nurse for each S in the hypnosis and attention and information groups ... (a) having the subject sit comfortably in the tank (or lie on the table), (b) instructing the S to picture the staircase and count from 1 to 20, (c) touching the subject on the shoulder four times

during wound care, and (d) telling the subject to let the area being worked on 'become relaxed and numb'" (p. 714).

No treatment control condition - Subjects received only opioid medication for both Day 1 and Day 2 dressing changes.

A Visual Analog Scale (VAS) for rating pain was used by both the patients and the nurses, within three hours of the dressing change.

Of 87 patients who met the inclusion criteria (for age, psychiatric and language status, and length of hospital stay) only 30 were in the final group. (31 had pain rating scores below 5; 13 declined to participate; 5 were in other investigations; 5 were not able to participate because of hypnotherapist unavailability; and 3 who began the study did not complete it. Those in the final subject group averaged 34.1 years old; mean total burn surface area was 16%.

No subjects in the placebo group questioned whether they had actually been hypnotized. Nevertheless, Experimenters did a manipulation check to determine whether the pseudo hypnosis group thought they were hypnotized. Subjects rated on a scale of 1-5 the extent to which they believed the hypnotic intervention was 'effective'; means were 4.0 for hypnosis and 3.4 for placebo, a non-significant difference.

Pain medication was converted to morphine equivalents (MD) and was equivalent across the three groups.

"The hypnosis group reported a significant reduction in pain from pre- to posttreatment, whereas the attention and information and the no-treatment control groups did not change significantly ... In addition, the hypnosis group had a significantly lower posttreatment pain rating than both the attention and information and the no-treatment control groups, which did not differ significantly" (p. 715).

"Nurses' ratings of subjects in the hypnosis group showed a significant reduction in pain from pretreatment to posttreatment, whereas there were no significant pain reductions for the attention and information and the no-treatment control groups ... The three posttreatment means did not differ significantly ... [and] correlations between patient baseline and posttreatment pain ratings and those submitted by nurses were  $r(27) = .16$ ,  $p = .423$ , for baseline ratings and  $r(27) = .29$ ,  $p = .127$ , for posttreatment ratings" (p. 716).

In their Discussion, the authors note that patients' reports evidenced more treatment effect than that of nurses. Also, they observed that the treatment effects might have been stronger if they had not been following a research protocol very strictly. "We might also mention that hypnotized subjects reported lower pain scores in spite of problems that they may have had in remembering the actual amount of pain they experienced. There is an increasing body of evidence suggesting that subjects have difficulty remembering clinical pain (Carlsson, 1983). Considering these factors, we feel that the treatment effect was a robust one" (p. 716).

The low correlation between nurses' ratings and patients' ratings is consistent with earlier reports that nurses are often unable to assess patients' pain accurately (Choiniere et al., 1990; Iafrati, 1986; Walkenstein, 1982). The authors discuss why this might be, giving references. "Yet in this study, nurses [blind to group

assignment] still reported a significant pain reduction for the hypnosis group" (p. 716).

"Our findings were consistent with theoretical approaches that argue that hypnotized subjects undergo an altered state--or at least a different form of cognitive processing--as opposed to a placebo effect" (p. 716).

"The question of whether hypnosis is superior to opioid pain medication, or can be used in its stead, was never addressed in this study. All subjects received opioids throughout hospitalization, including the study period. Our bias is that opioid drugs are the primary treatment of choice for burn pain. Attempting to replace opioids with hypnosis for the purpose of satisfying the hypnotist's curiosity or convictions, while occasionally successful, may often result in unnecessary patient suffering" (p. 716).

### **1990**

**Gauld, Alan (1990). The early history of hypnotic skin marking and blistering. British Journal of Experimental and Clinical Hypnosis, 7, 139-152.**

### **NOTES:**

Reviews the history of alleged hypnotic skin marking and blistering from 1785 to 1917. Various early studies are described and brought to bear upon certain long-standing and recurrent controversies. The conclusion is drawn that, even by the end of the period surveyed, the available evidence warranted the belief that such phenomena sometimes occur. However, there were also occasional examples of their occurrence through suggestion without hypnosis, and it remained unclear to what extent hypnosis had played a special role in their production.

### **1989**

**Patterson, David R.; Questad, Kent A.; deLateur, B. J. (1989). Hypnotherapy as an adjunct to narcotic analgesia for the treatment of pain for burn debridement. American Journal of Clinical Hypnosis, 31, 156-163.**

This paper presents a hypnotherapeutic intervention for controlling pain in severely burned patients while they go through dressing changes and wound debridement. The technique is based on Barber's (1977) Rapid Induction Analgesia (RIA) and involves hypnotizing patients in their rooms and having their nurses provide posthypnotic cues for analgesia during wound cleaning. Five subjects who underwent hypnotherapy showed reductions on their pain rating scores (Visual Analogue Scale) relative to their own baselines and to the pain curves of a historical control group (N = 8) matched for initial pain rating scores. Although the lack of randomized assignment to experimental and control groups limited the validity of the results, the findings provide encouraging preliminary evidence that RIA offers an efficient and effective method for controlling severe pain from burns.

Van der Does, A. J.; Van Dyck, R. (1989). Does hypnosis contribute to the care of burn patients? Review of the evidence. General Hospital Psychiatry, 11, 119-124.

In burn treatment, hypnosis has been used for alleviation of pain, prevention and treatment of anxiety and depression, and acceleration of wound healing. Successful application of hypnosis decreases the extensive medication needed. Furthermore, it provides a tool to patients with which they may experience more control in situations that are often experienced as overwhelming. Notwithstanding these important applications and the very positive terms with which the results of studies are generally described, hypnosis has mostly been neglected as a tool to help burn patients. This article reviews the clinical and experimental evidence of the usefulness of hypnosis in the management of burns. Pain reduction and crisis intervention are promising applications. However, due to a lack of systematic and controlled research, more specific conclusions are precluded. In the controversial area of wound healing, claims for the effectiveness of hypnosis have been made on the basis of slim evidence and inconclusive studies. This hypothesis needs to be addressed in controlled experiments. In summary, systematic investigations are needed to confirm and supplement available clinical evidence. Recommendations for future research are given.

**1988**

Van der Does, A. J.; Van Dyck, R.; Spijker, R. E. (1988). Hypnosis and pain in patients with severe burns: A pilot study. Burns Including Thermal Injuries, 14, 399-404.

Presents a pilot study on the effectiveness of hypnosis in the control of pain during dressing changes of burn patients. Eight patients were treated, and all evaluated the interventions as beneficial. The treatment of four patients was more closely analyzed by obtaining pain and anxiety ratings daily. Results show a 50%-64% decrease in reported pain level for three patients and a 52% increase of pain for one patient. The mean decrease for these four patients was 30% (for overall as well as worst pain during dressing changes). A 30% reduction of anxiety level and a modest reduction of medication use were achieved concurrently. It is concluded that hypnosis is of potential value during dressing changes of burn patients. Comparison of global evaluations and daily pain ratings shows that systematic research in some cases leads to conclusions opposite from clinical observations. Follow-up recommendations for future studies are given.

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, 31, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year study of 50 thermally injured patients with greater than 45% total body surface second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the

experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

**NOTES:**

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

**1987**

Dobkin de Rios, Marlene; Friedmann, Joyce K. (1987). Hypnotherapy with Hispanic burn patients. International Journal of Clinical and Experimental Hypnosis, 35 (2), 87-94.

This paper examines a culturally sensitive hypnotherapeutic intervention for Hispanic burn patients who suffer symptoms of the post-traumatic stress disorder and discusses the outcome of 27 patients seen by the authors (a medical anthropologist and a clinical psychologist), over a 3.5-year period. Given the difficulties of recent monolingual, Mexican migrants in responding to psychological interventions that are not culturally sensitive, the hypnotherapeutic interventions and procedures developed by the authors provide a plan for systematic desensitization and cultural concordance to make rehabilitation of Hispanic burn patients more effective.

**Patterson, David R.; Questad, Kent A.; Boltwood, Michael D. (1987). Hypnotherapy as a treatment for pain in patients with burns: Research and clinical considerations. Journal of Burn Care and Rehabilitation, 8 (3), 263-268.**

Hypnotherapy has increasingly been included in the management of burn patients, particularly in the area of acute pain. To better understand such issues as (1) overall efficacy of hypnotherapy to alleviate acute burn pain, (2) instances in which hypnotherapy is contraindicated, (3) interaction of hypnotherapy with medication, (4) standard induction techniques to use with various age groups, (5) role of nursing and other staff in facilitating hypnotic effects, and (6) future methodological directions, they examined the clinical and methodological merits of recent studies of hypnoanalgesia. A literature search found 17 studies in which hypnotherapy was applied to the management of burns. The literature generally supports the efficacy of this approach to reduce burn pain; however, little else can be concluded from these studies. Several recent studies have applied hypnotherapy to aspects of burn care other than pain using excellent experimental designs. It is suggested that future studies of acute pain management follow suit.

**1983**

**Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.**

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal.

**1982**

Spanos, Nicholas P.; McNeil, Conrad; Stam, Henderikus J. (1982). Hypnotically 'reliving' a prior burn: Effects on blister formation and localized skin temperature. Journal of Abnormal Psychology, 91 (4), 303-305.

60 Ss who had previously been burned were "hypnotically age regressed" and given both suggestions to "relive" the burn experience and suggestions that a blister was forming. Although 17 Ss reported vividly imagining the burn events, none showed localized skin-coloration changes or evidence of blister formation. Moreover, skin temperature measured before, during, and after age regression indicated no overall suggestion effects. Nevertheless, 1 S did show differential skin-temperature response to the suggestion. This S had showed only moderate hypnotic susceptibility on the Harvard Group Scale of Hypnotic Susceptibility. (10 ref)

**NOTES:**

The male subject who appeared to show changes in response to the suggestion increased temperature differences between the burn site and the contralateral site from .3 degrees C before the imagining period to a maximum of 2.7 degrees C during the imagining period and decreased to 0 degrees C after the imagining period. However, temperature differences between the adjacent sites remained very small (never more than .1 degree C) throughout the session. This subject answered "no" to all seven items on the skin-sensitivity questionnaire. He testified postexperimentally to being only "slightly hypnotized" (score 1), "not at all age regressed" (score 0), and to have experienced imagery that was only 50% as vivid as the real experience. (His HGS: A score was 8.)

**1978**

Kaplan, Jerold Z.; Wakeman, John (1978). An experimental study of hypnosis in painful burns. American Journal of Clinical Hypnosis, 21, 3-12.

The present study examines the usefulness of hypnosis in the control of acute pain in thermal and electrically burned patients as an adjunctive analgesic during the routine care of burn wounds. It was hypothesized that the use of hypnosis would lead to significant reductions in the amount of drugs needed as compared to patients using medication only. Anxiety and discomfort associated with daily tanking, debridement, and dressing changes were expected to be reduced because of the introduction of hypnotic procedures. The experimental study also examined the variables of age and percent of burns. Two studies were conducted including patients with 0-20% total body burns and 31-60% burns. A variety of hypnotic techniques were used. Both studies revealed significantly lower percentages of medication used ( $p < .01$ ) by the hypnotic groups than control groups. The 7-18-year-old patients used significantly less medication ( $p < .05$ ) than the adult groups. The implications of the findings, and usefulness of hypnosis and ego strengthening techniques for improvement of self-confidence and improved body image were considered.

**1967**

Dahinterova, Jeanette (1967). Some experiences with the use of hypnosis in the treatment of burns. International Journal of Clinical and Experimental Hypnosis, 2, 49-53.

EXPERIENCE WITH HYPNOSIS AS A MEANS OF ELIMINATING PAIN DURING SURGICAL PROCEDURES FOR THE TREATMENT OF SEVERE BURNS HAS BEEN FAVORABLE IN 3 OUT OF THE 4 CASES DISCUSSED. THESE INCLUDE PATIENTS WHO HAD RELATIVELY CHRONIC, SERIOUS, AND SEVERE BURNS. IT IS CONCLUDED THAT HYPNOSIS CAN BE AN IMPORTANT AND USEFUL ADJUNCT IN PSYCHOTHERAPEUTIC TREATMENT OF BURNS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Vasiliev, L. (1965). Mysterious phenomena of the human psyche. New York NY: University Books. (Reviewed by Leo Wollman in American Journal of Clinical Hypnosis, 1965, 8 (2), 146-147)

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AJCH Abstract by Leo Wollman: Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B.N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep-inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris

in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent.

Dr. P. P. Podyapolsky, in 1905, wrote 'I tried unsuccessfully to induce in a peasant a reddening of the skin from a mock mustard plaster not only was there no reddening, there wasn't even any appropriate sensation of burning or smarting. I surmised that this simple man had probably never experienced a mustard plaster; therefore, his mind lacked the corresponding images and the ability to reproduce them with all their consequences... And so it turned out--he had never experienced a mustard plaster. It happened that he later had occasion to put a mustard plaster on his chest, and when I hypnotized him thereafter, suggestion quickly created not only the appropriate burning sensation but also reddening of the skin where the mock mustard plaster was applied.' This phenomenon is explained by the fact that the connection between the skin and cerebral cortex by means of neural conductors may, under certain circumstances, alter the activity of different organs. The alteration operates, apparently, in the category of conditioned-reflex formation.

This book is interesting reading and from a historic point of view is worth having in one's library.

**1958**

Crasilneck, Harold B.; Jenkins, M. T. (1958). Further studies in the use of hypnosis as a method of anesthesia. Journal of Clinical and Experimental Hypnosis, 6 (3), 152-158.

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"At the present time it appears that there are several problems in which hypnosis is an acceptable and perhaps preferable method of anesthesia. Some of these problems include cases in which chemical analgesics and depressants are contraindicated or dangerous because of respiratory or cardiac disease. It may be indicated with patients who have demonstrated sensitivity to certain local anesthetics. Hypno-anesthesia may be used in cases in which repeated chemical anesthesia tends to have a debilitating effect on the patient with an already disturbed physiology, such as patients with thermal injuries who require multiple repeated debridements and dressings. Hypnosis may also obviate the debilitating effects of prolonged chemical anesthesia" (p. 156).

Behavior Therapy / Cognitive Therapy

**1997**

Kirsch, Irving (1996). Hypnosis in psychotherapy: Efficacy and mechanisms. Contemporary Hypnosis, 13 (2), 109-114.

Meta-analyses have established that different psychotherapies have different outcomes. Cognitive-behavioural therapies are significantly more effective than psychodynamic therapies, and their superiority increases when long-term follow-up is assessed. Hypnosis enhances the efficacy of both psychodynamic and cognitive-

behavioural psychotherapy, and this effect is especially strong in long-term outcome of treatment for obesity. The paucity of procedural differences between hypnotic and non-hypnotic treatments in many of the studies demonstrating a substantial advantage for hypnosis suggests that the effect depends on the use of the word 'hypnosis'. Hypnosis can be regarded as an empirically-validated, non-deceptive placebo, the effects of which are mediated by response expectancies.

**1996**

**Kirsch, Irving (1996). Hypnotic enhancement of cognitive-behavioral weight loss treatments--Another meta-reanalysis. Journal of Consulting and Clinical Psychology, 64 (3), 517-519.**

In a 3rd meta-analysis of the effect of adding hypnosis to cognitive-behavioral treatments for weight reduction, additional data were obtained from authors of 2 studies, and computational inaccuracies in both previous meta-analyses were corrected. Averaged across posttreatment and follow-up assessment periods, the mean weight loss was 6.00 lbs. (2.72 kg) without hypnosis and 11.83 lbs. (5.37 kg) with hypnosis. The mean effect size of this difference was 0.66 SD. At the last assessment period, the mean weight loss was 6.03 lbs. (2.74 kg) without hypnosis and 14.88 lbs. (6.75 kg) with hypnosis. The effect size for this difference was 0.98 SD. Correlational analyses indicated that the benefits of hypnosis increased substantially over time ( $r=.74$ ).

**1995**

**Kirsch, Irving; Montgomery, Guy; Sapirstein, Guy (1995). Hypnosis as an adjunct to cognitive behavioral psychotherapy: A meta-analysis. Journal of Consulting and Clinical Psychology, 63 (2), 214-220.**

A meta-analysis was performed on 18 studies in which a cognitive-behavioral therapy was compared with the same therapy supplemented by hypnosis. The results indicated that the addition of hypnosis substantially enhanced treatment outcome, so that the average client receiving cognitive-behavioral hypnotherapy showed greater improvement than at least 70% of clients receiving nonhypnotic treatment. Effects seemed particularly pronounced for treatments of obesity, especially at long-term follow-up, indicating that unlike those in nonhypnotic treatment, clients to whom hypnotic inductions had been administered continued to lose weight after treatment ended. These results were particularly striking because of the few procedural differences between the hypnotic and nonhypnotic treatments.

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treatment, clients to whom hypnotic inductions had been administered continued to lose weight after treatment ended. These results were particularly striking because of the few procedural differences between the hypnotic and nonhypnotic treatments.

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, *102*, 29-38

1994

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, *102*, 29-38

High-hypnotizable subjects were found superior to low-hypnotizable subjects in degree of pain reduction produced by hypnotic analgesia and by a stress-inoculation (cognitive-therapy) procedure. But, stress inoculation and not hypnotic analgesia impaired performance on a cognitively demanding task that competed with pain reduction for cognitive resources. This outcome implies that hypnotic analgesia occurs with little or no cognitive effort to reduce pain, challenging the social psychological theory of hypnotic response, at least in high-hypnotizable individuals. The findings are also incompatible with the concept of dissociated experience wherein the pain and cognitive efforts to reduce it are separated from consciousness by an amnesia-like barrier. But the results do support the concept of dissociated control, which proposes that suggestions for hypnotic analgesia directly activate pain reduction and thereby avert the need for cognitive strategies to reduce pain.

Saperstein, Guy; Montgomery, Guy; Kirsch, Irving (1993, August). Cognitive-behavioral hypnotherapy: A meta-analysis. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Meta-analysis was used to compare the effectiveness of cognitive-behavior therapy (CBT) to that of cognitive-behavior therapy with hypnosis (CBHT). A review of the literature revealed 18 studies in which 20 hypnotic treatments were compared to similar non-hypnotic treatments and in which sufficient data were presented for the calculation of effect sizes. Effect sizes were weighted for sample size and then averaged. This resulted in a mean effect size of 1.37 standard deviation units, indicating that the average client receiving cognitive-behavioral hypnotherapy is better off than 90 percent of clients who receive the same treatment in a nonhypnotic context. Substantial variance in effect sizes was found, indicating the presence of a moderator variable. Further analyses indicated that this variance was limited to treatments in which obesity was the presenting problem. The mean effect size for the addition of hypnosis to treatments of obesity was larger ( $M = 1.98$ ) and more variable (variance = 4.10) than that for the addition of hypnosis to treatments for other presenting problems ( $M = .52$ ; variance = .06). Also, studies of clinical samples yielded larger effects ( $M = 1.72$ ) than analogue studies with college student samples ( $M = .07$ ). The effect of hypnosis was independent of whether relaxation training was included in the nonhypnotic treatment or whether the hypnotic

treatment included suggestions that were not included in the nonhypnotic treatment. Consistent with response expectancy theory, these data indicate that the substantial positive effect obtained was due to labeling the treatment 'hypnosis,' rather than to any substantive change in clinical procedure. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, 102, 29-38.

High-hypnotizable subjects were found superior to low-hypnotizable subjects in degree of pain reduction produced by hypnotic analgesia and by a stress-inoculation (cognitive-therapy) procedure. But, stress inoculation and not hypnotic analgesia impaired performance on a cognitively demanding task that competed with pain reduction for cognitive resources. This outcome implies that hypnotic analgesia occurs with little or no cognitive effort to reduce pain, challenging the social psychological theory of hypnotic response, at least in high-hypnotizable individuals. The findings are also incompatible with the concept of dissociated experience wherein the pain and cognitive efforts to reduce it are separated from consciousness by an amnesia-like barrier. But the results do support the concept of dissociated control, which proposes that suggestions for hypnotic analgesia directly activate pain reduction and thereby avert the need for cognitive strategies to reduce pain.

1992

Kihlstrom, John F. (1992). Hypnosis: A sesquicentennial essay. International Journal of Clinical and Experimental Hypnosis, 40 (4), 301-314.

The present paper views Coe's (1992) reflections on the socio-political interests in clinical and experimental hypnosis against the background of Braid's Neurypnology of 1843. Topics considered are: the significance of the label "hypnosis"; the controversy over state; the tension between credulity and skepticism; the problem of dissociation and automaticity; current theoretical conflicts; and the relationships between practitioners and researchers.

Kirsch, Irving (1992, August). Cognitive-behavioral hypnotherapy. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The use of hypnosis to augment cognitive behavior therapy was described. Hypnotic inductions establish a context in which the effects of therapeutic interventions can be potentiated for clients with positive attitudes and expectancies toward it. Hypnosis can also provide a disinhibiting context for both clients and therapists, allowing them to behave in ways that are therapeutic, but that might seem awkward in other contexts. A meta-analysis of outcome studies in which the effects of a cognitive-behavioral treatment were compared to the effects of the same treatments supplemented by hypnosis resulted in a mean effect size of 0.87 standard deviations,

indicating the average client receiving cognitive-behavioral hypnotherapy is better off at the end of it than more than 80 percent of clients who receive the same treatment in a nonhypnotic context. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Levitt, Eugene E. (1992, August). Hypnosis in the treatment of obesity. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The literature dealing with the hypnotherapy of overweight and weight control is comprehensively reviewed. In general, the more recent reports are methodologically more sophisticated than earlier ones. Specific techniques employed include direct and aversive suggestions, imagery, ego-enhancement, self-hypnosis and a variety of behavior modification tactics. Most hypnotherapy is carried out in groups and most subjects/patients have been female. Twenty reports providing group data summarized. All but one report weight reduction at close and at follow-up. Of eight reports using control groups, six found that the group treated by hypnotherapy lost significantly more weight than some or all of the control groups. Hypnosis with behavior modification appears to be the most effective approach. Analysis suggests that hypnosis effectuates behavioral techniques after the close of treatment. Eleven reports presenting correlations between weight loss and hypnotic susceptibility differ sharply depending upon the year of publication. Only one of seven reports published prior to 1982 found a relationship between weight loss and susceptibility. Three of four reports since 1985 found a positive relationship. It is concluded that hypnotherapy for weight control can be effective and that it is probably maximally effective with high susceptibility persons. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Reeves, John (1992). Hypnosis and pain control. [Lecture] UCLA Clinical Hypnosis Seminar, Psychiatry 207 (Holroyd).

#### NOTES:

Cancer patients have a high incidence of pain, as indicated by statistics from several different investigators. Pain is most common in tumors involving bone, oral cavity, genitourinary system, and breast. (Cites Fordyce (1988) Pain and suffering, American Psychologist)

#### No. of Incidence

Patients of Pain Wilkes 1974 300 58% Twycross 1974 500 80% Foley 1979 397 60% Pannuti 1979 290 64%

Spanos, Nicholas P.; Simulates, Ann; de Faye, Barbara; Mondoux, Thomas J.; Gabora, Natalie J. (1992-93). A comparison of hypnotic and nonhypnotic treatments for smoking. Imagination, Cognition and Personality, 12, 23-43.

Three experiments administered variants of Spiegel's (1970) smoking cessation procedure to smokers in hypnotic and nonhypnotic treatments. Follow-up periods

were from twelve to twenty-four weeks depending on the experiment. Complete abstinence was an infrequent outcome in all three experiments. Greater-than-control reductions in smoking for treated subjects were obtained in two of the experiments but, in both cases treatment and control subjects failed to differ significantly before the end of the follow-up period. Hypnotic and nonhypnotic treatments produced equivalent smoking reductions in all studies, and neither hypnotizability nor questionnaire assessments of motivation to quit correlated significantly with treatment outcome. Implications are discussed.

#### NOTES:

When the experimenters compared number of treatments they simply compared two sessions of Spiegel's one-session treatment with four sessions of it. The authors make the point that perhaps they should vary the four sessions.

"In all three of the present experiments the abstinence rates associated with the Spiegel treatment were very low. Our abstinence rates were similar to those reported in one earlier study [4 - Perry et al.], but substantially lower than those reported in three other studies [2, 22, 25]. The reasons for these discrepancies between studies remains unclear, but experiment 3 suggests that these discrepancies cannot be accounted for simply in terms of whether the subjects were drawn from a university or nonuniversity population, and experiment 2 suggests that the discrepancies are unrelated to the number of treatment sessions administered to subjects.

"The finding that hypnotic and nonhypnotic subjects in all three experiments attained equivalent reductions in smoking is consistent with other comparison studies in this area which indicate that hypnotic treatments are no more effective than various nonhypnotic procedures at inducing reductions in smoking [22, 25, 30]. More generally, these findings are consistent with comparison studies on a wide variety of clinical disorders (headache pain, warts, phobias, obesity) which indicate that hypnotic treatments are no more effective than nonhypnotic ones at producing therapeutic change (see [3] for a review).

"The failure to find significant correlations between smoking reduction and hypnotizability among treated subjects is also consistent with the findings of most studies in this area [3], but the reasons why significant correlations between these variables are found in some studies and not others remains unclear. Spanos [3] suggested that significant correlations between these variables are particularly likely when hypnotizability testing is integrated into the treatment protocol. Under these circumstances subjects are likely to form strong expectations about treatment success on the basis of their self-observed responses to the hypnotizability scale. Such expectations may, in turn, influence subjects' motivations to comply with the treatment regimen, the self-statements they make concerning their likelihood of quitting, etc. In all of the present experiments hypnotizability was assessed at the end of the follow-up period and, therefore, could not influence subjects' expectations of treatment success" (pp. 40-41).

Syrjala, Karen L.; Cummings, Claudette; Donaldson, Gary W. (1992). Hypnosis or cognitive behavioral training for the reduction of pain and nausea during cancer treatment: A controlled clinical trial. Pain, 48, 137-146.

Few controlled clinical trials have tested the efficacy of psychological techniques for reducing cancer pain or post-chemotherapy nausea and emesis. In this study, 67 bone marrow transplant patients with hematological malignancies were randomly assigned to one of four groups prior to beginning transplantation conditioning: (1) hypnosis training (Hypnosis); (2) cognitive behavioral coping skills training (CB); (3) therapist contact control (TC); or (4) treatment as usual (TAU; no treatment control). Patients completed measures of physical functioning (Sickness Impact Profile; SIP) and psychological functioning (Brief Symptom Inventory; BSI), which were used as covariates in the analyses. Biodemographic variables included gender, age and a risk variable based on diagnosis and number of remissions or relapses. Patients in the Hypnosis, CB, and TC groups met with a clinical psychologist for two pre-transplant training sessions and ten in-hospital "booster" sessions during the course of transplantation. Forty-five patients completed the study and provided all covariate data, and 80% of the time series outcome data. Analyses of the principal study variables indicated that hypnosis was effective in reducing reported oral pain for patients undergoing marrow transplantation. Risk, SIP, and BSI pre-transplant were found to be effective predictors of inpatient physical symptoms. Nausea, emesis and opioid use did not differ significantly between the treatment groups. The cognitive behavioral intervention, as applied in this study, was not effective in reducing the symptoms measured.

#### NOTES:

Hypnotizability was not measured in this study.

The authors hypothesized that "(1) patients receiving hypnosis training would report the least pain, but the cognitive behavioral group would report less pain than the untreated group; and (2) both treatment groups would report less nausea and emesis than the control groups" (p. 138). The adult patients were undergoing their first marrow transplant, had survived at least 19 days post-transplant, and had participated in at least the first 8 of 10 possible inpatient sessions; five additional patients completed the study but had missing data.

Each patient in the TC (therapist contact), CB (cognitive behavioral coping skills), and Hypnosis groups participated in two 90 minute training sessions with a psychologist, 2-4 days apart, on an outpatient basis. Once admitted to hospital, twice each week they participated in a total of ten 30-minute sessions designed to reinforce use of the interventions. The TAU (treatment as usual) group had no psychologist contact. For the TC control group, the psychologist simply talked with the patients about whatever was on their minds.

The CB group received multiple interventions: training in relaxation (2 techniques-progressive muscle relaxation and abbreviated autogenic relaxation) with tapes provided; cognitive restructuring (Turk et al., 1983) which included training in attention redirection and restructuring self-defeating cognitions; preparing coping self-statements or affirmations, by focusing attention on neutral or pleasant events

or objects, or by occupying their attention through mental repetition of affirmations, songs or prayer; encouragement to think of negative events as time limited; provision of information, especially the beneficial effects of reducing physiological arousal and attention to pain and nausea; assistance in setting short-term progress-related goals for self-care such as exercise, caloric intake, and mouth care; exploration of the meaning of their illness and of bone marrow transplant.

For the Hypnosis group, individually tailored Ericksonian inductions (Lankton & Lankton, 1983) with relaxation and multi-sensory imagery were taped and given to the patient to use in daily practice, in between sessions. The suggestions were directed at reducing pain, nausea, and the emotional reactions to those symptoms; there also were suggestions about health, well-being, self-control and enhanced coping capabilities.

The results were analyzed by ANCOVA (except where non-parametric analysis was required with the opioid data). Due to gender differences in reported pain (men experiencing more) and the fact that the TAU group had an over-representation of men, the TAU group could not be used in the pain analyses. However, there were no gender differences in nausea reports, so that all four groups could be used for nausea outcome analyses.

The Hypnosis group evidenced the lowest amount of post-transplant pain, and used (nonsignificantly) less opioids than the other groups. No significant treatment effects were observed for either nausea or emesis.

In their discussion, the authors noted that "The hypnosis group's peak pain was lower and of a shorter duration than the other three groups. Opioid use closely followed the course of pain intensity. ... The gender effect may be characteristic of this particular sample [since it was unexpected].

"Nausea and emesis followed a less predictable course than pain. ... nausea fluctuated dramatically from day to day within treatment groups. As nausea moderated after completion of conditioning, the day to day fluctuations remained striking. This lack of symptom predictability may have contributed to the difficulty patients had in using the interventions effectively" (p. 143).

"The lack of significant differences between treatment groups in opioid use indicates that lower pain report in the hypnosis group cannot be explained by increased opioid use. Results do not support the second hypothesis that both hypnosis and cognitive behavioral training would reduce chemotherapy or radiation-induced nausea and emesis.

"In MT patients, several factors may limit the impact of either cognitive behavioral training or hypnosis on nausea and emesis. First, MT patients receive higher doses of emetogenic agents than are given to most other cancer patients. Second, patients in this study had only two sessions in which to learn relaxation techniques; this may not have provided adequate training. Third, the most severe emetic challenge began immediately with the first dose of chemotherapy rather than having a gradual onset. This did not permit patients to master the techniques with milder symptoms before applying training to intense symptoms. Fourth, for all patients, psychological interventions were provided as adjuncts to medications rather than as substitutes for antiemetics or opioids. Both antiemetics and opioids have substantial cognitive side effects which, in high doses, may impact patients' abilities to implement

interventions which are in essence cognitive. This combination of factors may have provided too severe a challenge to a newly learned skill. In contrast to nausea, oral pain developed over a number of days, permitting practice while symptoms were mild and before administration of opioids.

"Results suggest that the imagery component of the hypnosis intervention was central to its efficacy. Not only was the cognitive behavioral intervention without imagery not effective in reducing the symptoms measured, but we found in clinical practice that patients intermittently began to refuse sessions with relaxation alone. Even hypnosis patients, when under the physical stresses of treatment, had shortened attention spans that necessitated briefer inductions, less time spent on relaxation, and more active, engaging imagery.

"... Since, in clinical practice, imagery is frequently a component of cognitive behavioral treatment, these results would not generalize to those settings where imagery is combined with other skill training.

"Several other possible limitations of the cognitive behavioral intervention merit consideration. Our experience indicates that the number of components used in the two training sessions were more than patients could competently learn in a short time. ... A further possibility is that maladaptive cognitions, which are the targets of cognitive restructuring, may be the exception rather than the rule among MT patients who tend to focus, with their families, on positive, hopeful attitudes toward their treatment" (pp. 144- 145).

The authors note that the relatively small sample size may have provided inadequate statistical power to demonstrate effects with some of the outcome variables

Tosi, D. J.; Rudy, D. R.; Lewis, J.; Murphy, M. A. (1992). The psychobiological effects of cognitive experiential therapy, hypnosis, cognitive restructuring, and attention placebo control in the treatment of essential hypertension. Psychotherapy, 29, 274-284

Evaluated the effects of cognitive experiential hypnotherapy (CEH), which includes hypnosis, cognitive restructuring, and developmental staging, on essential hypertension. CEH, Hypnosis alone, cognitive restructuring, and attention-placebo control conditions were randomly assigned to 39 subjects. There was a significant interaction effect with the nine psychobiological outcome measures. Discriminant analysis found a stronger overall effect over time for CEH when compared with its components.

1991

Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. Behaviour Research and Therapy, 29, 17-31.

NOTES:

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in *Lancet* have important implications for health care.

Mauer, D. R. (1991, October). A comparison of cognitive-behavioral and hypnotic techniques in the management of electromyography pain (Dissertation, University of Iowa). Dissertation Abstracts International, 53 (4), 1070-B. (Order No. DA 9217180)

"Compared a cognitive behavioral technique that included providing specific sensory and procedural information combined with relaxation with a hypnotic technique (relaxation with guided imagery) and a control group for management of acute EMG pain and anxiety. Pain and anxiety ratings were gathered from 45 EMG patients and observers for both nerve conduction and needle electrode components of the EMG exam. It was found that only the hypnosis group significantly reduced pain and anxiety during the needle electrode portion of the procedure. Patients with unexplained or functional symptoms reported more EMG pain and anxiety than patients who had an organically based disease. Because having had a prior EMG seemed to have an effect on the efficacy of treatment, the data were reexamined. Results determined that inexperienced EMG patients who were treated had less pain and anxiety than patients who experienced EMG before, but inexperienced control patients had an increase in pain and anxiety over experienced patients" (p. 1070).

Keywords: behavior therapy/cognitive therapy, cancer/oncology, cardiology/cardiovascular, hypnotherapy, personality, relaxation

#### NOTES

This is a commentary on two papers by Grossarth-Maticek and Eysenck, in which they report on 'creative novation behaviour therapy' to prevent cancer and heart disease in people with personalities associated with the development of those diseases. Therapy may involve hypnosis and/or relaxation, with suggestions that facilitate modification of unhealthy expectancies. The papers are:

Grossarth-Maticek, R. & Eysenck, H.J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part I - Description of treatment. *Behaviour Research and Therapy* 29, 1-16.

Eysenck, H.J. & Grossarth-Maticek, R. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. *Behaviour Research and Therapy* 29, 1, 17-31.

Oettingen, Gabriele; Wadden, Thomas A. (1991). Expectation, fantasy, and weight loss: Is the impact of positive thinking always positive?. Cognitive Therapy and Research, 15 (2), 167-175.

Investigated the impact of expectation and fantasy on the weight losses of 25 obese women participating in a behavioral weight reduction program. Both expectations of reaching one's goal weight and spontaneous weight-related fantasies were measured at pretreatment before Ss began 1 year of weekly group treatment. Consistent with the hypothesis that expectation and fantasy are different in quality, these variables predicted weight change in opposite directions. Optimistic expectations but negative fantasies favored weight loss. Ss who displayed pessimistic expectations combined with positive fantasies had the poorest treatment outcome. Expectation but not fantasy predicted program attendance. The effects of fantasy are discussed with regard to their potential impact on weight reduction therapy.

Rapee, Ronald M. (1991). The conceptual overlap between cognition and conditioning in clinical psychology. Clinical Psychology Review, 11, 193-203.

Given the fact that contemporary theories of conditioning regularly utilize information processing concepts such as memory and expectancies, classifying clinical theories as either cognitive or conditioned appears to be outdated. Yet, this dichotomy is still upheld in many clinical writings. Such a false dichotomy seems to serve more of a political function than a theoretical one and thus is likely to interfere with a complete understanding of psychopathology. While the terms conditioning and cognition are often used to imply unconscious learning on the one hand versus conscious, rational learning on the other, this usage is not consistent. A more empirically useful way to describe pathological behavior may be in terms of the amount of attentional resources utilized.

Salkovskis, Paul M.; Clark, David M.; Hackmann, Ann (1991). Treatment of panic attacks using cognitive therapy without exposure or breathing retraining. Behaviour Research and Therapy, 29 (2), 161-166.

Used a multiple baseline design among 7 panic patients to determine whether a modified form of treatment involving cognitive procedures reduces panic attack frequency. Ss received both focal and nonfocal treatment. Focal therapy concentrated on bringing about reattribution of bodily sensations. Six of the 7 Ss showed a marked reduction in panic frequency following focal cognitive treatment, while nonfocal treatment did not reduce panic frequency. Results provide preliminary evidence that cognitive procedures that exclude breathing retraining and exposure to feared situations or sensations can reduce panic attack frequency, and that cognitive procedures that do not target misinterpretations of bodily sensations may not reduce panic.

Schwarz, Shirley P.; Blanchard, Edward B. (1991). Evaluation of a psychological treatment for inflammatory bowel disease. Behaviour Research and Therapy, 29 (2), 167-177.

Compared the effectiveness of a multicomponent behavioral treatment package, which included inflammatory bowel disease (IBD) education, progressive muscle relaxation, thermal biofeedback, and training in use of cognitive coping strategies, with the effectiveness of symptom-monitoring as a control condition. The treatment group consisted of 11 IBD patients (aged 25-62 yrs); 8 of 10 persons (aged 25-71 yrs) in the control group completed treatment. At posttreatment, the treatment group showed fewer reductions in symptoms (5) than the symptom-monitoring controls (8). However, treated Ss perceived themselves as coping better with IBD and as feeling less IBD-related stress. It is hypothesized that the differences in treatment responses may be related to differences between Ss with ulcerative colitis and Ss with Crohn's disease.

1990

Clark, Duncan B.; Agras, W. Stewart (1990). The assessment and treatment of performance anxiety in musicians. American Journal of Psychiatry, 148 (5), 598-605.

94 adults with a performance anxiety problem were recruited by mass media announcements and were seen in a university-based outpatient psychiatric clinic. Assessments were questionnaires for all 94 ss, diagnostic interview of 50 ss, and laboratory performance of 34 ss. Treatment conditions were 6 weeks of buspirone, 6 weeks of placebo, a five-session group cognitive-behavior therapy program (CBTP) with buspirone, or the CBTP with placebo. All Ss fulfilled criteria for Diagnostic and Statistical Manual of Mental Disorders-III-Revised (DSM-III-R) social phobia. Of the 15 full-time professional musicians, 10 had tried propranolol and 3 had stopped performing. Most Ss had substantial anxiety and heart rate increases during lab speech and musical performances. CBTP resulted in significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence.

Harmon, Teresa M.; Hynan, Michael T.; Tyre, Timothy E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. Journal of Consulting and Clinical Psychology, 58, 525-530.

Studied the benefits of hypnotic analgesia as an adjunct to childbirth in 60 nulliparous women. Subjects were divided into high- and low-susceptibility groups before receiving six sessions of childbirth education and skill mastery using an ischemic pain task. Half of the subjects in each group received a hypnotic induction at the beginning of each session; the remaining control subjects received relaxation and breathing exercises typically used in childbirth education. Both hypnotic subjects and highly susceptible subjects reported reduced pain. Hypnotically prepared births had shorter Stage 1 labors, less medication, higher Apgar scores,

and more frequent spontaneous deliveries than control subjects' births. Highly susceptible, hypnotically treated women had lower depression scores after birth than women in the other three groups. The authors believe that repeated skill mastery facilitated the effectiveness of hypnosis in the study.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

Kirsch, Irving (1990). Changing expectations: A key to effective psychotherapy. Pacific Grove, CA: Brooks/Cole. (Reviewed in American Journal of Clinical Hypnosis, 34, 138)

**NOTES:**

This is a clinical hypnosis textbook written from the perspective of a cognitive therapist, and based on response-expectancy theory. The author discusses how expectancy theory can account for results obtained with hypnosis, cognitive behavioral, and psychodynamic psychotherapy, as well as with psychopharmacology. The book draws heavily upon psychological research in psychotherapy as well as hypnosis, and discusses how therapists can mobilize patient positive expectations for change. Hypnotic responses are viewed as 'genuine' responses that subjectively are not perceived to be under voluntary control (similar to other classes of response behavior).

Newshan, Gayle; Balamuth, Ron (1990-91). Use of imagery in a chronic pain outpatient group. Imagination, Cognition and Personality, 10, 25-38.

Reports treatment of chronic pain, integrating relaxation, cognitive therapy, and imagery techniques for 3 groups of chronic pain patients. Imagery and visualization were the most important components of the treatment.

**NOTES:**

Chronic nonmalignant pain is defined as pain that exists beyond the normal and expected healing time, usually six months or more after the initial injury or trauma. Patients used daily journal to monitor level of pain using a color scale 4 times/day (blue - little or no pain, green mild pain, yellow moderate, orange severe, and red pain so intense it could kill or render the patient unconscious).

Used two types of imagery: mental rehearsal of actually doing and reaching a goal, or symbolic representation of the pain as a creature, alive, within their bodies. They dialog with the creature, asking Why are you here? What do you need from me? What can I do to live with you? What is the message you have for me? patients are asked to listen very closely for the response.

Cognitive restructuring is introduced later to identify dysfunctional thought patterns and correct them. They are taught, 1) thoughts influence behavior and emotions, 2) thoughts can be changed, and therefore 3) behavior can be changed. However, not all patients benefit from cognitive restructuring (because resistant to self monitoring or frightened or critical of own negative thoughts).

Relaxation is especially beneficial in breaking the pain/anxiety cycle, reducing fear associated with pain, improving sleep patterns, promoting a general feeling of well-being and facilitating mental imagery. Mental imagery, on the other hand, provides a means of self-discovery. It is defined by Achterberg and Lawlis (1980) as the internal experience of a perceptual event in the absence of the actual external stimuli; although usually thought of as visual, it may well involve any other sensory modality associated with the image.

Imagery is a proverbial process, eliciting the rich symbolism of knowledge of a person's unconscious and providing powerful insights indirectly. It provides an opportunity for one to reorganize a problem or experience, such as pain, towards a more positive resolution. Imagery can increase the patient's self-esteem and self-control and seems to facilitate well behavior. It is also a vivid method of communication from the patient to the therapist and the rest of the group. The group members had a healthy respect for these images and were able to appreciate the impact they had in their recovery, even if the process is not completely understood.

In each of their cases, "it is important to emphasize that the pain was never 'cured,' the pain persisted throughout treatment. Again, the program does not take away the patients' pain but changes the pain experience and enables patients to participate more fully in their lives despite the pain. As suggested by the 'big person, small person' concept, the pain would probably always be part of their lives, but through the program it could be a smaller, more manageable part. Imagery proved to be a valuable tool in helping clients achieve this goal.

Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. Behaviour Research and Therapy, 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were

compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

Stanton, Harry E. (1990). Using ego-enhancement to increase assertiveness. British Journal of Experimental and Clinical Hypnosis, 7, 133-137.

An ego-enhancement technique embodying three metaphors designed to help elderly people become more assertive is described. These metaphors: (1) the cloud - a symbol for 'getting rid of things'; (2) the snowball - a symbol for determination; and (3) the pyramid - a symbol for confidence, are linked together to achieve both general ego- enhancement and increased assertiveness.

Turner, Judith A.; Clancy, Steve; McQuade, Kevin J.; Cardenas, Diana D. (1990). Effectiveness of behavioral therapy for chronic low back pain: A component analysis. Journal of Consulting and Clinical Psychology, 58 (5), 573-579.

The effects of outpatient group behavioral therapy including aerobic exercise (BE), behavioral therapy only (B), and aerobic (E) on pain and physical and psychosocial disability were evaluated and compared in a group of mildly disabled chronic low-back-pain patients. Ninety-six Ss were randomly assigned to the 3 treatments and a waiting-list control (WL) condition and assessed on a variety of patient self-report, spouse-rated, and direct observational measures at pretreatment, posttreatment, and 6- and 12-month follow-ups. Patients in the BE condition, but not the B or E conditions, improved significantly more pretreatment to posttreatment than did WL patients on the patient self-report and observer-rated measures. At both follow-ups, all 3 treatment groups remained significantly improved from pretreatment, with no significant differences among treatments.

Vanderlindin, Johan; Vandereycken, Walter (1990). The use of hypnosis in the treatment of bulimia nervosa. International Journal of Clinical and Experimental Hypnosis, 38 (2), 101-111.

**NOTES:**

25 people who were highly hypnotizable were treated. Treatment consisted of three phases: introduction to hypnosis, addressing core issues, and ensuring long term results. The induction included focus on breathing, relaxation, and arm levitation. Subject was told to imagine that she is eating a meal, while concentrating and tasting her food. She is then told to imagine a recent binge and to exaggerate all the negative consequences of bingeing (weight gain, low self-esteem) and all the positive consequences of binge-free life.

To address Subject's core issues of why bingeing started, the Subject is told to separate her ego from her bulimic past, and the therapist then tries to find out why the bulimic past entered the patients' life. The therapist then tries to 'negotiate' with the bulimic past and tries to help the patient find other ways to deal with the problems. Cognitive restructuring and hypnosis techniques are used.

The final phase, which entails a year of followup care, involves helping the patients to become independent from their past. Many bulimic patients are still dependent on their parents, and this may have caused their dependency on food. Therefore, the goal of hypnosis is to allow herself to become emotionally independent and to control her life.

It was estimated that 50% of patients completely recovered and 30% showed great improvement but 20% did not change at all.

Wells, Adrian (1990). Panic disorder in association with relaxation induced anxiety: An attentional training approach to treatment. Behavior Therapy, 21 (3), 273-280.

Trained a 40-yr-old woman with panic disorder without agoraphobic avoidance in the use of an attentional training procedure that was effective in eliminating panic and facilitated tension reduction without producing anxiety. A 2-treatment design revealed that a procedure evoking external attentional focus eliminated panic attacks, whereas autogenic training increased the frequency of panic attacks and the intensity of anxiety. Possible roles of self-focus in mediating panic and the effects of relaxation are discussed.

1989

Cooper, Nancy A.; Clum, George A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. Behavior Therapy, 20 (3), 381-391.

14 Vietnam veterans suffering from posttraumatic stress disorder (PTSD) were assigned either to standard treatment (control group), or standard treatment plus imaginal flooding (experimental group). The 2 groups were closely matched on medications and combat roles and tours of duty were comparable. Experimental Ss received up to 14 sessions of flooding for a maximum of one and one-half hours per session. Self-report measures were administered at pre-treatment, post-treatment, and at 3-mo follow-up. These measures included the Behavioral Avoidance Test, the Beck Depression Inventory, and a Modified Vietnam Experiences Questionnaire. Results indicate that flooding increased the effectiveness of usual treatment, particularly in such areas as re-experiencing symptoms and sleep disturbances. However, flooding had no effect on level of depression, trait anxiety, and violence-proneness.

Edelson, Jeffrey; Fitzpatrick, Jody L. (1989). A comparison of cognitive-behavioral and hypnotic treatments of chronic pain. Journal of Clinical Psychology, 45, 316-323.

27 male chronic pain patients were assigned to 1 of 3 treatment groups: hypnosis, cognitive-behavioral, and attention control. Hypnosis and cognitive-behavioral treatments were identical, with the exception of the hypnotic induction. Scores on the McGill Pain Questionnaire (MPQ) and a measure of the overt motor behavior element of chronic pain were collected at pretreatment, posttreatment, and follow-

up intervals. Analyses showed significant increases in activity and decreases in pain intensity for the cognitive-behavioral treatment. Changes for the hypnosis treatment were noted only on the MPQ. Changes for both groups were sustained on the 1-mo follow-up. Findings generally support the superiority of the cognitive-behavioral treatment on behavior measures and its equivalence to hypnosis on subjective measures.

Heap, Michael (1989). Antecedent imagery in a case of Gilles de la Tourette syndrome. British Journal of Experimental and Clinical Hypnosis, 6 (1), 55-56.

#### NOTES

1:

Author presents a male teenager diagnosed with Gilles de la Tourette syndrome, who was treated without noticeable success using a variety of techniques (relaxation, suggestion, hypnoanalysis, video-feedback, paradoxical injunction).

Stanton, Harry E. (1989). Hypnotic relaxation and the reduction of sleep onset insomnia. International Journal of Psychosomatics, 36, 64-68.

A hypnotic relaxation technique was compared to stimulus control and placebo conditions as a means of reducing sleep onset latency (SOL). Forty-five subjects were matched on their baseline SOL as measured through sleep diaries. They were randomly assigned to one of the three groups and experienced four weekly sessions of 30- minutes' duration, with demand effects being controlled through the use of counter- demand instructions. Data generated by the study suggested that the particular hypnotic relaxation treatment used was effective in helping Ss sleep more quickly. Neither stimulus control nor placebo groups recorded similar improvement.

Tosi, D. J.; Judah, S. M.; Murphy, M. A. (1989). The effects of a cognitive experiential therapy utilizing hypnosis, cognitive restructuring, and developmental staging in psychological factors associated with duodenal ulcer disease: A multivariate experimental study. Journal of Cognitive Psychotherapy, 3, 273-290.

This study evaluated the effects of a Cognitive Experiential Therapy (CET)--in the past referred to as Rational Stage Directed Hypnotherapy--Cognitive Restructuring (CR), Hypnosis Only (HO), and a no-treatment control condition on the duodenal ulcer syndrome. CET is a systematic, stage-directed therapy that employs hypnosis and the cognitive restructuring of self-defeating cognitive, emotional, physiological, and behavioral tendencies. Seven criterion variables were assessed using two standardized instruments and questionnaire data. The standardized instruments included the Millon Behavioral Health Inventory (MBHI) and the Common Beliefs Survey III (CBS). Twenty-five volunteer duodenal ulcer patients were subjects in a 4 x 3 factorial design with repeated measures consisting of the four treatments and pretest, posttest, and follow-up. There was a significant treatment effect, and effects were observed on personality coping styles, beliefs and locus of control scales, and

on gastrointestinal disturbance. CET appeared to have an ameliorative effect on psychological factors associated with duodenal ulcer.

Van den Bergh, Omer; Eelen, Paul; Baeyens, Frank (1989). Brief exposure to fear stimuli: Imagery ability as a condition of fear enhancement and fear decrease. Behavior Therapy, *20*, 563-572.

Examined fear enhancement and fear decrease during brief exposure to fear stimuli. 140 good and poor imagery Subjects (aged 14-18 years) with medium fear levels toward spiders were exposed to a live spider, either by looking at it or by thinking of an invisible, but present spider during either 60, 180, or 360 sec. Control Subjects were given a distraction task. Subjective fear and behavioral approach were measured. Brief exposure hindered fear decrease compared to the control condition. Good imagers showed more fear decrease and were less affected by the mode of exposure. Fear enhancement occurred only in poor imagers at the longer exposure duration (360 sec) during thinking. In that condition, good imagers showed their greatest fear decrease.

1988

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, *34*, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Tsushima, W. T. (1988). Current psychological treatments for stress-related skin disorders. Cutis, *42*, 402-404.

Surveys current methods used by psychologists in the management of stress-related skin disorders, including hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive behavioral therapy. These techniques offer promise in the treatment of certain dermatologic conditions, but the limited amount of well-controlled and replicated studies of their use suggests that caution be taken in their application.

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, 31, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year study of 50 thermally injured patients with greater than 45% total body surface second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

**NOTES:**

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to

practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

Crist, Dwayne Anderson (1987). The effect of suggestibility on the efficacy of relaxation training instruction: A multisession evaluation (Dissertation, University of Alabama). Dissertation Abstracts International, 47 (n9-B), 3950.

"Progressive relaxation is a well established procedure used in the treatment of anxiety related disorders. Research has suggested that the muscle tension-release component of progressive relaxation is the critical variable in producing relaxation effects. However, other techniques which do not employ muscle-tension release have proven effective. It has been suggested that treatment type may interact with personality characteristics to produce greater effects. Suggestibility was selected as a personality characteristic that may facilitate or inhibit relaxation effects. Fifty high and 50 low suggestible individuals were selected to participate based on scores from the Creative Imagination Scale. Half of each group was randomly assigned to either a progressive relaxation or imagery relaxation treatment. Subjects received four weekly sessions of relaxation training. The Relaxation Scale was administered before and after each session to assess effects of training. The results indicated that high suggestible individuals had significantly greater increases in relaxation within session on each of the three scales of the Relaxation Scale, but this appeared to be a result of lower pre-test scores. Only the Physical Assessment scale also demonstrated higher post-test scores for the high suggestible participants. A ceiling effect appeared to be operating for both the Physiological Tension and Cognitive Tension scales. There were no significant differences between the progressive relaxation and imagery relaxation treatments. It appears that muscle tension release may not be a critical variable in relaxation effects" (p. ).

Jay, Susan (1987, October). Hypnotic susceptibility and response to psychological intervention for distress related to painful procedures in leukemic children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES:

Presented children with a cognitive behavioral intervention package that involved five elements 1. Filmed Modeling (child modeling and talking about it with good coping skills) 2. Positive Reinforcement - trophy 'for doing the best you can,' to change aversive situation to a positive situation 3. Breathing Exercises - 'puff yourself up like a tire' 4. Emotive Imagery/Distraction - super hero image (Superman), or being in a favorite place 5. Behavioral Rehearsal - dollplay, reviewing the procedure with medical equipment.

For Numbers 4 and 5 the therapist would actively guide the procedures; numbers 3, 4 & 5 are hypnotic elements.

Valium had lowered children's distress prior to procedures but not during the procedures. This study involved Valium plus cognitive behavior therapy.

25 Subjects ages 6-12, were measured for hypnotizability

**2 groups: (1) Cognitive Behavior Therapy + Valium given just before intervention started, after film ended; (2) Cognitive Behavior Therapy alone.**

**Dependent Measures: 1. Observation Scale of Behavioral Distress coded every 15 seconds. 2. Faces Scale for Fear (self report) before procedure**

**Faces Scale for Pain (self report) after procedure 3. Blood pressure**

**RESULTS. No Significant Differences were found between the two groups (CBT vs CBT + Valium). Pre-Post Analyses: Post intervention scores were significant lower than Pretest on [missed notes]**

**Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.**

**This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.**

**1986**

**Diamond, Michael Jay (1986). Hypnotically augmented psychotherapy: The unique contributions of the hypnotically trained clinician. American Journal of Clinical Hypnosis, 28 (4), 238-247.**

**In the last century, psychotherapists trained in clinical hypnosis have made a number of unique contributions to the psychotherapeutic endeavor, particularly in the areas of psychotherapeutic theory, technique, and practice. Nine factors indexing the contribution of hypnotherapists are discussed. They are: 1) communication focus; 2) maximizing expectation and belief; 3) mind-body emphasis; 4) handling of resistance; 5) employing trance phenomena; 6) using archaic levels of relationship; 7) stressing healthy, adaptive ego functions; 8) using therapist trance; and 9) permitting responsible creativity. Each factor is considered as it pertains to hypnotic technique and phenomena as well as how it is manifested in clinical treatment.**

**Lehrer, Paul M.; Woolfolk, Robert L.; Goldman, Nina (1986). Progressive relaxation then and now. In Davidson, Richard J.; Schwartz, Gary E.; Shapiro,**

David (Ed.), Consciousness and self regulation: Advances in research and theory (4, ). New York: Plenum Press.

**NOTES:**

Reviews changes that have occurred in progressive relaxation training and their effects. The authors conclude:

"Jacobson's original progressive relaxation technique differs from the types of progressive relaxation used by many current practitioners in a number of fundamental respects. Jacobson emphasized relaxation as a method of learning to control one's excess muscle tension 24 hours per day. In his mind, progressive relaxation was not a method by which something is done\_ to\_ a person. Rather, it is a method by which the individual learns to control his or her own body. Jacobson, therefore, rejected the use of suggestion and of various biofeedback instruments and conditioning techniques that may induce relaxation during a training session. Empirical evaluations of most elements of the two progressive relaxation techniques have not yet been done. Thus, although many studies have compared progressive relaxation with a number of hypnotic, cognitive, and combined somatic-cognitive techniques, no one has dismantled the progressive relaxation technique Jacobson's or modified versions, in order to study the exact contribution of suggestion or cognitive interventions to the modified progressive relaxation technique, or of teaching one muscle at a time. The evidence reviewed above, however, does lead us to hypothesize that Jacobson's original technique would be relatively more effective in producing lasting somatic changes, whereas the revised technique might be more effective in producing cognitive changes or even short-term somatic changes. If these hypotheses are borne out, we predict that for many applications in behavioral medicine Jacobson's original technique will be found to be preferable. This will be especially true for those disorders which cannot be assessed by asking the patient how he or she feels but must be evaluated physiologically (e.g., hypertension and various cardiac arrhythmias, where the patient may sometimes even feel worse when the problem is controlled than when it is not).

"In the 'big picture' of therapy, of course, the distinctions between the two techniques may be overshadowed by such overriding issues as whether relaxation therapy is even \_relevant\_ for the individual. We have extensively discussed this issue elsewhere (Woolfolk & Lehrer, 1984b) but we reemphasize here that we see relaxation training as a specific method for overcoming definable problems and not as a panacea nor as a way of life. Nevertheless, we believe that the various approaches to the progressive relaxation technique are sufficiently different, both in practice and in philosophy, that we would do well to evaluate these differences in a rigorous fashion" (Lehrer, Woolfolk, Goldman 209- 210).

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress

inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

1985

Bolocofsky, David N.; Spinler, Dwayne; Coulthard-Morris, Linda (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41 (1), 35-41.

109 17-67 year olds completed a behavioral treatment for weight management either with or without the addition of hypnosis. Results show that, at the end of the 9-week program, both interventions resulted in significant weight reduction. However, at 8-month and 2-year follow-ups, the hypnosis Ss showed significant additional weight loss, while those in the behavioral-treatment-only group exhibited little further change. More Ss who used hypnosis also achieved and maintained their personal weight goals. It is suggested that hypnosis may have been an effective motivator for Ss to continue practicing the more adaptive eating behaviors acquired during treatment. Findings support the utility of employing hypnosis as an adjunct to a behavioral weight management program. (25 ref)

Spanos, Nicholas P.; Ollerhead, Virginia Gail; Gwynn, Maxwell I. (1985-86). The effects of three instructional treatments on pain magnitude and pain tolerance: Implications for theories of hypnotic analgesia. Imagination, Cognition and Personality, 5, 321-337.

Between baseline and posttesting on the cold pressor test, subjects were assigned to four treatments: a) hypnotic analgesia, b) brief instructions to "Do whatever you can to reduce pain," c) stress inoculation, and d) no instruction control. Participants in the three instructional treatments showed significantly greater baseline to posttest decrements in pain magnitude and significantly greater increments in pain tolerance than controls. However, the instructional treatments did not differ significantly from one another in these regards. Pretested hypnotic susceptibility correlated significantly with degree of pain reduction in the hypnotic analgesia treatment but not in the "Do whatever" or stress inoculation treatments. Theoretical implications are discussed.

1984

Billotti, Thomas J. (1984, August). The effects of rational emotive imagery and rational emotive imagery plus hypnosis in reduced public speaking anxiety (Dissertation). Dissertation Abstracts International, 46 (2), 633-634-B.

"Previous investigations have demonstrated the effectiveness of rational emotive therapy in reducing public speaking anxiety and the increased benefit derived by combining rational emotive procedures with hypnosis. The present study examined the effectiveness of rational emotive imagery and rational emotive imagery plus hypnosis in reducing public speaking anxiety in subjects with high and low levels of imaginative ability. The dependent measures employed included self report, behavioral and physiological measures of anxiety. "47 undergraduate students who reported anxiety while speaking in public served as subjects in the study. The subjects were divided into high and low levels of imaginative ability and randomly assigned to one of three experimental groups as follows: rational emotive imagery, rational emotive imagery plus hypnosis, and an instructional control group. It was hypothesized that subjects in the rational emotive imagery plus hypnosis group would evidence significantly less anxiety than subjects in the rational emotive imagery and instructional control group, and that subjects with high pre-treatment levels of imaginative ability would evidence significantly less anxiety than subjects with low pre-treatment levels of imaginative ability. "The results of this study provided some support for the efficacy of combining rational emotive imagery with hypnosis. Subjects in the rational emotive imagery plus hypnosis group evidenced significantly less anxiety than subjects in the rational emotive imagery and instructional control group on the two self-report measures. There were no significant differences as between subjects in the rational emotive imagery group and instructional control group or between subjects with high and low imaginative ability on post-treatment assessments. Subjects tended to have their highest pulse rates at the start of the speeches, their lowest pulse rate just after the speeches, and moderate pulse rates just before and during the speeches. "Factors contributing to these results and interpretations of the data were discussed. Suggestions regarding the direction of future research were offered" (p. 633- 634).

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization method, with the additional factor that they were hypnotized for the visualization. In a long term follow-up study, those patients who were treated for at least 6 months and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

Stam, Henderikus J.; McGrath, Patricia A.; Brooke, Ralph I. (1984). The effects of a cognitive-behavioral treatment program on temporo-mandibular pain and dysfunction syndrome. Psychosomatic Medicine, 46, 534-545.

Sixty-one patients, clearly diagnosed as suffering from temporo-mandibular pain and dysfunction syndrome (TMPDS), were randomly assigned to one of three groups, (1) hypnosis and cognitive coping skills, (2) relaxation and cognitive coping skills, or (3) a no-treatment control group. All patients were evaluated with a standard hypnotic susceptibility scale prior to treatment. The two treatment groups received four weekly sessions of their respective treatments. Patients in the hypnosis and relaxation groups reported equivalent decrements in pain, abnormal sounds in the temporomandibular joint, and limitations of jaw mobility. Hypnotic susceptibility was significantly correlated with reductions in reported pain for the treatment groups. Patients' age and the duration of pain prior to treatment were not related to treatment outcome. Patients who dropped out of treatment had fewer limitations in jaw movement but did not differ on any other variable from patients who remained in treatment. These findings are discussed in relation to the hypothesis that TMPDS is a stress related muscular pain and dysfunction.

Wideman, Margaret V.; Singer, Jerome E. (1984). The role of psychological mechanisms in preparation for childbirth. American Psychologist, 39, 1357-1371.

Psychoprophylactic (Lamaze) preparation for childbirth consists of six to eight classes held during the last trimester of pregnancy. These classes include instruction in the anatomy and physiology of gestation and parturition, respiration techniques, controlled neuromuscular relaxation, visual focusing, and the training of a labor coach. Although the techniques are based upon psychological principles, they have remained largely unstudied by either psychologists or physicians. This article presents a brief history of the development of the training regimen and critically examines the few empirical studies that have been conducted. Because explanations for the efficacy of the preparation, if it exists, are equivocal, literature on the explicit components of the training--that is, information, respiration techniques,

conditioned relaxation, cognitive restructuring, and social support--in situations other than child delivery are reviewed and their implications for the Lamaze method discussed. However, because there exist several, more implicit factors that may affect the type of child delivery a prepared woman experiences, the literature concerning social comparison, the effects of commitment and conformity, perceived control, and endorphin secretion are also discussed as they may apply to psychoprophylactic preparation. Problems associated with the study of childbirth preparation are presented, and suggestions for the direction of future research are made.

Boutin, Gerald E.; Tosi, Donald J. (1983). Modification of irrational ideas and test anxiety through rational stage directed hypnotherapy (RSDH). Journal of Clinical Psychology, 39 (3), 382-391.

Examined the effects of four treatment conditions on the modification of Irrational Ideas and test anxiety in female nursing students. The treatments were Rational Stage Directed Hypnotherapy, a cognitive behavioral approach that utilized hypnosis, and vivid emotive imagery, a hypnosis-only treatment, a placebo condition, and a no-treatment control. The 48 Ss were assigned randomly to one of these treatment groups, which met for 1 hour per week for 6 consecutive weeks with in-vivo homework assignments also utilized. Statistically, significant treatment effects on cognitive, affective, behavioral, and physiological measures were noted for both the RSDH and hypnosis group at the posttest and at a 2-month follow-up. Post-hoc analyses revealed the RSDH treatment group to be significantly more effective than the hypnosis only group on both the post- and follow-up tests. The placebo and control groups showed no significant effects either at posttreatment or at follow-up.

Flatt, Jennifer R. (1983). What makes therapy work? Thoughts provoked by a case study. Australian Journal of Clinical and Experimental Hypnosis, 11 (2), 63-72.

The case described is offered as illustrating the doubt common to introspective therapists: what did cure the patient? "Francesca's" presenting problem and the object of the short-term psychological intervention described here, was a fairly circumscribed set of fears related to enclosed spaces. The therapeutic approach adopted was primarily hypnobehavioural, with hypnotically-assisted systematic desensitization and "in vivo" exposure being the main components of the planned programme. However, at the client's suggestion, one hypnotic session with content planned by the therapist as age regression produced rather dramatic and unexpected results claimed by the patient to effect complete cure.

## NOTES

The therapist suggested that "her mind would take her back to a time that was important in understanding her fears and that she would be able to stay calm and relaxed while this past event was revealed to her" (p. 69). She subsequently imagined being in a cave, peaceful and calm. "On being roused from hypnosis, Francesca eagerly described her cave image. She was enthusiastic about the significance of this

experience, claiming that it was evidence that in a \_previous life\_ she had died from being locked into a cave as some sort of punishment and that this pexperience made her fear of enclosed places rational and comprehensible to her" (p. 69).

Myles, (1983, April). Cognition, hypnotic susceptibility, and laboratory induced pain (Dissertation, University of Waterloo). Dissertation Abstracts International, 43 (10), 3360-B.

"Individuals' experiences of pain, and responses to pain treatments vary greatly. This study attempted to relate two areas of research concerned with this variation: (a) cognitions and pain (thoughts, images, etc.), in particular, catastrophizing versus coping; and (b) hypnotic susceptibility and analgesia. "Subjects were preselected for high or low hypnotic susceptibility. Susceptibility assessment was divorced from the laboratory study to minimize the potential bias of expectancies concerning hypnosis. High hypnotic susceptibility was expected to potentiate therapeutic effects of hypnotic-like treatment that did not involve a hypnotic induction. "Ten high and ten low-susceptible subjects were assigned to each of three groups: (a) a cognitive treatment, encouraging subjects to reduce spontaneous catastrophizing and increase self-generated coping cognitions; (b) a dissociative imagery treatment, encouraging subjects to engage in self-generated engrossing images; (c) an attention- placebo manipulation. "Pre and post-treatment assessments involved tolerance and pain-report measures during the cold-pressor task, and interview and questionnaire information concerning cognitions. "No treatment effects were evident on measures of pain. Cognitive data indicated less catastrophizing and more coping during the post-treatment stressor across all groups. Subjects in the dissociative imagery group did report more imagery during the post- treatment assessment than subjects in the other groups, but this increased use of imagery was not associated with a decrease in pain. "Interview and questionnaire data supported prior reports that catastrophizing is related to increased pain. Low catastrophizing was associated with a high sense of control, high use of a variety of coping strategies, and lower pain reports. These relationships were altered following treatment, however, leading to a caution in generalizing about such variables. "High susceptibility did not potentiate therapeutic effects for either experimental treatment. Nor was susceptibility related in any other consistent way to pain, although high susceptibility was associated with more extensive use of post-treatment imagery. "Methodological inconsistencies and problems in laboratory pain research were discussed, and suggestions made for future work in the area" (p. 3360).

Polk, W. M. (1983). Treatment of exhibitionism in a 38-year-old male by hypnotically assisted covert sensitization. International Journal of Clinical and Experimental Hypnosis, 31 (3), 132-138.

This case study reports the successful treatment of a 38-year-old male with a 14 year history of exhibitionism. A multifaceted treatment program was used, involving hypnotically assisted covert sensitization and brief marital therapy. Hypnosis was used to develop psychic aversive and reinforcing stimuli from the patient's past

experience. The value of hypnosis in enhancing imagery in cognitive treatment approaches and the need for only experienced clinicians to utilize the present intervention strategy is discussed.

Schandler, Steven L.; Dana, Edward R. (1983). Cognitive imagery and physiological feedback relaxation protocols applied to clinically tense young adults: A comparison of state, trait, and physiological effects. Journal of Clinical Psychology, 39, 672-681.

Examined changes in targeted and general tension behaviors as well as reductions in physiological tension associated with cognitive imagery and electromyographic biofeedback relaxation procedures. Three groups of 15 female college students participated. During three weekly sessions each person received either guided cognitive imagery relaxation, frontalis muscle feedback relaxation, or a self-rest control procedure. The Anxiety Differential was administered before and after each session, while frontalis EMG, heart rate, and skin temperature were monitored continuously. A second Temperament Analysis was administered after the final session. The imagery procedure was associated with moderate reductions in physiological tension and significant reductions in state anxiety and three tension-related personality dimensions. Self-rest persons displayed lesser reductions in general tension with little physiological change. While biofeedback persons showed the largest reductions in physiological tension, they displayed only small and variable changes in state anxiety and personality dimensions. The data raise continued questions about the application of physiologically based operant relaxation procedures and support the use of cognitively mediated protocols for the treatment of specific or general anxiety behaviors.

1982

Cognitive therapies have, for the most part, proceeded in ignorance of recent work in hypnosis. The present article attempts to summarize some of the findings in hypnosis that are relevant for clinicians and investigators in the tradition of cognitive behavioral modification. Especially important is the concept of suggestion, and the fact of individual differences in hypnotic ability. It is argued that at least some of the therapeutic effectiveness of non-hypnotic therapies may be due to such individual differences. The importance of suggestion appears to be especially important in the treatment of psychosomatic disorders, and numerous illustrations are given showing that therapeutic outcome with such disorders is correlated with hypnotic ability, even when specific hypnotic procedures are not employed.

Howard, L.; Reardon, J. P.; Tosi, D. (1982). Modifying migraine headache through rational stage directed hypnotherapy: A cognitive-experiential perspective. International Journal of Clinical and Experimental Hypnosis, 30 (3), 257-269.

Recent techniques designed to modify migraine headache have emphasized physiological modification via hypnosis only or biofeedback. Psychological factors, however, have been identified as causal in many psychophysiological disorders such

as migraine. The present case study describes the results of utilizing Rational Stage Directed Hypnotherapy (RSDH) of Tosi (1974), Tosi and Marzella (1975), and Tosi (1980a) in the treatment of an individual suffering from severe migraine headaches. RSDH, designed to attend to both physiological and psychological factors, is a cognitive-experientially based, stage directed, systematic psychotherapeutic regimen which utilizes hypnosis and hypnotic imagery to enhance the rational restructuring of negative cognitive/emotional/physiological/behavioral states.

In the present case study, RSDH demonstrated superior effects over the hypnosis only treatment and baseline in reducing migraine headaches. The client demonstrated improvement on both self-report measurement (frequency of migraine headaches) and objective test results (MPI, Hathaway & McKinley, 1951; Tennessee Self-Concept Scale, Fitts, 1979). In describing this case, particular attention was given to analyzing cognitive distortions via hypnotic imagery in a temporal framework. Analysis and restructuring of past traumatic events which were symbolically affecting the client's current behavior were particularly significant aspects of the treatment process.

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched-pairs signed ranks test) were found in nausea ( $Z = 2.37, p$

Lyles, Jeanne Naramore; Burish, Thomas G.; Krozely, Mary G.; Oldham, Robert K. (1982). Efficacy of relaxation training and guided imagery in reducing the aversiveness of cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 509-524.

Fifty cancer patients receiving chemotherapy, 25 by push injection and 25 by drip infusion, were assigned to one of three conditions for their chemotherapy treatments: (a) progressive muscle-relaxation training plus guided-relaxation imagery; (b) therapist control, in which a therapist was present to provide support and encouragement but did not provide systematic relaxation training; and (c) no-treatment control. Patients participated in one pretraining, three training, and one follow-up session. Results indicated that during the training sessions, patients who received relaxation training, relative to patients in either of the other two conditions, (a) reported feeling significantly less anxious and nauseated during chemotherapy,

(b) showed significantly less physiological arousal (as measured by pulse rate and systolic blood pressure) and reported less anxiety and depression immediately after chemotherapy, and (c) reported significantly less severe and less protracted nausea at home following chemotherapy. The attending nurses' observations during chemotherapy confirmed patient reports. In general, patients in the therapist control condition and the no-treatment control condition did not differ significantly from each other. The differences among conditions generally remained significant during the follow-up session. The data suggest that relaxation training may be an effective procedure for helping cancer patients cope with the adverse effects of their chemotherapy.

**Oliver, George W. (1982-83). A cancer patient and her family: A case study. American Journal of Clinical Hypnosis, 25 (2-3), 156-160.**

In recent years, increasing numbers of mental health workers have been attempting to use techniques of psychotherapy to influence the course of malignant disease. This paper reviews in detail the course of treatment of one female patient with an inoperable malignancy and conveys a sense of the clinical experience of working intensively with a cancer patient and her family. It shows the complex levels of interaction within the patient herself, between the patient and her family, and between the therapist and her family and within the therapist himself during different phases of the therapeutic journey.

**Redd, William H.; Andrykowski, Michael A. (1982). Behavioral intervention in cancer treatment: Controlling aversion reactions to chemotherapy. Journal of Consulting and Clinical Psychology, 50 (6), 1018-1029.**

During the protracted course of cancer chemotherapy, approximately 25% of patients develop aversion reactions to treatment by becoming nauseated and/or vomiting before their chemotherapy treatments. This phenomenon has been conceptualized as a result of respondent conditioning. Since commonly used antiemetic drugs do not reliably control anticipatory nausea/emesis, behavioral techniques of control have been studied. They include hypnosis used in conjunction with guided-relaxation imagery, progressive muscle relaxation with guided imagery, and systematic desensitization. (67 ref)

**Redd, William H.; Andresen, Graciela V.; Minagawa, Rahn Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50 (1), 14-19.**

**NOTES: Deep muscle relaxation hypnosis controlled nausea, gagging, retching in all cases. Anticipatory emesis recurred when hypnosis was not used. During subsequent sessions in which hypnosis was reinstated, anticipatory emesis was again controlled.**

Redd, William H.; Rosenberger, Patricia H.; Hendler, Cobie S. (1982-83). Controlling chemotherapy side effects. American Journal of Clinical Hypnosis, 25 (2-3), 161-172.

Severe nausea and vomiting are commonly experienced by cancer patients after receiving chemotherapy treatments. Moreover, approximately 25% of these patients develop conditioned aversions to treatment and become nauseated before they receive their chemotherapy injections. The use of deep muscle relaxation hypnosis in conjunction with guided imagery to control pre- and post-chemotherapy nausea and emesis is discussed. Theoretical and clinical issues raised by this application of hypnosis in cancer treatment are also addressed.

Shapiro, Arnold (1982-83). Psychotherapy as adjunct treatment for cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 150-155.

During the past ten years psychotherapy as adjunct treatment for cancer patients has become increasingly common. The use of hypnosis as an integral part of that treatment has also burgeoned. This report will follow the progress of two cancer patients in psychotherapy. While each is highly individual, the commonalities which allow treatment to be systematic will be quite apparent. The ability to minimize pain and discomfort, the ability to keep the white cell count high despite ongoing chemotherapy, and augmenting the ability of the body's immune system to fight the disease are utilized by both of the patients. All of the above are accomplished through the use of visual imagery in the trance state. Visual imagery is also used to reach feelings which patients are often unable to verbalize, and of which they often claim to be unaware. Other aspects of therapy such as the gradual shift from despair to hope and even confidence, and the development of more assertive behavior are discussed.

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

#### NOTES:

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation

[Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...

"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).

The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.

"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).

"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).

1981

Araoz, Daniel L. (1981). Negative self-hypnosis. Journal of Contemporary Psychotherapy, 12, 45-52.

A review of recent developments in psychotherapeutic methods of cognitive behavior therapy leads to the conclusion that negative self-hypnosis (NSH) is operative in problematic behavior. NSH is elucidated, and a counteractive, five-stage approach of self-hypnosis is proposed to effectively deal with NSH.

Kellerman, J. (1981). Hypnosis as an adjunct to thought stopping and covert reinforcement in the treatment of homicidal obsessions in a twelve-year-old boy. International Journal of Clinical and Experimental Hypnosis, 29 (2), 128-135.

A combined cognitive behavioral approach was used to successfully treat matricidal obsessions in an otherwise psychologically well-adjusted 12-year-old boy. The primary problem was conceptualized as anxiety over loss of control. Therapeutic techniques included re-defining of symptoms, thought-stopping, hypnotic enhancement of imagery in order to facilitate cognitive restructuring, covert reinforcement, home practice, and paradoxical instructions to produce the symptom. A decline in obsessions began after 3 sessions and total remission was observed after 6 sessions (10 weeks). 2-year follow-up revealed no recurrence of symptoms. The value of hypnosis as an adjunct to behavior therapy with children is discussed.

O'Brien, Richard M.; Cooley, Lewis E.; Ciotti, Joseph; Henninger, Kathleen M. (1981). Augmentation of systematic desensitization of snake phobia through posthypnotic dream suggestion. American Journal of Clinical Hypnosis, 23, 231-238.

Nine snake phobics who had scored above eight on the SHSS (Form A) were given four desensitization sessions and five sessions in which a pleasant posthypnotic dream of the phobic object was suggested. These subjects were significantly superior to a desensitization-only control group on a behavioral avoidance test. Seven of the nine hypnosis subjects were able to touch a real snake. The two subjects who did not touch the snake reported dreams in which the snake was either absent or threatening. Although conclusions are limited by differential attention and susceptibility, the technique seems promising.

Scrignar, C. B. (1981). Rapid treatment of contamination phobia with hand-washing compulsion by flooding with hypnosis. American Journal of Clinical Hypnosis, 23, 252-257.

Two obsessive-compulsive patients with contamination phobias and hand-washing compulsions are presented. Psychoanalytic psychotherapy had resulted in little change. Behavior therapy techniques of thought-stopping, systematic desensitization, progressive muscle relaxation, cognitive restructuring and self-imposed response prevention were first used, resulting in some subjective

improvement, but no change in the hand-washing rate. Hypnosis, emphasizing relaxation, positive suggestion and corrective information provided further temporary subjective improvement but little change in compulsive rituals. Hypnosis, combined with the behavioral technique of flooding, produced rapid improvement. The patients maintained improvement at seven years and two years. Flooding under hypnosis may afford obsessive-compulsive patients a rapid and economical therapeutic procedure.

Worthington, Everett L.; Shumate, Michael (1981). Imagery and verbal counseling methods in stress inoculation training for pain control. Journal of Counseling Psychology, 28 (1), 1-6.

Investigated 3 elements of stress inoculation training, a therapeutic package for helping clients control anxiety, anger or pain. 96 undergraduate females were tested twice for ice water tolerance. In a 3 design, the independent variables were the presence or absence of (a) pleasant imagery, (b) a conceptualization of pain as a multistage process, and (c) planned, explicit self-instructions. A multivariate analysis of covariance using the (transformed) pretest tolerance rating and 2 self-ratings of pain. Imagery users (Is) controlled their pain better than nonimagery users (NIs). There was a significant interaction of Imagery and Conceptualization. NIs had longer tolerance and less self-reported pain at withdrawal when they heard no conceptualization. The Is did not derive additional benefit from hearing the conceptualization. Self-instruction did not affect pain control. Results suggest that pleasant imagery effectively relieves pain and may account for much of the effectiveness of stress inoculation training. (23 ref)

1980

Bornstein, Philip H.; Devine, David A. (1980). Covert modeling-hypnosis in the treatment of obesity. Psychotherapy: Theory, Research and Practice, 17 (3), 272-276.

Investigated the efficacy of a covert modeling/hypnosis treatment package in the control of obesity. 48 overweight female volunteers (who had been administered the Harvard Group Scale of Hypnotic Susceptibility, Eating Patterns Questionnaire, and Rotter's Internal-External Locus of Control Scale) were randomly assigned to 1 of the following groups: (a) covert modeling/hypnosis, (b) covert modeling, (c) no-model scene control, and (d) minimal treatment (where Ss received a shortened version of the covert modeling/hypnosis procedure following an 8-wk no-treatment period.) Results indicate a significant effect for weight loss from pretreatment to follow-up across all groups combined. Proportion weight loss measures indicated significantly greater weight loss only for the covert modeling/hypnosis group as compared to the no-model controls. Implications for combining behavior therapy and hypnotic techniques are discussed. (30 ref).

Bornstein, P. H.; Rychtarik, R. G.; McFall, M. E.; Winegardner, J.; Winnett, R. L.; Paris, D. A. (1980). Hypnbehavioral treatment of chronic nailbiting: A multiple

baseline analysis. International Journal of Clinical and Experimental Hypnosis, 28 (3), 208-217.

3 highly hypnotizable Ss were administered a hypnbehavioral treatment package in an attempt to alleviate chronic nailbiting behavior. The combined hypnotic and behavioral procedures included standard induction and deepening techniques, motivation enhancement, time-projection, self-reinforcement, aversion-relief, coping self-instructions, and posthypnotic suggestion. A multiple baseline design across Ss was employed as a means of evaluating the treatment intervention. Results for all Ss indicated immediate and dramatic increase in fingernail lengths concomitant with the introduction of treatment. At 3-month follow-up, 1 S demonstrated a moderate reversal effect while the remaining 2 Ss continued to indicate substantial progress. These findings were discussed with regard to the efficacy of hypnbehavioral treatment strategies and utilization of single-case experimental designs in future hypnotherapy research.

Powell, Douglas H. (1980). Helping habitual smokers using flooding and hypnotic desensitization techniques: A brief communication. International Journal of Clinical and Experimental Hypnosis, 28 (3), 192-196.

A subgroup of individuals who were helped to stop smoking by hypnosis or other means returned to consuming a few cigarettes a day. A flooding and hypnotic desensitization technique assisted 4 of 7 individuals who resumed smoking in becoming and remaining abstinent for a 6- to 9-month follow-up period.

Puente, Antonio E.; Beiman, Irving (1980). The effects of behavior therapy, self-relaxation, and transcendental meditation on cardiovascular stress response. Journal of Clinical Psychology, 26 (1), 291-295.

#### NOTES

1:

Compared Behavior Therapy (BT), self-relaxation (SR), transcendental meditation (TM), and a waiting-list control group (WL) on measures of cardiovascular and subjective stress response. Male and female respondents (N = 60) to an ad for therapy were evaluated in assessment sessions before and after treatment. The results indicate that BT and SR were more effective than either TM or WL in reducing cardiovascular stress response. These data were interpreted as resulting from therapeutic suggestion and positively reinforced client progress.

1979

Beers, Thomas M.; Karoly, Paul (1979). Cognitive strategies, expectancy, and coping style in the control of pain. Journal of Consulting and Clinical Psychology, 47, 179-180

Measures of tolerance, self-reported pain threshold, and overall discomfort of cold-pressor pain were obtained from 114 male subjects in a pretest-training-posttest experiment. Training consisted of brief practice in one of four cognitive strategies:

rational thinking, compatible imagery, incompatible imagery, and task-irrelevant cognition. Analyses of covariance indicated (a) that cognitive-imaginal strategies facilitated endurance of pain and raised self-reported threshold, (b) that rational thinking and compatible imagery were generally the most effective treatments, (c) that expectancy alone was not a significant pain-attenuating factor, (d) that treatments did not affect discomfort ratings, and (e) that individual differences in imaginal ability and coping style did not correlation with changes in any of the dependent measures.

Katz, Norman W. (1979). Comparative efficacy of behavioral training, training plus relaxation, and a sleep/trance hypnotic induction in increasing hypnotic susceptibility. Journal of Consulting and Clinical Psychology, 47, 119-127.

A social-learning-based behavioral training procedure and the same procedure with the addition of progressive relaxation instructions were compared with a traditional sleep/trance eye-fixation hypnotic induction. As predicted, the hypothesis that a social-learning training procedure would be more effective than a sleep/trance induction was supported. The hypothesis that the addition of relaxation instructions would further potentiate the social-learning treatment was not supported. The results suggest that for subjects of low and medium hypnotic susceptibility, social-learning procedures are a more effective way of increasing suggestibility than a sleep/trance induction. Changes in subjects' conceptions of hypnosis, particularly in terms of moving toward a self-control viewpoint, were hypothesized to be an intervening variable.

Perry, Campbell; Gelfand, Robert; Marcovitch, Phillip (1979). The relevance of hypnotic susceptibility in the clinical context. Journal of Abnormal Psychology, 88 (5), 592-603.

Despite experimental evidence that hypnotic susceptibility is a relatively stable characteristic of the individual, and one that is very difficult to modify, clinical investigators tend to see susceptibility as irrelevant to therapeutic outcome. Such investigators view motivational and interpersonal variables as more essential to the therapeutic change. The evidence for the clinical relevance of hypnotizability is sparse and contradictory. Most existing studies stem from medical hypnosis and indicate that susceptibility plays an important role in the successful treatment of such conditions as clinical pain, warts, and asthma. Two studies are reported that seek to pursue a contrary finding reported by Perry and Mullen, who found that susceptibility was unrelated to the successful treatment of a socially learned behavior (cigarette smoking). Both studies confirmed the earlier finding of a lack of relation. In Study 1, however, stepwise multiple regression analysis located three inventory items concerning the motivation of cigarette smokers. The combination of items was found to predict outcome for 67.39% of 46 clients treated either by hypnosis or by rapid smoking. The finding was replicated in Study 2, which utilized a combined hypnosis - rapid smoking technique and employed a different therapist.

The outcome for 9 of the 13 quitters and 37 of the 62 nonquitters across the two studies could be predicted by the three motivational questionnaire variables.

Spanos, Nicholas P.; Radtke-Bodorik, H. Lorraine; Ferguson, John D.; Jones, Bill (1979). The effects of hypnotic susceptibility, suggestions for analgesia, and the utilization of cognitive strategies on the reduction of pain. Journal of Abnormal Psychology, 88, 282-292.

Subjects previously stratified in terms of hypnotic susceptibility had an arm immersed in ice water for a 60-sec pretest and, afterward, were assigned to one of four treatments: (a) hypnosis plus analgesia suggestion, (b) hypnosis alone, (c) suggestion alone, or (d) no hypnosis - no suggestion. Next, the subjects were retested in ice water and then interviewed about their experiences during the retest. High susceptibles reported the use of more cognitive strategies during the retest and showed greater pretest-to-retest pain magnitude reductions than did low susceptibles. Similar effects occurred for subjects given, as opposed to not given, a suggestion. The hypnosis variable, however, failed to affect either strategy use or pain magnitude. Strategy use facilitated pain reduction only for subjects who did not worry about, and did not exaggerate, the unpleasantness of the situation (i.e., noncatastrophizers). The very few subjects who showed dramatic pretest- to-retest reductions in pain magnitude (50% reduction or more) were all high-susceptible noncatastrophizers who used one or more cognitive strategies.

Turner, Ralph M.; Ascher, L. Michael (1979). Controlled comparison of progressive relaxation, stimulus control, and paradoxical intention therapies for insomnia. Journal of Consulting and Clinical Psychology, 47 (3), 500-508.

Assessed the effectiveness of treatment programs based on progressive relaxation, stimulus control, and paradoxical intention in the context of sleep difficulties for 50 volunteer Ss. The results indicate that each of the therapeutic procedures significantly reduced sleep complaints in contrast to placebo and waiting list control groups. No differences were observed among the 3 active techniques. (1 1/2 p ref).

1978

Brown, Jude M.; Chaves, John F., Ph.D (1978, August). Hypnosis in the treatment of sexual dysfunction. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Recent reports suggest that hypnosis may be a useful technique for the treatment of sexual dysfunction. Five distinct strategies for the utilization of hypnosis in sex therapy can be identified: (1) as a diagnostic tool, (2) to improve self-confidence, (3) as an adjunct to behavior therapy, (4) for the direct removal of symptoms, and (5) to facilitate the resolution of neurotic conflicts. Case reports documenting these applications of hypnotic procedures typically fail to include significant information regarding patient variables, symptomatology, the nature of the therapeutic intervention, and criteria for improvement. Although the conclusions provided by

these case studies are encouraging, it is essential that the efficacy of hypnotic techniques in sex therapy be evaluated by controlled studies.

Dempsey, George L.; Granich, Marina (1978). Hypno-behavioral therapy in the case of a traumatic stutterer: A case study. International Journal of Clinical and Experimental Hypnosis, 26 (3), 125-133.

Hypnotherapy was used to treat a 41-year-old veteran for a severe stuttering problem, which began suddenly following a traumatic accident while serving during the Korean War and persisted for an ensuing 19-year period. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to treat a rather distressing, and in this case incapacitating, speech disorder. Various strategies for treatment are discussed.

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (19656) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

1977

Ascher, L. M. (1977). The role of hypnosis in behavior therapy. In Edmonston, William E., Jr. (Ed.), Conceptual and investigative approaches to hypnosis and hypnotic phenomena (296, ). New York: New York Academy of Sciences.

NOTES:

He does not differentiate physical and mental relaxation (Davidson & Schwartz). Insists that hypnosis treatment not include desensitization operations.

"Two studies (Gibbins et al., and Woody and Schaube) presented data that seemed to indicate that desensitization plus a hypnotic induction procedure resulted in greater fear reduction than desensitization alone. However, an analysis of the procedures employed suggests that the conclusion may be unwarranted, or at least

premature. Both studies confound the hypnotic induction with added elaboration of desensitization scenes, as well as additional direct fear-reduction suggestions. In addition, Gibbons et al. further confounded their study by placing good hypnosis subjects into the hypnotic-induction group as opposed to the desensitization or control groups. Barber has pointed out that the type of method that Gibbins et al. employed in subject assignment, as opposed to random assignment, results in the inability to control for such things as previous experience, the relationship of the subject with the experimenter, and the differential effects of these factors on the subject's attitudes, expectancies, and motivation" (p. 256).

"Finally, some individuals writing from the context of hypnotherapy, have suggested that the effects of specific imaginal behavioral techniques may be due to the possible existence of hypnosis or the trance state unwittingly incorporated into these behavioral procedures. The difficulties of such a position have been addressed by Barber, Cautela, Johnston and Donaghue, Spanos, Spanos, et al., Spanos and Barber, and Weitzenhoffer, among others. The following, as a group, have pointed out the difficulties inherent in the position that certain procedures, not otherwise associated with hypnosis, may nevertheless result in the production of a 'trance state' in susceptible subjects (Barber, Chaves, and Spanos) have delineated the differences between hypnosis and various behavioral procedures (Cautela, Spanos et al., and Spanos and Barber); and have presented strong arguments for suggesting that the effectiveness of hypnotherapeutic techniques are due to the inclusion of components of desensitization in the procedure rather than to the induction of a 'trance'" (pp. 257-258).

Barkley, R. A.; Hastings, J. E.; Jackson, T. L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. International Journal of Clinical and Experimental Hypnosis, 25 (1), 7-17.

29 Ss were assigned to one of 3 treatment conditions and treated for their cigarette smoking over a 2-week period. These conditions were: group rapid smoking, group hypnosis, and an attention-placebo control group. All treatments produced significant reductions in average daily smoking rates during the treatment phase but all Ss returned to near baseline levels of smoking by the 6-week follow-up. The rapid smoking and hypnosis groups did not differ from the control group in smoking rates at treatment termination or at the 6-week follow-up. They also did not differ from the control group in the number of Ss abstaining from smoking by treatment termination but did differ at follow-up. Eventually, at the 9-month follow-up, only Ss from the group rapid smoking condition had significantly more abstainers than the control group. The results suggested that rapid smoking can work as effectively in group procedures as previous individualized approaches had demonstrated. Group hypnosis, while less effective than some previous individualized approaches had indicated, was nevertheless only marginally less effective than the group rapid smoking procedure. The use of abstinence rates as opposed to average rates of smoking was strongly recommended as the best measure of treatment effectiveness for future research in this area.

Novaco, Raymond W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. Journal of Consulting and Clinical Psychology, 45 (4), 600-8.

Clinical interventions for anger disorders have been scarcely addressed in both theory and research in psychotherapy. The continued development of a cognitive behavior therapy approach to anger management is presented along with the results of its application to a hospitalized depressive with severe anger problems. The treatment approach follows a procedure called "stress inoculation," which consists of three basic stages: cognitive preparation, skill acquisition and rehearsal, and application practice. The relationship between anger and depression is discussed.

Scott, D. S.; Barber, T. X. (1977). Cognitive control of pain: Four serendipitous results. Perceptual and Motor Skills, 44, 569-570.

The experiment was designed to determine whether specific cognitive strategies are effective in reducing pain. Subjects were tested either on cold pain or pressure pain. Although the cognitive strategies did not significantly alter pain tolerance or pain intensity, the following four findings emerged: (a) males and females responded in a similar manner to the painful stimuli, (b) both the experimental subjects and the controls had surprisingly high tolerance of pain, (c) subjects typically generated their own thoughts and images to control pain, and (d) subjects responded to cold pain and to pressure pain in a similar manner.

#### NOTES:

80 subjects were randomly assigned to 4 groups, in the following conditions: 1. detailed instructions on how to interpret pain sensations as non-painful 2. a condensed version of the same instructions 3. instructions to imagine pleasant events during the pain stimulation 4. no instructions (controls)

Half were tested on cold pain, half on pressure pain.

Pain tolerance and also ratings of pain severity were not significantly different under any one of the four treatments. [A subsequent experiment (Scott & Barber, 1976) included somewhat similar experimental treatments but extended maximum allowable tolerance time from 3 min to 10 min. In this case, marked differences in pain tolerance were produced by the experimental treatments. It appears that results obtained in experiments on pain tolerance may depend on whether the ceiling for tolerance is set low or high.]

Post experimental interviews indicated that the typical subject used his assigned cognitive strategy part of the time during his exposure to the pain stimulation. During the remaining part of the pain period, the typical subject did not use any strategy or used a strategy for pain control derived from his own previous experience.

In general, the subjects tolerated the cold pain for the same length of time they tolerated the pressure pain and they rated the two kinds of pain as equally severe.

Stanton, Harry E. (1977). The utilization of suggestions derived from rational-emotive therapy. International Journal of Clinical and Experimental Hypnosis, 25 (1), 18-26.

A series of positive suggestions derived from Ellis' rational-emotive therapy were compared with Hartland's "ego-strengthening" technique in terms of patients' belief in their efficacy. Both pre- and post-treatment ratings were collected. Patients tended to approach treatment with a positive feeling that the treatment would help them with their problem and this belief was strengthened after the 10 therapy sessions had been completed. Further ratings taken 6 months later indicated that patients' belief in the value of the suggestive therapy had not decreased over time.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

Russell, Elbert W. (1974). The power of behavior control: A critique of behavior modification methods. Journal of Clinical Psychology, 30 (2), 111-136.

NOTES

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In summarizing the effectiveness of behavior therapy the author states, "At this point there does not appear to be sufficient evidence to demonstrate that all of the effectiveness of various types of behavior therapy is produced by non-specific, especially placebo, effects. In fact, it is more probable that many of these techniques will be found to have elements that are not due to non-specific effects and, as such, they will be the treatment of choice for certain limited problems, such as aversive therapy for autistic children or training of the mentally retarded. Nevertheless, concerning the central issue in this monograph, it is increasingly apparent that a very large proportion of the 'power' of behavior methods is due to non-specific, suggestion or placebo effects.

"As such, this 'power' is neither behavioristic, new, nor particularly threatening. It is not new since it has been known to medicine for many decades. As Shapiro states,

'the history of both physiologic and psychologic treatment is largely the history of the placebo effect; those who forget it are destined to repeat it'. In support of the age of this problem, Shapiro also quotes from the compiler of the remedies of the Paris Pharmacologia, a century ago, 'What pledge can be afforded that the boasted remedies of the present-day will not, like their predecessors, fall into disrepute, and in their turn serve only as a humiliating memorial to the credulity and infatuation of the physicians who recommended and prescribed them'" (p. 120-121).

"The large amount of suggestion or placebo effect in behavior therapy does raise at least two vital problems. The first problem involves the ethics of using suggestion or a placebo. Is it ethical to give the patient a false or questionable explanation for the source of the effectiveness of behavior procedures? Such an explanation would be that they are based on proven scientific behavior principles when major people in the field do not believe this and evidence is mounting that the primary source of effect is suggestion. Secondly, what will be the effect on the attitude of the general public toward professional psychology when they realize that the effectiveness of psychological behavior therapy methods is primarily a matter of suggestion? Will they not consider it a modern patent medicine? The damage that could be done to the prestige of psychology might take decades to repair. JH

1973

Tori, Christopher; Worell, Leonard (1973). Reduction of human avoidant behavior: A comparison of counterconditioning, expectancy, and cognitive information approaches. Journal of Consulting and Clinical Psychology, 41 (2), 269-278.

This study was designed to compare the fear-reducing efficacy of procedures based on three major theories that have been proposed to account for the success of systematic desensitization therapy: (a) cognitive information storage and retrieval, (b) cognitive expectancy, and (c) counterconditioning. Predictions were confirmed in that the outcome measures of the high-expectancy placebo group and the two cognitive-coping groups were significantly superior to those of the counterconditioning and no-treatment groups. Thus, this experiment supports the supposition that changes in human avoidant behavior may be attributed to demand and expectancy variables rather than the conditioning of "antagonistic responses" as has been previously suggested.

1971

Moorefield, C. W. (1971). The use of hypnosis and behavior therapy in asthma. American Journal of Clinical Hypnosis, 13, 162-163.

Nine patients with asthma were treated with hypnosis and behavior therapy. All of these patients showed subjective improvement to a rather marked degree, except for one patient who has had three slight attacks of asthma since the onset of her treatment. These patients have been followed from eight to approximately 24 months. The results so far have been rather encouraging and the author believes this form of treatment will prove to be of benefit in the treatment of asthma and possibly many other related conditions.

1970

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

NOTES

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Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience. Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

1969

Meyer, Robert G.; Tilker, Harvey (1969). The clinical use of direct hypnotic suggestion: A traditional technique in the light of current approaches. International Journal of Clinical and Experimental Hypnosis, 17 (2), 81-88.

Described a psychotherapeutic procedure which utilized hypnosis and aspects from the behavior therapies. Direct manipulation of behavior in an efficient, effective, and replicable procedure was the goal. Posthypnotic suggestions for the manifestation of desired behaviors were combined with attempts to induce S to reinforce his own behavioral changes. The 2 cases presented are of male prison inmates diagnosed as having character disorders. Positive and substantiated changes in physiological, behavioral, and attitudinal areas occurred. These continued without decrease over 6 mo. (with some indication of healthy adjustment at 1 yr.) for 1 S, and for 15 mo. with some continuous improvements for the 2nd S. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Behavior

**1994**

**Kennedy, James; Coe, William C. (1994). Nonverbal signs of deception during posthypnotic amnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 42 (1), 13-19.**

The question of hypnotic subjects complying with instructions, perhaps even purposely deceiving the hypnotist or deceiving themselves, has arisen from the state-nonstate (skeptical-credulous) theoretical controversy. However, experimental testing of competing hypotheses has been difficult. The current report offers methodological procedures that may prove useful. Subjects who were given posthypnotic amnesia instructions were tested on free recall and implicit recall of a 20-word list. To detect the possibility of deception, videotapes of real subjects and simulating subjects during and after posthypnotic amnesia were rated for nonverbal signs of deception, signs taken from the works of Ekman, Ekman and Friesen, and Zuckerman et al. Preliminary results were gathered on a small pilot sample, and recommendations for procedural improvements are proposed.

**1990**

**Ader, Robert; Felton, David; Cohen, Nicholas (1990). Interactions between the brain and the immune system. In Cho, Arthur K.; George, Robert; Blaschke, Terrence (Ed.), null (30, pp. 561-602). Palo Alto, CA: Annual Reviews Inc..**

**NOTES:**

Without attempting to cover all the literature, we have used stress effects and conditioning phenomena as illustrations to point out that behavior can influence immune function. We have also described data indicating that the immune system can receive and respond to neural and endocrine signals. Conversely, behavioral, neural, and endocrine responses seem to be influenced by an activated immune system. Thus, a traditional view of immune function that is confined to cellular interactions occurring within lymphoid tissues is insufficient to account for changes in immunity observed in subhuman animals and man under real world conditions.

"These data question seriously the notion of an autonomous immune system. ... The immune system is, indeed, capable of considerable self-regulation, and immune responses can be made to take place in vitro. The functions of that component of adaptive processes known as the immune system that are of ultimate concern, however, are those that take place in vivo. There are now compelling reasons to believe that in vivo immunoregulatory processes influence and are influenced by the neuroendocrine environment in which such processes actually take place ... . The immune system appears to be modulated, not only by feedback mechanisms mediated through neural and endocrine processes, but by feedforward mechanisms as well. The immunologic effects of learning, an essential feedforward mechanism, suggest that, like direct neural and endocrine processes, behavior can, under appropriate circumstances, serve an immunoregulatory function in vivo. Conceptually, the capacity to suppress or enhance immune responses by conditioning has raised innumerable questions about the normal operation and modifiability of the immune system via neural and endocrine processes.

**"We do not yet know the nature of all the channels of communication between the brain and the immune system or the functional significance of the neural and endocrine interrelationships that have been established....**

**"This integrated circuitry has extensive ascending and descending connections among the regions cited. These regions also share many similarities. They are sites intimately involved in visceral, autonomic, and neuroendocrine regulation. The cortical and limbic forebrain regions mediate both affective and cognitive processes and may be involved in the response to stressors, in affective states and disorders such as depression, in aversive conditioning, and in the emotional context of sensory inputs from the outside as well as the inside world. From an immunologic perspective, these regions are the sites in which lesions result in altered responses of cells of the immune system; they are the regions that respond to immunization or cytokines by altered neuronal activity or altered monoamine metabolism; and they are the regions that possess the highest concentration of glucocorticoid receptors and link some endocrine systems with neuronal outflow to the autonomic and neuroendocrine systems. Thus, this circuitry is the major system of the CNS suspected to play a key role in responding to immune signals and regulating CNS outflow to the immune system" (pp. 587-589).**

**1986**

**Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027)**

**"Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic**

indices as dependent variables. These analyses were performed on the original sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

Sands, Steven (1986, August). The use of hypnosis in establishing a holding environment to facilitate affect tolerance and integration in impulsive patients. Psychiatry, 49.

This paper is concerned with the use of hypnosis in establishing a facilitating and holding environment in the treatment of impulsive behavior across a range of diagnoses. The reason for this cross-diagnostic viewpoint is to underscore the common sources of such action and the needs to be met in its treatment. Illustrations from work with two patients are presented: One was a hypomanic and bulimic woman who was successful in her profession; the other was an underemployed and sometimes unemployed schizophrenic man. Both were inclined to self-defeating impulsive action---bulimia in the woman, assault in the man.

## 1985

Kirsch, Irving (1985, November). Response expectancy as a determinant of experience and behavior. American Psychologist, 40 (11), 1189-1202.

Response expectancies, defined as expectancies of the occurrence of nonvolitional responses, have generally been ignored in theories of learning. Research on placebos, hypnosis, and fear reduction indicates that response expectancies generate corresponding subjective experiences. In many cases, the genuineness of these self-reported effects has been substantiated by corresponding changes in behavior and physiological function. The means by which response expectancies affect experience, physiology, and behavior are hypothesized to vary as a function of response mode. The generation of changes in subjective experience by corresponding response expectancies is hypothesized to be a basic psychological mechanism. Physiological effects are accounted for by the mindbody identity assumption that is common to all nondualist philosophies of psychology. The effects of response expectancies on volitional behavior are due to the reinforcing properties of many nonvolitional responses. Classical conditioning appears to be one method by which response expectancies are acquired, but response expectancy effects that are inconsistent with a conditioning hypothesis are also documented.

Vickery, Anne R.; Kirsch, Irving; Council, James R.; Sirkin, Mark I. (1985). Cognitive skill and traditional trance hypnotic inductions: A within-subjects comparison. Journal of Consulting and Clinical Psychology, 53 (1), 131-133

Comparison of a traditional trance hypnotic induction and a cognitive skill induction in a within-Ss design with 40 undergraduates showed that the cognitive skill induction enhanced subjective responses to suggestions and produced significant increments in behavioral responses when it was preceded by the trance induction. The trance procedure led to greater self-reported alterations in consciousness. Findings suggest that skill induction teaches cognitive strategies that enhance responsivity to suggestions in subsequent hypnotic experiences, independent of alterations in consciousness elicited by trance induction.

### 1981

Tellegen, Auke (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on 'Role of the feedback signal in electromyograph biofeedback: the relevance of attention' by Qualls and Sheehan. Journal of Experimental Psychology: General, 110, 217-226.

High and Low Absorption Ss differ in set rather than in capability for attending to external or internal stimuli, as Qualls and Sheehan suggest. Trait x Treatment interaction for Absorption illustrates concept of personality dispositions being inherently interactive functional units. Provides a content analysis of Absorption scale (subscales) and relates absorption to other constructs in psychology. "It is not the internal versus external focus per se that play a decisive role but the subject's experiential versus instrumental set. For example, with two treatment levels, one would expect to obtain an Absorption x Treatment interaction even if both treatment conditions required an external attentional focus, as long as they contrasted an experiential and an instrumental set" (pp 223-224).

Gerschman, Jack; Burrows, Graham D.; Reade, Peter; Foenander, George (1979). Hypnotizability and the treatment of dental phobic behavior. In Burrows, Graham D.; Collison, David R.; Dennerstein, Lorraine (Ed.), Hypnosis 1979: Proceedings of the 8th International Congress of Hypnosis and Psychosomatic Medicine, Melbourne, Australia (pp. 33-39). New York: Elsevier/North Holland Biomedical Press.

### NOTES:

Found significant relationship between hypnotizability scores on the Diagnostic Rating Scale (O'Connell, D. N., Orne, M. T., & Shor, R. D., 1966) and responsivity to treatment employing hypnosis for dental phobia.

### 1975

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

**NOTES**

**1:**

**Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.**

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

**1961**

**Sutcliffe, J. P. (1961). 'Credulous' and 'Skeptical' views of hypnotic phenomena: Experiments on anesthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189-200.**

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias,

hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From Psyc Abstracts 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1958**

Barber, Theodore Xenophon (1958). Hypnosis as perceptual-cognitive restructuring: II. "Post"-hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 6 (1), 10-20.

NOTES

1:

The author presents "experimental evidence indicating that there is no essential difference between 'hypnotic' behavior and 'post-hypnotic' behavior" (p. 11).

"Summary and Conclusions

"When 'somnambulistic' subjects were told to 'wake up' after they were given a 'post-hypnotic suggestion' and 'amnesia for the suggestion' they behaved as follows:

1. They opened their eyes and became relatively more aware of their surroundings.
2. They were aware that the signal for the 'post-hypnotic- behavior had special significance for them.
3. They were 'set' to 'obey the hypnotist's suggestions' from the moment they were told to 'wake up,' until they were convinced that their interpersonal relationship with the operator was no longer that of subject and hypnotist.
4. When the 'post-hypnotic suggestion' was uncomplicated and fitted into the normal pattern of behavior, the subjects carried it out without 'going deeper into trance,' i.e., without becoming relatively more 'detached' from their surroundings. However, when the 'post-hypnotic suggestion' was of such a nature that it was necessary for the subjects to 'go deeper into trance' to properly carry it out, the subjects did 'go deeper into trance.'

"Whether the subjects did or did not have amnesia for the 'post-hypnotic suggestion' was not important. 'Amnesic' and 'non-amnesic' subjects carried out the 'post-hypnotic' behavior in essentially the same way.

"These experiments indicate that:

1. If the operator properly manipulates the situation, the 'good' hypnotic subject is 'set' to carry out the operator's commands in the 'post-hypnotic' period in the same way as during 'hypnosis.'
2. If, in order to properly carry out the 'post-hypnotic suggestions,' it is necessary for the subject to 'go deeper into trance' -- i.e., to become relatively inattentive to stimuli not emanating from the operator -- the good subject will do so.
3. There is no essential- difference between the subject's behavior in the 'hypnotic' period and in the 'post-hypnotic' period.
4. If we are to continue speaking of 'suggestions' to be carried out in the post-hypnotic period we should term them 'post'-hypnotic 'suggestions'" (pp. 19-20).

Bibliography

**2002**

Gravitz, Melvin (2002). Hypnosis as a counter-measure against the polygraph test of deception.. Polygraph Journal, 31, 293-297.

This article presents a bibliography of experimental and applied studies for reference by those interested in the use of hypnosis as a counter-measure in the "lie detector" test.

### **1988**

**Nash, Michael R.; Minton, Ann; Baldrige, Jeffrey (1988). Twenty years of scientific hypnosis in dentistry, medicine, and psychology: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36, 198-205.**

This paper examines the number of hypnosis articles appearing over the past 20 years in the scientific literature. A comprehensive index of all hypnosis articles published from 1966 to 1985 was obtained by using 5 computer reference data bases (Psychological Abstracts, Index Medicus, Psych Info, Psych Alert, Medline, and Index to Dental Literature). Over 3,500 scientific articles on hypnosis were categorized as to year published (1966 to 1985); journal title; and journal discipline (dental, medical, psychological, core hypnosis specialty journals, and interdisciplinary journals). The period 1966-1969 witnessed a relative prominence of hypnosis articles. For the next 12 years, the number of articles modestly declined. During the most recent 4-year period (1982-1985) there has been a sharp increase, with more articles published in this period than any other. The authors conclude: (a) that there is a stable level of acceptance and interest in hypnosis methodologies across years and disciplines and (b) that this stability, along with the growth of hypnosis specialty journals, signals maturation of the field. A list of dental, medical, psychological, and interdisciplinary journals which publish hypnosis articles is included.

### **1987**

**Gravitz, Melvin A. (1987). Two centuries of hypnosis specialty journals. International Journal of Clinical and Experimental Hypnosis, 35 (4), 265-276.**

Hypnosis under a variety of names has been utilized in clinical practice and scientific research for more than 2 centuries. During that time, there have been numerous periodicals which functioned as specialized outlets for publications related to the modality. In addition, there have been hundreds more which contained hypnosis articles within more general contexts. A comprehensive compilation of these specialized journals has not been available, however, and the present research presents the most complete listing to date. A total of 139 different titles was located through a search of the literature. The largest single group of these was published in French, while English was the second most frequent language used. The oldest hypnosis periodical was the *Annales de la Societe Harmonique des Amis-Reunis de Strasbourg* which was published in Strasbourg, France, in 1786, under the possible editorship of A. M. J. Chastenot de Puysegur. The first English language journal was published in London in 1816 with Francis Corbax as editor and was entitled the *Magnetiser's Magazine and Annals of Animal Magnetism*. In

the United States, 1842 was the initial year for the publication of the first 3 hypnosis journals.

**Hollender, M. H. (1987). The Albert Moll hypnosis collection. International Journal of Clinical and Experimental Hypnosis, 35 (1), 1-7.**

An outstanding collection on hypnosis and related subjects -- about 800 items -- is housed at Vanderbilt University. It was assembled by Albert Moll, an eminent practitioner, who himself contributed many scholarly works to the field. Information about Moll and his unique collection is called to the attention of scholars who have a special interest in the history of hypnosis.

## **Biofeedback**

### **2002**

**Hammond, D. C. (2002). Treatment of chronic fatigue with neurofeedback and self-hypnosis.. NeuroRehabilitation, 16, 1-6..**

A 21 year old patient reported a relatively rapid onset of serious chronic fatigue syndrome (CFS), with her worst symptoms being cognitive impairments. Congruent with research on rapid onset CFS, she had no psychiatric history and specialized testing did not suggest that somatization was likely. Neuroimaging and EEG research has documented brain dysfunction in cases of CFS. Therefore, a quantitative EEG was done, comparing her to a normative data base. This revealed excessive left frontal theta brainwave activity in an area previously implicated in SPECT research. Therefore, a novel treatment approach was utilized consisting of a combination of EEG neurofeedback and self-hypnosis training, both of which seemed very beneficial. She experienced considerable improvement in fatigue, vigor, and confusion as measured pre-post with the Profile of Mood States and through collaborative interviews with both parents. Most of the changes were maintained at 5, 7, and 9 month follow-up testing.

**Shenefelt, Philip (2002). Complementary psychotherapy in dermatology: Hypnosis and biofeedback. Clinics in Dermatology, 20 (5), 595-601.**

Hypnosis has been used for millenia to treat medical and dermatologic problems. The use of biofeedback is more recent, being dependent on instrumentation to measure such parameters as galvanic skin resistance (GSR) and skin temperature. Numerous dermatological disorders may be improved or cured using hypnosis as an alternative or complementary therapy. Examples include acne excoriee, alopecia areata, atopic dermatitis, congenital ichthyosiform erythroderma, dyshidrotic dermatitis, erythromelalgia, furuncles, glossodynia, herpes simplex, hyperhidrosis, ichthyosis vulgaris, lichen planus, neurodermatitis, postherpetic neuralgia, pruritus, psoriasis, rosacea, trichotillomania, urticaria, verruca vulgaris, and vitiligo. Dermatologic procedure anxiety can also be reduced using hypnosis.

Skin problems that have an autonomic nervous system component can be assisted by biofeedback with or without hypnosis. Examples include biofeedback of GSR for hyperhidrosis and biofeedback of skin temperature for Raynaud's syndrome. Hypnosis may enhance the effects obtained by biofeedback.

**1999**

**Kirsch, Irving; Lynn, Steven Jay (1999). Automaticity in clinical psychology. American Psychologist, 54 (7), 504-515.**

The authors provide an overview of the literature on the ability of response expectancies to elicit automatic responses in the form of self-fulfilling prophecies and link it to the broader psychological investigation of automatic processes. The authors review 3 areas of research in which response expectancies have been shown to affect experience, behavior, and physiology: placebo effects, the effects of false biofeedback on sexual arousal, and the alteration of perceptual and cognitive functions by hypnotic and nonhypnotic suggestion. Also reviewed are data suggesting that all behavior, including novel and intentional behavior, is initiated automatically. Following this review, the authors summarize some of the ways in which knowledge of response expectancy effects and other automatic processes that influence experience and behavior can enhance clinical practice.

**NOTES**

**1:**

Although expectancy accounts for some variance in the development of classical hypnosis effects, it is also true that "experimental data suggest that faking accounts for relatively few of these effects" (p. 507). "The best predictors of hypnotic suggestibility are waking suggestibility and response expectancy, and expectancy remains a significant predictor of hypnotic response even with waking suggestibility controlled (Braffman & Kirsch, in press; Kirsch, 1997)" (p. 508). The authors theorize that automatisms (like Chevreul pendulum) are "responses that are primed for automatic activation by two response sets: an intention and an expectancy for their occurrence" (p. 508). They suggest that most behavior is routine, virtually automatic, because cognitive structures like schemas, scripts, or plans that are outside immediate awareness trigger the behavior. They cite research by Libet (1985) and hypotheses developed by Nisbett & Wilson (1977) and Dennett (1991), concluding that "the feeling of will is a judgment, rather than an introspected content" (p. 509). The authors discuss the Chevreul pendulum phenomenon in terms of expectancy theory and explore how their theory would apply to psychotherapy.

**Wickramasekera, Ian (1999). How does biofeedback reduce clinical symptoms and do memories and beliefs have biological consequences? Toward a model of mind-body healing. Applied Psychophysiology and Biofeedback, 24 (2), 91-105.**

Changes in the magnitude and direction of physiological measures (EMG, EEG, temperature, etc.) are not strongly related to the reduction of clinical symptoms in biofeedback therapy. Previously, nonspecified perceptual, cognitive, and emotional

factors related to threat perception (Wickramasekera, 1979, 1988, 1998) may account for the bulk of the variance in the reduction of clinical symptoms. The mean magnitude of these previously nonspecified or placebo factors is closer to 70% when both the therapist and patient believe in the efficacy of the therapy. This powerful placebo effect is hypothesized to be an elicited conditioned response (Wickramasekera, 1977a, 1977c, 1980, 1985) based on the memory of prior healing. These memories of healing are more resistant to extinction if originally acquired on a partial rather than continuous reinforcement schedule. High and low hypnotic ability in interaction with threat perception (negative affect) is hypothesized to contribute to both the production and reduction of clinical symptoms. High and low hypnotic ability respectively are hypothesized to be related to dysregulation of the sympathetic and parasympathetic arms of the autonomic nervous system. Biofeedback is hypothesized to be the most effective for reducing clinical symptoms in people of low to moderate hypnotic ability. For people high in trait hypnotic ability, training in self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc**

**NOTES**

**1:**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge

and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

## **1996**

**DeBenedittis, Giuseppe De (1996). Hypnosis and spasmodic torticollis -- report of four cases: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (4), 292-306.**

Dystonia and particularly spasmodic torticollis are neuromuscular disorders that are extremely resistant to most therapies (physical, medical, or surgical). Torticollis is a unilateral spasm of the neck muscles, particularly of the sternocleidomastoid, that produces violent, tonic turning of the head to one side. The etiology remains uncertain, although the role of psychogenic factors has been emphasized. This article reviews the literature and reports four cases of spasmodic torticollis treated successfully with hypnosis. In all four cases, psychogenic causes were involved. Postural hypnosis (i.e., hypnosis in the standing position) was employed to counteract and minimize muscle spasms due to postural reflexes. A hypnobehavioral approach was adopted along with hypnotic strategies that included hierarchical desensitization, sensory-imaging conditioning, ego-boosting suggestions, and hypnosis-facilitated differential muscle retraining. In two cases, a combined hypnosis and electromyographic-biofeedback approach was used to equilibrate and retrain affected neck muscles. Although the hypnotherapeutic process took several months to induce and stabilize significant changes, outcome results were good to excellent in all cases, with marked reduction of the torticollis and the hypertrophy of the neck muscles as well as a reduced interference of symptoms in daily living. -- Journal Abstract

## **1995**

**Capafons, A.; Amigs, S. (1995). Emotional self-regulation therapy for smoking reduction: Description and initial empirical data.. International Journal of Clinical and Experimental Hypnosis, 43 (1), 7-19.**

Self-regulation therapy (Amigs, 1992) is a set of procedures derived from cognitive skill training programs for increasing hypnotizability. First, experiences are generated by actual stimuli. Clients are then asked to associate those experiences with various cues. They are then requested to generate the experiences in response to the cues, but without the actual stimuli. When they are able to do so quickly and easily, therapeutic suggestions are given. Studies of self-regulation therapy indicate that it can be used successfully to treat smoking.

## **1994**

Culbert, Timothy P.; Reany, Judson B.; Kohen, Daniel P. (1994). Cyberphysiologic strategies for children: The clinical hypnosis/biofeedback interface. International Journal of Clinical and Experimental Hypnosis, 42 (2), 97-117.

This article presents an in-depth discussion of the integrated use of self-hypnosis and biofeedback in the treatment of pediatric biobehavioral disorders. The rationale for integrating these techniques and their similarities and differences are discussed. The concepts of children's imaginative abilities, mastery, and self-regulation are examined as they pertain to these therapeutic strategies. Three case studies are presented that illustrate the integrated use of self-hypnosis and biofeedback in the treatment of children with psychophysiological disorders. The authors speculate on the specific aspects of these self-regulation or "cyberphysiologic" techniques that appear particularly relevant to positive therapeutic outcomes.

**1993**

Wickramasekera, Ian (1993). Observations, speculations and an experimentally testable hypothesis on the mechanism of the presumed efficacy of the Peniston and Kulkosky procedure. Biofeedback, 21, 17-20.

Raises the speculation that alpha/theta EEG brainwave training procedures that have shown preliminary effectiveness with alcoholics and PTSD war veterans may be effective, at least in part, because of an enhancement of hypnotizability resulting from such training. Research to evaluate this is suggested.

**1992**

Bindler, Paul R. (1992, October). Biofeedback-assisted hypnosis: Theoretical and clinical perspectives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

**NOTES:**

Relates personality trait of absorption to biofeedback literature. Surprisingly, low absorption ability Ss do better than high absorption Ss on biofeedback (Qualls & Sheehan). All but one study that compared biofeedback and hypnosis found no difference in effectiveness. However recently Miller & Cross found high hypnotizables reduce EMG better with hypnosis and lows did better with biofeedback.

Our findings also supported notion that highs perform better with sensory imagery instructions and lows do better with biofeedback. Critical in determining the outcome is the way Ss deploy attention. Qualls & Sheehan, and we, find highs don't like attention drawn away from internal cognitive strategies by the biofeedback signal. However lows find the signal to keep their attention focused. Author developed model combining biofeedback and hypnosis to capitalize on the attentional characteristics of patients, the specific cognitive and affective characteristics of the pt. Highs start with using altered state of consciousness to help them to alter their cognition patterns. Some do not relax during hypnosis and biofeedback can be used. Hypnotic suggestions can be added to biofeedback to

emphasize attention to internal discrimination. Attention to stimuli is poor when arousal is too low or too high. Both biofeedback and hypnosis can be used to create a moderate level of attention.

With low hypnotizables, they need to increase awareness of contingencies between cognitions and physiological states; to verbalize and express their feelings. Initially they learn to recognize, label, and express their feelings through biofeedback, which amplifies the physiol. state/body sensations. It provides a means of relaxation. Begin with brief trials of biofeedback to train low arousal states. Duration of training is gradually lengthened to 15 minutes. Patient should be continually questioned about feelings etc. (physical) during exercise, and their response correlated with the feedback signal.

Many lows have difficulty expressing feelings in words. Biofeedback allows the correlation to emerge initially by the instruments. Crystal's "preparatory" treatment: helping patient with affect tolerance prepares them for next stage of verbalizing emotions. Biofeedback facilitates this by deintensifying the effect of discharged affect.

**Zitman, Frans G.; Van Dyck, Richard; Spinhoven, Philip; Linszen, A. Corrie G. (1992). Hypnosis and autogenic training in the treatment of tension headaches: A two-phase constructive design study with follow-up. Journal of Psychosomatic Research, 36, 219-228.**

Tension headaches can form a chronic (very long duration) condition. EMG biofeedback, relaxation training and analgesia by hypnotic suggestion can reduce the pain. So far, no differences have been demonstrated between the effects of various psychological treatments. In a constructively designed study, we firstly compared an abbreviated form of autogenic training to a form of hypnotherapy (future oriented hypnotic imagery) which was not presented as hypnosis and secondly we compared both treatments to the same future oriented hypnotic imagery, but this time explicitly presented as hypnosis. The three treatments were equally effective at post-treatment, but after a 6- month follow-up period, the future oriented hypnotic imagery which had been explicitly presented as hypnosis was superior to autogenic training. Contrary to common belief, it could be demonstrated that the therapists were as effective with the treatment modality they preferred as with the treatment modality they felt to be less remedial.

#### NOTES

1:

An earlier review by these authors found that EMG biofeedback and relaxation training were equally effective with headache [Zitman, 1983, Biofeedback and chronic pain, In *Advances in Pain Research and Therapy* (Edit by Bonica, Lindblom, Iggo) V. 5, pp 794-809. N. Y.: Raven Press]. Other authors also found that hypnotic suggestion, EMG biofeedback and EMG biofeedback plus progressive relaxation training were equally effective [Schlutter, Golden, Blume, 1980, A comparison of treatments for prefrontal muscle contraction headache. *Br J. Med Psychol*, 53, 47-52.]. The authors raise the question whether any treatment element

or perhaps combination of elements can enhance a basic relaxation training procedure, with respect to chronic headache.

The first phase of this research compared autogenic training (AT) and future oriented hypnotic imagery (FI) which was not labeled as hypnosis. Results were the same for both groups, and were reported earlier [van Dyck, Zitman, Linssen et al. *International Journal of Clinical and Experimental Hypnosis*, 1991, 39, 6-23]. The current study added a third group which received future oriented hypnotic imagery but also was told that they were getting hypnosis (FI-H). Thus the AT and FI groups were 'historical' comparison groups for the FI-H group in this study.

Patients were described as having headache complaints of at least 6 months (76% had been suffering for >2 years), were over 18 years old, had no drug dependence and no psychiatric disorder, and no previous therapy with autogenic training or hypnosis; no other treatment during the project; fluent in Dutch.

The autogenic training consisted of six exercises learned in a fixed order. The FI method, in which the hypnotized patient imagines himself in a future, pain-free, situation, had been described by Milton Erickson [1954, *Pseudo-orientation in time as a hypnotherapeutic procedure*. *JCEH*, 2, 261-283]. For that future situation the investigators used descriptions that the patients provided. Both kinds of intervention taught patients muscular and mental relaxation. Both methods required home practice of the technique, using audio cassettes.

In order to substantiate the labeling of the hypnotic procedure as hypnotic future oriented imagery (FI-H) "hand levitation induction was employed during session two with the purpose of inducing positive expectancies concerning hypnosis as a procedure capable of changing ordinary experiences in an unexpected way [17]. This hand levitation procedure, however, was not presented on tape. Except for the labeling as hypnosis and the hand levitation induction, the hypnotic future oriented imagery procedure was identical to the future oriented imagery procedure in the first phase" (p. 221).

Treatment lasted for 8 weeks and provided 2 12 hours of therapist and 24 1/2 hours of home training with taped instructions. The outcome measures included: 1. Budzinsky-type headache index (mean daily sum of intensity rating for each hour of headache activity recorded during 3 separate days of the week of an assessment session) 2. State Anxiety 3. Zung-type Self-rating Depression Scale 4. Perceived credibility of treatment (4 Question's developed by Borkovec & Nau using a visual analogue scale) 5. Neuroticism from the CPI

**RESULTS.** Of 96 patients who agreed to participate, 17 dropped out before the post-treatment assessment. Of the remaining 79, 28 completed AT treatment, 27 FI, and 24 FI-H. Sixty-six attended the follow-up assessment; there were no dropouts from the FI-H, and the drop-outs were equally divided between the AT and FI condition. The headache index scores were logarithmically transformed because the distribution was positively skewed.

Using ANOVA, in terms of post-treatment scores, there were no significant main effects for therapist or treatment, nor were there any significant interaction effects when analyzing headache index, state anxiety, and depression. There was a significant main effect for Time for three outcome measures: headache index score, state anxiety, and depression.

Post-treatment, neither amount of medication used nor subjective estimates of headaches differed by treatment or by therapist. However, over time there were beneficial results for both treatment groups. "Patients rated their headaches as significantly reduced compared to pre-treatment (a mean pain reduction of 40%). ...they had significantly reduced their use of analgesic medication (a mean decrease of 14%)" (p. 224).

Using ANOVA, in terms of follow-up scores, again there were no significant main effects for Treatment or Therapist on the outcome measures of headache index, state anxiety, or depression. There now were three time periods (pre-, post-, and follow-up), and once again there was significant main effect for Time for headache index (though not for state anxiety). That is, people benefitted over the time of the treatment and follow-up. Moreover, there was a significant interaction effect between Therapy and Time on the headache index measure. "A posteriori contrasts revealed that the patients from the FI-H condition showed a greater reduction in their headaches between pre-treatment and follow-up than patients from the AT condition" (p. 225).

The authors write in their Discussion, "Our data indicate that at least in tension headache patients, defining a procedure explicitly as hypnotherapy may not lead to greater effects at post-treatment, but does lead to longer lasting effects" (p. 226).

"The paucity of differences between the three conditions may be a consequence of the study design: the small number of patients and the large SD may have prevented the detection of more differences in effect between the three conditions" (p. 226).

"Other critical remarks are related to the difference in headache reduction at follow-up between AT and FI-H. Firstly, the differences at follow-up were found only with respect to the headache index and not with respect to the subjective estimate of the pain. Secondly, in defining future oriented hypnotic imagery explicitly as hypnosis, we hoped to enhance the efficacy via increased credibility. We found increased efficacy, but we did not find enhanced credibility. Therefore, the differences in effect at follow-up must have another cause. The different effects at follow-up could be linked to the fact that the FI-H condition was the only one without drop-outs. This absence of drop-outs was due to a new research assistant who tried extraordinarily hard to make the patients return for follow-up. By doing so, she may have prevented the patients who gained much from the treatment from dropping out as well as those who gained little" (p. 226-227).

"In this study, despite the differences in therapists' preferences, both therapists were equally effective with all three treatments. This is an intriguing finding which goes against the belief commonly held by clinicians that therapists are more effective with the type of therapy they prefer" (p. 227).

"The effects were modest, but it must be kept in mind that most of our patients referred by a neurologist were chronic headache sufferers (76% had been suffering for > 2 yr). In such a group of patients even small effects are important, especially when these effects are long-lasting" (p. 227).

Acosta-Austan, Frank (1991). Tolerance of chronic dyspnea using a hypnoeducational approach: A case report. American Journal of Clinical Hypnosis, 33, 272-277.

A 48-year-old woman with severe, chronic obstructive pulmonary disease was instructed in the use of peak-flow feedback and hypnotically induced relaxation to reduce the intensity of dyspnea during periods of anxiety. Peak-flow information provided physiologic feedback as well as a safety feature in the event that subjective improvement did not correspond with objective physiologic improvement. I used a progressive relaxation method for inducing hypnosis and gave her suggestions of well-being and muscle relaxation. Peak-flow feedback was useful in enhancing the patient's confidence that hypnotic relaxation was successful in improving respiratory function.

Russell, Christine; Davey, Graham C. (1991). The effects of false response feedback on human 'fear' conditioning. Behaviour Research and Therapy, 29 (2), 191-196.

Describes a human electrodermal conditioning experiment in which 28 students (aged 19-30 yrs) were given false skin conductance feedback during conditioned stimulus/stimuli (CS) presentation. In comparison with attentional control groups, Ss who believed they were exhibiting a strong conditioned response (CR) did actually emit a greater magnitude CR, while Ss who believed they were exhibiting a weak CR emitted a lower magnitude CR. When both self-report and behavioral measures of unconditioned stimulus/stimuli (UCS) evaluation were taken after conditioning, response feedback (RFB) had not differentially affected Ss' evaluation of the aversiveness of the UCS. The response modulating effects of RFB may not be caused by RFB influencing evaluation of the UCS, but they are consistent with the hypothesis that beliefs about the nature of RFB influence the strength of the UCS representation itself.

Schwarz, Shirley P.; Blanchard, Edward B. (1991). Evaluation of a psychological treatment for inflammatory bowel disease. Behaviour Research and Therapy, 29 (2), 167-177.

Compared the effectiveness of a multicomponent behavioral treatment package, which included inflammatory bowel disease (IBD) education, progressive muscle relaxation, thermal biofeedback, and training in use of cognitive coping strategies, with the effectiveness of symptom-monitoring as a control condition. The treatment group consisted of 11 IBD patients (aged 25-62 yrs); 8 of 10 persons (aged 25-71 yrs) in the control group completed treatment. At posttreatment, the treatment group showed fewer reductions in symptoms (5) than the symptom-monitoring controls (8). However, treated Ss perceived themselves as coping better with IBD and as feeling less IBD-related stress. It is hypothesized that the differences in treatment responses may be related to differences between Ss with ulcerative colitis and Ss with Crohn's disease.

Weisz, G. (1991, December). Meta-analysis of hypnosis and biofeedback pain control with children, adolescents and young adults (Dissertation, Pace University). Dissertation Abstracts International, 52 (6), 3321-B. (Order No. DA 9132945)

**NOTES:**

This study used meta-analysis to investigate the issues related to treatment efficacy with hypnosis and biofeedback in anxiety management and in child, adolescent, and young adult pain. Analysis revealed that hypnosis and biofeedback were effective in pain and anxiety reduction and appeared equally effective. This contrasts with metaanalysis results by Malone & Strube (1988) showing almost triple superiority of hypnosis and autogenic training over biofeedback. The study notes methodologic variables that may distort or reduce the size of obtained effects.

**1990**

Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. Behaviour Research and Therapy, 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

**1989**

Wickramasekera, Ian (1989). Enabling the somatizing patient to exit the somatic closet: A high-risk model. Psychotherapy: Theory, Research and Practice, 26 (4), 530-544.

Problems in establishing a therapeutic alliance make somatizing patients poor candidates for psychotherapy. A logical analysis is presented of the conspiracy of silence between the somatizing patient, the medical doctor, and the health insurance industry regarding the psychosocial factors contributing to somatization. Alternatives are sought to repeated biomedical tests and therapies that are clinically unproductive and iatrogenic. Two psychophysiological pathways are proposed that are promising to reduce the distance between the medical doctors' and the psychologists' procedures. The new profile of illness has produced a paradigm shift with implications for an expansion of the definition of the word "physician".

**1988**

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Spinhoven, Philip (1988). Similarities and dissimilarities in hypnotic and nonhypnotic procedures for headache control: A review. American Journal of Clinical Hypnosis, 30 (3), 183-194.

Similarities and differences between hypnosis and similar psychological procedures in the treatment of headache are reviewed. A brief outline of various hypnotic and nonhypnotic interventions for headache reduction shows that none of these procedures has consistently proved to produce superior results. Possible common denominators such as control of physiological processes, placebo factors, and the alteration of cognitive factors are discussed. The positive relationship between hypnotic susceptibility and hypnotic pain reduction indicates that the value of hypnosis seems to be less a matter of therapeutic procedure per se than of which context activates a patient's hypnotic potential for pain reduction.

#### NOTES:

The author summarizes literature on biofeedback and relaxation: "(a) biofeedback with home practice of relaxation is, at least in some cases, effective in reducing migraine and tension headache; (b) relaxation training alone has also produced some success in reducing migraine and tension headaches; and (c) there is not sufficient evidence that biofeedback in the treatment of these pain problems yields results superior to relaxation training" (p. 184). Hypnotherapy for headache is not reviewed in detail, but he provides a table showing various controlled studies and their results. "With the exception of the methodologically problematic study of Anderson, Basker, and Dalton (1975), no differences in effect are found between hypnosis and biofeedback (Andreychuck & Skriver, 1975; Schlutter, Golden, & Blume, 1980; Friedman & Taub, 1984) and hypnosis and relaxation (Friedman & Taub, 1984; Spinhoven, Van Dyck, Zitman, & Linsen, 1985)" (p. 184). He notes

that there are no studies that directly compare hypnosis and nonhypnotic relaxation interventions for headache.

"In all the studies in which hypnotizability was related to outcome, irrespective of patient selection method of measurement, and hypnotic procedure used, a significant positive relationship between hypnotizability and therapy results was found in more than 350 patients (Andreychuck & Skriver, 1975; Cedercreutz, Lahteenmaki, & Tulikoura, 1976; Cedercreutz, 1978; Friedman & Taub, 1984; Spinhoven et al., 1985). If we consider the level of hypnotizability rather than the details of the hypnotic procedure, it seems that headache patients who are highly hypnotizable benefit more from hypnosis in the reduction of headache.

"However, little reliable information is available concerning the underlying dimensions of hypnotic susceptibility relevant for pain reduction. In the neodissociation theory of Hilgard it is suggested that highly hypnotizable patients register pain covertly outside conscious awareness (Hilgard, 1977, 1979). In the social learning model of Spanos and his coworkers (Spanos, Radtke-Bodorik, Ferguson, & Jones, 1979; Spanos, Kennedy, & Gwynn, 1984), it is assumed that high susceptibles show a relatively greater preference for focusing attention on internal thoughts and images as a way of attenuating pain than low susceptibles.

"A recent experimental study of Miller and Bowers (1986), which directly compared hypnotic analgesia, cognitive-behavior therapy, and cognitive-behavior therapy defined as hypnosis in high and low susceptibles, suggests that pain reduction achieved by highly hypnotizable subjects during hypnosis is not mediated by the deliberate use of cognitive strategies (such as imaginative inattention). Cognitive strategy use resulted in pain reduction only during behavior therapy. Clinical studies about the experiential aspects of high and low susceptible headache patients during hypnosis, biofeedback, relaxation training, and cognitive-behavior therapy are urgently needed. If process research in a clinical setting validates that hypnotic analgesia involves the activation of a subsystem of pain control temporarily dissociated from conscious executive control, a therapy component specific for hypnosis will have been identified" (pp. 189-190).

Tsushima, W. T. (1988). Current psychological treatments for stress-related skin disorders. Cutis, *42*, 402-404.

Surveys current methods used by psychologists in the management of stress-related skin disorders, including hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive behavioral therapy. These techniques offer promise in the treatment of certain dermatologic conditions, but the limited amount of well-controlled and replicated studies of their use suggests that caution be taken in their application.

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, *31*, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year

study of 50 thermally injured patients with greater than 45% total body surface second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

#### **NOTES:**

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

#### **1986**

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug

treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

1985

LaRiccia, P. J.; Katz, R. H.; Peters, J. W.; Atkinson, G. W.; Weiss, T. (1985). Biofeedback and hypnosis in weaning from mechanical ventilators. Chest, 87, 267-269.

Weaning patients from mechanical ventilation can be hindered by both physical and psychologic factors. Biofeedback has been used successfully as an adjunct in difficult weaning problems. We have used a combination of hypnosis and biofeedback to wean a patient with neurologic disease who previously failed weaning by standard procedures. A 30-year-old woman with respiratory failure secondary to multiple sclerosis with transverse myelitis was given eight sessions of biofeedback over 12 days in which the movements of her chest wall, as monitored by magnetometers, were displayed on an oscilloscope. The patient was praised for targeted respiratory rate, amplitude, and rhythm. These sessions included hypnosis in which the patient was given suggestions of well-being and that she could breathe as she had five years earlier. In this manner the patient was successfully weaned. Respiratory biofeedback and hypnosis appear to be useful adjuncts in weaning patients from ventilators.

Miller, Lorence S.; Cross, Herbert J. (1985). Hypnotic susceptibility, hypnosis, and EMG biofeedback in the reduction of frontalis muscle tension. International Journal of Clinical and Experimental Hypnosis, 33, 258-272.

Biofeedback and hypnosis have been used in the treatment of similar disorders. While each has been useful, it is unclear whether they involve similar or conflicting processes. Bowers & Kelly (1979) have hypothesized that high hypnotizable Ss are more likely to benefit from hypnosis and similar procedures, than moderate and low hypnotizable individuals. In contrast, Qualls & Sheehan (1979, 1981 a, b, c) have argued that hypnosis and biofeedback involve antithetical abilities. In the present

study, high, moderate, and low hypnotizable individuals (N = 60) were randomly assigned to either EMG biofeedback or hypnosis conditions and instructed to relax. It was found that the mean percent reduction in frontalis muscle tension over the last 5 trials was significantly greater for the high hypnotizable Ss during hypnosis than the moderate and low hypnotizable Ss. The moderate and low hypnotizable Ss demonstrated greater reductions in frontalis muscle tension during EMG biofeedback than during hypnosis. These findings are partly supportive of the predictions of Qualls and Sheehan that hypnosis and biofeedback involve antithetical processes.

#### NOTES:

Qualls and Sheehan (1979, 1981a) "have hypothesized that biofeedback and hypnosis abilities involve antithetical or antagonistic cognitive processes. Specifically, they argued that the biofeedback signal interferes with the natural ability of high absorption Ss to 'direct their attention in an effortless manner toward subjective, imaginal experience [1981a, p. 33],' by forcing them to attend to the external environment. In contrast, low absorption Ss, as well as moderate hypnotizable Ss, possess inadequate abilities to direct their attention in such an effortless and absorbing manner towards inner, subjective experiences, and therefore, the biofeedback signal better enables them to focus their attention. While the pattern of EMG results among the high, moderate, and low hypnotizable Ss ... was somewhat consistent with these predictions, the self-report data did not reveal differences in Ss' awareness of the biofeedback signal or hypnotic suggestions. In addition, there was only a trend for the high hypnotizable Subjects to report less effort in attempting to relax. It is, therefore, unclear whether the explanations postulated by Qualls and Sheehan (1979, 1981a) for the differences found in this study are valid" (p. 269).

Subjective relaxation response results were complex. Ss were asked how relaxed they were during the experimental session in comparison to the previous hypnosis sessions (screening tests). Biofeedback Ss rated the experimental session less favorably than hypnosis Ss. Ss were asked to what degree the feedback (or hypnotic suggestions) helped them to relax; there were significant main effects for treatment and trait, as well as a significant trait x sex interaction. Hypnosis Ss reported that this procedure was more helpful than was reported by the biofeedback Ss. Newman-Keuls comparison revealed that the main effect for trait was due to the high hypnotizable Ss reporting more help from the procedures than the low hypnotizable Ss, and moderate hypnotizable Ss. The Trait x Sex interaction was the result of the high hypnotizable female Ss indicating more help from either relaxation procedure, than was reported by the low hypnotizable male Ss and moderate hypnotizable female Ss and the high hypnotizable male Ss indicated that the procedures were significantly more helpful than was reported by the low hypnotizable male Ss.

Schlesinger, Jay Lawrence (1985). Hypnotizability in relation to success in learning biofeedback training: Attentional involvement (Dissertation, Adelphi University). Dissertation Abstracts International, 45 (n8-B), 2701. (Order No. DA 8424937)

#### **NOTES:**

**"This study investigated the role of attentional focus in the relationship between hypnotizability and success in learning two types of biofeedback training. 40 female college students, aged 18-25, were measured for hypnotic responsiveness, and given one session of EMG biofeedback and one session of temperature biofeedback. For the biofeedback training, 20 Ss received written instructions designed to establish a passive, non-volitional attentional focus on the feedback signal, and 20 received written instructions intended to establish an active, volitional attentional focus on the feedback signal.**

**"It was hypothesized that level of hypnotizability would be positively related to success in learning EMG and temperature biofeedback training for the Ss given passive, non-volitional attentional instructions, while level of hypnotizability would be negatively related to success in learning biofeedback training for the Ss given active, volitional attentional instructions. It was also hypothesized that higher hypnotizables would perform better with temperature biofeedback than with EMG biofeedback, and that lower hypnotizables would perform better with EMG biofeedback than with temperature biofeedback.**

**"The hypotheses were not supported, nor was any overall relationship between level of hypnotizability and success in learning biofeedback demonstrated. There was support to suggest that an active, volitional attentional focus on the biofeedback signal was most adequately maintained by the 20 Ss given the active volitional instructions. Clinical implications of these findings and directions for future research were discussed"**

#### **1984**

**Funch, Donna P.; Gale, Elliot N. (1984). Biofeedback and relaxation therapy for chronic temporomandibular joint pain: Predicting successful outcomes. Journal of Consulting and Clinical Psychology, 52 (6), 928-935.**

**Fifty-seven patients with chronic temporomandibular joint (TMJ) pain were randomly assigned to receive either relaxation or biofeedback therapy. Therapy efficacy was assessed (immediate posttreatment and 2-year follow-up), and pretherapy factors (demographic, clinical, personality) were used to predict successful outcomes for each therapy group. Although there were no significant differences in outcomes, characteristics of patients with successful outcomes were not similar for the two therapies. Successful patients in the relaxation condition tended to be younger, had experienced TMJ pain for a shorter period of time, and had reported problems with other psychophysiological disorders. Successful patients in the biofeedback group tended to be older, married, had experienced TMJ pain for a longer period of time, and had not received prior equilibration treatment. Only two of these factors, equilibration and presence of other disorders, were related to both short- and long-term outcomes, suggesting that they may be particularly useful as predictors of outcome. These findings do suggest that knowledge of pretherapy factors, particularly clinical, may allow for more optimal assignment to therapy conditions.**

Murphy, Joseph K.; Fuller, A. Kenneth (1984). Hypnosis and biofeedback as adjunctive therapy in blepharospasm: A case report. American Journal of Clinical Hypnosis, 27, 31-37.

The efficacy of ophthalmologic, hypnotic, and biofeedback treatment procedures in a case of blepharospasm was evaluated. Manual eye rubbing and eye opening served as dependent measures which were assessed by the patient during treatment and a three month follow-up. Results indicated that ophthalmologic treatment had a limited effect. In contrast, brief hypnosis had a dramatic but short-lived effect and biofeedback had a moderate but sustained effect. Results are discussed in terms of the efficacy of psychological intervention, the limitations of the report, and the need for future research.

### 1983

Radtke, H. Lorraine.; Spanos, Nicholas P.; Armstrong, L. A.; Dillman, N.; Boisvenue, M. E. (1983). Effects of electromyographic feedback and progressive relaxation training on hypnotic susceptibility: Disconfirming results. International Journal of Clinical and Experimental Hypnosis, 31 (2), 98-106.

The efficacy of relaxation training in modifying hypnotic susceptibility was investigated. Following 2 pretests of hypnotic susceptibility, 24 Ss who scored 7 or below on both tests were randomly assigned to 1 of 2 relaxation training groups (EMG-biofeedback or progressive relaxation) or a no-treatment control group. Relaxation training was conducted over 10 20-minute sessions and was monitored by measurement of frontalis EMG. All Ss were then administered a posttest of hypnotic susceptibility. Hypnotic susceptibility did not increase significantly from pretest to posttest. Moreover, change in frontalis EMG was unrelated to change in susceptibility. These results fail to confirm earlier work conducted by Wickramasekera (1972, 1973, 1977).

Schandler, Steven L.; Dana, Edward R. (1983). Cognitive imagery and physiological feedback relaxation protocols applied to clinically tense young adults: A comparison of state, trait, and physiological effects. Journal of Clinical Psychology, 39, 672-681.

Examined changes in targeted and general tension behaviors as well as reductions in physiological tension associated with cognitive imagery and electromyographic biofeedback relaxation procedures. Three groups of 15 female college students participated. During three weekly sessions each person received either guided cognitive imagery relaxation, frontalis muscle feedback relaxation, or a self-rest control procedure. The Anxiety Differential was administered before and after each session, while frontalis EMG, heart rate, and skin temperature were monitored continuously. A second Temperament Analysis was administered after the final session. The imagery procedure was associated with moderate reductions in physiological tension and significant reductions in state anxiety and three tension-related personality dimensions. Self-rest persons displayed lesser reductions in general tension with little physiological change. While biofeedback persons showed

the largest reductions in physiological tension, they displayed only small and variable changes in state anxiety and personality dimensions. The data raise continued questions about the application of physiologically based operant relaxation procedures and support the use of cognitively mediated protocols for the treatment of specific or general anxiety behaviors.

**1982**

**Credidio, Steven G. (1982). Comparative effectiveness of patterned biofeedback vs meditation training on EMG and skin temperature changes. Behaviour Research and Therapy, 20, 233-241.**

Examined whether a low arousal, relaxation pattern of frontalis EMG decreases and peripheral skin temperature increases could be attained more effectively through biofeedback or meditation training. 30 21-59 yr old females were randomly assigned to 1 of 3 groups: patterned biofeedback, clinically standardized meditation, or control. Prior to training, Ss were administered the Eysenck Personality Inventory. Each S was seen weekly for 7 sessions. Subjective experiences and time spent practicing at home were also recorded. Results indicate that the meditation group showed significantly lower EMG levels at the end of treatment than did the control group. The biofeedback group had difficulty in patterning the 2 feedback signals simultaneously. Extraverts in the control group had the highest EMG levels. The most positive subjective reports came from Ss in the meditation group. It is suggested that meditation offers a viable alternative as a relaxation procedure, requiring little time to learn and devoid of any performance criteria levels.

**Holroyd, Jean; Nuechterlein, Keith; Shapiro, David; Ward, Frederick (1982). Individual differences in hypnotizability and effectiveness of hypnosis or biofeedback. International Journal of Clinical and Experimental Hypnosis, 30 (4), 45-65.**

8 high and 8 low hypnotizable Ss used biofeedback and hypnosis to lower blood pressure in one session and forehead EMG activity in another session. Results were analyzed by repeated measures analyses of covariance using baseline physiological level on the dependent variable as the covariate. Electromyographic level was reduced more immediately by biofeedback than by hypnosis. When the task was to lower blood pressure, blood pressure and skin conductance were more effectively reduced by hypnosis than by biofeedback, considering only the first half of each session to eliminate within-session transfer effects. Hypnotizability did not predict overall outcome. Factors which may have prevented demonstrating a clearer relationship between hypnotizability and success using biofeedback or hypnosis are discussed. State and trait anxiety, cognitive strategies used during the tasks, and self-reported hypnotic depth are examined for correlates of successful performance.

**Lehrer, Paul M. (1982). How to relax and how not to relax: A re-evaluation of the work of Edmund Jacobson: I. Behaviour Research and Therapy, 20 (5), 417-428.**

Contrasts E. Jacobson's (1928-1970) method of progressive relaxation with modified techniques that emphasize suggestion, brevity, and the feeling of large differences between tension and relaxation. The literature suggests that the modifications may have been premature. The psychophysiological effects of suggestion are weaker than those of progressive relaxation. Tape-recorded instruction appears to be completely ineffective as a method for teaching relaxation as a skill that can be used across situations. Live training contributes more than simple feedback; its effectiveness may lie in individualized adaptation of training technique. EMG biofeedback makes taped training more effective but contributes nothing to intensive live training. Despite its greater length, Jacobson's original technique is preferred to the modified techniques, particularly when psychophysiological effects are important. Length of training does not appear to be a critical factor. (116 ref)

Shapiro, Deane H. (1982). Overview: Clinical and physiological comparison of meditation with other self-control strategies. American Journal of Psychiatry, 139 (3), 267-274.

In 1977, the American Psychiatric Association called for a critical examination of the clinical effectiveness of meditation. The present author reviews the pertinent literature and defines meditation as a family of techniques that attempt to focus attention in a nonanalytical way and attempt not to dwell on discursive, ruminating thought. Meditation is then compared with such self-regulation strategies as biofeedback, hypnosis, and progressive relaxation. Particular attention is given to the "uniqueness" of meditation as a clinical intervention strategy as well as the adverse effects of meditation. Future research should deal with the context of meditation, a component analysis, refinement of the dependent variable, S variables, and the phenomenology of meditation.

Stern, T. E. (1982). The effects of Ericksonian hypnosis and biofeedback on self-reported measures of pain (Dissertation). Dissertation Abstracts International, 43, 3744-B.

**NOTES:**

Conducted a 6-subject case study comparing the effectiveness of so-called Ericksonian hypnosis and biofeedback on chronic pain. Two subjects improved more on subjective and behavioral pain measures using biofeedback, three improved more using hypnosis, and one did not improve in either condition.

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

**NOTES:**

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift

from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...

"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).

The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.

"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).

"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were

led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).

## 1981

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, 138, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive 133 Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

Cott, A.; et al. (1981). The long-term therapeutic significance of the addition of electromyographic biofeedback to relaxation training in the treatment of tension headaches. Behavior Therapy, 12, 556-559.

**ABSTRACT:** Eight tension headache sufferers seeking traditional medical treatment from a neurologist participated in either a therapist-delivered relaxation training (RT) condition or an RT plus EMG feedback condition. Mean hours of pain/day, headache severity, and medication ingestion were significantly lower in both groups following treatment. Results were maintained at a 1-year follow-up for hours of pain/day and medication ingestion. Findings thus indicate no benefit of adding EMG feedback to relaxation training.

Piedmont, Ralph L. (1981). Effects of hypnosis and biofeedback upon the regulation of peripheral skin treatment. Perceptual and Motor Skills, 53, 855-862.

The purpose of this study was to examine the influence of hypnosis on the regulation of peripheral skin temperature. The independent variables were the presence of a hypnotic trance during the session on thermal regulation and the number of trials received. A two-factor mixed-design analysis of variance with repeated measures on one factor showed a significant main effect for trials and a significant interaction between hypnosis and trials. It may be concluded that hypnosis, in conjunction with

thermal regulation techniques, exerts a significant influence over performance. The cognitive characteristics influenced by hypnosis may account for this finding.

## 1980

Adams, Henry E.; Feuerstein, Michael; Fowler, Joanne L. (1980). Migraine headache: Review of parameters, etiology, and intervention. Psychological Bulletin, 87 (2), 217-237.

The migraine headache is a disorder of much interest to clinicians and researchers in the areas of psychology and medicine. Research that has investigated various characteristics of this disorder and the factors contributing to its etiology and a variety of treatment techniques have appeared in both the medical and the psychological literature. The present article provides a comprehensive critical appraisal of this literature, with particular emphasis on psychological intervention. Theoretical issues involving biological and psychological factors in migraine etiology are discussed, and a psychobiological model for the migraine disorder is proposed. Areas requiring further basic and clinical research are identified. Major conclusions include (a) that etiological factors of migraine remain unclear; (b) that pharmacological intervention does not constitute an adequate treatment method in terms of headache elimination; (c) that although a number of psychological treatment approaches have been reported in the literature, there are few well-controlled evaluations, and definitive conclusions regarding differential effectiveness of the various techniques are difficult; and (d) that a biofeedback approach directed at modifying the peripheral pain mechanism in migraine appears to be a promising treatment technique for this disorder.

Crosson, B. (1980). Control of skin temperature through biofeedback and suggestion with hypnotized college women. International Journal of Clinical and Experimental Hypnosis, 28 (1), 75-87.

4 groups of 9 college women attempted to raise finger temperature relative to forehead temperature during hypnosis. After a hypnotic induction, each group of Ss received 1 of the following treatments for temperature control: (a) biofeedback, (b) suggestion and imagery, (c) biofeedback plus suggestion and imagery, and (d) a relaxation, false-feedback control. Groups were initially balanced for hypnotic susceptibility. Between-subject differences in baseline temperatures were statistically controlled. After 4 training sessions, only Ss in the groups receiving biofeedback and biofeedback plus suggestion and imagery demonstrated evidence of learned temperature control, and only Ss in the biofeedback group demonstrated a significantly greater ability to control skin temperature than Ss in the control group. Changes in temperature during hypnotic induction did not appear to affect changes during the subsequent treatment. There was no significant correlation between hypnotic susceptibility and temperature control for Ss in any group, contrary to popular assumption. Future research should attempt to ascertain if combined use of biofeedback and hypnosis offers any advantages to the use of biofeedback alone.

**Dumas, R. A. (1980). Cognitive control in hypnosis and biofeedback. International Journal of Clinical and Experimental Hypnosis, 28 (1), 53-62.**

The relation between biofeedback and hypnotic self-control abilities was examined in the EEG alpha biofeedback situation. 17 Ss, selected on the basis of group hypnotic susceptibility tests, completed 4 EEG alpha training sessions, with enhance, suppress, and unreinforced baseline conditions. The 5 Ss who scored high on the hypnotic susceptibility test did not gain significant control over their EEG alpha, whereas those Ss who scored moderate or low on the test did gain control over their alpha. "Control" in this experiment was gained by learning contingent alpha suppression. There were no differences between the hypnotizability groups in baseline EEG alpha production.

NOTES

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"In summary, the results of the present study in combination with the results of the Friedman and Taub (1977) study should lead to the treatment of biofeedback and hypnosis as potentially different processes involving different, possibly antagonistic, cognitive processes. The treatment of hypnosis and hypnotic ability as different phenomena from biofeedback self-control should lead to experimental designs which do not automatically assume additivity of effects. Such enlightened designs will then shed more light on the mechanisms of each and the relation of these two cognitive control techniques" (0. 60).

**Hurley, John D. (1980). Differential effects of hypnosis, biofeedback training, and trophotropic responses on anxiety, ego strength, and locus of control. Journal of Clinical Psychology, 36 (2), 503-507.**

Pretested 60 college students on three scales: the IPAT Anxiety Scale, the Barron Ego-strength scale, and the Rotter I-E scale. The Ss then were assigned randomly to one of four treatment groups designated: hypnotic treatment, biofeedback treatment, trophotropic treatment, and control. Three of these groups met separately for 60 minutes once a week for 8 weeks. The control group did not meet during this time. During the sessions, each group was trained in a different technique for self-regulation. At the end of the 8-week period the scales were readministered to all groups. A series of covariance analyses indicated that hypnosis was a more effective self-regulatory technique for lowering anxiety levels when compared to biofeedback or trophotropic response procedures. With regard to increasing ego strength, both the hypnotic training group and the biofeedback training group proved to be significant. No significant difference was found between the experimental and control groups on the I-E scores.

**1979**

**Quall, Penelope J.; Sheehan, Peter W. (1979). Capacity for absorption and relaxation during electromyograph biofeedback and no-feedback conditions. Journal of Abnormal Psychology, 88 (6), 652-662.**

The present research examined the relation between absorption capacity and relaxation during electromyograph biofeedback and no-feedback (instructions only) conditions. Sixteen high absorption and 16 low absorption female subjects

underwent a biofeedback and no-feedback session with the order of conditions counterbalanced. For high absorption subjects in the first session, EMG reductions were greater during no- feedback than during biofeedback, although the performance of biofeedback subjects improved in the second session. For low absorption subjects, no differences in EMG reductions were apparent across experimental conditions. Postexperimental self-report data demonstrated differences between absorption groups in subjects' state of arousal and quality of consciousness. It was concluded that for subjects with high capacity for absorbed attention, experimental conditions that allow for a withdrawal from the external environment are most conducive to relaxation, whereas for subjects with limited capacity for absorbed attention, conditions such as biofeedback that place an attentional demand on subjects may be preferable.

Turk, Dennis C.; Meichenbaum, Donald H.; Berman, William H. (1979). Application of biofeedback for the regulation of pain: A critical review. Psychological Bulletin, 86 (6), 132

The biofeedback literature for the regulation of pain is reviewed and found wanting on both conceptual and methodological grounds. In particular, studies on the use of biofeedback for the treatment of tension and migraine headaches and chronic pain indicate that biofeedback was not found to be superior to less expensive, less instrument- oriented treatments such as relaxation and coping skills training. The relative absence of needed control comparisons was noted, and the need for caution in promoting biofeedback was stressed. Suggestions for future research are offered.2-1338.

## 1978

Acosta, Frank X.; Yamamoto, Joe; Wilcox, Stuart A. (1978). Application of electromyographic biofeedback to the relaxation training of schizophrenic, neurotic, and tension headache patients. Journal of Consulting and Clinical Psychology, 46 (2), 383-384.

This study examined the effects of electromyographic (EMG) biofeedback on tension reduction by schizophrenic, neurotic, and tension headache patients. Fourteen patients participated voluntarily in at least 10 weekly EMG biofeedback sessions at a public outpatient clinic. All had complained of chronic tension. Patients showed significant decreases in their muscle tension levels with successive biofeedback training sessions. No significant differences were found between the schizophrenic, neurotic, and tension headache groups. A further contribution was the finding that patients with diverse socioeconomic and educational levels benefitted similarly from EMG biofeedback training.

Counts, D. Kenneth; Hollandsworth, James G., Jr.; Alcorn, John D. (1978). Use of electromyographic biofeedback and cue-controlled relaxation in the treatment of test anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 990-996.

The effect of using electromyographic (EMG) biofeedback to increase the efficacy of cue-controlled relaxation training in the treatment of test anxiety was studied. Forty

college undergraduates scoring in the upper third on a self-report measure of test anxiety were randomly assigned to one of four treatment conditions - EMG-assisted cue- controlled relaxation, cue-controlled relaxation alone, attention-placebo relaxation, and no-treatment control. Pre-post self-report measures of test anxiety, state anxiety, and trait anxiety were obtained. In addition, a performance measure in the form of a mental abilities test was administered. Subjects from the three relaxation groups received six 45- minute individual sessions over a period of 2 weeks. All treatments were conducted using audiotape recordings. The results indicate that cue-controlled relaxation is effective in increasing test performance for test anxious subjects, that EMG biofeedback does not contribute to the effectiveness of this procedure, and that self-report measures of anxiety are susceptible to a placebo effect.

Lehrer, Paul M. (1978). Psychophysiological effects of progressive relaxation in anxiety neurotic patients and of progressive relaxation and alpha feedback in nonpatients. Journal of Consulting and Clinical Psychology, 46 (3), 389-404.

Gave 10 anxiety neurotic patients 4 sessions of individual instruction in progressive relaxation; 10 patients served as waiting list controls. 10 nonpatients were assigned to each of the same conditions, and an additional 10 nonpatients were given 4 sessions of alpha feedback. Nonpatients showed more psychophysiological habituation over sessions than patients in response to hearing 5 very loud tones and to a reaction time task. Patients, however, showed greater physiological response to relaxation than did nonpatients. After relaxation, the autonomic responses of the patients resembled those of the nonpatients. The effects of relaxation were more pronounced in measures of physiological reactivity than in measures of physiological activity. Defensive reflexes yielded to orienting reflexes more readily in nonpatients than in patients. There was also a tendency for progressive relaxation to generalize to autonomic functions more than alpha feedback.

**1977**

Ansel, Edward Leslie (1977). A simple exercise to enhance response to hypnotherapy for migraine headache. International Journal of Clinical and Experimental Hypnosis, 25 (2), 68-71.

A common method of hypnotherapy for migraine headache utilizes suggestions of warmth for the hands and coldness for the head. This procedure reverses the abnormal pattern of vasodilation and excess supply of blood in the head and decreased supply in the extremities associated with this type of headache, thereby relieving the pain. A simple exercise, utilizing centrifugal force to dramatically increase blood flow to the hands, is described. It promotes relief in itself and provides a vivid background experience to enhance productivity of this effect in hypnosis. It appears to be especially useful in patients exhibiting lesser degrees of trance capacity.

Friedman, Howard; Taub, Harvey A. (1977). The use of hypnosis and biofeedback procedures for essential hypertension. International Journal of Clinical and Experimental Hypnosis, 25, 335-347.

In an attempt to evaluate a procedure combining 2 techniques, hypnosis and biofeedback, which might effect significant changes in diastolic blood pressure in essential hypertensives, Ss were placed in 1 of 4 groups: hypnosis only, biofeedback only, hypnosis and biofeedback combined, or measurement only. The first phase -- training sessions and brief follow-ups (1 week and 1 month) -- of the long-term study with 6 monthly follow-up periods, was evaluated. Hypnosis only and biofeedback only procedures were both capable of providing significant lowering of diastolic pressure. However, in intergroup comparisons, the hypnosis only procedure showed the most impressive effect. Unexpectedly, the procedure of combining hypnosis and biofeedback into one technique was as ineffective as the measurement only procedure.

#### NOTES

1:

In their discussion of the finding that hypnosis + biofeedback did not yield more positive results, the authors state, "it is possible that two opposing sets were established that negated each other: the biofeedback instructions wherein S was enjoined to direct his attention externally and to attempt to change the displayed number which reflected diastolic pressure, versus the more passive, relaxed attitude implied in hypnotic induction. It is interesting to note that Benson et al. (1974b) have similarly suggested that the set involved in biofeedback training may interfere with the elicitation of the 'relaxation response.' Also, Orne [personal communication] has indicated that, although anticipating a synergistic effect as a result of combining hypnotic and biofeedback procedures, some difficulty may lie in requiring Ss to be hypnotized during [emphasis on 'during' in original] the biofeedback training procedure"

Pelletier, K. R.; Peper, E. (1977). Developing a biofeedback model: Alpha EEG feedback as a means for pain control. International Journal of Clinical and Experimental Hypnosis, 25, 361-371.

3 adept meditators voluntarily inserted steel needles into their bodies while physiological measures (EEG, EMG, GSR, EKG, and respiration) were recorded. Although each adept used a different passive attention technique, none reported pain. During the insertion, 2 of the 3 Ss increased their alpha EEG activity. The role of alpha EEG and its relationship to pain control is discussed.

#### NOTES

1:

The three adepts studied were: (1) RCT, a 34 yr old Ecuadorian who had "demonstrated control over pain by placing bicycle spokes through his body, being suspended from hooks inserted under his shoulder blades, and walking through fire -- all without reported pain or observed damage to his skin;" (2) JSL, a 31 yr old Korean karate expert, who "suspended a 25-pound bucket of water from a sharpened spoke placed through a fold of skin on his forearm;" and (3) JS, a 50-yr

old Dutch meditator who had "demonstrated pain and bleeding control" (pp. 363-365). "RCT, JSL, and JS each remarked that pain is principally fear of and attention to pain, and they maintained that anyone can learn to control pain through relaxation and passive attention" (p. 367). Both JS and RCT had increased alpha EEG activity during piercing, whereas JSL showed no increase. The authors suggest that "the karate expert practiced a very focused meditation, during which he mentally saw and felt the ki energy as a point, while RCT and JS employed passive attention and did not attend to the body stimuli. Thus, it is possible for physiological measurements to reflect strategies used in dissociation of pain perception, and that the quality of pain perception is altered if S is at either extreme of focused or unfocused conscious attention" (p. 368). "We hypothesize that, for nonadepts, alpha EEG training without alpha blocking to stimuli could become a distraction technique whereby S again could learn self-control and competence as he becomes more successful in controlling his EEG" (p. 369).

Wickramasekera, Ian (1977). The placebo effect and medical instruments in biofeedback. Journal of Clinical Engineering, 2 (3), 227-230.

This article defines a "placebo effect" and identifies some of its parameters in pain control and in other areas of medicine. It proposes a new model of the placebo effect and advances the hypothesis that biomedical instruments used in biofeedback studies, like drugs, can acquire and generate placebo effects. Such placebo effects can complicate the interpretation of specific experimental treatments in human clinical research in which biomedical instruments are used.

1976

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

NOTES:

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

Schaudler, S. L.; Grings, W. W. (1976). An examination of methods for producing relaxation during short-term laboratory sessions. Behaviour Research and Therapy, 14, 419-426.

NOTES:

Subjects were 100 undergraduate students, average age 22.3, distributed into two experiments as follows.

Experiment 1 20 had progressive relaxation (Jacobsonian, abbreviated as done by Paul, 1969) = PR 20 had visual feedback (from forearm extensor) = VFB 20 had

tactile feedback (from forearm extensor) = TFB 20 had relaxation control (music) = CT

Experiment 2 10 had auditory feedback (from forearm extensor) = AFB 10 had tactile feedback (from forearm extensor) = TFB

The results obtained for the various measures were as follows. Anxiety was significantly reduced by PR and TFB; perhaps by AFB. Blood pressure was significantly reduced by AFB, TFB, VFB and PR. Heart rate was significantly reduced by VFB, AFB, TFB, but not PR or CT Extensor EMG was significantly reduced by VFB, TFB, PR, and AFB Frontalis EMG was significantly reduced by TFB, PR and AFB Skin conductance was significantly reduced by TFR and PR

In their Discussion the authors noted that tactile biofeedback was especially beneficial and achieved lower levels of response than the other feedback techniques. Visual feedback was somewhat poorer than progressive relaxation and tactile feedback approaches. Also, the progressive relaxation heart rate and respiratory rate changes were not as impressive as the biofeedback group effects.

## 1975

Alexander, A. Barney (1975). An experimental test of assumptions relating to the use of electromyographic biofeedback as a general relaxation technique. Psychophysiology, 656-662.

Twenty-eight normal adults participated in an experimental test of two assumptions underlying the use of electromyographic (EMG) biofeedback as a general relaxation training technique: 1) that trained EMG reduction in one muscle generalizes to untrained muscles; and 2) that subjective feelings of relaxation are related to EMG reduction. An experimental group received 5 sessions, during the middle 3 of which EMG biofeedback training was offered on the frontalis muscle. Throughout all sessions, EMG recordings were also taken from the forearm and lower leg, and rating of subjective relaxation feelings were obtained at regular intervals. A control group, matched with the experimental group on baseline frontalis EMG, received 5 similar sessions without feedback. Employing a maximum p of .05, the results revealed no evidence of generalization of EMG reduction from the frontalis to the untrained sites, nor any tendency for successful frontalis EMG reduction to result in increased feelings of relaxation beyond what was obtainable from relaxing without the benefit of training. The results were interpreted as suggesting the EMG biofeedback cannot yet be accepted as a viable general relaxation training technique.

Andrews, Reagan H., Jr. (1975). Placebo effects in EMG biofeedback (Dissertation). Dissertation Abstracts International, 36, 1424.

"Differential instructions were employed in a negative placebo model to alter expectancies of success in achieving criterion frontalis EMG voltage levels in 30 female subjects. The negative placebo model dictated that all subjects receive true feedback during both of two 10-minute experimental trials. On one of the two trials they were informed that feedback would be accurate, and on the other trial, that feedback would be accurate only 50% of the trial period. Data was collected for 20

subjects in a 2 X 2 Latin Square design, while 10 subjects were designated control subjects and received high-success expectancy instructions on both experimental trials. Pre-trial measures included administration of a standard hypnotic susceptibility scale and a pre-test subjective questionnaire. Dependent variable was the time from onset of feedback to 70% reduction of resting EMG levels of the frontalis. Significant differences were found between high and low-expectancy trials for experimental subjects. Effects were strongest on the first experimental trial and tended to diminish on the following trial. Correlation of hypnotic susceptibility scores with response latencies was not significant, but subjects' impression of their degree of relaxation during susceptibility scale administration was significantly correlated with criterion latencies. Importance of subject expectancies, instrumentation standards and implications for future studies in the biofeedback area were discussed" (p. 1424).

Andreychuk, Theodore; Skriver, Christian (1975). Hypnosis and biofeedback in the treatment of migraine headache. International Journal of Clinical and Experimental Hypnosis, 23 (3), 172-183.

A study was made to explore the effects of subject hypnotizability in response to 3 treatment procedures applied to 33 migraine headache sufferers. These treatment procedures included biofeedback training for hand-warming, biofeedback training for alpha enhancement and training for self-hypnosis. The Hypnotic Induction Profile (HIP) of Spiegel & Bridger (1970) was given to each S to determine degree of hypnotizability and the MMPI was administered to all Ss. All 3 treatment groups showed significant reductions in headache rates and there were no significant differences between groups. Cutting across treatment groups, high hypnotizable Ss (N - 15) showed significant reductions in headache rates when compared with low hypnotizable Ss (N - 13). There was no correlation between HIP scores and the hysteria scale of the MMPI.

Cowings, Patricia S. (1975, September). Observed differences in learning ability of heart rate self-regulation as a function of hypnotic susceptibility. [Paper] Presented at the 3rd Congress of the International College of Psychosomatic Medicine, Rome.

Three groups of eight men and women were given personality tests and were taught to control their own heart rates. Experimental group I and the control group had low hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale), and subjects in experimental group II had high hypnotic susceptibility. The experimental groups received autogenic therapy and biofeedback, while the control group was given biofeedback only. Subjects who received autogenic therapy and biofeedback performed better than the control group. Significant differences, however, were found in all psychological test scores between high and low hypnotic susceptibles.

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

Melzack, Ronald; Perry, Campbell (1975). Self-regulation of pain: The use of alpha-feedback and hypnotic training for the control of chronic pain. Experimental Neurology, 46, 452-469.

Patients suffering chronic pain of pathological origin received alpha- feedback training methods in association with prior hypnotic training. Changes in the intensity and quality of pain were measured with the McGill Pain Questionnaire. The combined procedures produced a substantial decrease in pain (by 33% or greater) in 58% of the patients during the training sessions. Both the sensory and affective dimensions of the pain were diminished. The EEG records indicated that the majority of patients learned to increase their alpha output during the training sessions. In contrast, patients who received the alpha training alone reported no decreases in pain even though they showed increases in alpha output. Patients who received hypnotic training alone also produced increased EEG alpha during the training sessions and showed substantial (though not statistically significant) decreases in pain. The results demonstrate that chronic, pathological pain can be reduced in a significant number of patients by means of a combination of alpha-feedback training, hypnotic training, and placebo effects. It is concluded, however, that the contribution of the alpha training procedure to pain relief is not due to increased EEG alpha as such but, rather, to the distraction of attention, suggestion, relaxation, and sense of control over pain which are an integral part of the procedure.

1974

London, Perry; Cooper, Leslie M.; Engstrom, D. R. (1974). Increasing hypnotic susceptibility by brain wave feedback. Journal of Abnormal Psychology, 83 (5), 554-560.

Presents a reanalysis of earlier studies by D. R. Engstrom et al (1970) as well as additional findings which show that successful training to increase alpha rhythm duration raises people's hypnotic susceptibility. Ss in the previous studies were 30 volunteers who had low to moderate hypnotic susceptibility and low alpha production. It was found, subsequent to publication, that some Ss had had previous

exposure to alpha training. When they were eliminated in reanalysis, the previous findings were still confirmed; alpha training was more effective for experimental than for control Ss, and hypnotic susceptibility accordingly increased more among experimentals than among controls. In addition, base-rate alpha production in each training session was correlated with feedback alpha output among experimental Ss but not among controls. (24 ref) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1973**

**Roberts, Alan H.; Kewman, Donald G.; Macdonald, Hugh (1973). Voluntary control of skin temperature: Unilateral changes using hypnosis and feedback. Journal of Abnormal Psychology, 82 (1), 163-168.**

To demonstrate the ability of human Ss to achieve control over specific autonomic functions, hypnosis and auditory feedback were used to train a select group of hypnotically talented subjects to produce a difference in skin temperature in one hand relative to the other in a direction specified by the experimenter. Large and reliable effects were shown demonstrating that some individuals are capable of achieving a high degree of voluntary control over the autonomic processes involved in peripheral skin temperature regulation. Individual differences between subjects were noted, and variables that might account for these are discussed.

**Wickramasekera, Ian (1973). Effects of electromyograph feedback on hypnotic susceptibility: More preliminary data. Journal of Abnormal Psychology, 82 (1), 74-77.**

The purpose of this double-blind study was to determine if taped verbal relaxation instructions and response-contingent electromyographic feedback training would increase suggestibility or hypnotic susceptibility over that obtained with instructions and false or noncontingent feedback, The present data appear to confirm the hypothesis

## **Biological Rhythm**

**1995**

**Wallace, Benjamin; Kokoska, Andrzej (1995). Fluctuations in hypnotic susceptibility and imaging ability over a 16-hour period. International Journal of Clinical and Experimental Hypnosis, 43 (1), 20-33.**

Within-subject variability for hypnotic susceptibility as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A and for imaging ability as measured by the Vividness of Visual Imagery Questionnaire was determined over a 16-hour period. Half of the subjects were day persons, those most alert during daytime hours (as determined by the Alertness Questionnaire); the remaining subjects were night persons. For day persons, hypnotic susceptibility was greatest at 10:00 a.m. and 2:00 p.m.; for night persons, susceptibility was greatest at 1:00 p.m. and between 6:00 p.m. and 9:00 p.m. Imaging ability also varied as a function of time of administration. However, these peak periods occurred before and after

hypnotic susceptibility peaks. Such a pattern was interpreted as indicating the possible existence of an ultradian cycle for imaging ability.

**1993**

Wallace, Benjamin; Kokoszka, Andrzej (1993, October). Within-subject variability in hypnotic susceptibility and imaging ability: Same or different?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES:**

Subjects were given the Harvard scale of hypnotizability and an imagery questionnaire (VVIQ) repeatedly. They had been asked, "when are you the most alert during the day?" and classified as Day People and Night People. People had higher scores on the Harvard for Day People at 10 a.m. and 2 p.m., for Night People at 1 p.m. and at 6, 7, 8, and 9 .m. This replicates my 1993 study. VVIQ scores do not show that pattern; they are zig-zag. What is the relationship between peaks on the two scales? They don't peak at the same time. This may be why in the literature we don't find a strong relationship between hypnotizability and imagery ability. VVIQ scores peak before hypnotizability scores on the same people. This might mean an ultradian cycle for imaging ability. So these abilities are not stable throughout 24 hours, despite the fact that hypnotizability scores are stable over 25 years!

**1992**

Lippincott, Brian (1992). Owls and larks in hypnosis: Individual differences in hypnotic susceptibility relating to biological rhythms. American Journal of Clinical Hypnosis, 34, 185-192.

In 1986 Coleman developed the Owl and Lark Questionnaire to differentiate morning people from evening people, with owl individuals being more alert during the evening phase and lark individuals being more alert during the morning phase. Rossi has hypothesized that the bimodal peaks of hypnotizability found by Aldrich and Bernstein in 1987 were caused by alterations in owl and lark circadian rhythms. In the current study I used the Harvard Group Scale of Hypnotic Susceptibility, Form A to test compliance with hypnotic suggestions among 42 graduate students at three times of the day: in the morning, in the evening, and, as a control, in the middle of the night. Owls were more hypnotizable than larks in the morning, and larks were also significantly more hypnotizable in the evening than owls. There was no difference between the two groups in the middle of the night. A possible implication of this study is that one fundamental mechanism of therapeutic hypnosis is the entrainment of psychobiological rhythms.

**NOTES:**

The author tested Subjects at 8-10 a.m., 4-6 p.m., and midnight to 2 a.m. because they were the times when owls and larks could be most easily differentiated (morning and late afternoon) or were most equal (night). The goal was "to determine if individuals differentiated by the Owl and Lark Questionnaire have

different peaks of hypnotizability associated with the rest phases of their biological rhythms." (P. 187).

"To control for practice effects (Cooper, Banford, Schubot, & Tart, 1967), one third of the subjects started rotating at each of the three test times and proceeded in clockwise order (morning-evening-night; evening-night-morning; night-morning-evening).

"There were at least 24 hours between tests to assure that boredom from the testing was not a factor" (p. 188).

**DISCUSSION.** "Rossi has extended Erickson's naturalistic approach and has hypothesized the entrainment of the ultradian biological rhythms as a possible factor in therapeutic hypnosis. ... Rossi states: 'The ultradian theory of hypnotherapeutic healing proposes that (1) the source of psychosomatic reactions is in stress-induced distortions of the normal periodicity of ultradian cycles and, (2) the naturalistic approach to hypnotherapy facilitates healing by permitting a normalization of these ultradian processes.' (Rossi, 1982, p. 23)" (pp. 189-190).

"If owls and larks were not separated, the results of this study would show no differences in hypnosis. Perhaps this is why Hollander et al. (1988) found no change in hypnotizability using a direct-suggestion measure after a 2-day training in Ericksonian techniques" (p. 190).

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

**NOTES:**

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

**Brown, Peter (1991). Ultradian rhythms of cerebral function and hypnosis. Contemporary Hypnosis, 8, 17-24.**

As a consequence of his observations of the clinical work of Milton Erickson, Ernest Rossi has proposed an 'ultradian rhythm theory of hypnosis'. Rossi demonstrated that the spontaneous changes in cognition, affect and behaviour which occur as part

of the ultradian cycle (which Erickson referred to as 'the common everyday trance') are similar to the changes which occur during hypnosis. A review of studies of the phasic changes in hemispheric function suggests that ultradian changes do parallel the changes found in hypnosis.

#### **NOTES:**

Falling asleep and waking up are regulated by two separate mechanisms rather than being opposite poles of one mechanism (Winfrey, 1980). Kleitman (1961) suggested a 90-min cycle, the basic rest-activity cycle (BRAC). In addition to physiological alterations, there are alterations in cognition, mood and behavior (Rossi & Cheek, 1988); vigilance (Okawa, Matousek & Petersen 1984); peripheral blood flow (Ramano & Gizdulich, 1980); respiratory amplitude (Horne & Whitehead, 1976); visual evoked potentials (Zimmerman, Gortelmeyer & Wiemann, 1983); pupillary diameter, stability and reactivity to light, and saccadic eye movements (Lavie & Kripke, 1981).

These diurnal variations may relate to hypnotic behavior. There is a recurring increase in daydream and fantasy, as well as visual imagery (Kripke & Sonnenschein, 1978). "There is evidence for a parallel recurring cognitive and emotional cycle with increased emotional responsiveness and a more subjective cognitive processing of information (Evans, 1972; Holloway, 1978; Overton, 1978; Thayer, 1987). Subjects appear to repeat the cycle approximately 16 times per day, with a range of 70-120 minutes. Kripke and Sonnenschein (1978) noted that the subjects were personally unaware of any repeating cycle in their mental lives" (p. 19).

The brainstem arousal mechanisms seem to be implicated in periodic changes in the EEG. Ultradian rhythms are "more easily detected under conditions of increased sleep need, reduced external performance demand and lowered motivation to focus externally (Broughton, 1985)" (p. 20). Sterman (1985) observed that the rhythm was most marked in resting state and disappears during complex visuomotor tasks. Relationship of EEG patterns to attentional patterns indicate there may be two different forms of attention, one for focused awareness (often thought to be associated with trance state) and the other a generalized vigilance (which would be reduced in hypnosis). Ultradian changes in consciousness reflected in the EEG may suggest increased internal absorption associated with visual imagery, a feature of the trance state.

"There has recently been a partial direct confirmation of Rossi's hypothesis. Aldrich and Bernstein (1987 [International Journal of Clinical and Experimental Hypnosis]) reported a bimodal distribution of Harvard Group Scale Hypnotic Susceptibility (HGSHS) scores when they are done at different times throughout the day. They note the parallel of the changes in HGSHS scores and the circadian variations in body temperature which suggest changes in hypnotic responsiveness coinciding with the fluctuations of physiological rhythms.

"Other support comes from some highly original work involving breathing rhythms. There are cyclic alterations in relative air flow between the left and right nostrils with an average period of 2-3 hours (Hasegawa & Kern, 1977). This nasal ultradian rhythm is correlated with an increase in contralateral cerebral

hemispheric activity (Werntz, Bickford, Bloom & Shannahoff-Khalsa, 1981, 1983; Klein, Pilon, Prosser & Shannahoff-Khalsa, 1986). The alterations in hemispheric function do appear to be related to changes both in the style of cognition, particularly in an increase in vivid visual imagery, and in performance on specific tasks (Klein et al., 1986). Thus these studies support the notion of an ultradian rhythm of cerebral function which is associated with characteristic physical manifestations mediated by the autonomic nervous system. Whether or not these changes are directly related to the findings reported by Aldrich and Bernstein has yet to be established" (p. 21).

The authors conclude that "the most consistent evidence for ultradian rhythms is demonstrated by the mechanisms of the hypothalamic-limbic system and by brain-stem mechanisms that regulate arousal and attention processes (Parmeggiani, 1987); neuroendocrine regulatory mechanisms (Follenius, Simon, Brandenberger & Lenzi, 1987) and autonomic nervous system function (Bossom, Natelson, Levin & Stokes, 1983; Gordon & Lavie, 1986). These studies also suggest an ongoing dynamic interaction between cortical and subcortical structures throughout the ultradian cycle (Parmeggiani, 1987), and suggest that these interactions may be of great significance in hypnosis" (p. 21).

## 1987

Aldrich, Kevin J.; Bernstein, Douglas A. (1987). The effect of time of day on hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 35, 141-145.

Hypnotizability has been shown to be very stable for long periods of time in a person's adult life when no attempts at modification are made (Morgan, Johnson, & Hilgard, 1974). Even though it can be improved by several different means, attempts to modify individual hypnotizability may only allow people to reach a 'plateau' level of hypnotizability that is predetermined for each person. The present experiment addressed the question of whether hypnotizability like body temperature, reflex response intensity, and performance on various mental and motor tasks, fluctuates in a circadian rhythm. The Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) was used to test compliance with hypnotic suggestions among several large groups of Ss at different hours of the day. A plot of the mean HGSHS:A scores obtained at each time of day showed a bimodal distribution, with the highest mean score significantly different from 2 of the 3 minima. Although the second peak did not differ significantly from the minima, its occurrence was consistent with the bimodal distributions which sometimes occur in other circadian rhythms, such as body temperature and complex mental and motor skill performance. One possible implication for the results of this study is that they suggest that hypnotherapy could be more effective for individuals at different times of the day, as they approach their 'plateau' level of suggestibility. Average Harvard score was greatest at noon, least at 8 pm; mid-range at 8 am, 2 pm; and medium high at 10 am, 4 pm, and 6 pm. "The general plot of hypnotizability approximately conforms to plots of average body temperature obtained in other studies (e.g., Horne & Ostberg, 1976; Kleitman,

1963). The dips, however, also appear after times when Ss were likely to have eaten lunch and dinner, suggesting that food consumption may have an effect on hypnotizability. Further research controlling for this possible effect and measuring body temperature, as well as testing Ss in the absence of 'zeitgeber' ('time-givers' such as clocks, natural light, and other devices to give Ss information about the time of day) will be necessary to determine the diurnal function of hypnotizability and whether it follows a true circadian rhythm" (p. 144).

## Bleeding

### 1995

Enqvist, Bjorn; von Konow, L.; Bystedt, H. (1995). Pre- and perioperative suggestion in maxillofacial surgery: Effects on blood loss and recovery. International Journal of Clinical and Experimental Hypnosis, 43 (3), 284-294.

The basic assumption underlying the present study was that emotional factors may influence not only recovery but also blood loss and blood pressure in maxillofacial surgery patients, where the surgery was performed under general anesthesia. Eighteen patients were administered a hypnosis tape containing preoperative therapeutic suggestions, 18 patients were administered hypnosis tapes containing pre- and perioperative suggestions, and 24 patients were administered a hypnosis tape containing perioperative suggestions only. The patients who received taped suggestions were compared to a group of matched control patients. The patients who received preoperative suggestions exhibited a 30% reduction in blood loss. A 26% reduction in blood loss was shown in the group of patients receiving pre- and perioperative suggestions, and the group of patients receiving perioperative suggestions only showed a 9% reduction in blood loss. Lower blood pressure was found in the groups that received pre- and perioperative and perioperative suggestions only. Rehabilitation was facilitated in the group of patients receiving perioperative suggestions only.

### 1991

Hopkins, Mildred B.; Jordan, Jeanette M.; Lundy, Richard M. (1991). The effects of hypnosis and of imagery on bleeding time: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 134-139.

2 studies are reported, one using hypnotized Ss selected on hypnotizability and one using Ss selected on imagery vividness, whose purpose is to examine whether non-patient Ss can control their bleeding in a laboratory setting. All Ss were cut on both arms with the "Surgicutt" device, an instrument that automatically makes a cut that will bleed from 2 to 10 minutes. Results suggest that Ss, who are instructed to reduce the bleeding time in one arm and to let the other arm bleed normally, are not able to control bleeding time.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

**NOTES:**

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.'

'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Palan, Bhupendra M.; Lakhani, Jitendra D. (1991). Converting a 'threat' into a 'challenge': A case of stress-related hemoptysis managed with hypnosis. American Journal of Clinical Hypnosis, 33 (4), 241-247.

A 24-year-old patient was treated using hypnosis for chronic repeated episodes of hemoptysis. The symptom episodes were related to academic examinations (perceived as a threat by the patient). Clinical examinations and laboratory investigations failed to indicate an organic cause for hemoptysis. He did not respond to empirical treatment trials. These negative findings suggested the psychosomatic nature of the illness. We used hypnotherapeutic ego-strengthening and guided-imagery approaches. This reduced his acute anxiety but failed to check hemoptysis. Use of explorative hypnotic dreaming revealed an emotional trauma as the possible cause of origin of the symptoms. We restructured the trauma experience during hypnotic regression. We advised him to skip the upcoming examination and conducted a total of six therapeutic sessions. The patient continued using self-hypnosis throughout the follow-up period of 3 years during which he remained symptom free and achieved remarkable academic progress. He now perceives an examination as a challenge.

## 1988

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing.

## 1986

Swirsky-Sacchetti, Thomas; Margolis, Clorinda G. (1986). The effects of a comprehensive self-hypnosis training program on the use of factor VIII in severe hemophilia. International Journal of Clinical and Experimental Hypnosis, 34, 71-83.

Hemophilia, the bleeder's disease, is characterized by internal bleeding episodes which have been associated anecdotally with psychological stress. The focus of the present investigation was to study the potential utility of a comprehensive self-hypnosis training program to decrease stress and to assess the amount of clotting factor used for bleeding by those individuals trained in self-hypnosis compared to a control group. 30 severe hemophiliacs on home therapy were randomly assigned to a treatment or to a waiting list control group. The treatment group received a comprehensive 6-week training program including support, education, deep relaxation, and self-hypnosis. Over the 18-week follow-up, the treatment group significantly reduced the amount of factor concentrate used to control bleeding in comparison to controls. The treatment group also significantly reduced general distress level as measured by a symptom checklist. The training was extremely cost effective, and the results support the efficacy of this comprehensive training program to augment the medical management of severe hemophiliacs on a home therapy regimen.

## NOTES:

The authors begin with a discussion of the importance of being able to reduce the amount of blood factor concentrate required by hemophiliacs, including the problems of obtaining uncontaminated blood in an era of HTLV-III and LAV contamination and the fact that some patients with Hemophilia A have developed antibodies to Factor VIII (so-called inhibitor patients). When an inhibitor patient hemorrhages, it is potentially life-threatening. Earlier controlled clinical research by LaBaw (1975) indicated that hypnosis might be useful for decreasing blood usage. The current study builds upon that research and adds further control procedures.

The hypotheses of this study were: "(a) hemophiliacs who received the comprehensive training program including self-hypnosis along with education, support, and relaxation for stress management would significantly reduce the amount of factor concentrate used to control spontaneous bleeding in comparison to randomly assigned waiting list controls; (b) the general distress level, as measured by the SCL-90 (Derogatis, 1977), would significantly decrease for the treatment

group from pretraining to follow-up; and (c) hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. C. Orne (1962) would show a positive correlation with the treatment effect" (p. 74).

The Subjects were patients of a hematologically severe status (less than 1% clotting factor present in the blood); ages 11-50, mean age 30; normally distributed on socioeconomic variables; and prescreened to rule out serious psychological dysfunction. The treatment and control groups did not differ in SES or pretest bleeding severity. Control Ss were informed that they would receive the same training after the initial follow-up period. Three Ss were lost from the treatment group because they did not complete the 6 weekly self-hypnosis training sessions, and three from the control group due to geographic move or decision to obtain treatment elsewhere.

Patients recorded their factor usage on log sheets, and their reports were checked with distribution records kept at the clinic. (Factor received during hospital stays was not included. Also 3 "inhibitor" patients--2 treatment, 1 control--were removed from some analyses because they must infuse Factor IX at a level that far exceeds the amount appropriate for body were an inhibitor not present.)

The Ss, in groups of 3-4 people, were educated about the effects of stress on bleeding, physiological signals of overstress, and then trained as a group in self hypnosis. Each training session began with a group hypnosis induction followed by various suggestions and imagery. They were given a cassette tape with suggestions for decreased bleeding, ego-strengthening, relaxation, and sensations of floating. In addition to listening to the tape at least once each day, they were taught rapid (1-2 minute) inductions to combat stress, and were to develop their own self-hypnosis procedure.

In terms of results, 9 of 11 (82%) treatment Ss and 4 of 10 (40%) control Ss decreased in blood factor usage ( $p < .05$ ). There was a great deal of variability between Subjects. While the treatment group demonstrated an overall decrease in factor usage, the control group actually had an overall increase in usage. The authors speculate that possibly a change in season caused the increase, because several Ss reported that a change in season ordinarily caused an increase due to their arthritic joints. Also, a change to warmer weather might have led to increased physical activity. General distress, measured by General Severity Index of the SCL-90, was reduced significantly for the treatment group. (Results of SCL-90 aren't reported for control group.)

The third hypothesis was not supported. In fact, the correlation between HGSHS:A and treatment effect was in the opposite direction from what was expected ( $- .25$ , n.s.). However, "there was a significant correlation ( $\rho = .56$ ,  $p < .025$ ) between Ss' self-reported trance usage and change scores, indicating that those Ss who practiced self-hypnosis more were more likely to have decreased factor usage. There was also a trend ( $\rho = .44$ ,  $p < .10$ ) between treatment Ss' change scores and their initial distress levels (GSI), suggesting that those Ss who were initially more distressed tended to profit more from treatment" (pp. 78-79).

In their Discussion, the authors suggest that the fact that the treatment effect of decreased factor usage was consistent throughout the follow-up period suggests that

reduced usage was not due to a placebo effect. They note that placebo responses are usually brief, and situation-specific (Frank, 1976). They see the need for further research to clarify which component(s) of the treatment program are effective (self-hypnosis, relaxation, education, social support), and to extend the length of follow-up period. Since hypnotizability did not correlate with outcome, the results might be due to some other component. Since outcome did correlate with amount of self hypnosis practice, motivation may be an important determiner of effect. Decreased stress was not only reported by Ss but also reflected in changes on the test scores (SCL-90). Also, several Ss spontaneously used the self hypnosis for school and occupational performance, and to relieve headaches. In terms of financial benefits, "the one patient who had the most significant decrease in factor usage noted an average monthly savings of \$850. For the entire treatment group (including those few Ss whose factor usage increased), the training resulted in savings of \$1240 per month over the follow-up period" (p. 81).

### 1985

Lichstein, Kenneth L.; Eakin, Terry L. (1985). Progressive versus self-control relaxation to reduce spontaneous bleeding in hemophiliacs. Journal of Behavioral Medicine, 8 (2), 149-162.

Investigated the effects of progressive and self-control relaxation on spontaneous bleeding and collateral symptoms with 7 hemophiliacs (average age 32.6 years) in a combined multiple-baseline partial-crossover design. Following 6 or 12 weeks of training in either or both relaxation methods, there was no strong evidence that the treatment affected bleeding or perceived pain in these Ss. Results failed to replicate findings of W. L. LaBow (1975) or J. W. Varni (see PA, Vol 65:13289) (20 ref)

### 1984

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention.

### NOTES:

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

**LeBaron, Samuel; Zeltzer, Lonnie K. (1984). Research on hypnosis in hemophilia--preliminary success and problems: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 290-295.**

Although little is known about physiological effects of hypnosis on hemophilia, hypnosis for reduction of pain and/or bleeding in hemophilia has attracted increasing attention. Literature on this topic is reviewed, and important problems in conducting clinical research on hypnosis for hemophilia are discussed.

**NOTES:** Reviews literature on physiological effects of hypnosis on hemophilia (for reduction of pain and/or bleeding). Discusses problems in conducting clinical research on same.

### **1983**

**Fung, E. H.; Lazar, B. S. (1983). Hypnosis as an adjunct in the treatment of von Willebrand's disease. International Journal of Clinical and Experimental Hypnosis, 31 (4), 256-265.**

Hypnosis has been used to control bleeding, both in normals and hemophiliacs. Case material is presented to demonstrate how hypnosis was used as an adjunct to standard medical treatment of a boy and his mother with von Willebrand's disease, initially to reduce anxiety and improve self-esteem and the parent-child relationship, and later, to reduce bleeding. This use of hypnosis illustrates the relationship between hemostatic control and psychological adaptation.

### **1957**

**Crasilneck, Harold B.; Fogelman, Morris J. (1957). The effects of hypnosis on blood coagulation. Journal of Clinical and Experimental Hypnosis, 5 (3), 132-137.**

A series of hematologic methods designed to determine the coagulative function of the blood were performed on eight healthy individuals who had previously been conditioned to enter somnambulistic states of hypnotic sleep. Rigorous and quantitative experimental conditions and controls were followed throughout the four phases of the study. The results of the present study indicate that hypnosis and simple hypnotic suggestion are not correlated with any alterations of bleeding or blood clotting factors in normal man" (pp. 135-136).

**Solovey, Galina; Milechnin, Anatol (1957). Concerning the nature of hypnotic phenomena. Journal of Clinical and Experimental Hypnosis, 5 (2), 67-76.**

### **NOTES**

**1:**  
The authors write about the place of the hypnotic state in general psychology: "the study of the psychological mechanisms that make the appearance of the phenomenon possible, which need not be different from the normal and current psychological mechanisms in everyday life\_" (p. 67). They classify hypnotic phenomena into three groups:

**"I. Phenomena \_ which are a function of the state of psychological\_ retrogression (hypnotic depth), appearing in spontaneously [sic] or when proposed by the operator.**

**II. Phenomena which appear without any specific suggestion, as \_ a side issue of other suggestions,\_ capable of originating emotional states in the subject.**

**III. Phenomena \_ which are independent of all suggestion,\_ being a constituent part of the hypnotic state itself, in its 'positive' or 'negative' forms" (p. 68).**

Using this framework, the authors describe several aspects of hypnosis: catalepsy, anesthesia, retrogression, the taking of a role, negativism and resistance, visceral changes, emotional stabilization, psychotherapeutic benefits (indirect). They observe that direct suggestions are often not necessary for therapeutic benefit, and give as an example the tendency for less bleeding when dentists suggest that patients will not feel less pain.

"For the elucidation of this point, the authors carried out an experiment in a dental clinic, taking six easily hypnotizable subjects in whom dental extractions were to be performed. They were given only the suggestions that they would feel the doctor working, but not experience pain ... that they would pay no attention to it ... or even if they felt a little pain, this would not trouble them and they would bear it perfectly ... Nothing was said about the loss of blood. As a result, in all the cases the loss of blood was slight, practically insignificant, though technically difficult extractions of roots were included" (p. 74).

"The explanation of hypnotic phenomena as natural and normal consequences of the hypnotic emotional state, and of the state of psychological retrogression, eliminates the supposed mysterious powers of suggestion. \_ Suggestion is thus relegated to the modest role of a litmus paper which reveals the psychological functioning of the individual\_ in an experimental environment. On the other hand, in everyday-life hypnosis, in the principal hypnotic relationships of parents with their children, of teachers with their pupils, etc. (11), suggestibility plays an important role in education or re-education" (p. 75).

**1956**

**NOTES**

**1:**

The authors report on a demonstration of dental extractions with two patients (of five patients with whom hypnosis was attempted). They describe successful results despite 3-minute inductions in people not pre-trained, a terse and abrupt approach by the dentist (who uses only hypnosis and refers non-responding patients elsewhere). "While the hypnotist demonstrated effectively what could be done with hypnosis, his theoretical orientaton as to why this had occurred can only be described as unfortunate. In response to questioning he stated and quite flatly: that in hypnosis there are no dangers (1); that hypnosis is essentially cardiovascular in nature; that drugs had no place along with hypnosis--despite the advice of Moss (2) that dentists should use hypnosis along with drugs routinely unless the latter is contraindicated. He expressed his attitude toward the use of local anesthetics by indicating that the package he had had was thrown away because it had become spoiled from disuse. Hypnosis was presented in effect as an all or nothing technique" (p. 3).

**1955**

**Stolzenberg, Jacob (1955). Clinical application of hypnosis in producing hypno-anesthesia control of hemorrhage and salivation during surgery. A case report. Journal of Clinical and Experimental Hypnosis, 3 (1), 24-27.**

**NOTES**

**1:**

**The patient was a 14 year old male with an impacted mandibular left first molar. A series of surgical interventions were required to remove granulation tissue, overlying bone, and fibrotic tissue prior to orthodontic procedures. Hypnoanesthesia and suggestions to stop bleeding and salivating were successfully employed. In fact "It was noticeable with the last two procedures that spontaneous dryness occurred without any suggestion by the operator" (p. 26).**

**1953**

**Kroger, William S. (1953). Hypnotherapy in obstetrics and gynecology. Journal of Clinical and Experimental Hypnosis, 1 (2), 61-70.**

**Author's Summary - "A high percentage of gynecologic complains [sic] are due to psychic factors. Therapeutic efforts, therefore, must be directed primarily toward the psychologic component. Until recently, the principal weapon of the dynamically oriented physician was orthodox psychoanalysis. However, the increased interest for a relatively rapid approach has demonstrated the diagnostic and therapeutic value of hypnoanalysis. This development has been concomitant with the psychoanalyst's [sic] interest in 'brief psychotherapy' and narcosynthesis.**

**"In many functional gynecologic disorders, hypnoanalysis has supplanted the parent therapy even though this form of treatment utilizes the concepts of dynamic psychiatry.**

**"The relevant literature on the use of hypnotherapy in functional obstetrical and gynecological disorders has been reviewed.**

**"Significant areas for research have been pointed out.**

**"This review emphasizes that hypnosis per se is only of value in obtaining symptomatic relief. On the other hand, hypnoanalysis elicits the responsible dynamics behind the symptom, and is effective in reaching all aspects of the personality.**

**"Hypnoanalysis will be more applicable in obstetrics and gynecology when there is a wider acceptance of its techniques" (p. 68).**

**Blindness**

**1992**

**Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.**

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

**1989**

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

**NOTES:**

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Bryant, Richard A.; McConkey, Kevin M. (1989). Visual conversion disorder: A case analysis of the influence of visual information. Journal of Abnormal Psychology, 98, 326-329.

**NOTES:**

"Examined the influence of visual information on a decision task that was administered to an individual with monocular visual conversion disorder. Findings indicated that his performance was influenced by the visual information and by motivation instructions. The findings are discussed in terms of a model of hysterical blindness that recognizes the interplay of cognitive and motivational processes" (p. 326).

**1981**

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.

#### NOTES:

Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.

Experiment 1. Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.

The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15, 16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.

The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.

Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in

which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments.

In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

Experiment 2. The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

Results. "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a

consistency of responses over experimental sessions that were widely separated in time, making conscious or unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

N.B. None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

## 1965

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of

physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

**1960**

Sukhakarn, Khun Vichit (1960/1962). Extra ocular vision [Letter]. British Journal of Medical Hypnotism, 14 (2), 41-47

**NOTES:**

The article is in the original form of a letter to Herbert Spiegel, M.D. The author describes experiences training subjects, both blind and with normal vision, to 'see' through the skin of their cheeks. Training involved concentrative meditation (Buddhist) and hypnosis. Simple tests were performed, apparently independently, by two other scientists.

"From information available from our subjects, the Extra Ocular Vision gained through the cheek-skin is different from those through the eyes as best explained here below:-- (1) The vision through the cheek-skin first takes a form of a series of spots somewhat like the image of coarse gain prints. Only after further training the spots are transformed into a clear object, so clear that needle threading is possible. (2) Objects seen through the cheek-skin are as clear as through the eyes. Distant objects can be magnified by the subject's wish, just like looking through an opera glass. (3) The vision gained through the cheek-skin is first 'seen' in black and white, and the 'colour picture' is achieved only after further training. But the colour 'seen' through the cheek is more intense than those through the eyes. (4) The field of vision 'seen' through each side of the cheek is more narrow than those seen through each eye. (5) There is a sign indicating that the vision through the cheek is only two-dimensional, the subjects find it difficult at first to stand the finger to another finger test" (p. 42).

**1954**

Erickson, Milton H. (1954). The development of an acute limited obsessional hysterical state in a normal hypnotic subject. Journal of Clinical and Experimental Hypnosis, 2, 27-41.

**NOTES**

**1:**

The 25 year old female graduate student in psychology had often been used in hypnosis experiments and as a demonstration subject, and had witnessed induction of hypnotic deafness, blindness, and color-blindness though she had not been given those suggestions herself. Scientific curiosity appeared to be the motivation for volunteering to experience hypnotic blindness, but she was skeptical about her ability to experience it. The author gave a series of "exceedingly tedious" suggestions to develop somnambulism (passively responsive and receptive) followed by suggestions leading gradually to development of "blindness" with the intention of concealing it from the hypnotist, with attendant strong and mixed emotions.

The initial attempts failed because the subject ostensibly was deceiving herself into thinking she had developed hypnotic blindness, but the author also was of the opinion that she was seeking to meet unconscious personality needs. The author then covertly changed the goal of the experiment "to develop in the subject an acute hysterical obsessional compulsive mental state which would be accompanied by hypnotic blindness and which would parallel or resemble the obsessive compulsive hysterical mental disturbances encountered in psychiatric practice" (p. 32). The author developed a monologue of suggestions based in part on the utterances of hospitalized obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc.

## **Blood Hematology**

### **2003**

Wood, Gary J.; Bughi, Stefan; Morrison, John; Tanavoli, Sara; Tanavoli, Sohrab; Zadeh, Homayoun H. (2003). Hypnosis, differential expression of cytokines by T-cell subsets, and the hypothalamo-pituitary-adrenal axis. American Journal of Clinical Hypnosis, 45 (3), 179-196.

Tested the hypothesis that hypnosis can differentially modulate T-cell subsets, and that this effect is mediated by changes in hypothalamo-pituitary-adrenal (HPA) mediators. Seven healthy, highly hypnotizable volunteers (aged 24-42 yrs) participated in 3 1-day sessions, a baseline and 2 intervention sessions. Hypnosis intervention entailed a standardized induction, suggestions for ego strengthening and optimally balanced functioning of the immune and neuroendocrine systems, and post-hypnotic suggestions for stress management and continued optimal balance of bodily systems. Blood samples were analyzed for T-cell activation and intracellular cytokine expression (Interferon [IFN]-gamma, Interleukin-2 [IL-2], Interleukin-4,) and HPA axis mediators (ACTH, cortisol, and beta-endorphin). The proportion of T-cells expressing IFN-gamma and IL-2 were lower after hypnosis. T-cell activation response to polyclonal stimulation was positively correlated with ACTH and beta-endorphin, while IFN-gamma expression was correlated with levels of cortisol. Further controlled studies utilizing hypnosis with patients in treatment are warranted in order to examine whether an altered T-cell response can be replicated in the presence of disease. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

### **1997**

Dinges, David F.; Whitehouse, Wayne G.; Orne, Emily Carota; Bloom, Peter B.; Carlin, Michele M.; Bauer, Nancy K.; Gillen, Kelly A.; Shapiro, Barbara S.; Ohene-Frempong, Kwaku; Dampier, Carlton; Orne, Martin T. (1997). Self-hypnosis training as an adjunctive treatment in the management of pain associated with

sickle cell disease. International Journal of Clinical and Experimental Hypnosis, 45 (4), 417-432.

A cohort of patients with sickle cell disease, consisting of children, adolescents, and adults, who reported experiencing three or more episodes of vaso-occlusive pain the preceding year, were enrolled in a prospective two-period treatment protocol. Following a 4-month conventional treatment baseline phase, a supplemental cognitive-behavioral pain management program that centered on self-hypnosis was implemented over the next 18 months. Frequency of self-hypnosis group training sessions began at once per week for the first 6 months, became biweekly for the next 6 months, and finally occurred once every third week for the next 6 months, and finally occurred once every third week for the remaining 6 months. Results indicate that the self-hypnosis intervention was associated with a significant reduction in pain days. Both the proportion of "bad sleep" nights and the use of pain medications also decreased significantly during the self-hypnosis treatment phase. However, participants continued to report disturbed sleep and to require medications on those days during which they did experience pain. Findings further suggest that the overall reduction in pain frequency was due to the elimination of less severe episodes of pain. Non-specific factors may have contributed to the efficacy of treatment. Nevertheless, the program clearly demonstrates that an adjunctive behavioral treatment for sickle cell pain, involving patient self-management and regular contact with a medical self-hypnosis team, can be beneficial in reducing recurrent, unpredictable episodes of pain in a patient population for whom few safe, cost-effective medical alternatives exist.

## 1996

Hall, Howard; Papas, Angela; Tosi, Michael; Olness, Karen N. (1996). Directional changes in neutrophil adherence following passive resting versus active imagery. International Journal of Neuroscience, 85, 185-194.

This study was designed to determine whether increases or decreases in neutrophil adherence could be achieved following a self-regulation (relaxation/imagery) intervention. Fifteen subjects were randomly assigned to one of three conditions. Two experimental groups employed imagery focused on either increasing or decreasing neutrophil adherence. Subjects had two weeks of self-regulation practice (4 total training sessions) prior to blood drawings. A third group of control subjects had the same number of resting sessions without imagery training. All subjects had blood samples collected before and after either 30 minutes of self-regulation or resting practice for two sessions. Pulse and peripheral finger temperature measures were taken before and after the blood samples. Both experimental groups demonstrated decreases in neutrophil adherence, and the control group showed a tendency toward increases in this measure. The psychophysiologic data for the control group was suggestive of a relaxation response. The experimental group that attempted to increase neutrophil adherence demonstrated psychophysiologic responses that were contrary to relaxation. We concluded that an active cognitive exercise or process is associated with decreases in neutrophil adherence irrespective

of the intent of the exercise. In contrast, relaxation without an active imagery exercise was associated with increases in neutrophil adherence. The results of this study are discussed in terms of behavioral engineering of directional immune changes.

### **1993**

**Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, 15, 181-195.**

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

**Hall, Howard; Minnes, Luke; Olness, Karen (1993). The psychophysiology of voluntary immunomodulation. International Journal of Neuroscience, 69, 221-234.**

In twenty-two studies of intentional efforts of humans to change immune measures, only four monitored psychophysiological parameters. One study reported physiologic alterations associated with immune changes. In this current study we examined changes in pulse rate and peripheral temperature associated with intentional changes in neutrophil adherence. Subjects had blood, pulse and temperature recordings collected before and after either a rest condition (Group A), or a self-regulation exercise (Groups B and C) for two sessions. Group C had four prior training sessions before participating in the experimental sessions. This study found no association between psychophysiological alterations and neutrophil changes. The control group (A) demonstrated no significant neutrophil changes but showed physiologic alterations, whereas, the experimental group (C) that showed increases in neutrophil adherence demonstrated no significant physiologic changes. It was speculated that intentional changes on neutrophil adherence and the pattern of the psychophysiological measures were associated with and reflective of cognitive activity.

**1992**

**Hall, Howard; Minnes, Luke; Tosi, Michael; Olness, Karen (1992). Voluntary modulation of neutrophil adhesiveness using a cyberphysiologic strategy. International Journal of Neuroscience, 63, 287-297.**

In a study of voluntary immunomodulation, 45 subjects were assigned either to a control group or one of two experimental groups. All groups had blood and saliva samples collected before and after either a 30 minute rest condition (Control group) or a 30 minute cyberphysiologic strategy (Experimental groups) to increase neutrophil adherence. These samples were analyzed on a range of immunologic measurements including neutrophil adherence. The second experimental group practiced a cyberphysiologic strategy two weeks prior to the experimental session. Subjects in each group returned to repeat their exercise in a second session the following week. Analysis of all immune measurements revealed statistical significance for changes in neutrophil adherence. These studies suggest that such strategies may be used to effect changes in immune cell functions. Analysis further revealed that those subjects with prior cyberphysiologic training were able, by the second session, to induce a significant increase in neutrophil adherence.

**1991**

**Rapkin, David A.; Straubing, Marsha; Holroyd, Jean (1991). Guided imagery, hypnosis and recovery from head and neck cancer surgery. International Journal of Clinical and Experimental Hypnosis, 39, 215-226.**

The value of a brief, preoperative hypnosis experience was explored with a sample of 36 head and neck cancer surgery patients. 15 patients volunteered for the experimental hypnosis intervention. 21 patients who received usual care (no hypnosis) were followed through their hospital charts and were used as a comparison group. Hypnotic intervention and usual care groups were comparable in terms of relevant demographic variables. Postoperative hospitalizations for the hypnotic intervention group were significantly shorter than for the usual care group. Within the hypnotic intervention group, hypnotizability was negatively correlated with surgical complications and there was a trend toward a negative correlation between hypnotizability and blood loss during surgery. Findings suggest that imagery-hypnosis may be prophylactic, benefitting patients by reducing the probability of postoperative complications and thereby keeping hospital stay within the expected range. Recommendations are presented for a controlled, randomized, clinical trial with a sufficiently large sample to provide the opportunity for statistical analysis with appropriate power.

**1990**

**Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.**

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

Sletvold, H.; Jensen, G. M.; Gotestam, K. G. (1990). The effect of specific hypnotic suggestions on blood pressure in normotensive subjects. Pavlovian Journal of Biological Science, 26, 20-24.

Twenty normotensive subjects participated in a study of the effects of specific suggestions on blood pressure (BP). After an induction, the experimental group received suggestions presumed to be relatively nonactivating, although capable of lowering or raising BP. A control group was used to record the BP changes over time. All subjects met for one session. Eight subjects from the experimental group met for a second session. Both adaptation and induction resulted in significant BP decreases. A specific suggestion to increase BP gave a significant result when compared to the induction point. There was no significant change from induction to the BP-decrease suggestion. Both systolic and diastolic BP behaved in the same way. A second experimental session resulted in no significant change compared with the first session. Also, no significant difference was found in suggestibility scores from the first to the second session. The results are in line with previously published studies.

1989

DeBenedittis, Giuseppe; Panerai, Alberto A.; Villamira, Marco A. (1989). Effects of hypnotic analgesia and hypnotizability on experimental ischemic pain. International Journal of Clinical and Experimental Hypnosis, 37 (1), 55-69.

Mechanisms of hypnotic analgesia are still poorly understood and conflicting data are reported regarding the underlying neurochemical correlates. The present study was designed to investigate the effects of hypnotically induced analgesia and hypnotizability on experimental ischemic pain, taking into account pain and distress tolerance as well as the neurochemical correlates. 11 high hypnotizable Ss and 10 low hypnotizable Ss, as determined by scores on the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & E. R. Hilgard, 1962), were administered an ischemic pain test in both waking and hypnotic conditions. The following variables were measured: (a) pain and distress tolerance, (b) anxiety levels, and (c) plasma concentrations of beta-endorphin and adrenocorticotrophic hormone (ACTH). Results confirmed significant increases of pain and distress

tolerance during hypnosis as compared to the waking state, with positive correlations between pain and distress relief and hypnotizability. Moreover, a hypnotically induced dissociation between the sensory-discriminative and the affective-motivational dimensions of pain experience was found, but only in high hypnotizable Ss. Hypnotic analgesia was unrelated to anxiety reduction and was not mediated either by endorphins or by ACTH.

Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 35, 48-58.

#### NOTES:

Regional cerebral blood flow (rCBF) was measured by means of the 133-Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

#### 1987

Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.

This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.

Meyer, von H. K.; Diehl, B. J. M.; Ulrich, P.; Meinig, G. (1987). Kurz- und langfristige Änderungen der kortikalen Durchblutung bei Autogenem Training[Short and long-term changes in cortical circulation caused by autogenic training]. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 33 (1), 52-62.

English Summary. The well-known hyperfrontal pattern of hemispheric blood flow measured with 133-Xenon is not found in 12 healthy resting men who have been practicing Autogenic Training at least six months. This might indicate a long-term decrease in the level of activation. Successfully practiced exercises of Autogenic Training lead to an increased blood flow in the Rolandic area representing the body scem (sic) and to a decreased blood flow in regions related to acoustical attention and to autonomic functions. Left hemispheric cerebral blood flow is lower in rest. The relative activation of the left hemisphere during Autogenic Training is discussed.

Ulrich, P.; Meyer, H. J.; Diehl, B.; Meinig, G. (1987). Cerebral blood flow in autogenic training and hypnosis. Neurosurgery Review, 10, 305-307. (Abstracted in American Journal of Clinical Hypnosis, 1989)

In 12 healthy volunteers with at least an experience of 6 months in autogenic training (AT), the cerebral blood flow (CBF) was measured at rest, in AT, and in hypnosis (H). The results were correlated with individual test profiles. The cortical flow pattern at rest of our AT-trained volunteers did not show the hyperfrontality which is described in the literature. This may be interpreted as an effect of better and habitualized relaxation in long-trained AT practitioners. This flow pattern corresponds to the low grades of neuroticism and aggressivity found in the tests. Furthermore, an activation in central cortical areas and a deactivation in regions which are associated with acoustic and autonomous functions occur. Possible explanations for these phenomena as well as for the relatively low perfusion of the left hemisphere at rest and activation in AT are discussed. The global rise of CBF in Hypnosis may be an activation effect caused by resistance against the hypnotizer: the deeper the trance, the smaller the catalepsy of the right arm and in temporal cortical fields processing acoustic inputs.

## 1986

Suls, Jerry; Sanders, Glenn S.; Labrecque, Mark S. (1986). Attempting to control blood pressure without systematic instruction: When advice is counterproductive. Journal of Behavioral Medicine, 9 (6), 567-577.

Hypothesized that, without assistance, Ss' attempts to keep their blood pressure low would produce increases in blood pressure, compared to Ss asked to respond naturally to an arousing stimulus. 50 male undergraduates watched a videotape containing a neutral (nonarousing) section and an erotic section while their blood pressure was recorded by an automated blood-pressure monitoring device. 22 Ss were asked to relax and keep their blood pressure low during the erotic parts of the

videotape, and 28 Ss were asked to respond naturally. Results confirm the hypothesis, suggesting that urging people to relax can be counterproductive if they do not also receive systematic instruction on how to relax or control blood pressure.

**1984**

**Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.**

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention.

**NOTES:**

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

**Conn, Lois; Mott, Thurman, Jr. (1984). Plethysmographic demonstration of rapid vasodilation by direct suggestions: A case of Raynaud's Disease treated by hypnosis. American Journal of Clinical Hypnosis, 26, 166-170.**

Raynaud's Disease is a painful vasospastic disorder of the fingers and toes precipitated by cold or emotional stimuli. Treatment has usually included protection from cold stimuli and vasodilators. Biofeedback, imagery, relaxation, and hypnosis have also been used. The relationship between response to treatment and hypnotizability has been inconclusive. A case of Raynaud's Disease was treated using hypnosis. The patient was highly hypnotizable and responded rapidly to direct suggestion with a fourfold increase in her blood volume. The implications of this rapid response and its relationship to hypnotizability are discussed with suggestions for further studies.

**NOTES:**

The authors review experimental literature on the usefulness of hypnosis in modifying peripheral circulation, finding both positive (Barabasz and McGeorge, 1978, Roberts, Kewman, and MacDonald, 1973) and negative (Peters, Lundy, and Stern, 1973; Black, Edholm, Fox, and Kidd, 1963) outcomes. Experiments relating outcome to hypnotizability also have positive (Block, Levitsky, Teitelbaum, and Valletta, 1977) and negative (Crosson, 1980; Roberts et al, 1973) results.

Clinical literature found that peripheral circulation could be influenced (Crasilneck & Hall, 1975; Norris & Huston, 1956; Jacobson et al., 1973) but none of those studies reported the hypnotizability of the patients. In the Crasilneck and Hall (1975) investigation, 60% of their 48 Raynaud's patients experienced marked improvement in symptoms or remission.

Hypnotizability has been investigated with respect to biofeedback results, finding both no relationship (Holroyd et al., 1982) and a positive relationship (Andreychuk and Skriver, 1975).

In this investigation, the highly hypnotizable (Stanford Hypnotic Susceptibility Scale, Form A, score = 11) female patient was treated with hypnosis when the blood vessels in her hands were constricted. Either she had arrived at the office with poor circulation, or a Raynaud's attack was induced with ice water. Hypnosis involved progressive relaxation followed by suggestions to visualize the blood vessels in her hand opening up, the blood warming and nourishing her hands. "With each beat of your pulse your hand becomes warmer as more blood reaches your fingers. It is as though you are lying in the warm sun. Try to visualize the blood vessels in your hand opening up...." (P. 168).

The patient was asked to use self hypnosis and a cassette of the office session twice a week between sessions, but in fact she either failed to practice or did the exercise once between weekly sessions.

With neutral hypnosis (no specific suggestions about circulation) there was little change in pulse volume; with suggestions to open up her blood vessels, there was an increase in blood volume that began within 20 seconds, reaching four times the baseline in 45 seconds. This increase was reproduced in later sessions, and a somewhat lesser degree of change could be produced with self hypnosis.

In their Discussion, the authors question whether the positive results depend on someone who is high in hypnotizability, and/or on someone with a labile vascular system. They refer to a model of biological information processing to explain how suggestions might have been incorporated by the patient. "Bowers (1977) has speculated that hypnotized patients process information in a way different from when they are not hypnotized. He presents a number of different studies which have shown a significant relationship between hypnotizability and treatment response in patients with illnesses with a clear cut physiological component, including asthma, warts, and ichthyosis. He then speculates that 'suggestions delivered to deeply hypnotized subjects can be transduced into information that is somatically encodable, thereby producing a selective and specific impact on body function and structure.' This kind of processing of information could explain the very rapid response described in the patient presented here.

"In reviewing the cases in which blistering has been produced by hypnotic suggestion, Chertok (1981) states, 'It therefore clearly emerges that these experiments have all been conducted with highly hypnotizable subjects, including a very large proportion of true somnambulists. Inversely, there is not a single known case where a blister has been produced without the subject having been deeply hypnotized beforehand'" (p. 169).

Hall, Howard R. (1984, October). Hypnosis, imagery, and the immune system. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES:**

Studied the relationship of hypnosis to immune functions, using imagery methods like the Simontons did with their cancer patients. Twenty normal volunteers were hypnotized and asked to imagine their white blood cells (WBCs) attacking weak germs like strong sharks would attack something, and they were told that the sharks would continue working after they came out of hypnosis (a post-hypnotic suggestion). They were asked to "feel it and experience it any way you can," to avoid emphasizing visual imagery too much. Then they were taught self hypnosis and sent home to practice twice a day for a week.

Three blood measures increased after hypnosis: --B-cells increased with pokeweed stimuli (an allergen) for younger Ss, not older Ss --WBC's increased for highly hypnotizable Ss who were young, not for poor hypnotizable Ss or for any older Ss (Age range was 22-80.) --Lymphocyte count increased, approaching significance for highly hypnotizable Ss who were young but not for poor hypnotizable Ss or for older Ss. A personality test administered before the hypnosis, the SLC-90, suggested that the higher the distress level, the lower the lymphocyte count before hypnosis training. Two scores that summed up the distress level correlated -.49 and -.53, respectively. The psychological distress measured by the personality test decreased after the week of self-hypnosis practice. Of the two scores that summed up distress, one decreased for everyone (General Severity Index) and the other decreased only for highly hypnotizable Ss (Positive Symptom Total). Thus, a week of self hypnosis with imagining one's WBC's eating up weak germs in the blood led to both an increase in immune response indicators and a decrease in psychological distress. Psychological distress decreased as lymphocytes increased.

Dr. Hall repeated these procedures with a small number of Ss who were told just to "lie down and rest" rather than being hypnotized and given instructions to imagine their WBC's increasing. None of the above changes occurred. However, he cautions that his research doesn't indicate whether the positive effects are due to relaxation, imagery, or hypnosis since all three were involved

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-

treatment, antimeditation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

**1983**

Fung, E. H.; Lazar, B. S. (1983). Hypnosis as an adjunct in the treatment of von Willebrand's disease. International Journal of Clinical and Experimental Hypnosis, **31** (4), 256-265.

Hypnosis has been used to control bleeding, both in normals and hemophiliacs. Case material is presented to demonstrate how hypnosis was used as an adjunct to standard medical treatment of a boy and his mother with von Willebrand's disease, initially to reduce anxiety and improve self-esteem and the parent-child relationship, and later, to reduce bleeding. This use of hypnosis illustrates the relationship between hemostatic control and psychological adaptation

**1981**

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, **138**, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive <sup>133</sup>Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

**1980**

Case, David B.; Fogel, David H.; Pollack, Albert A. (1980). Intrahypnotic and long-term effects of self-hypnosis on blood pressure in mild hypertension. International Journal of Clinical and Experimental Hypnosis, **28**, 27-38.

Self-hypnosis using the method of Spiegel (1974) was evaluated in 15 patients with labile or mild essential hypertension who were equally hypnotizable and adhered to a regimen of 6-10 daily exercises for a 4-month period. During the hypnotic state, there were consistent rises in both systolic and diastolic pressures in hypnotizable patients, but not in non-hypnotizable controls. Similar but smaller changes were also observed in normotensive subjects. Pressure rose immediately with hypnosis and subsided gradually over 15 minutes. However, the long-term effects of the daily practice of self-hypnosis were variable: ambulatory diastolic pressure fell in 5

patients, was unchanged in 7 patients, and rose in 3 patients. The changes in blood pressure could not be specifically attributed to the daily practice of self-hypnosis; however, all patients experienced improvement in well-being, mood, and behavior patterns during the 4-month period. The study indicates that self-hypnosis can produce changes in behavior and mood which may be beneficial to cardiovascular health, although paradoxically, the act of hypnosis by this technique is pressor. Aside from its therapeutic potential, self-hypnosis may provide useful information about central mechanisms of blood pressure regulation.

## **1978**

**Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.**

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

## **1974**

**Redmond, Daniel P.; Gaylor, Michael S.; McDonald, Robert H.; Shapiro, Alvin P. (1974). Blood pressure and heart-rate response to verbal instruction and relaxation in hypertension. Psychosomatic Medicine, 36 (4), 285-297.**

Recent data have suggested that instructional set and task awareness may play a substantial role in the achievement of directional changes in blood pressure associated with "operant conditioning" techniques. Six hypertensive patients were instructed alternately to raise (UP) and lower (DOWN) their blood pressure by concentrating on changing "heart rate, force of contraction, and blood vessel resistance to flow." Paired 10 min periods were separated by the experimenter's entry and exit. Five of the subjects were taught progressive muscular relaxation (PMR), and the protocol repeated, with PMR induced throughout this session. The immediate cardiovascular response to PMR, induced in both the presence and absence of the experimenter, was studied. Systolic (SBP) and diastolic (DBP) blood

pressure and heart rate (HR) were measured every 30 sec in all sessions. Direction of changes in BP and HR for UP and DOWN periods was appropriate and significant in both instruction sessions, and these differences for BP frequently reached significant levels of magnitude. In general, interactions for HR did not reach significant levels. Comparison of the two sessions yielded little difference between them. PMR uniformly lowered BP and HR, but was of significant magnitude only when induction of PMR involved the active participation of the experimenter. Interview data revealed considerable dramatic mental imagery associated with directional shifts in BP. The results indicate that directional instruction may result in appropriate changes in BP and HR of a magnitude comparable to those reported in studies using "external biofeedback." PMR did not alter the response. This study adds to other data which point to the potential for nonspecific or "placebo" effects to be operative in conditioning studies.

#### **NOTES:**

The authors reviewed literature suggesting that blood pressure changes have been brought about by hypnotic suggestions of attitudes, progressive muscular relaxation, autogenic training (a form of self hypnosis), yogi, transcendental meditation, and hypnotically suggested relaxation.

The instructions to raise and lower blood pressure by concentrating on changing heart rate, force of contraction, and blood vessel resistance to flow were a repetitive monologue with a monotonous emphasis on "rate and force of heart beat and resistance of vessels to flow." Most subjects spontaneously introduced imagery appropriate to the desired change. The authors expressed the opinion that task awareness (to change the blood pressure) influenced the results, and the changes were accomplished more by associative imagery than by responding to the literal meaning of instructions.

#### **1958**

Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

#### **NOTES**

1:

"Summary

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the

experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).

## C RESEARCH

### CANCER

2002

Edser, Stuart J (2002, March). Hypnotically-facilitated counter-conditioning of anticipatory nausea and vomiting associated with chemotherapy: A case study.. *Australian Journal of Clinical Hypnotherapy and Hypnosis*, 23 (1), 18-30.

Presents an account of a cancer patient who suffers from severe anticipatory nausea and vomiting in the lead-up to chemotherapy treatment. The paper briefly contextualises the symptomatology of the presenting problem in the behavioural and hypnotic literature and recounts the rationale and methods that the writer used in assisting the patient to overcome the problem. Counter-conditioning was used to desensitise the patient to the aversive stimuli and hypnosis used to enhance this effect and to facilitate the final outcome.

Harper, Gary W. (1999). A developmentally sensitive approach to clinical hypnosis for chronically and terminally ill adolescents. *American Journal of Clinical Hypnosis*, 42 (1), 50-60.

Adolescents who suffer from terminal and/or chronic medical illnesses must face difficult developmental issues coupled with increased burdens of physical discomfort and uncertainty about survival. Clinical hypnosis is one technique that can be used to help these individuals gain a sense of comfort and control over their lives. I describe the use of a developmentally sensitive hypnotherapeutic intervention for chronically and terminally ill adolescents. I have used the technique for the reduction of various types of physical and psychological discomfort secondary to a range of medical problems such as cancer, end-stage renal disease, organ transplant, and HIV disease. The treatment focuses on the use of personalized procedures that attempt to increase perceptions of control through interactive formats. Movement through a personally intriguing journey is used as a metaphor for controlling and moving away from discomfort. I also present three case examples as well as general treatment recommendations for clinical use.

Lioffi, Christina; Hatira, Popi (1999). Clinical hypnosis versus cognitive behavioural training for pain management with pediatric patients undergoing bone marrow aspirations. *International Journal of Clinical and Experimental Hypnosis*, 47 (2), 104-116.

A randomized controlled trial was conducted to compare the efficacy of clinical hypnosis versus cognitive behavioral (CB) coping skills training in alleviating the pain and distress of 30 pediatric cancer patients (age 5 to 15 years) undergoing bone marrow aspirations. Patients were randomized to one of three groups: hypnosis, a package of CB coping skills, and no intervention. Patients who received either hypnosis or CB reported less pain and pain-related anxiety than did control patients and less pain and anxiety than at their own baseline. Hypnosis and CB were similarly effective in the relief of pain. Results also indicated that children reported more anxiety and exhibited more behavioral distress in the CB group than in the hypnosis group. It is concluded that hypnosis and CB coping skills are effective in preparing pediatric oncology patients for bone marrow aspiration.

Eimer, Bruce; Freeman, Arthur (1998). *Pain management psychotherapy: A practical guide*. New York NY: John Wiley & Sons, Inc..

#### NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

Bayot, A.; Capafons, A.; Cardeqa, E. (1997). Emotional self-regulation therapy: A new and efficacious treatment for smoking.. *American Journal of Clinical Hypnosis*, 40 (2), 146-156.

We described emotional self-regulation therapy, a recently-developed suggestion technique for the treatment of smoking, and present data attesting to its efficacy. Of the 38 individuals who completed treatment, 82% (47% of the initial sample) stopped smoking altogether and 13% (8% of the initial sample) reduced their smoking. A follow-up at 6 months showed that 66% (38% of the initial sample) of those who had completed the treatment remained abstinent and reported minimal withdrawal symptoms or weight gain. In a no-treatment comparison group, only 8% reduced their smoking or became abstinent.

Holroyd, Jean (1996). Hypnosis treatment of clinical pain: Understanding why hypnosis is useful. *International Journal of Clinical and Experimental Hypnosis*, 44 (1), 33-51.

Clinical and experimental research literature indicates hypnosis is very useful for severe and persistent pain, yet reviews suggest hypnosis is not widely used. To encourage more widespread clinical application, the author reviews recent controlled clinical studies in which hypnosis compares favorably with other interventions; links advances in understanding endogenous pain modulation to a neurophysiologic view of hypnosis and hypnoanalgesia; relates the neurophysiology of hypnoanalgesia to management of chronic pain; challenges the view that hypnotic pain control is only for the highly hypnotizable patient; and raises issues about how people learn to control pain with hypnosis. Training in hypnotic analgesia may usefully enhance nervous system inhibitory processes that attenuate pain.

#### NOTES

Hypnosis has been more effective for pain management than other cognitive behavioral interventions in studies of fibromyalgia (Haanen, Hoenderdos, Van Romunde, Hop, Malle, Terwiel, & Hekster, 1991); burn treatment (Patterson, Everett, Burns, & Marvin, 1992); and cancer bone marrow transplant procedures (Syrjala, Cummings, & Donaldson, 1992). Central nervous system gating or downward modulation of pain impulses may account for hypnotic pain control. "Hypnosis enables both amplification and attenuation of cortical response subsequent to sensory registration and prior to consciousness, depending on whether suggestions are for increasing or decreasing awareness (Blum & Barbour, 1979)" (p. 36). This type of inhibition may even be observed in the peripheral nervous system (see Hernandez-Peon, Dittborn, Borlone, & Davidovich, 1959/1960; Sharev & Tal, 1989; Kiernan, Dane, Phillips, & Price, 1995). Work by Helen Crawford (1994) suggests that frontal and limbic areas of the brain are involved in inhibitory patterns of brain activity, and that generation of theta EEG rhythms by lower centers is associated with the suppression of awareness of pain.

Some very low hypnotizable people have been able to learn to control pain with hypnosis, suggesting that it is a skill that can be learned. However, few investigations of improvement of hypnoanalgesia were located. Rather, one must generalize from the fact that other kinds of hypnosis skills have been improved using special training programs, such as the Carleton University program developed by Gorassini & Spanos, 1986). Although most research on improving hypnotic response has been based on operant learning principles, a model that incorporates respondent (classical conditioning) principles might be more useful when it comes to understanding the training of a neurophysiological response, such as inhibitory brain patterns associated with hypnoanalgesia. "Historical success with clinical pain, taken together with newer findings in the neurophysiology of hypnosis, indicate that we should be spending more energy investigating how learning may improve hypnotic analgesia" (p. 43). "We should acknowledge that there are advantages to hypnosis beyond those of relaxation, a good placebo, and psychotherapy. ... Responsible care demands that we provide training or practice in hypnotic analgesia when treating pain, and especially whenever a chronic pain patient initially appears to be nonresponsive" (p. 43).

Jones, M. M. (1994). Apnea in postsurgical hypnotherapy of an esophageal cancer patient: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, 42 (3), 179-183.

Use of clinical hypnosis in the postsurgical psychotherapy of an esophageal cancer patient who could not swallow involved reenactment of the successful surgery and producing hallucinations of taste and smell, as well as working through emotions relating to the surgery and her disease. An apnea that occurred in a late phase of the treatment was addressed with the familiar arm pumping technique that had been used as a deepening technique, resulting in the patient's resuming normal breathing. The experience reminds the practitioner of the possible unexpected professional demands when working in a medical environment. It also provides clues as to the underlying psychological mechanisms and their role in successful symptom removal. A 6-year follow-up confirmed the lasting effect of this brief psychotherapy.

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. *Contemporary Hypnosis*, 10, 43-48.

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

**Barinaga, Marcia (1992). Giving personal magnetism a whole new meaning. Science, 256, 967.**

**NOTES:**

**Cited in Noetic Sciences Review, Autumn, 1992. This geobiologist has discovered that the human brain contains billions of tiny magnets--some 7 billion of them, each so small that their total weight is only one/millionth of an ounce. In magnetite-containing bacteria, the crystals are used as a compass needle which orients the bacteria with respect to the Earth's magnetic field. In birds, bees, and fish, where concentration of the mineral is a few orders of magnitude higher than he found in the human brain, it is used as a navigational aid. He plays down the possible connection to weak electromagnetic fields that supposedly cause cancer (unless fields could induce very weak electrical fields inside the cells, disrupting cellular function). Other possible interpretations: a means for cells to store excess iron, or part of a magnetic sensing system, or a vestigial system left over in evolution from when we were more directly connected with the earth's magnetic field and may have relied on it for navigation or migratory movement.**

**Kraft, Tom (1992). Counteracting pain in malignant disease by hypnotic techniques: Five case studies. Contemporary Hypnosis, 9, 123-129.**

**Five cases of patients suffering from cancer are described in which hypnotic visualization techniques were successfully employed to relieve pain and anxiety. This study supports the view that hypnosis can be an effective tool for pain relief in malignant disease, particularly when traditional methods have been exhausted.**

**Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131.**

**Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.**

**Spiegel, David (1992, October). Hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

**NOTES**

Dr. Spiegel announced that this was a last minute substitution for Fred Frankel's presentation on Hypnotizability.

We have ongoing a major replication of the study that we published on group therapy with terminally ill breast cancer patients. The matched control patients get educational materials but not psychotherapy. We are looking at NKC cytotoxicity and delayed hypersensitivity.

Tasks: spend 15 minutes discussing list of problems; 15 minutes discussing things like, "What is your spouse doing that doesn't help; what can we do to help it?" We get drop in NKC cytotoxicity immediately afterward, returning after 24 hrs to usual levels. Controls don't drop in NKC cytotoxicity. This measure of stress may be a predictor of survival time.

In Fawzy's study of group therapy with melanoma patients, they noted a significant difference at 6 months in interferon augmented activity of NK, which didn't hold up at a year. But at 6 years there were 10 of 40 deaths in control group vs 3 of 40 deaths in treated group. This is a vigorous effect.

Cohen's study of colds in New England J. of Med is another good clinical study.

There are two broad areas of relevance of hypnotizability to healing: 1. Hypnotizability as a trait: do highs differ in way they regulate body or mind? 2. Is there something you do when in hypnotized state that is different? Studies of treatment of warts with hypnosis are important 3. Transition between states, e.g. circadian rhythms; is there a shift in wakefulness between trance and nontrance states that affects health?

Psychiatric Diagnosis and self regulation. High hypnotizability is associated with certain psychiatric disorders (dissociative reaction, PTSD, MPD, etc.). Schizophrenics score much lower than normals (av. = 4 vs 7; replicated with the Hypnotic Induction Profile (HIP). Stanford Hypnotizability Scales show no difference in means, but do show a difference in range). I don't know what this means. But schizophrenics can falsely pass some Stanford Scale items, e.g. amnesia which they don't however reverse; so schizophrenics' hypnotizability scores may be inflated on Stanford scales. We don't see extremely high scores in schizophrenics.

Psychoactive medication doesn't affect scores of schizophrenics, but improves scores of anxiety neurotics (by reducing anxiety). Frischholz has an article coming out in a psychiatry journal that confirms this.

There is a lot of evidence that patients with dissociative disorders are more hypnotizable than other groups. Frischholz et al couldn't replicate Frankel's finding of higher scores in phobics. Pettinati et al found higher scores in bulimia and I haven't seen anything to counter that. Another idea is that high hypnotizables are very good at internal regulation

Spiegel & Ken Kline selected Ss who could regulate gastric activity. They got an 80% increase in gastric acid output while imagining eating; got 40% decrease in output when imagining something pleasant that wasn't imagining eating. Injected with pentagastrin, which induces gastric output, they still got a decrease in gastric acid output in the relaxation condition.

This suggests that hypnotizability should be a selection criterion for some research. See also Katz et al. 1974 (?) with acupuncture; and McGlashan, Evans & Orne on the placebo response.

Herbert Spiegel found that 2/3 of highs but 1/3 of lows were cured of phobia. Eye roll sign on the HIP, living with spouse/lover, rating self as hypnotizable, and giving a postcard follow-up response at one week post treatment were associated with 89% rate abstinence at 2 years follow-up, when only 23% overall of 223 were abstinent. Absence of those positive predictors was associated with only a 4% rate of abstinence.

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. *Hospice Journal*, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

Syrjala, Karen L.; Cummings, Claudette; Donaldson, Gary W. (1992). Hypnosis or cognitive behavioral training for the reduction of pain and nausea during cancer treatment: A controlled clinical trial. *Pain*, 48, 137-146.

Few controlled clinical trials have tested the efficacy of psychological techniques for reducing cancer pain or post-chemotherapy nausea and emesis. In this study, 67 bone marrow transplant patients with hematological malignancies were randomly assigned to one of four groups prior to beginning transplantation conditioning: (1) hypnosis training (Hypnosis); (2) cognitive behavioral coping skills training (CB); (3) therapist contact control (TC); or (4) treatment as usual (TAU; no treatment control). Patients completed measures of physical functioning (Sickness Impact Profile; SIP) and psychological functioning (Brief Symptom Inventory; BSI), which were used as covariates in the analyses. Biodemographic variables included gender, age and a risk variable based on diagnosis and number of remissions or relapses. Patients in the Hypnosis, CB, and TC groups met with a clinical psychologist for two pre-transplant training sessions and ten in-hospital "booster" sessions during the course of transplantation. Forty-five patients completed the study and provided all covariate data, and 80% of the time series outcome data. Analyses of the principal study variables indicated that hypnosis was effective in reducing reported oral pain for patients undergoing marrow transplantation. Risk, SIP, and BSI pre-transplant were found to be effective predictors of inpatient physical symptoms. Nausea, emesis and opioid use did not differ significantly between the treatment

groups. The cognitive behavioral intervention, as applied in this study, was not effective in reducing the symptoms measured.

## NOTES

Hypnotizability was not measured in this study.

The authors hypothesized that "(1) patients receiving hypnosis training would report the least pain, but the cognitive behavioral group would report less pain than the untreated group; and (2) both treatment groups would report less nausea and emesis than the control groups" (p. 138). The adult patients were undergoing their first marrow transplant, had survived at least 19 days post-transplant, and had participated in at least the first 8 of 10 possible inpatient sessions; five additional patients completed the study but had missing data.

Each patient in the TC (therapist contact), CB (cognitive behavioral coping skills), and Hypnosis groups participated in two 90 minute training sessions with a psychologist, 2-4 days apart, on an outpatient basis. Once admitted to hospital, twice each week they participated in a total of ten 30-minute sessions designed to reinforce use of the interventions. The TAU (treatment as usual) group had no psychologist contact. For the TC control group, the psychologist simply talked with the patients about whatever was on their minds.

The CB group received multiple interventions: training in relaxation (2 techniques-progressive muscle relaxation and abbreviated autogenic relaxation) with tapes provided; cognitive restructuring (Turk et al., 1983) which included training in attention redirection and restructuring self-defeating cognitions; preparing coping self-statements or affirmations, by focusing attention on neutral or pleasant events or objects, or by occupying their attention through mental repetition of affirmations, songs or prayer; encouragement to think of negative events as time limited; provision of information, especially the beneficial effects of reducing physiological arousal and attention to pain and nausea; assistance in setting short-term progress-related goals for self-care such as exercise, caloric intake, and mouth care; exploration of the meaning of their illness and of bone marrow transplant.

For the Hypnosis group, individually tailored Ericksonian inductions (Lankton & Lankton, 1983) with relaxation and multi-sensory imagery were taped and given to the patient to use in daily practice, in between sessions. The suggestions were directed at reducing pain, nausea, and the emotional reactions to those symptoms; there also were suggestions about health, well-being, self-control and enhanced coping capabilities.

The results were analyzed by ANCOVA (except where non-parametric analysis was required with the opioid data). Due to gender differences in reported pain (men experiencing more) and the fact that the TAU group had an over-representation of men, the TAU group could not be used in the pain analyses. However, there were no gender differences in nausea reports, so that all four groups could be used for nausea outcome analyses.

The Hypnosis group evidenced the lowest amount of post-transplant pain, and used (nonsignificantly) less opioids than the other groups. No significant treatment effects were observed for either nausea or emesis.

In their discussion, the authors noted that "The hypnosis group's peak pain was lower and of a shorter duration than the other three groups. Opioid use closely followed the course of pain intensity. ... The gender effect may be characteristic of this particular sample [since it was unexpected].

"Nausea and emesis followed a less predictable course than pain. ... nausea fluctuated dramatically from day to day within treatment groups. As nausea moderated after completion of conditioning, the day to day fluctuations remained striking. This lack of symptom predictability may have contributed to the difficulty patients had in using the interventions effectively" (p. 143).

"The lack of significant differences between treatment groups in opioid use indicates that lower pain report in the hypnosis group cannot be explained by increased opioid use. Results do not support the second hypothesis that both hypnosis and cognitive behavioral training would reduce chemotherapy or radiation-induced nausea and emesis.

"In MT patients, several factors may limit the impact of either cognitive behavioral training or hypnosis on nausea and emesis. First, MT patients receive higher doses of emetogenic agents than are given to most other cancer patients. Second, patients in this study had only two sessions in which to learn relaxation techniques; this may not have provided adequate training. Third, the most severe emetic challenge began immediately with the first dose of chemotherapy rather than having a gradual onset. This did not permit patients to master the techniques with milder symptoms before applying training to intense symptoms. Fourth, for all patients, psychological interventions were provided as adjuncts to medications rather than as substitutes for antiemetics or opioids. Both antiemetics and opioids have substantial cognitive side effects which, in high doses, may impact patients' abilities to implement interventions which are in essence cognitive. This combination of factors may have provided too severe a challenge to a newly learned skill. In contrast to nausea, oral pain developed over a number of days, permitting practice while symptoms were mild and before administration of opioids.

"Results suggest that the imagery component of the hypnosis intervention was central to its efficacy. Not only was the cognitive behavioral intervention without imagery not effective in reducing the symptoms measured, but we found in clinical practice that patients intermittently began to refuse sessions with relaxation alone. Even hypnosis patients, when under the physical stresses of treatment, had shortened attention spans that necessitated briefer inductions, less time spent on relaxation, and more active, engaging imagery.

"... Since, in clinical practice, imagery is frequently a component of cognitive behavioral treatment, these results would not generalize to those settings where imagery is combined with other skill training.

"Several other possible limitations of the cognitive behavioral intervention merit consideration. Our experience indicates that the number of components used in the two training sessions were more than patients could competently learn in a short time. ... A further possibility is that maladaptive cognitions, which are the targets of cognitive restructuring, may be the exception rather than the rule among MT patients who tend to focus, with their families, on positive, hopeful attitudes toward their treatment" (pp. 144- 145).

The authors note that the relatively small sample size may have provided inadequate statistical power to demonstrate effects with some of the outcome variables.

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. *Journal of Consulting and Clinical Psychology*, 59 (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. *Behaviour Research and Therapy*, 29, 17-31.

#### NOTES

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in *Lancet* have important implications for health care.

McCue, Peter A. (1991). Key Paper Review: Prophylactic therapy for cancer and coronary heart disease. [Comment/Discussion]

#### NOTES

This is a commentary on two papers by Grossarth-Maticek and Eysenck, in which they report on 'creative novation behaviour therapy' to prevent cancer and heart disease in people with personalities associated with the development of those diseases. Therapy may involve hypnosis and/or relaxation, with suggestions that facilitate modification of unhealthy expectancies. The papers are:

Grossarth-Maticek, R. & Eysenck, H.J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part I - Description of treatment. *Behaviour Research and Therapy* 29, 1-16.

Eysenck, H.J. & Grossarth-Maticek, R. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. *Behaviour Research and Therapy* 29, 1, 17-31.

Rapkin, David A.; Straubing, Marsha; Holroyd, Jean (1991). Guided imagery, hypnosis and recovery from head and neck cancer surgery. *International Journal of Clinical and Experimental Hypnosis*, 39, 215-226.

The value of a brief, preoperative hypnosis experience was explored with a sample of 36 head and neck cancer surgery patients. 15 patients volunteered for the experimental hypnosis intervention. 21 patients who received usual care (no hypnosis) were followed through their hospital charts and were used as a comparison group. Hypnotic intervention and usual care groups were comparable in terms of relevant demographic variables. Postoperative hospitalizations for the hypnotic intervention group were significantly shorter than for the usual care group. Within the hypnotic intervention group, hypnotizability was negatively correlated with surgical complications and there was a trend toward a negative correlation between hypnotizability and blood loss during surgery. Findings suggest that imagery-hypnosis may be prophylactic, benefitting patients by reducing the probability of postoperative complications and thereby keeping hospital stay within the expected range. Recommendations are presented for a controlled, randomized, clinical trial with a sufficiently large sample to provide the opportunity for statistical analysis with appropriate power.

#### NOTES

Actual stay in hospital, post-surgery, was 8.7 days (SD = 3.7) for the Hypnosis group and 13.9 days (SD = 9.7) for the Usual Care group; the range was 3-17 days for the Hypnosis group and 5-42 days for the usual care group.

The hypnosis script included an indirect, permissive induction; positive suggestions for relaxation and healing imagery; images of calm situations that would lead to expectation for healing (e.g. a 'healing pool'); suggestions for patients to develop their own images of pleasurable, comforting situations. The only direct suggestions were for minimal blood loss during surgery, modeled after those given in the waking situation by Bennett, Benson, and Kuiken (1986).

As measured by the Stanford Hypnotic Clinical Scale, there were five highly hypnotizable patients (scores 4-5), six mediums (scores 2-3), and four lows (scores 0-1). "Hypnotizability correlated negatively with complications ( $r = -.54$ ,  $p < .04$ , two-tailed test). There was a trend toward a negative correlation with length-of-stay ( $r = -.37$ ,  $p < .18$ , two-tailed test) and estimated blood loss ( $r = -.40$ ,  $p < .15$ , two-tailed test). Note that these correlations represent moderate to large effects, and the significance levels are due in part to low power associated with a small N (Cohen, 1988). The means for blood lost during surgery for the three hypnotizability groups were: highs = 904 cc, mediums = 1465 cc, and lows = 2056 cc" (p. 222).

Data on cost could not be published in this article but later was published in a letter to the Editor of the Newsletter of the Society of Clinical and Experimental Hypnosis (February 1994, Vol. 35, No. 1, p.8). "The average savings for the intervention group was \$6,725. While this difference fell short of statistical significance on the Wilcoxon test ( $Z = -1.5402$ ,  $p < .10$ ), it is rather striking on its face. The range actually was \$7849 to \$27,782 for Intervention Group patients and \$9,390 to \$53,627 for Usual Care group patients.

"In 1990 a semi-private room at UCLA Center for the Health Sciences cost \$405 to \$529 per day, depending on quality; standard ICU care (one nurse for two patients) was \$1236 per day, and more intensive care (one nurse for one patient) was \$2471/day. Head and neck surgery patients may remain in the ICU, driving up costs, solely because they have not learned to suction their own tracheostomies, usually a motivational factor that might be affected by hypnosis. UCLA is a tertiary care hospital in a high-cost area (and is therefore reimbursed at higher rates than many other hospitals), and costs may be driven up by the many additional procedures required for long-stay patients. Therefore the cost savings could not be expected to be as great where expected length of stay is brief, ICU use is limited, and community costs are lower" (p. 8).

Zeltzer, Lonnie K.; Dolgin, M. J.; LeBaron, Samuel; LeBaron, C. (1991). A randomized, controlled study of behavioral intervention for chemotherapy distress in children with cancer. *Pediatrics*, 88, 34-42.

Subjects were randomly assigned to hypnosis, nonhypnotic distraction/relaxation, or attention placebo control. children in the hypnosis group reported the greatest reduction in both anticipatory and postchemotherapy symptoms. Distraction/relaxation kept symptoms from getting worse, but they did not get better, and the control children's symptoms became much worse.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. *General Hospital Psychiatry*, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

LaClave, Linda J.; Blix, Susanne (1989). Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. *International Journal of Clinical and Experimental Hypnosis*, 37 (1), 6-14.

This paper presents the case of a 6.5-year-old girl with malignant astrocytoma of the left brain hemisphere. During the course of her chemotherapy treatment, severe

vomiting developed to the degree that on several occasions she became dehydrated. Discontinuation of chemotherapy was being considered when she was referred for hypnotherapy. Despite severe neurological impairments which excluded many traditional techniques, hypnosis was successful in eliminating emesis. Hypnosis was also utilized to decrease pain and to improve sleep patterns. Drawings are presented to help show how this child resolved anxiety associated with treatment and fears surrounding the knowledge of her impending death.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. *Lancet*, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Jay, Susan (1987, October). Hypnotic susceptibility and response to psychological intervention for distress related to painful procedures in leukemic children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

Presented children with a cognitive behavioral intervention package that involved five elements 1. Filmed Modeling (child modeling and talking about it with good coping skills) 2. Positive Reinforcement - trophy 'for doing the best you can,' to change aversive situation to a positive situation 3. Breathing Exercises - 'puff yourself up like a tire' 4. Emotive Imagery/Distraction - super hero image (Superman), or being in a favorite place 5. Behavioral Rehearsal - dollplay, reviewing the procedure with medical equipment.

For Numbers 4 and 5 the therapist would actively guide the procedures; numbers 3, 4 & 5 are hypnotic elements.

Valium had lowered children's distress prior to procedures but not during the procedures. This study involved Valium plus cognitive behavior therapy.

25 Subjects ages 6-12, were measured for hypnotizability

**2 groups: (1) Cognitive Behavior Therapy + Valium given just before intervention started, after film ended; (2) Cognitive Behavior Therapy alone.**

**Dependent Measures: 1. Observation Scale of Behavioral Distress coded every 15 seconds. 2. Faces Scale for Fear (self report) before procedure**

**Faces Scale for Pain (self report) after procedure 3. Blood pressure**

**RESULTS. No Significant Differences were found between the two groups (CBT vs CBT + Valium). Pre-Post Analyses: Post intervention scores were significant lower than Pretest on [missed notes]**

**Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.**

**This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.**

#### **NOTES**

**Lonnie Zelzer, M.D., in a UCLA Hypnosis Seminar lecture in 1992, stated that in pre-treatment with Valium the patients did worse during the procedure, vs no pretreatment with Valium, because the medicated patients didn't have clarity of attention during the cognitive behavioral learning.**

**Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.**

**Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them.**

Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. *Behavior Therapy*, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Achterberg, J. (1984, October). Cancer, immunology, psychological factors, and imagery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Author developed a way of scoring imagery (which will be published in *Imagery and Disease*). In terms of predicting who will die and who will survive, the content of the images doesn't seem to be as important as the quality (strength, vividness, etc.), which supports Bernauer Newton's (1984) findings. "The image seems to be a basic pre-verbal component of our species that has survival value."

Margolis, Clorinda G. (1984). Hypnosis and cancer: An overview of the field. [Unpublished manuscript]

#### NOTES

This paper apparently was presented either at American Psychological Association or the Society for Clinical and Experimental Hypnosis. The author has two tables summarizing types of cancer associated with pain, and pain syndromes in patients with cancer.

Table 3 is a list of Erickson's procedures for Controlling Pain: --Direct hypnotic suggestion for total abolition of pain --Permissive indirect hypnotic abolition of pain

--Amnesia --Hypnotic analgesia --Hypnotic anesthesia --Hypnotic replacement or substitution of sensations --Hypnotic displacement of pain --Hypnotic dissociation  
Time and body disorientation --Hypnotic reinterpretation of pain experience --  
Hypnotic time distortion --Hypnotic suggestions effecting a diminution of pain  
(from Rossi, Ed., *Innovative Hypnotherapy*, Vol. IV of the Collected Papers of  
Milton H. Erickson on Hypnosis, 1980)

Table 4 is a list of Sacerdote's Procedures for Controlling Pain: --Teleological  
approach --Reinterpretation of signals --Associating and conditioning --Dissociation  
--Simile of electric wiring --Development of amnesia --Positive and negative  
hallucinations --Induction of dreams --Time and space distortion, and elicitation of  
mystical states --Relaxation techniques --Glove anesthesia and analgesia --Pain  
management through control of autonomic functions  
(from Barber & Adrian, Eds., *Psychological Approaches to the Management of  
Pain*, 1982)

The author describes cases treated by Erickson (one in which he used 12 hours of  
training, in one session, reported in Rossi's 1980 edited writings of Milton Erickson,  
Vol. IV) and by Sacerdote.

Author notes that the Hilgards, in *Hypnosis in the Relief of Pain* (1975), describe  
the use of hypnosis in treating patients with cancer pain. In all three--Butler (1954),  
Lea, Ware, and Monroe (1960), and a larger study by Cangello (1961), both success  
and failure are reported. As the Hilgards point out, about 50% of the patients  
studied were able to reduce their pain--a percentage the Hilgards remark is rather  
close to what successful clinicians tend to report.

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the  
systematic desensitization of anticipatory nausea and vomiting in cancer patients.  
*Journal of Consulting and Clinical Psychology*, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an  
effective treatment for the nausea and vomiting experienced by approximately 25%  
of cancer patients in anticipation of chemotherapeutic treatments-- could be learned  
from a prerecorded audiotape prior to meeting a psychologist for treatment. 10  
cancer patients who had developed anticipatory nausea or vomiting were assigned  
to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss  
assigned to the tape-relaxation group experienced nausea while listening to the  
prerecorded audiotape, while none of the patients in the live-relaxation group  
reported nausea when subsequently listening to an audiotape made during the live  
presentation of relaxation.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer  
patients. [Paper] Presented at the annual meeting of the Society for Clinical and  
Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization  
method, with the additional factor that they were hypnotized for the visualization.  
In a long term follow-up study, those patients who were treated for at least 6 months

and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

**Petrucci, Ralph J.; Harwick, Robert D. (1984). Role of the psychologist on a radical head and neck surgical service team. *Professional Psychology: Research and Practice*, 15, 538-543.**

Surgery for head and neck cancers often produces disfiguration and a sense of hopelessness in patients, and it may also results in a lack of self-acceptance, depression, and covert hostility. Psychologists are often called on to help such patients deal with drug abuse, suicidal behaviors, strong characterological disorders, noncompliance, and overall adjustment. Behavioral management and anxiety-reduction strategies, such as relaxation exercises and visual imagery, are often helpful. (17 ref).

**Gardner, G. Gail; Lubner, Alison (1982-83). Hypnotherapy for children with cancer: Some current issues. *American Journal of Clinical Hypnosis*, 25 (2-3), 135-142.**

The authors review some of the problems that now face clinicians and researchers working in the field of hypnotherapy for pediatric cancer patients. These include (1) understanding and dealing with resistance and refusal, (2) developing preventive hypnotherapeutic strategies for children who will survive cancer, and (3) carrying out research that clarifies the value of hypnotherapy with childhood cancer patients and elucidates when and how specific approaches can best be utilized.

**Hall, Marian D. (1982-83). Using relaxation imagery with children with malignancies: A developmental perspective. *American Journal of Clinical Hypnosis*, 25 (2-3), 143-149.**

Developmental theory has been the foundation for this program of relaxation-imagery therapy with its goal of increasing the efficacy of immune mechanisms, thus increasing the survival rate of children with malignancies and/or improving the comfort and quality of their lives. Three basis constructs--the impact of social stress, the positive development of attachment and the negative effects of separation and loss, and the stages of concept formation relating to the functioning of the human body, the processes of disease and death--are basic approaches to the use of imagery-relaxation as an integral part of a comprehensive care plan.

**Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. *International Journal of Clinical and Experimental Hypnosis*, 30, 417-442.**

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5 more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. *American Journal of Clinical Hypnosis*, 25 (2-3), 173-176

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. *Journal of Consulting and Clinical Psychology*, 50, 14-19.]

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched-pairs signed ranks test) were found in nausea ( $Z = 2.37$ ,  $p < .02$ ), vomiting ( $Z = 2.52$ ,  $p < .01$ ), bother ( $Z = 2.24$ ,  $p < .02$ ), and disruption of

activities ( $Z = 2.38, p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

Lyles, Jeanne Naramore; Burish, Thomas G.; Krozely, Mary G.; Oldham, Robert K. (1982). Efficacy of relaxation training and guided imagery in reducing the aversiveness of cancer chemotherapy. *Journal of Consulting and Clinical Psychology, 50*, 509-524.

Fifty cancer patients receiving chemotherapy, 25 by push injection and 25 by drip infusion, were assigned to one of three conditions for their chemotherapy treatments: (a) progressive muscle-relaxation training plus guided-relaxation imagery; (b) therapist control, in which a therapist was present to provide support and encouragement but did not provide systematic relaxation training; and (c) no-treatment control. Patients participated in one pretraining, three training, and one follow-up session. Results indicated that during the training sessions, patients who received relaxation training, relative to patients in either of the other two conditions, (a) reported feeling significantly less anxious and nauseated during chemotherapy, (b) showed significantly less physiological arousal (as measured by pulse rate and systolic blood pressure) and reported less anxiety and depression immediately after chemotherapy, and (c) reported significantly less severe and less protracted nausea at home following chemotherapy. The attending nurses' observations during chemotherapy confirmed patient reports. In general, patients in the therapist control condition and the no-treatment control condition did not differ significantly from each other. The differences among conditions generally remained significant during the follow-up session. The data suggest that relaxation training may be an effective procedure for helping cancer patients cope with the adverse effects of their chemotherapy.

Margolis, Clorinda G. (1982-83). Hypnotic imagery with cancer patients. *American Journal of Clinical Hypnosis, 25* (2-3), 128-134.

This is a clinical report on the use of hypnotic imagery to reduce pain and discomfort in cancer patients. Deep relaxation, ego strengthening, imagery, and suggestions for changes in perception and awareness are the principal techniques used to reduce suffering and to produce a sense of well-being among cancer patients treated at different stages of disease. Hypnotic intervention involving six patients is described, with emphasis on the ease with which positive transference is established and the effectiveness with which it may be used to enhance therapeutic effects.

Meares, Ainslie (1982-83). A form of intensive meditation associated with the regression of cancer. *American Journal of Clinical Hypnosis, 25* (2-3), 114-121.

Elsewhere I have reported a number of cases of regression of cancer following intensive meditation. This type of meditation is characterized by extreme simplicity and stillness of the mind, and so differs from other forms using a mantra, awareness of breathing or visualization of the healing process. Any logical verbal

communication by the therapist stimulates intellectual activity in the patient. So communication is by un verbalized phonation, reassuring words and phrases, and most important, by touch. There follows a profound reduction in the patient's level of anxiety which flows on into his daily life. The non-verbal nature of the meditative experience initiates a non-verbal philosophical understanding of other areas of life.

Oliver, George W. (1982-83). A cancer patient and her family: A case study. *American Journal of Clinical Hypnosis*, 25 (2-3), 156-160.

In recent years, increasing numbers of mental health workers have been attempting to use techniques of psychotherapy to influence the course of malignant disease. This paper reviews in detail the course of treatment of one female patient with an inoperable malignancy and conveys a sense of the clinical experience of working intensively with a cancer patient and her family. It shows the complex levels of interaction within the patient herself, between the patient and her family, and between the therapist and her family and within the therapist himself during different phases of the therapeutic journey.

Redd, William H.; Andrykowski, Michael A. (1982). Behavioral intervention in cancer treatment: Controlling aversion reactions to chemotherapy. *Journal of Consulting and Clinical Psychology*, 50 (6), 1018-1029.

During the protracted course of cancer chemotherapy, approximately 25% of patients develop aversion reactions to treatment by becoming nauseated and/or vomiting before their chemotherapy treatments. This phenomenon has been conceptualized as a result of respondent conditioning. Since commonly used antiemetic drugs do not reliably control anticipatory nausea/emesis, behavioral techniques of control have been studied. They include hypnosis used in conjunction with guided-relaxation imagery, progressive muscle relaxation with guided imagery, and systematic desensitization. (67 ref)

Redd, William H.; Andresen, Graciela V.; Minagawa, Rahn Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. *Journal of Consulting and Clinical Psychology*, 50 (1), 14-19.

#### NOTES

Deep muscle relaxation hypnosis controlled nausea, gagging, retching in all cases. Anticipatory emesis recurred when hypnosis was not used. During subsequent sessions in which hypnosis was reinstated, anticipatory emesis was again controlled.

Redd, William H.; Rosenberger, Patricia H.; Hendler, Cobie S. (1982-83). Controlling chemotherapy side effects. *American Journal of Clinical Hypnosis*, 25 (2-3), 161-172.

Severe nausea and vomiting are commonly experienced by cancer patients after receiving chemotherapy treatments. Moreover, approximately 25% of these patients develop conditioned aversions to treatment and become nauseated before they receive their chemotherapy injections. The use of deep muscle relaxation hypnosis in conjunction with guided imagery to control pre- and post-chemotherapy nausea and emesis is discussed. Theoretical and clinical issues raised by this application of hypnosis in cancer treatment are also addressed.

Rosenberg, Simon W. (1982-83). Hypnosis in cancer care: Imagery to enhance the control of the physiological and psychological 'side-effects' of cancer therapy. *American Journal of Clinical Hypnosis*, 25 (2-3), 122-127.

The use of surgery, radiation, and chemotherapy has resulted in increased control of malignancy and prolonged survival for cancer patients. These modalities also carry significant morbidity. Normal physiological homeostasis is often altered by both the neoplasm and its treatment. The diagnosis, treatment, and social stigma of cancer exact profound psychological impact. Hypnosis effectively can control the range of both physiological and psychological 'side-effects' of cancer and its therapy. This paper will delineate those effects of hypnosis of proven value to the cancer patient. Incorporation of images into each phase of a hypnosis session will be demonstrated with an actual case history and annotated transcript. Imagery as a therapeutic modality will be discussed in general, and specific suggestions and images will be given.

Shapiro, Arnold (1982-83). Psychotherapy as adjunct treatment for cancer patients. *American Journal of Clinical Hypnosis*, 25 (2-3), 150-155

During the past ten years psychotherapy as adjunct treatment for cancer patients has become increasingly common. The use of hypnosis as an integral part of that treatment has also burgeoned. This report will follow the progress of two cancer patients in psychotherapy. While each is highly individual, the commonalities which allow treatment to be systematic will be quite apparent. The ability to minimize pain and discomfort, the ability to keep the white cell count high despite ongoing chemotherapy, and augmenting the ability of the body's immune system to fight the disease are utilized by both of the patients. All of the above are accomplished through the use of visual imagery in the trance state. Visual imagery is also used to reach feelings which patients are often unable to verbalize, and of which they often claim to be unaware. Other aspects of therapy such as the gradual shift from despair to hope and even confidence, and the development of more assertive behavior are discussed.

Reviews research on psychophysiology of cancer, effect of stress on host resistance, cancer prediction from personality traits, psychological theories of cancer aetiology, and psychological characteristics of patients with different types of neoplasms. The hypnotherapy of cancer patients is outlined in terms of its effect upon the

malignancy, relief of discomfort, and psyche of the cancer patient. Recommends direction of hypnotherapeutic treatment of cancer patients.

#### NOTES

"In summary, the radical treatment of malignancies presents a number of hypnotherapeutic opportunities. Not only can hypnotherapy help alleviate disease-related symptoms, but it can also limit some of the distressing side-effects of the treatments. The patient can gain needed hope by having the impact of his disease lessened. The hypnotherapeutic relationship also provides a useful base from which to deal with the issues of terminal illness, of death, and of dying.

"Implications for the future basically revolve around the issue of supportive hypnotherapy during radical treatment. As the use of chemotherapy of malignancies increases, there will be many opportunities for successful hypnotherapeutic interventions" (pp. 7-8).

Gardner, Gail G. (1976). Hypnosis and mastery: Clinical contributions and directions for research. *International Journal of Clinical and Experimental Hypnosis*, 24 (3), 202-214.

This paper explores the concept of mastery in relation to hypnotherapy by pulling together clinical observations and suggesting directions for research. It is suggested that a sense of mastery may enhance the effectiveness of hypnosis, either by facilitating induction, or by strengthening hypnotherapeutic suggestions, or by maintaining hypnotherapeutic gains. Moreover, the question is raised as to whether hypnotherapy, as compared with other psychotherapeutic approaches, better facilitates the development of a sense of mastery.

Clawson, T. A.; Swade, R. H. (1975). The hypnotic control of blood flow and pain: The cure of warts and the potential for the use of hypnosis in the treatment of cancer. *American Journal of Clinical Hypnosis*, 17 (3), 160-169.

Case histories show that hypnosis can control massive bleeding and pain, and it can remove warts, probably by stopping blood flow to them. We propose that blood flow to cancerous tumors can likewise be controlled, which could destroy them outright, or which control could be a useful adjunct to chemo- or radio-therapy

Sacerdote, Paul (1970). Theory and practice of pain control in malignancy and other protracted or recurring painful illnesses. *International Journal of Clinical and Experimental Hypnosis*, 18 (3), 160-180.

Recent neuroanatomical and neurophysiological experimental data suggest absence or presence of pain and changes in pain intensity as expressions of the balance between sensory (peripheral) and central (centrifugal) inputs at synaptic stations. Psychological activities by contributing to the centrifugal input influence

conduction, transduction, and perception of pain stimuli. Hypnotically induced analgesia and anesthesia are therefore acceptable as neurophysiological realities. Methods for hypnotic alterations of pain based upon these premises are described utilizing neurophysiological mechanisms, psychodynamic changes, establishment of new behavioral patterns, or changes in time-space concepts and percepts. Case presentations illustrate some of these multiple psychological and physiological approaches to pain control. (Spanish & German summaries) (28 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. *American Journal of Clinical Hypnosis*, 5 (4), 248-255.

#### NOTES

"Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).

Cangello, V. W. (1961). The use of hypnotic suggestion for pain relief in malignant disease. *International Journal of Clinical and Experimental Hypnosis*, 9, 17-22.

Using hypnotic suggestion, pain relief was attempted in 22 cases. 13 of these patients showed a decrease in narcotic requirements. Duration of effectiveness was from 1 week to 4 1/2 months. It is concluded that this method should be tried before resorting to either chemical or surgical procedures since it is relatively simple to perform, has no harmful complications, and is not unduly time consuming. From *Psyc Abstracts* 36:02:2II17C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## NOTES

"At the present time it appears that there are several problems in which hypnosis is an acceptable and perhaps preferable method of anesthesia. Some of these problems include cases in which chemical analgesics and depressants are contraindicated or dangerous because of respiratory or cardiac disease. It may be indicated with patients who have demonstrated sensitivity to certain local anesthetics. Hypno-anesthesia may be used in cases in which repeated chemical anesthesia tends to have a debilitating effect on the patient with an already disturbed physiology, such as patients with thermal injuries who require multiple repeated debridements and dressings. Hypnosis may also obviate the debilitating effects of prolonged chemical anesthesia" (p. 156).

Stokvis, B. (1956). The application of hypnosis in organic diseases. *Journal of Clinical and Experimental Hypnosis*, 4 (2), 79-82.

## SUMMARY

Hypnotherapy, applied as a symptomatic treatment, is especially indicated in those cases of organic diseases in which the patient has neurotically elaborated his physical suffering. In cases presenting neither etiological nor secondary psychic factors one may try to improve the patient's condition by hypnotic treatment. Description of a case (hypnotherapy in a woman with carcinoma mammae)[sic]. The writer's lack of appreciation of hypnotherapy in organic diseases does not include the treatment of diseases which are definitely psychosomatically determined" (pp. 81-82).

## CANCER

Hendler CS, Redd WH Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions *Behav Ther.* 1986;17(1):2-13 One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled 'hypnosis', 'relaxation', or 'passive relaxation with guided imagery'. The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled 'hypnosis' were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Hockenberry-Eaton MJ. Cotanch PH. Evaluation of a child's perceived self-competence during treatment for cancer. *Journal of Pediatric Oncology Nursing* 1989;6(3):55-62 The purpose of this study was to evaluate the effect of self-hypnosis on the perceived self-competence of children undergoing treatment for cancer and to determine longitudinal differences in perception of self-competence over time. Twenty-two children were randomized into an experimental group (taught self-hypnosis) and a control group (given standard care). Data were collected using the Harter Perceived Self-Competence Profile (HPSCP) during four courses of chemotherapy. A decrease in mean scores for the control group was found compared with the hypnosis group, which showed an increase in mean scores in five of six domains. Both groups showed a statistically significant increase in the scholastic cognitive domain and social acceptance domain from the time of diagnosis compared with the second test period. Ten children had a visible physical disability. These children were found to have significant decreases in the domains of athletic competence, social acceptance, and global self-worth. Decreases remained significant throughout all test periods in the athletic competence domain for the children with a visible physical disability. This study is unique in that the researchers evaluated children's perception of self-competence over time. These findings support previous studies and identify the need for nurses to become actively involved in helping children develop effective coping skills during chemotherapy for cancer.

Jacknow DS. Tschann JM. Link MP. Boyce WT. Hypnosis in the prevention of chemotherapy-related nausea and vomiting in children: a prospective study. *Journal of Developmental & Behavioral Pediatrics* 1994;15(4):258-64 To study the effectiveness of hypnosis for decreasing antiemetic medication usage and treatment of chemotherapy-related nausea and vomiting in children with cancer, we conducted a prospective, randomized, and controlled single-blind trial in 20 patients receiving chemotherapy for treatment of cancer. Patients were randomized to either hypnosis or standard treatment. The hypnosis group used hypnosis as primary treatment for nausea and vomiting, using antiemetic medication on a supplemental (p.r.n.) basis only, whereas the control group received a standardized antiemetic medication regimen. Nausea, vomiting, and p.r.n. antiemetic medication usage were measured during the first two courses of chemotherapy. Anticipatory nausea and vomiting were assessed at 1 to 2 and 4 to 6 months postdiagnosis. Patients in the hypnosis group used less p.r.n antiemetic medication than control subjects during both the first ( $p < .04$ ) and second course of chemotherapy ( $p < .02$ ). The two groups did not differ in severity of nausea and vomiting. The hypnosis group experienced less anticipatory nausea than the control group at 1 to 2 months postdiagnosis ( $p < .02$ ). Results suggest self-hypnosis is effective for decreasing antiemetic medication usage and for reducing anticipatory nausea during chemotherapy.

Kuttner L. Bowman M. Teasdale M. Psychological treatment of distress, pain, and anxiety for young children with cancer. *Journal of Developmental & Behavioral Pediatrics* 1988;9(6):374-81 The study compared the efficacy of hypnotic "imaginative involvement," behavioral distraction and standard medical practice

for the reduction of pain, distress and anxiety in children with leukemia, during bone marrow aspirations. Two age groups of children, 3 to 6, and 7 to 10 years, were randomized to the three treatment groups. Two intervention sessions were given. At first intervention, observational ratings of distress indicated significant reductions for the younger group in the hypnotic treatment, whereas the older group achieved significant reductions in both treatment conditions for observer-rated pain and anxiety. At second intervention, all groups showed reductions and the control group appeared to be contaminated. The hypnotic method with its internal focus had an all-or-none effect, whereas distraction appeared to require that coping skills be learned over one session or more.

Rapkin DA, Straubing M, Holroyd JC. Guided imagery, hypnosis and recovery from head and neck cancer surgery: an exploratory study. *International Journal of Clinical & Experimental Hypnosis* 1991;39(4):215-26 The value of a brief, preoperative hypnosis experience was explored with a sample of 36 head and neck cancer surgery patients. 15 patients volunteered for the experimental hypnosis intervention. 21 patients who received usual care (no hypnosis) were followed through their hospital charts and were used as a comparison group. Hypnotic intervention and usual care groups were comparable in terms of relevant demographic variables. Postoperative hospitalizations for the hypnotic intervention group were significantly shorter than for the usual care group. Within the hypnotic intervention group, hypnotizability was negatively correlated with surgical complications and there was a trend toward a negative correlation between hypnotizability and blood loss during surgery. Findings suggest that imagery-hypnosis may be prophylactic, benefitting patients by reducing the probability of postoperative complications and thereby keeping hospital stay within the expected range. Recommendations are presented for a controlled, randomized, clinical trial with a sufficiently large sample to provide the opportunity for statistical analysis with appropriate power.

Richardson MA, Post-White J, Grimm EA, Moye LA, Singletary SE, Justice B. Coping, life attitudes, and immune responses to imagery and group support after breast cancer treatment. *Alternative Therapies in Health and Medicine* 1997;3(5):62-70 **BACKGROUND:** The pilot study used clinical trial methodology to differentiate the effects of imagery and support on coping, life attitudes, immune function, quality of life, and emotional well-being after breast cancer. **METHODS:** Women (N = 47) who completed treatment for primary breast cancer, excluding stage IV, were randomly assigned to standard care (n = 15) or six weekly support (n = 16) or imagery (n = 16) sessions. Self-report measures included Ways of Coping-Cancer, Life Attitude Profile, Quality of Life (FACT-B), Profile of Mood States, and Functional Support. Immune measures included natural killer cell activity, plasma neopterin, interferon-gamma, interleukins 1 alpha, 1 beta, and 2, and beta-endorphin levels. Differences between groups over time were tested using general linear models, adjusted for pretest score and covariates (age, stage, and months posttreatment). **RESULTS:** For all women, interferon-gamma increased, neopterin decreased, quality of life improved, and natural killer activity remained unchanged.

Compared with standard care, both interventions improved coping skills (seeking support) and perceived social support, and tended to enhance meaning in life. Support boosted overall coping and death acceptance. When comparing imagery with support, imagery participants tended to have less stress, increased vigor, and improved functional and social quality of life. **CONCLUSION:** Although imagery reduced stress and improved quality of life, both imagery and support improved coping, attitudes, and perception of support. The clinical implications of these changes warrant further testing.

Sellick SM, Zaza C Critical review of 5 nonpharmacologic strategies for managing cancer pain *Cancer Prev Control* 1998 Feb;2(1):7-14 **Purpose:** Health care professionals at 2 Ontario cancer centres were surveyed to determine their familiarity with, perceptions of and interest in learning more about nonpharmacological strategies for the management of cancer pain. Evidence-based education sessions were subsequently developed for the 5 strategies in which participants were most interested. This article presents the results of critical literature reviews concerning the effectiveness of the 5 strategies: acupuncture, massage therapy, hypnosis, therapeutic touch and biofeedback. **Methods:** The databases MEDLINE (1966 to June 1997) CINAHL (1982 to June 1997) and PsychoINFO Lit (1980 to June 1979) were searched systematically for randomized controlled trials (RCTs) of the 5 nonpharmacologic strategies. The authors' personal files and reference lists of relevant papers and main texts were also searched. The quality of the trials was reviewed according to established criteria. **Results:** The search yielded 1 RCT of acupuncture, 1 of massage therapy and 6 of hypnosis. The studies of hypnosis suggested that there is much support for its use in the management of cancer pain. The evidence was either lacking or less clear for the other therapies examined. **Conclusion:** Because patients use a wide variety of nonpharmacologic strategies regardless of their effectiveness, clinicians need to be familiar with available research and able to discuss those strategies for which the evidence is strong, weak or nonexistent. More research on the effectiveness of nonpharmacologic strategies for pain management is needed.

Sellick SM. Zaza C. Critical review of 5 nonpharmacologic strategies for managing cancer pain. *Cancer Prevention & Control* 1998;2(1):7-14 **PURPOSE:** Health care professionals at 2 Ontario cancer centres were surveyed to determine their familiarity with, perceptions of and interest in learning more about nonpharmacologic strategies for the management of cancer pain. Evidence-based education sessions were subsequently developed for the 5 strategies in which participants were most interested. This article presents the results of critical literature reviews concerning the effectiveness of the 5 strategies: acupuncture, massage therapy, hypnosis, therapeutic touch and biofeedback. **METHODS:** The databases MEDLINE (1966 to June 1997), CINAHL (1982 to June 1997) and PsychoINFO Lit (1980 to June 1997) were searched systematically for randomized controlled trials (RCTs) of the 5 nonpharmacologic strategies. The authors' personal files and reference lists of relevant papers and main texts were also searched. The quality of the trials was reviewed according to established criteria.

**RESULTS:** The search yielded 1 RCT of acupuncture, 1 of massage therapy and 6 of hypnosis. The studies of hypnosis suggested that there is much support for its use in the management of cancer pain. The evidence was either lacking or less clear for the other therapies examined. **CONCLUSION:** Because patients use a wide variety of nonpharmacologic strategies regardless of their effectiveness, clinicians need to be familiar with available research and able to discuss those strategies for which the evidence is strong, weak or nonexistent. More research on the effectiveness of nonpharmacologic strategies for pain management is needed. [References: 35]

## **CANCER/ONCOLOGY**

**1984**

Achterberg, J. (1984, October). Cancer, immunology, psychological factors, and imagery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

### **NOTES**

Author developed a way of scoring imagery (which will be published in Imagery and Disease.). In terms of predicting who will die and who will survive, the content of the images doesn't seem to be as important as the quality (strength, vividness, etc.), which supports Bernauer Newton's (1984) findings. "The image seems to be a basic pre-verbal component of our species that has survival value."

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**1992**

Barinaga, Marcia (1992). Giving personal magnetism a whole new meaning. Science, 256, 967.

### **NOTES**

Cited in Noetic Sciences Review, Autumn, 1992. This geobiologist has discovered that the human brain contains billions of tiny magnets--some 7 billion of them, each so small that their total weight is only one/millionth of an ounce. In magnetite-containing bacteria, the crystals are used as a compass needle which orients the bacteria with respect to the Earth's magnetic field. In birds, bees, and fish, where concentration of the mineral is a few orders of magnitude higher than he found in the human brain, it is used as a navigational aid. He plays down the possible

connection to weak electromagnetic fields that supposedly cause cancer (unless fields could induce very weak electrical fields inside the cells, disrupting cellular function). Other possible interpretations: a means for cells to store excess iron, or part of a magnetic sensing system, or a vestigial system left over in evolution from when we were more directly connected with the earth's magnetic field and may have relied on it for navigation or migratory movement.

Bayot, A.; Capafons, A.; Cardega, E. (1997). Emotional self-regulation therapy: A new and efficacious treatment for smoking.. American Journal of Clinical Hypnosis, **40** (2), 146-156.

We described emotional self-regulation therapy, a recently-developed suggestion technique for the treatment of smoking, and present data attesting to its efficacy. Of the 38 individuals who completed treatment, 82% (47% of the initial sample) stopped smoking altogether and 13% (8% of the initial sample) reduced their smoking. A follow-up at 6 months showed that 66% (38% of the initial sample) of those who had completed the treatment remained abstinent and reported minimal withdrawal symptoms or weight gain. In a no-treatment comparison group, only 8% reduced their smoking or became abstinent.

1991

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, **59** (4), 518-525.  
Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, **59** (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

Cangello, V. W. (1961). The use of hypnotic suggestion for pain relief in malignant disease. International Journal of Clinical and Experimental Hypnosis, **9**, 17-22.

Using hypnotic suggestion, pain relief was attempted in 22 cases. 13 of these patients showed a decrease in narcotic requirements. Duration of effectiveness was from 1

week to 4 1/2 months. It is concluded that this method should be tried before resorting to either chemical or surgical procedures since it is relatively simple to perform, has no harmful complications, and is not unduly time consuming. From Psyc Abstracts 36:02:2II17C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

**ABSTRACT:** This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

Clawson, T. A.; Swade, R. H. (1975). The hypnotic control of blood flow and pain: The cure of warts and the potential for the use of hypnosis in the treatment of cancer. American Journal of Clinical Hypnosis, 17 (3), 160-169.

Case histories show that hypnosis can control massive bleeding and pain, and it can remove warts, probably by stopping blood flow to them. We propose that blood flow to cancerous tumors can likewise be controlled, which could destroy them outright, or which control could be a useful adjunct to chemo- or radio-therapy.

Crasilneck, Harold B.; Hall, James A. (1962). The use of hypnosis with unconscious patients. International Journal of Clinical and Experimental Hypnosis, 10 (3), 141-144.

8 of 10 patients dying of cancer were found to continue a simple motor response to a hypnotic command, even though they revealed no other evidence of interaction with the environment and were considered unconscious by their physicians. Certain theoretical considerations are mentioned. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Crasilneck, Harold B.; Jenkins, M. T. (1958). Further studies in the use of hypnosis as a method of anesthesia. Journal of Clinical and Experimental Hypnosis, 6 (3), 152-158.

#### NOTES

"At the present time it appears that there are several problems in which hypnosis is an acceptable and perhaps preferable method of anesthesia. Some of these problems include cases in which chemical analgesics and depressants are contraindicated or

dangerous because of respiratory or cardiac disease. It may be indicated with patients who have demonstrated sensitivity to certain local anesthetics. Hypno-anesthesia may be used in cases in which repeated chemical anesthesia tends to have a debilitating effect on the patient with an already disturbed physiology, such as patients with thermal injuries who require multiple repeated debridements and dressings. Hypnosis may also obviate the debilitating effects of prolonged chemical anesthesia" (p. 156).

Dempster, C. R.; Balson, P.; Whalen, B. T. (1976). Supportive hypnotherapy during the radical treatment of malignancies. International Journal of Clinical and Experimental Hypnosis, 24, 1-9.

#### NOTES

"In summary, the radical treatment of malignancies presents a number of hypnotherapeutic opportunities. Not only can hypnotherapy help alleviate disease-related symptoms, but it can also limit some of the distressing side-effects of the treatments. The patient can gain needed hope by having the impact of his disease lessened. The hypnotherapeutic relationship also provides a useful base from which to deal with the issues of terminal illness, of death, and of dying.

"Implications for the future basically revolve around the issue of supportive hypnotherapy during radical treatment. As the use of chemotherapy of malignancies increases, there will be many opportunities for successful hypnotherapeutic interventions" (pp. 7-8).

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

#### NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible

to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

Gardner, G. Gail; Lubner, Alison (1982-83). Hypnotherapy for children with cancer: Some current issues. American Journal of Clinical Hypnosis, 25 (2-3), 135-142.

The authors review some of the problems that now face clinicians and researchers working in the field of hypnotherapy for pediatric cancer patients. These include (1) understanding and dealing with resistance and refusal, (2) developing preventive hypnotherapeutic strategies for children who will survive cancer, and (3) carrying out research that clarifies the value of hypnotherapy with childhood cancer patients and elucidates when and how specific approaches can best be utilized.

Gardner, Gail G. (1976). Hypnosis and mastery: Clinical contributions and directions for research. International Journal of Clinical and Experimental Hypnosis, 24 (3), 202-214.

This paper explores the concept of mastery in relation to hypnotherapy by pulling together clinical observations and suggesting directions for research. It is suggested that a sense of mastery may enhance the effectiveness of hypnosis, either by facilitating induction, or by strengthening hypnotherapeutic suggestions, or by maintaining hypnotherapeutic gains. Moreover, the question is raised as to whether hypnotherapy, as compared with other psychotherapeutic approaches, better facilitates the development of a sense of mastery.

Grant, Guy (1977). The psychophysiology and hypnotherapeutic management of cancer. Australian Journal of Clinical Hypnosis, 5, 35-49.

Reviews research on psychophysiology of cancer, effect of stress on host resistance, cancer prediction from personality traits, psychological theories of cancer aetiology, and psychological characteristics of patients with different types of neoplasms. The hypnotherapy of cancer patients is outlined in terms of its effect upon the malignancy, relief of discomfort, and psyche of the cancer patient. Recommends direction of hypnotherapeutic treatment of cancer patients.

Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. Behaviour Research and Therapy, 29, 17-31.

#### NOTES

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in Lancet have important implications for health care.

Hall, Howard R. (1982-83). Hypnosis and the immune system: A review with implications for cancer and the psychology of healing. American Journal of Clinical Hypnosis, 25 (2-3), 92-103.

This paper presents a review of the body's immune system as an introduction to a discussion of the implications of those processes for cancer and the healing mechanisms.

#### NOTES

Presents a review of the body's immune system as an introduction to a discussion of the implications of those processes for cancer and the healing mechanisms.

Hall, Marian D. (1982-83). Using relaxation imagery with children with malignancies: A developmental perspective. American Journal of Clinical Hypnosis, 25 (2-3), 143-149.

Developmental theory has been the foundation for this program of relaxation-imagery therapy with its goal of increasing the efficacy of immune mechanisms, thus increasing the survival rate of children with malignancies and/or improving the comfort and quality of their lives. Three basis constructs--the impact of social stress, the positive development of attachment and the negative effects of separation and loss, and the stages of concept formation relating to the functioning of the human body, the processes of disease and death--are basic approaches to the use of imagery-relaxation as an integral part of a comprehensive care plan.

Hallaji, J, Ja'far (1962). Hypnotherapeutic techniques in a central Asian community. International Journal of Clinical and Experimental Hypnosis, 10, 271-274. (Abstracted in Index Medicus, 63, Mar. S-543)

The semimonastic Sufi practitioners of Afganistan treat physical as well as psychosomatic disorders by a method which is reminiscent of Mesmerism, and they claim cures even for illnesses such as tuberculosis and cancer. A treatment session for 18 patients is described. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Harper, Gary W. (1999). A developmentally sensitive approach to clinical hypnosis for chronically and terminally ill adolescents. American Journal of Clinical Hypnosis, 42 (1), 50-60.

Adolescents who suffer from terminal and/or chronic medical illnesses must face difficult developmental issues coupled with increased burdens of physical discomfort and uncertainty about survival. Clinical hypnosis is one technique that can be used to help these individuals gain a sense of comfort and control over their lives. I describe the use of a developmentally sensitive hypnotherapeutic intervention for chronically and terminally ill adolescents. I have used the technique for the reduction of various types of physical and psychological discomfort secondary to a range of medical problems such as cancer, end-stage renal disease, organ transplant, and HIV disease. The treatment focuses on the use of personalized procedures that attempt to increase perceptions of control through interactive formats. Movement through a personally intriguing journey is used as a metaphor for controlling and moving away from discomfort. I also present three case examples as well as general treatment recommendations for clinical use.

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. International Journal of Clinical and Experimental Hypnosis, 30, 417-442.

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5 more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

Holroyd, Jean (1996). Hypnosis treatment of clinical pain: Understanding why hypnosis is useful. International Journal of Clinical and Experimental Hypnosis, 44 (1), 33-51.

Clinical and experimental research literature indicates hypnosis is very useful for severe and persistent pain, yet reviews suggest hypnosis is not widely used. To encourage more widespread clinical application, the author reviews recent controlled clinical studies in which hypnosis compares favorably with other interventions; links advances in understanding endogenous pain modulation to a neurophysiologic view of hypnosis and hypnoanalgesia; relates the neurophysiology

of hypnoanalgesia to management of chronic pain; challenges the view that hypnotic pain control is only for the highly hypnotizable patient; and raises issues about how people learn to control pain with hypnosis. Training in hypnotic analgesia may usefully enhance nervous system inhibitory processes that attenuate pain.

#### NOTES

Hypnosis has been more effective for pain management than other cognitive behavioral interventions in studies of fibromyalgia (Haanen, Hoenderdos, Van Romunde, Hop, Malle, Terwiel, & Hekster, 1991); burn treatment (Patterson, Everett, Burns, & Marvin, 1992); and cancer bone marrow transplant procedures (Syrjala, Cummings, & Donaldson, 1992). Central nervous system gating or downward modulation of pain impulses may account for hypnotic pain control. "Hypnosis enables both amplification and attenuation of cortical response subsequent to sensory registration and prior to consciousness, depending on whether suggestions are for increasing or decreasing awareness (Blum & Barbour, 1979)" (p. 36). This type of inhibition may even be observed in the peripheral nervous system (see Hernandez-Peon, Dittborn, Borlone, & Davidovich, 1959/1960; Sharev & Tal, 1989; Kiernan, Dane, Phillips, & Price, 1995). Work by Helen Crawford (1994) suggests that frontal and limbic areas of the brain are involved in inhibitory patterns of brain activity, and that generation of theta EEG rhythms by lower centers is associated with the suppression of awareness of pain.

Some very low hypnotizable people have been able to learn to control pain with hypnosis, suggesting that it is a skill that can be learned. However, few investigations of improvement of hypnoanalgesia were located. Rather, one must generalize from the fact that other kinds of hypnosis skills have been improved using special training programs, such as the Carleton University program developed by Gorassini & Spanos, 1986). Although most research on improving hypnotic response has been based on operant learning principles, a model that incorporates respondent (classical conditioning) principles might be more useful when it comes to understanding the training of a neurophysiological response, such as inhibitory brain patterns associated with hypnoanalgesia. "Historical success with clinical pain, taken together with newer findings in the neurophysiology of hypnosis, indicate that we should be spending more energy investigating how learning may improve hypnotic analgesia" (p. 43). "We should acknowledge that there are advantages to hypnosis beyond those of relaxation, a good placebo, and psychotherapy. ... Responsible care demands that we provide training or practice in hypnotic analgesia when treating pain, and especially whenever a chronic pain patient initially appears to be nonresponsive" (p. 43).

Jay, Susan (1987, October). Hypnotic susceptibility and response to psychological intervention for distress related to painful procedures in leukemic children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

Presented children with a cognitive behavioral intervention package that involved five elements 1. Filmed Modeling (child modeling and talking about it with good coping skills) 2. Positive Reinforcement - trophy 'for doing the best you can,' to change aversive situation to a positive situation 3. Breathing Exercises - 'puff yourself up like a tire' 4. Emotive Imagery/Distraction - super hero image (Superman), or being in a favorite place 5. Behavioral Rehearsal - dollplay, reviewing the procedure with medical equipment.

For Numbers 4 and 5 the therapist would actively guide the procedures; numbers 3, 4 & 5 are hypnotic elements.

Valium had lowered children's distress prior to procedures but not during the procedures. This study involved Valium plus cognitive behavior therapy.

25 Subjects ages 6-12, were measured for hypnotizability

2 groups: (1) Cognitive Behavior Therapy + Valium given just before intervention started, after film ended; (2) Cognitive Behavior Therapy alone.

Dependent Measures: 1. Observation Scale of Behavioral Distress coded every 15 seconds. 2. Faces Scale for Fear (self report) before procedure

Faces Scale for Pain (self report) after procedure 3. Blood pressure

**RESULTS.**

No Significant Differences were found between the two groups (CBT vs CBT + Valium). Pre-Post Analyses: Post intervention scores were significant lower than Pretest on [missed notes]

Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.

This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.

**NOTES**

Lonnie Zelzer, M.D., in a UCLA Hypnosis Seminar lecture in 1992, stated that in pre-treatment with Valium the patients did worse during the procedure, vs no

pretreatment with Valium, because the medicated patients didn't have clarity of attention during the cognitive behavioral learning.

Jones, M. M. (1994). Apnea in postsurgical hypnotherapy of an esophageal cancer patient: A brief communication. International Journal of Clinical and Experimental Hypnosis, 42 (3), 179-183.

Use of clinical hypnosis in the post surgical psychotherapy of an esophageal cancer patient who could not swallow involved reenactment of the successful surgery and producing hallucinations of taste and smell, as well as working through emotions relating to the surgery and her disease. An apnea that occurred in a late phase of the treatment was addressed with the familiar arm pumping technique that had been used as a deepening technique, resulting in the patient's resuming normal breathing. The experience reminds the practitioner of the possible unexpected professional demands when working in a medical environment. It also provides clues as to the underlying psychological mechanisms and their role in successful symptom removal. A 6-year follow-up confirmed the lasting effect of this brief psychotherapy.

Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This

demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

**Kraft, Tom (1992). Counteracting pain in malignant disease by hypnotic techniques: Five case studies. Contemporary Hypnosis, 9, 123-129.**

Five cases of patients suffering from cancer are described in which hypnotic visualization techniques were successfully employed to relieve pain and anxiety. This study supports the view that hypnosis can be an effective tool for pain relief in malignant disease, particularly when traditional methods have been exhausted.

**Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.**

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

**LaClave, Linda J.; Blix, Susanne (1989). Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. International Journal of Clinical and Experimental Hypnosis, 37 (1), 6-14.**

This paper presents the case of a 6.5-year-old girl with malignant astrocytoma of the left brain hemisphere. During the course of her chemotherapy treatment, severe vomiting developed to the degree that on several occasions she became dehydrated. Discontinuation of chemotherapy was being considered when she was referred for hypnotherapy. Despite severe neurological impairments which excluded many traditional techniques, hypnosis was successful in eliminating emesis. Hypnosis was also utilized to decrease pain and to improve sleep patterns. Drawings are presented to help show how this child resolved anxiety associated with treatment and fears surrounding the knowledge of her impending death.

**LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.**

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched- pairs signed ranks test) were found in nausea ( $Z = 2.37, p < .02$ ), vomiting ( $Z = 2.52, p < .01$ ), bother ( $Z = 2.24, p < .02$ ), and disruption of activities ( $Z = 2.38, p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

Levitan, Alexander A. (1985). Hypnotic death rehearsal. American Journal of Clinical Hypnosis, 27 (4), 211-215.

Death rehearsal is a technique developed to help terminally ill patients and their families deal with anxieties about death. It has proven useful in demystifying the dying process by answering the question "What is it like to die?" Patients, who are able to hypnotically experience the death process, learn to deal with both grief and anxiety with the help of the hypnotherapist. - Author's abstract

Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131.

Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

Lioffi, Christina; Hatira, Popi (1999). Clinical hypnosis versus cognitive behavioural training for pain management with pediatric patients undergoing bone marrow aspirations. International Journal of Clinical and Experimental Hypnosis, 47 (2), 104-116.

A randomized controlled trial was conducted to compare the efficacy of clinical hypnosis versus cognitive behavioral (CB) coping skills training in alleviating the pain and distress of 30 pediatric cancer patients (age 5 to 15 years) undergoing bone marrow aspirations. Patients were randomized to one of three groups: hypnosis, a

package of CB coping skills, and no intervention. Patients who received either hypnosis or CB reported less pain and pain-related anxiety than did control patients and less pain and anxiety than at their own baseline. Hypnosis and CB were similarly effective in the relief of pain. Results also indicated that children reported more anxiety and exhibited more behavioral distress in the CB group than in the hypnosis group. It is concluded that hypnosis and CB coping skills are effective in preparing pediatric oncology patients for bone marrow aspiration.

Lyles, Jeanne Naramore; Burish, Thomas G.; Krozely, Mary G.; Oldham, Robert K. (1982). Efficacy of relaxation training and guided imagery in reducing the aversiveness of cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 509-524.

Fifty cancer patients receiving chemotherapy, 25 by push injection and 25 by drip infusion, were assigned to one of three conditions for their chemotherapy treatments: (a) progressive muscle-relaxation training plus guided-relaxation imagery; (b) therapist control, in which a therapist was present to provide support and encouragement but did not provide systematic relaxation training; and (c) no-treatment control. Patients participated in one pretraining, three training, and one follow-up session. Results indicated that during the training sessions, patients who received relaxation training, relative to patients in either of the other two conditions, (a) reported feeling significantly less anxious and nauseated during chemotherapy, (b) showed significantly less physiological arousal (as measured by pulse rate and systolic blood pressure) and reported less anxiety and depression immediately after chemotherapy, and (c) reported significantly less severe and less protracted nausea at home following chemotherapy. The attending nurses' observations during chemotherapy confirmed patient reports. In general, patients in the therapist control condition and the no-treatment control condition did not differ significantly from each other. The differences among conditions generally remained significant during the follow-up session. The data suggest that relaxation training may be an effective procedure for helping cancer patients cope with the adverse effects of their chemotherapy.

Margolis, Clorinda G. (1982-83). Hypnotic imagery with cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 128-134.

This is a clinical report on the use of hypnotic imagery to reduce pain and discomfort in cancer patients. Deep relaxation, ego strengthening, imagery, and suggestions for changes in perception and awareness are the principal techniques used to reduce suffering and to produce a sense of well-being among cancer patients treated at different stages of disease. Hypnotic intervention involving six patients is described, with emphasis on the ease with which positive transference is established and the effectiveness with which it may be used to enhance therapeutic effects.

Margolis, Clorinda G. (1984). Hypnosis and cancer: An overview of the field. [Unpublished manuscript]

## NOTES

This paper apparently was presented either at American Psychological Association or the Society for Clinical and Experimental Hypnosis. The author has two tables summarizing types of cancer associated with pain, and pain syndromes in patients with cancer.

Table 3 is a list of Erickson's procedures for Controlling Pain: --Direct hypnotic suggestion for total abolition of pain --Permissive indirect hypnotic abolition of pain --Amnesia --Hypnotic analgesia --Hypnotic anesthesia --Hypnotic replacement or substitution of sensations --Hypnotic displacement of pain --Hypnotic dissociation Time and body disorientation --Hypnotic reinterpretation of pain experience --Hypnotic time distortion --Hypnotic suggestions effecting a diminution of pain (from Rossi, Ed., *Innovative Hypnotherapy*, Vol. IV of the Collected Papers of Milton H. Erickson on Hypnosis, 1980)

Table 4 is a list of Sacerdote's Procedures for Controlling Pain: --Teleological approach --Reinterpretation of signals --Associating and conditioning --Dissociation --Simile of electric wiring --Development of amnesia --Positive and negative hallucinations --Induction of dreams --Time and space distortion, and elicitation of mystical states --Relaxation techniques --Glove anesthesia and analgesia --Pain management through control of autonomic functions (from Barber & Adrian, Eds., *Psychological Approaches to the Management of Pain*, 1982)

The author describes cases treated by Erickson (one in which he used 12 hours of training, in one session, reported in Rossi's 1980 edited writings of Milton Erickson, Vol. IV) and by Sacerdote.

Author notes that the Hilgards, in *Hypnosis in the Relief of Pain* (1975), describe the use of hypnosis in treating patients with cancer pain. In all three--Butler (1954), Lea, Ware, and Monroe (1960), and a larger study by Cangello (1961), both success and failure are reported. As the Hilgards point out, about 50% of the patients studied were able to reduce their pain--a percentage the Hilgards remark is rather close to what successful clinicians tend to report.

McCue, Peter A. (1991). Key Paper Review: Prophylactic therapy for cancer and coronary heart disease. [Comment/Discussion] .

## NOTES

This is a commentary on two papers by Grossarth-Maticek and Eysenck, in which they report on 'creative novation behaviour therapy' to prevent cancer and heart disease in people with personalities associated with the development of those diseases. Therapy may involve hypnosis and/or relaxation, with suggestions that facilitate modification of unhealthy expectancies. The papers are:

Grossarth-Maticek, R. & Eysenck, H.J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part I - Description of treatment. *Behaviour Research and Therapy* 29, 1-16.

Eysenck, H.J. & Grossarth-Maticek, R. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. *Behaviour Research and Therapy* 29, 1, 17-31.

Meares, Ainslie (1982-83). A form of intensive meditation associated with the regression of cancer. *American Journal of Clinical Hypnosis*, 25 (2-3), 114-121.

Elsewhere I have reported a number of cases of regression of cancer following intensive meditation. This type of meditation is characterized by extreme simplicity and stillness of the mind, and so differs from other forms using a mantra, awareness of breathing or visualization of the healing process. Any logical verbal communication by the therapist stimulates intellectual activity in the patient. So communication is by unverballed phonation, reassuring words and phrases, and most important, by touch. There follows a profound reduction in the patient's level of anxiety which flows on into his daily life. The non-verbal nature of the meditative experience initiates a non-verbal philosophical understanding of other areas of life.

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. *Journal of Consulting and Clinical Psychology*, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization method, with the additional factor that they were hypnotized for the visualization. In a long term follow-up study, those patients who were treated for at least 6 months and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

Newton, Bernauer W. (1982-83). The use of hypnosis in the treatment of cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 104-113.

For nearly eight years, cancer patients have been treated at this outpatient facility using hypnosis and psychotherapy. Basic concepts, assumptions and procedures are presented and the issues and problems encountered are discussed. Results are given as they relate to the three goals of treatment.

Oliver, George W. (1982-83). A cancer patient and her family: A case study. American Journal of Clinical Hypnosis, 25 (2-3), 156-160.

In recent years, increasing numbers of mental health workers have been attempting to use techniques of psychotherapy to influence the course of malignant disease. This paper reviews in detail the course of treatment of one female patient with an inoperable malignancy and conveys a sense of the clinical experience of working intensively with a cancer patient and her family. It shows the complex levels of interaction within the patient herself, between the patient and her family, and between the therapist and her family and within the therapist himself during different phases of the therapeutic journey.

Petrucci, Ralph J.; Harwick, Robert D. (1984). Role of the psychologist on a radical head and neck surgical service team. Professional Psychology: Research and Practice, 15, 538-543.

Surgery for head and neck cancers often produces disfiguration and a sense of hopelessness in patients, and it may also results in a lack of self-acceptance, depression, and covert hostility. Psychologists are often called on to help such patients deal with drug abuse, suicidal behaviors, strong characterological disorders, noncompliance, and overall adjustment. Behavioral management and anxiety-reduction strategies, such as relaxation exercises and visual imagery, are often helpful. (17 ref).

Rapkin, David A.; Straubing, Marsha; Holroyd, Jean (1991). Guided imagery, hypnosis and recovery from head and neck cancer surgery. International Journal of Clinical and Experimental Hypnosis, 39, 215-226.

The value of a brief, preoperative hypnosis experience was explored with a sample of 36 head and neck cancer surgery patients. 15 patients volunteered for the experimental hypnosis intervention. 21 patients who received usual care (no hypnosis) were followed through their hospital charts and were used as a comparison group. Hypnotic intervention and usual care groups were comparable in terms of relevant demographic variables. Postoperative hospitalizations for the hypnotic intervention group were significantly shorter than for the usual care group. Within the hypnotic intervention group, hypnotizability was negatively correlated with surgical complications and there was a trend toward a negative correlation between hypnotizability and blood loss during surgery. Findings suggest that imagery-hypnosis may be prophylactic, benefitting patients by reducing the

probability of postoperative complications and thereby keeping hospital stay within the expected range. Recommendations are presented for a controlled, randomized, clinical trial with a sufficiently large sample to provide the opportunity for statistical analysis with appropriate power.

#### NOTES

Actual stay in hospital, post-surgery, was 8.7 days (SD = 3.7) for the Hypnosis group and 13.9 days (SD = 9.7) for the Usual Care group; the range was 3-17 days for the Hypnosis group and 5-42 days for the usual care group.

The hypnosis script included an indirect, permissive induction; positive suggestions for relaxation and healing imagery; images of calm situations that would lead to expectation for healing (e.g. a 'healing pool'); suggestions for patients to develop their own images of pleasurable, comforting situations. The only direct suggestions were for minimal blood loss during surgery, modeled after those given in the waking situation by Bennett, Benson, and Kuiken (1986).

As measured by the Stanford Hypnotic Clinical Scale, there were five highly hypnotizable patients (scores 4-5), six mediums (scores 2-3), and four lows (scores 0-1). "Hypnotizability correlated negatively with complications ( $r = -.54, p < .04$ , two-tailed test). There was a trend toward a negative correlation with length-of-stay ( $r = -.37, p < .18$ , two-tailed test) and estimated blood loss ( $r = -.40, p < .15$ , two-tailed test). Note that these correlations represent moderate to large effects, and the significance levels are due in part to low power associated with a small N (Cohen, 1988). The means for blood lost during surgery for the three hypnotizability groups were: highs = 904 cc, mediums = 1465 cc, and lows = 2056 cc" (p. 222).

Data on cost could not be published in this article but later was published in a letter to the Editor of the Newsletter of the Society of Clinical and Experimental Hypnosis (February 1994, Vol. 35, No. 1, p.8). "The average savings for the intervention group was \$6,725. While this difference fell short of statistical significance on the Wilcoxon test ( $Z = -1.5402, p < .10$ ), it is rather striking on its face. The range actually was \$7849 to \$27,782 for Intervention Group patients and \$9,390 to \$53,627 for Usual Care group patients.

"In 1990 a semi-private room at UCLA Center for the Health Sciences cost \$405 to \$529 per day, depending on quality; standard ICU care (one nurse for two patients) was \$1236 per day, and more intensive care (one nurse for one patient) was \$2471/day. Head and neck surgery patients may remain in the ICU, driving up costs, solely because they have not learned to suction their own tracheostomies, usually a motivational factor that might be affected by hypnosis. UCLA is a tertiary care hospital in a high-cost area (and is therefore reimbursed at higher rates than many other hospitals), and costs may be driven up by the many additional procedures required for long-stay patients. Therefore the cost savings could not be expected to be as great where expected length of stay is brief, ICU use is limited, and community costs are lower" (p. 8).

Redd, William H.; Andresen, Graciela V.; Minagawa, Rahn Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50 (1), 14-19.

## **NOTES**

**Deep muscle relaxation hypnosis controlled nausea, gagging, retching in all cases. Anticipatory emesis recurred when hypnosis was not used. During subsequent sessions in which hypnosis was reinstated, anticipatory emesis was again controlled.**

**Redd, William H.; Andrykowski, Michael A. (1982). Behavioral intervention in cancer treatment: Controlling aversion reactions to chemotherapy. Journal of Consulting and Clinical Psychology, 50 (6), 1018-1029.**

**During the protracted course of cancer chemotherapy, approximately 25% of patients develop aversion reactions to treatment by becoming nauseated and/or vomiting before their chemotherapy treatments. This phenomenon has been conceptualized as a result of respondent conditioning. Since commonly used antiemetic drugs do not reliably control anticipatory nausea/emesis, behavioral techniques of control have been studied. They include hypnosis used in conjunction with guided-relaxation imagery, progressive muscle relaxation with guided imagery, and systematic desensitization. (67 ref)**

**Redd, William H.; Rosenberger, Patricia H.; Hendler, Cobie S. (1982-83). Controlling chemotherapy side effects. American Journal of Clinical Hypnosis, 25 (2-3), 161-172.**

**Severe nausea and vomiting are commonly experienced by cancer patients after receiving chemotherapy treatments. Moreover, approximately 25% of these patients develop conditioned aversions to treatment and become nauseated before they receive their chemotherapy injections. The use of deep muscle relaxation hypnosis in conjunction with guided imagery to control pre- and post-chemotherapy nausea and emesis is discussed. Theoretical and clinical issues raised by this application of hypnosis in cancer treatment are also addressed.**

**Rosenberg, Simon W. (1982-83). Hypnosis in cancer care: Imagery to enhance the control of the physiological and psychological 'side-effects' of cancer therapy. American Journal of Clinical Hypnosis, 25 (2-3), 122-127.**

**The use of surgery, radiation, and chemotherapy has resulted in increased control of malignancy and prolonged survival for cancer patients. These modalities also carry significant morbidity. Normal physiological homeostasis is often altered by both the neoplasm and its treatment. The diagnosis, treatment, and social stigma of cancer exact profound psychological impact. Hypnosis effectively can control the range of both physiological and psychological 'side-effects' of cancer and its therapy. This paper will delineate those effects of hypnosis of proven value to the cancer patient. Incorporation of images into each phase of a hypnosis session will be demonstrated with an actual case history and annotated transcript. Imagery as a therapeutic modality will be discussed in general, and specific suggestions and images will be given.**

Sacerdote, Paul (1970). Theory and practice of pain control in malignancy and other protracted or recurring painful illnesses. International Journal of Clinical and Experimental Hypnosis, 18 (3), 160-180.

Recent neuroanatomical and neurophysiological experimental data suggest absence or presence of pain and changes in pain intensity as expressions of the balance between sensory (peripheral) and central (centrifugal) inputs at synaptic stations. Psychological activities by contributing to the centrifugal input influence conduction, transduction, and perception of pain stimuli. Hypnotically induced analgesia and anesthesia are therefore acceptable as neurophysiological realities. Methods for hypnotic alterations of pain based upon these premises are described utilizing neurophysiological mechanisms, psychodynamic changes, establishment of new behavioral patterns, or changes in time-space concepts and percepts. Case presentations illustrate some of these multiple psychological and physiological approaches to pain control. (Spanish & German summaries) (28 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Shapiro, Arnold (1982-83). Psychotherapy as adjunct treatment for cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 150-155.

During the past ten years psychotherapy as adjunct treatment for cancer patients has become increasingly common. The use of hypnosis as an integral part of that treatment has also burgeoned. This report will follow the progress of two cancer patients in psychotherapy. While each is highly individual, the commonalities which allow treatment to be systematic will be quite apparent. The ability to minimize pain and discomfort, the ability to keep the white cell count high despite ongoing chemotherapy, and augmenting the ability of the body's immune system to fight the disease are utilized by both of the patients. All of the above are accomplished through the use of visual imagery in the trance state. Visual imagery is also used to reach feelings which patients are often unable to verbalize, and of which they often claim to be unaware. Other aspects of therapy such as the gradual shift from despair to hope and even confidence, and the development of more assertive behavior are discussed.

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

#### NOTES

Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for

continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).

Spiegel, David (1992, October). Hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Dr. Spiegel announced that this was a last minute substitution for Fred Frankel's presentation on Hypnotizability. We have ongoing a major replication of the study that we published on group therapy with terminally ill breast cancer patients. The matched control patients get educational materials but not psychotherapy. We are looking at NKC cytotoxicity and delayed hypersensitivity.

Tasks: spend 15 minutes discussing list of problems; 15 minutes discussing things like, "What is your spouse doing that doesn't help; what can we do to help it?" We get drop in NKC cytotoxicity immediately afterward, returning after 24 hrs to usual levels. Controls don't drop in NKC cytotoxicity. This measure of stress may be a predictor of survival time.

In Fawzy's study of group therapy with melanoma patients, they noted a significant difference at 6 months in interferon augmented activity of NK, which didn't hold up at a year. But at 6 years there were 10 of 40 deaths in control group vs 3 of 40 deaths in treated group. This is a vigorous effect.

Cohen's study of colds in New England J. of Med is another good clinical study.

There are two broad areas of relevance of hypnotizability to healing: 1. Hypnotizability as a trait: do highs differ in way they regulate body or mind? 2. Is there something you do when in hypnotized state that is different? Studies of treatment of warts with hypnosis are important 3. Transition between states, e.g. circadian rhythms; is there a shift in wakefulness between trance and nontrance states that affects health?

Psychiatric Diagnosis and self regulation. High hypnotizability is associated with certain psychiatric disorders (dissociative reaction, PTSD, MPD, etc.). Schizophrenics score much lower than normals (av. = 4 vs 7; replicated with the Hypnotic Induction Profile (HIP). Stanford Hypnotizability Scales show no difference in means, but do show a difference in range). I don't know what this

means. But schizophrenics can falsely pass some Stanford Scale items, e.g. amnesia which they don't however reverse; so schizophrenics' hypnotizability scores may be inflated on Stanford scales. We don't see extremely high scores in schizophrenics.

Psychoactive medication doesn't affect scores of schizophrenics, but improves scores of anxiety neurotics (by reducing anxiety). Frischholz has an article coming out in a psychiatry journal that confirms this.

There is a lot of evidence that patients with dissociative disorders are more hypnotizable than other groups. Frischholz et al couldn't replicate Frankel's finding of higher scores in phobics. Pettinati et al found higher scores in bulimia and I haven't seen anything to counter that. Another idea is that high hypnotizables are very good at internal regulation

Spiegel & Ken Kline selected Ss who could regulate gastric activity. They got an 80% increase in gastric acid output while imagining eating; got 40% decrease in output when imagining something pleasant that wasn't imagining eating. Injected with pentagastrin, which induces gastric output, they still got a decrease in gastric acid output in the relaxation condition.

This suggests that hypnotizability should be a selection criterion for some research. See also Katz et al. 1974 (?) with acupuncture; and McGlashan, Evans & Orne on the placebo response.

Herbert Spiegel found that 2/3 of highs but 1/3 of lows were cured of phobia. Eye roll sign on the HIP, living with spouse/lover, rating self as hypnotizable, and giving a postcard follow-up response at one week post treatment were associated with 89% rate abstinence at 2 years follow-up, when only 23% overall of 223 were abstinent. Absence of those positive predictors was associated with only a 4% rate of abstinence.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. Hospice Journal, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

Stokvis, B. (1956). The application of hypnosis in organic diseases. Journal of Clinical and Experimental Hypnosis, 4 (2), 79-82.

#### SUMMARY.

Hypnotherapy, applied as a symptomatic treatment, is especially indicated in those cases of organic diseases in which the patient has neurotically elaborated his physical suffering. In cases presenting neither etiological nor secondary psychic factors one may try to improve the patient's condition by hypnotic treatment. Description of a case (hypnotherapy in a woman with carcinoma mammae)[sic]. The writer's lack of appreciation of hypnotherapy in organic diseases does not include the treatment of diseases which are definitely psychosomatically determined" (pp. 81-82).

Syrjala, Karen L.; Cummings, Claudette; Donaldson, Gary W. (1992). Hypnosis or cognitive behavioral training for the reduction of pain and nausea during cancer treatment: A controlled clinical trial. Pain, 48, 137-146.

Few controlled clinical trials have tested the efficacy of psychological techniques for reducing cancer pain or post-chemotherapy nausea and emesis. In this study, 67 bone marrow transplant patients with hematological malignancies were randomly assigned to one of four groups prior to beginning transplantation conditioning: (1) hypnosis training (Hypnosis); (2) cognitive behavioral coping skills training (CB); (3) therapist contact control (TC); or (4) treatment as usual (TAU; no treatment control). Patients completed measures of physical functioning (Sickness Impact Profile; SIP) and psychological functioning (Brief Symptom Inventory; BSI), which were used as covariates in the analyses. Biodemographic variables included gender, age and a risk variable based on diagnosis and number of remissions or relapses. Patients in the Hypnosis, CB, and TC groups met with a clinical psychologist for two pre-transplant training sessions and ten in-hospital "booster" sessions during the course of transplantation. Forty-five patients completed the study and provided all covariate data, and 80% of the time series outcome data. Analyses of the

principal study variables indicated that hypnosis was effective in reducing reported oral pain for patients undergoing marrow transplantation. Risk, SIP, and BSI pre-transplant were found to be effective predictors of inpatient physical symptoms. Nausea, emesis and opioid use did not differ significantly between the treatment groups. The cognitive behavioral intervention, as applied in this study, was not effective in reducing the symptoms measured.

#### NOTES

1:

NOTES: Hypnotizability was not measured in this study.

The authors hypothesized that "(1) patients receiving hypnosis training would report the least pain, but the cognitive behavioral group would report less pain than the untreated group; and (2) both treatment groups would report less nausea and emesis than the control groups" (p. 138). The adult patients were undergoing their first marrow transplant, had survived at least 19 days post-transplant, and had participated in at least the first 8 of 10 possible inpatient sessions; five additional patients completed the study but had missing data.

Each patient in the TC (therapist contact), CB (cognitive behavioral coping skills), and Hypnosis groups participated in two 90 minute training sessions with a psychologist, 2-4 days apart, on an outpatient basis. Once admitted to hospital, twice each week they participated in a total of ten 30-minute sessions designed to reinforce use of the interventions. The TAU (treatment as usual) group had no psychologist contact. For the TC control group, the psychologist simply talked with the patients about whatever was on their minds.

The CB group received multiple interventions: training in relaxation (2 techniques-progressive muscle relaxation and abbreviated autogenic relaxation) with tapes provided; cognitive restructuring (Turk et al., 1983) which included training in attention redirection and restructuring self-defeating cognitions; preparing coping self-statements or affirmations, by focusing attention on neutral or pleasant events or objects, or by occupying their attention through mental repetition of affirmations, songs or prayer; encouragement to think of negative events as time limited; provision of information, especially the beneficial effects of reducing physiological arousal and attention to pain and nausea; assistance in setting short-term progress-related goals for self-care such as exercise, caloric intake, and mouth care; exploration of the meaning of their illness and of bone marrow transplant.

For the Hypnosis group, individually tailored Ericksonian inductions (Lankton & Lankton, 1983) with relaxation and multi-sensory imagery were taped and given to the patient to use in daily practice, in between sessions. The suggestions were directed at reducing pain, nausea, and the emotional reactions to those symptoms; there also were suggestions about health, well-being, self-control and enhanced coping capabilities.

The results were analyzed by ANCOVA (except where non-parametric analysis was required with the opioid data). Due to gender differences in reported pain (men experiencing more) and the fact that the TAU group had an over-representation of men, the TAU group could not be used in the pain analyses. However, there were no gender differences in nausea reports, so that all four groups could be used for nausea outcome analyses.

The Hypnosis group evidenced the lowest amount of post-transplant pain, and used (nonsignificantly) less opioids than the other groups. No significant treatment effects were observed for either nausea or emesis.

In their discussion, the authors noted that "The hypnosis group's peak pain was lower and of a shorter duration than the other three groups. Opioid use closely followed the course of pain intensity. ... The gender effect may be characteristic of this particular sample [since it was unexpected].

"Nausea and emesis followed a less predictable course than pain. ... nausea fluctuated dramatically from day to day within treatment groups. As nausea moderated after completion of conditioning, the day to day fluctuations remained striking. This lack of symptom predictability may have contributed to the difficulty patients had in using the interventions effectively" (p. 143).

"The lack of significant differences between treatment groups in opioid use indicates that lower pain report in the hypnosis group cannot be explained by increased opioid use. Results do not support the second hypothesis that both hypnosis and cognitive behavioral training would reduce chemotherapy or radiation-induced nausea and emesis.

"In MT patients, several factors may limit the impact of either cognitive behavioral training or hypnosis on nausea and emesis. First, MT patients receive higher doses of emetogenic agents than are given to most other cancer patients. Second, patients in this study had only two sessions in which to learn relaxation techniques; this may not have provided adequate training. Third, the most severe emetic challenge began immediately with the first dose of chemotherapy rather than having a gradual onset. This did not permit patients to master the techniques with milder symptoms before applying training to intense symptoms. Fourth, for all patients, psychological interventions were provided as adjuncts to medications rather than as substitutes for antiemetics or opioids. Both antiemetics and opioids have substantial cognitive side effects which, in high doses, may impact patients' abilities to implement interventions which are in essence cognitive. This combination of factors may have provided too severe a challenge to a newly learned skill. In contrast to nausea, oral pain developed over a number of days, permitting practice while symptoms were mild and before administration of opioids.

"Results suggest that the imagery component of the hypnosis intervention was central to its efficacy. Not only was the cognitive behavioral intervention without imagery not effective in reducing the symptoms measured, but we found in clinical practice that patients intermittently began to refuse sessions with relaxation alone. Even hypnosis patients, when under the physical stresses of treatment, had shortened attention spans that necessitated briefer inductions, less time spent on relaxation, and more active, engaging imagery.

"... Since, in clinical practice, imagery is frequently a component of cognitive behavioral treatment, these results would not generalize to those settings where imagery is combined with other skill training.

"Several other possible limitations of the cognitive behavioral intervention merit consideration. Our experience indicates that the number of components used in the two training sessions were more than patients could competently learn in a short time. ... A further possibility is that maladaptive cognitions, which are the targets of

cognitive restructuring, may be the exception rather than the rule among MT patients who tend to focus, with their families, on positive, hopeful attitudes toward their treatment" (pp. 144- 145).

The authors note that the relatively small sample size may have provided inadequate statistical power to demonstrate effects with some of the outcome variables.

Walker, Leslie G. (1992). Hypnosis with cancer patients. American Journal of Preventative Psychiatry & Neurology, 3, 42-49.

Overviews the uses of hypnosis with cancer, for example to ameliorate side effects of treatment, help patients adjust to having cancer and its symptoms, reduce the distress caused by painful procedures, and to attempt to alter mechanisms of immunity with a view to improving prognosis. Studies in these areas are reviewed.

Wall, Valerie J.; Womack, William (1989). Hypnotic versus active cognitive strategies for alleviation of procedural distress in pediatric oncology patients. American Journal of Clinical Hypnosis, 31 (3), 181-191.

#### NOTES

The authors compared the effectiveness of a standardized hypnosis instruction vs and active cognitive strategy.

Zeltzer, Lonnie K.; Dolgin, M. J.; LeBaron, Samuel; LeBaron, C. (1991). A randomized, controlled study of behavioral intervention for chemotherapy distress in children with cancer. Pediatrics, 88, 34-42.

Subjects were randomly assigned to hypnosis, nonhypnotic distraction/relaxation, or attention placebo control. children in the hypnosis group reported the greatest reduction in both anticipatory and postchemotherapy symptoms. Distraction/relaxation kept symptoms from getting worse, but they did not get better, and the control children's symptoms became much worse.

#### CARDIOLOGY/CARDIOVASCULAR

2000

Lang, E. V.; Benotsch, E. G.; Fick, L. J.; Lutgendorf, S.; Berbaum, M. L.; Berbaum, K. S.; Logan, H.; Spiegel, D. (2000, Apr 29). Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial. Lancet, 355 (9214), 1486-90.

**BACKGROUND:** Non-pharmacological behavioural adjuncts have been suggested as efficient safe means in reducing discomfort and adverse effects during medical procedures. We tested this assumption for patients undergoing percutaneous vascular and renal procedures in a prospective, randomised, single-centre study.

#### METHODS

241 patients were randomised to receive intraoperatively standard care (n=79), structured attention (n=80), or self-hypnotic relaxation (n=82). All had access to

patient-controlled intravenous analgesia with fentanyl and midazolam. Patients rated their pain and anxiety on 0-10 scales before, every 15 min during and after the procedures.

#### **FINDINGS**

Pain increased linearly with procedure time in the standard group (slope 0.09 in pain score/15 min,  $p < 0.0001$ ), and the attention group (slope 0.04/15 min;  $p = 0.0425$ ), but remained flat in the hypnosis group. Anxiety decreased over time in all three groups with slopes of -0.04 (standard), -0.07 (attention), and -0.11 (hypnosis). Drug use in the standard group (1.9 units) was significantly higher than in the attention and hypnosis groups (0.8 and 0.9 units, respectively). One hypnosis patient became haemodynamically unstable compared with ten attention patients ( $p = 0.0041$ ), and 12 standard patients ( $p = 0.0009$ ). Procedure times were significantly shorter in the hypnosis group (61 min) than in the standard group (78 min,  $p = 0.0016$ ) with procedure duration of the attention group in between (67 min).

#### **INTERPRETATION**

Structured attention and self-hypnotic relaxation proved beneficial during invasive medical procedures. Hypnosis had more pronounced effects on pain and anxiety reduction, and is superior, in that it also improves haemodynamic stability.

Abstract from National Library of Medicine, PubMed

1999

Rainville, P.; Hofbauer, R. K.; Paus, T.; Duncan, G. H.; Bushnell, M. C.; Price, D. D. (1999). Cerebral mechanisms of hypnotic induction and suggestion. Journal of Cognitive Neuroscience, 11 (1), 110-125.

The neural mechanisms underlying hypnotic states and responses to hypnotic suggestions remain largely unknown and, to date, have been studied only with indirect methods. Here, the effects of hypnosis and suggestions to alter pain perception were investigated in hypnotizable subjects by using positron emission tomography (PET) measures of regional cerebral blood flow (rCBF) and electroencephalographic (EEG) measures of brain electrical activity. The experimental conditions included a restful state (Baseline) followed by hypnotic relaxation alone (Hypnosis) and by hypnotic relaxation with suggestions for altered pain unpleasantness (Hypnosis-with-Suggestion). During each scan, the left hand was immersed in neutral (35 degree C) or painfully hot (47 degrees C) water in the first two conditions and in painfully hot water in the last condition. Hypnosis was accompanied by significant increases in both occipital rCBF and delta EEG activity, which were highly correlated with each other ( $r = 0.70$ ,  $p < 0.0001$ ). Peak increases in rCBF were also observed in the caudal part of the right anterior cingulate sulcus and bilaterally in the inferior frontal gyri. Hypnosis-related decreases in rCBF were found in the right inferior parietal lobule, the left precuneus, and the posterior cingulate gyrus. Hypnosis-with-suggestions produced additional widespread increases in rCBF in the frontal cortices predominantly on the left side. Moreover, the medial and lateral posterior parietal cortices showed suggestion-related increases overlapping partly with regions of hypnosis-related decreases. Results support a state theory of hypnosis in which occipital increases in rCBF and delta

activity reflect the alteration of consciousness associated with decreased arousal and possible facilitation of visual imagery. Frontal increases in rCBF associated with suggestions for altered perception might reflect the verbal mediation of the suggestions, working memory, and top-down processes involved in the reinterpretation of the perceptual experience. These results provide a new description of the neurobiological basis of hypnosis, demonstrating specific patterns of cerebral activation associated with the hypnotic state and with the processing of hypnotic suggestions.

Abstract from National Library of Medicine, PubMed

**1998**

Wickramasekera, Ian E.; Kolm, Paul; Pope, Alan; Turner, Marsha (1998). Observation of a paradoxical temperature increase during cognitive stress in some chronic pain patients. Applied Psychophysiology and Biofeedback, 23 (4), 233-241.

A total of 224 chronic pain somatoform disorder patients without obvious pathophysiology or psychopathology were found to have colder hands than nonpatients. A paradoxical temperature increase (PTI) in response to a cognitive stressor (mental arithmetic) was noted in a subset of these chronic pain patients. Patients were defined as "PTI" responders if, during cognitive stress, an increase in digital temperature occurred over a prior eyes closed resting condition. It was found that 49.4% of males and 42.6% of females in a total sample of 224 patients demonstrated PTI. The PTI patients had significantly colder hands than non-PTI patients prior to stress. A concurrent SCL measure of sympathetic activation found no difference between the PTI and non-PTI groups either at baseline or during cognitive stress. It appears from this data that PTI is specific to the peripheral vascular system of these patients and may be a marker of psychophysiological dissociation or trauma blocked from consciousness.

**1997**

Bayot, A.; Capafons, A.; Cardega, E. (1997). Emotional self-regulation therapy: A new and efficacious treatment for smoking.. American Journal of Clinical Hypnosis, 40 (2), 146-156.

We described emotional self-regulation therapy, a recently-developed suggestion technique for the treatment of smoking, and present data attesting to its efficacy. Of the 38 individuals who completed treatment, 82% (47% of the initial sample) stopped smoking altogether and 13% (8% of the initial sample) reduced their smoking. A follow-up at 6 months showed that 66% (38% of the initial sample) of those who had completed the treatment remained abstinent and reported minimal withdrawal symptoms or weight gain. In a no-treatment comparison group, only 8% reduced their smoking or became abstinent.

**1996**

Lang, Elvira V.; Joyce, Janet S.; Spiegel, David; Hamilton, Donna; Lee, Kelvin K. (1996). Self-hypnotic relaxation during interventional radiological procedures: Effects on pain perception and intravenous drug use. International Journal of Clinical and Experimental Hypnosis, 44 (2), 106-119.

The authors evaluated whether self-hypnotic relaxation can reduce the need for intravenous conscious sedation during interventional radiological procedures. Sixteen patients were randomized to a test group, and 14 patients were randomized to a control group. All had patient-controlled analgesia. Test patients additionally had self-hypnotic relaxation and underwent a Hypnotic Induction Profile test. Compared to controls, test patients used less drugs (0.28 vs. 2.01 drug units;  $p < .01$ ) and reported less pain (median pain rating 2 vs. 5 on a 0-10 scale;  $p < .01$ ). Significantly more control patients exhibited oxygen desaturation and/or needed interruptions of their procedures for hemodynamic instability. Benefit did not correlate with hypnotizability. Self-hypnotic relaxation can reduce drug use and improve procedural safety.

1995

Enqvist, Bjorn; von Konow, L.; Bystedt, H. (1995). Pre- and perioperative suggestion in maxillofacial surgery: Effects on blood loss and recovery. International Journal of Clinical and Experimental Hypnosis, 43 (3), 284-294.

The basic assumption underlying the present study was that emotional factors may influence not only recovery but also blood loss and blood pressure in maxillofacial surgery patients, where the surgery was performed under general anesthesia. Eighteen patients were administered a hypnosis tape containing preoperative therapeutic suggestions, 18 patients were administered hypnosis tapes containing pre- and perioperative suggestions, and 24 patients were administered a hypnosis tape containing perioperative suggestions only. The patients who received taped suggestions were compared to a group of matched control patients. The patients who received preoperative suggestions exhibited a 30% reduction in blood loss. A 26% reduction in blood loss was shown in the group of patients receiving pre- and perioperative suggestions, and the group of patients receiving perioperative suggestions only showed a 9% reduction in blood loss. Lower blood pressure was found in the groups that received pre- and perioperative and perioperative suggestions only. Rehabilitation was facilitated in the group of patients receiving perioperative suggestions only.

1993

Blankfield, Robert P. (1993, October). Suggestion, hypnosis, and relaxation as adjuncts for surgery patients: Lessons from studies involving cardiac surgery patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

The author stated that his research and the few other studies of cardiac surgery patients do not support idea that cardiac surgery patients benefit from hypnosis and suggestion.

Types of intervention have varied: hypnosis, suggestion, relaxation; pre-op, during, or post-op; with many different outcome variables.

Aiken & Henrichs (1971) study was nonrandomized, nonblinded, for 30 patients getting open heart surgery. Treated patients had benefits.

Surman, Hackett, Silverberg, & Behrendt (1974) had a randomized, single-blind design for 40 patients taught Self Hypnosis (S-H), for elective mitral valve surgery. No difference in benefits. But 45% of patients taught S-H reported a subjective sense of benefit (though objective indicators didn't support that). [He says the difference between subjective/objective outcome ratings is important.]

Hart (1980) used randomized, single-blind design for 40 patients who had open heart surgery. No differences found except initial 3 days post surgery.

Greenleaf et al (1992) - see her paper presentation of this date.

Blankfield et al (presented at Society of Clinical and Experimental Hypnosis meeting in 1992) used a randomized, single-blind design for 95 patients, who were randomly assigned to taped suggestions, music, or controls. No differences were found in benefits.

Our data were re-analyzed: patients who felt tape was helpful were compared to the remaining 62 patients, but there again were no differences in amount of narcotics used for pain, though there was a trend in the right direction; nursing assessments failed to identify less anxiety.

The point is, whereas the bulk of publications suggest benefits, there is little evidence with this population. Could these patients be different in personality, ability to respond to intervention, amount of external stimuli? They should be studied because there are a lot of these patients with only a few surgeons and you don't have to gain the cooperation of a lot of different surgeons to do this kind of research. Also, there is uniformity in cardiac surgery whereas standard operating surgery is in a state of flux in other areas (e.g. movement from generous incisions to micro procedures, and patients receiving this type of surgery remain in hospital for a week whereas this opportunity to study them during inpatient post-surgical period is disappearing in other areas). It is my opinion that cardiac patients may not be highly receptive to suggestion.

Curiously, according to Surman and my research, 1/2 the subjects report benefits. Either some benefits are subtle, or they are reporting a placebo effect.

Future studies need more patients, and the investigators must stratify on personality inventory variables such as Type A personality, hypnotizability, motivation, anxiety, depression, family support, social support systems. This is labor intensive, to determine which characteristics determine differing outcomes. The patients used in this type of research require more presurgery evaluation than previously has occurred.

The MMPI can be self administered and is widely acceptable, but is cumbersome, not well suited to people who are acutely ill. Assessment of Type A personality is important because Type A's might be less receptive to suggestion. Structured

interview is time consuming, but a 52-item questionnaire can be self administered. Other factors listed above are important.

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, 15, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

Greenleaf, Marcia; Fisher, Stanley; Miaskowski, Christine; Du Hamel, Katherine (1993). Hypnotizability and recovery from cardiac surgery. American Journal of Clinical Hypnosis, 35, 119-128.

#### NOTES:

Notes were taken from author's presentation of this material at the Annual Meeting of the Society of Clinical and Experimental Hypnosis, Arlington Heights, Illinois. The paper presentation was part of a Symposium: Towards a Theory of Surgery: Hypnosis, Suggestion, Anesthesiology and Surgery, Methodological and Theoretical Issues and Dilemmas.

Authors outlined the reported advantages of using hypnosis. Their review found problems in much of the research on this topic published to date: many single subject studies, subjects were often selected and trained by the investigator, hypnotizability wasn't evaluated.

Used the Hypnotic Induction Profile (HIP) before assignment of patients to groups, and also equated groups for age. Groups 1 & 2 had formal hypnosis and then either relaxation-imagery (Jancks' autogenic training) or specific outcome suggestions (e.g. to have a clean dry wound, and to look forward to being able to function well); Group 3 were controls.

No differences were found in outcome measures of length of time in ICU, time on respirator, length of stay, and cumulative index of recovery. Didn't publish our data on pain medications because learned it was poorly charted.

Only difference found was: the relaxation imagery group got more wound drainage. It was degree of hypnotizability, independent of group, that made a difference in total number of hours on Nipride - highs were on it almost twice as long. On cumulative stability (having need of medications or respirator) the mid-range people did better. Not statistically significant but nevertheless clinically important, the lows were in the hospital 5 days longer.

This was counter-intuitive though it supports Herbert Spiegel's theory. We, as experimenters, were independent of the treatment team. We didn't have DRGs then and now we may have hit a ceiling effect in the amount of time people stayed in the hospital, because they had excellent pre-surgery education.

We had difficulty continuing the study because the intervention seemed to other staff to be so useful: after 6 months the surgeons began requesting hypnosis for their anxious patients; the chief anesthesiologist had started using it routinely.

Sample size is problematic. They were patients who were actively recruited, not people who sought hypnosis.

#### **CONCLUSIONS**

High hypnotizables in the hospital intensive care unit (ICU) demonstrate sensitivity to external stimuli without critical ability to screen; we see this reversed in the postoperative period. Mid range hypnotizables can decide which external cues to pay attention to. Lows are less able to incorporate new suggestions. They are bound by pre-existing views and also vigilance.

Hypnosis = Dissociation + Absorption + Suggestibility (Spiegel's theory)

We must focus more on the state-trait phenomena, the context, and then select the treatment.

Harris, Ruth M.; Porges, Stephen W.; Carpenter, Myrna E. Clemenson; Vincenz, Lilli M. (1993). Hypnotic susceptibility, mood state, and cardiovascular reactivity. American Journal of Clinical Hypnosis, 36 (1), 15-25.

In this study we explored the relationship between hypnotic susceptibility measured with the Harvard Group Scale of Hypnotic Susceptibility (HGSHS) and cardiovascular parameters. After assessing their degree of hypnotic susceptibility, we induced 21 female students into happy mood states and into sad mood states. During the mood state induction we monitored blood pressure, heart rate, and cardiac vagal tone continuously. The study demonstrated a strong relationship between hypnotic susceptibility and both cardiac vagal tone and heart rate reactivity. Subjects with lower heart rate and greater vagal tone during baseline and greater heart rate increases during mood induction were more susceptible to hypnosis. Multiple regression analyses indicated that approximately 40% of the individual difference variance of hypnotic susceptibility was accounted for by baseline cardiac vagal tone and heart rate reactivity during mood state. The data demonstrate that autonomic tone, assessed by cardiac vagal tone and heart rate

reactivity, are related to hypnotic susceptibility as measured by the HGSHS. -  
Journal Abstract

Morgan, William P. (1993, October). Use of hypnosis in exercise and sport psychology. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Performance of exercise is rated as equal effort with hypnosis and waking conditions; but with hypnotic suggestion they will perceive it as more or less effortful (uphill exercise vs going down the hill). When they think they are going up hill both cardiac and respiratory response increase physiologically, with catecholamine differences.

Mitchell (1981) suggests that respiration changes with exercise do not result from muscle feedback, but that central motor brain signals go to both the cardiovascular centers and to exercising muscle. Actually, it appears that both muscle and cortex give signals, and their synergy governs whether ventilation or heart rate increase.

Wang & Morgan, Psychophysiological responses to imagined exercise, Sport Psychology Lab, University of Wisconsin-Madison. Reported that both external (watching someone else) and internal (imagining oneself) visualizing give responses similar to actual exercise.

We have done research on the prediction of respiratory distress (dyspnea) - work we have done with fire fighters. The best predictor of this on treadmill with air supply is trait anxiety. Sometimes the firefighters who took off face mask even though they had air did not know why they did. It is an opportunity to use hypnotic age regression. SCUBA divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

For active people and athletes there is an "iceberg" profile on the POMS, below average on tension, depression, anger, fatigue, and confusion, but higher on vigor. But the divers who panic have a flat profile, around the 50th percentile on all POMS scales.

Middleman et al used Navy divers in 25 degree C. water and used hypnosis to increase and decrease their body temperature--one of the best papers on the topic. Ss who were best able to use imagery, to think of a beach, had the poorest responses; the ones who could relax did poorest, because shivering produces heat and keeps you warm. It is opposite of what is needed.

In our work, we took 5 highest and 5 lowest anxiety Ss; the latter had higher rates of respiration than the former.

All Ss are similar in oxygen use whether volunteers or not. When people volunteer for research before they know hypnosis will be used, the males are lower than females [on hypnotizability?] when they finally volunteer. [He presents a lot of different tests on which volunteers do not differ from nonvolunteers personality wise.]

Ikai & Steinhaus is a classic study of Disinhibition of Inhibitory Mechanisms. Taking Ss up to their maximum (in weight training) to a plateau, Ikai & Steinhaus

said this is a pseudomaximum. They showed that strength increases if - you fire a starter pistol behind them - you ask them to shout just as they do it - they have alcohol - they have amphetamine sulfate - they have hypnosis It is disinhibition of the inhibitory mechanisms.

[He referred to the book *Mind of the Marathoner*.]

In Tibet an anthropologist was amazed to see a man running into their camp, and he ran straight through--a monk carrying messages. He created a non-cultic form of meditation in the laboratory (trained to visually "fix" on mountaintop, to have respiration in synchrony with locomotion, and to use a pseudo mantra "down" each time they put their foot down). Placebo condition was used also. Ss were tested by blinded lab assistants. Endurance time increased from 16 minutes to 20, while controls decreased a minute.

Now we can predict who will win a race. Elite runners do not dissociate; they use association strategy. They pay close attention to race strategy, they monitor themselves constantly (they slow down when they feel bad), and attempt informally to stay loose, not get tight, and relax. Dissociation has, however, been used for the last 300 meters of a marathon (New Zealander Dixon).

1992

Kostka, Marion (1992). Personal experience with 'Use of Hypnosis Before and During Angioplasty' [Letter]. *American Journal of Clinical Hypnosis*, 34, 281-282.

#### NOTES

Author read the article referred to after his/her heart attack and before angioplasty. Goal was to control preprocedure anxiety and assist by being relaxed and cooperative; also to be able to tolerate inflations of the balloon for as long as needed. Used self-hypnosis "and by the time I entered the laboratory my anxiety was under control. ... None of the physiological responses that can occur (i.e., nausea, pain, etc.) did occur and, for the most part, my postprocedure recovery was uneventful. ... Had two procedures because the artery again occluded. ... My cardiologist commented later that the time of inflation was longer than he had even attempted with any of his patients and he attributed this to my lack of symptoms. I felt this was due in part to the use of self- hypnosis. .... my subjective feeling was that both my discomfort and anxiety were minimal" (Pp. 281-82). No blood was sampled to measure catecholamine levels.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. *Stress Medicine*, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures

(e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Tosi, D. J.; Rudy, D. R.; Lewis, J.; Murphy, M. A. (1992). The psychobiological effects of cognitive experiential therapy, hypnosis, cognitive restructuring, and attention placebo control in the treatment of essential hypertension. Psychotherapy, **29**, 274-284.

Evaluated the effects of cognitive experiential hypnotherapy (CEH), which includes hypnosis, cognitive restructuring, and developmental staging, on essential hypertension. CEH, Hypnosis alone, cognitive restructuring, and attention-placebo control conditions were randomly assigned to 39 subjects. There was a significant interaction effect with the nine psychobiological outcome measures. Discriminant analysis found a stronger overall effect over time for CEH when compared with its components.

1991

Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. Behaviour Research and Therapy, **29**, 17-31.

#### NOTES

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in Lancet have important implications for health care.

Hopkins, Mildred B.; Jordan, Jeanette M.; Lundy, Richard M. (1991). The effects of hypnosis and of imagery on bleeding time: A brief communication. International Journal of Clinical and Experimental Hypnosis, **39**, 134-139.

2 studies are reported, one using hypnotized Ss selected on hypnotizability and one using Ss selected on imagery vividness, whose purpose is to examine whether non-patient Ss can control their bleeding in a laboratory setting. All Ss were cut on both arms with the "Surgicutt" device, an instrument that automatically makes a cut that will bleed from 2 to 10 minutes. Results suggest that Ss, who are instructed to

reduce the bleeding time in one arm and to let the other arm bleed normally, are not able to control bleeding time.

**McCue, Peter A. (1991). Key Paper Review: Prophylactic therapy for cancer and coronary heart disease. [Comment/Discussion] .**

This is a commentary on two papers by Grossarth-Maticek and Eysenck, in which they report on 'creative novation behaviour therapy' to prevent cancer and heart disease in people with personalities associated with the development of those diseases. Therapy may involve hypnosis and/or relaxation, with suggestions that facilitate modification of unhealthy expectancies. The papers are:

**Grossarth-Maticek, R. & Eysenck, H.J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part I - Description of treatment. *Behaviour Research and Therapy* 29, 1-16.**

**Eysenck, H.J. & Grossarth-Maticek, R. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. *Behaviour Research and Therapy* 29, 1, 17-31.**

**Weinstein, Edwin J.; Au, Phillip K. (1991). Use of hypnosis before and during angioplasty. *American Journal of Clinical Hypnosis*, 34, 29-37.**

In this study, 16 patients matched with 16 controls were hypnotized prior to angioplasty. The hypnotized patients had a 25% increase in the time the cardiologist was able to keep the balloon inflated compared to the controls. Of the hypnotized patients, 13% required additional narcotic pain medication during the procedure as compared to 44% for the controls. Although we found no differences in rhythm, ischemia, blood pressure, or pulse between the two groups, the results of arterial catecholamine levels drawn at the start and at the end of the procedure were unexpected and seemed paradoxical. Norepinephrine levels were significantly higher in the hypnotized group (432 pg/ml, SE 51) than in the control group (281 pg/ml, SE 23) at the start of the procedure and fell more during the procedure than in control patients. Because catecholamines reportedly act as a barometer of neuroanxiety, further studies defining their role are needed.

#### **NOTES**

While sedatives and tranquilizers may reduce anxiety on a coronary care unit, occasionally they result in confusion, agitation, and ataxia (Kornfeld, 1980). Hypnosis can be used in acute medical care settings (Deltito, 1984) and is beneficial in reducing pain, suffering, and anguish (Hilgard & Hilgard, 1975). There is some suggestion that hypnosis may help regulate heart rate and blood pressure (Hilgard & Morgan, 1975).

In this study, patients with even chart numbers were in the control group, while odd-numbered patients were in the hypnosis group. Patients who were deaf or senile were excluded. All patients received their usual medications before angioplasty, and both the hypnosis group and the control group received identical treatment other than the hypnosis intervention. However, only the hypnosis group was interviewed

by the first author, on the night before angioplasty, and he was also present during the angiograph itself if necessary to help relax the hypnosis patients.

The hypnosis procedure was a modification of Barber's (1977) Rapid Induction Analgesia, and lasted about 1/2 hour. Patients were given a posthypnotic suggestion that they could achieve the same sense of relaxation the next morning during the angioplasty.

"If the patient had severe angina or had an undue amount of discomfort during the procedure, additional pain medication was given as was felt necessary by the cardiologist.

Two of 16 hypnotized and 7 of 16 control patients received pain medication. The difference is significant at  $p = .05$  (Chi Square)" (p. 34).

"In the hypnotized patients the total catecholamine levels (538 pg/ml, SE 60) and the levels of its major component, norepinephrine (432 pg/ml, SE 51), were significantly elevated above their corresponding control levels (361 pg/ml, SE 31 and 281 pg/ml, SE 23) at the start of the angioplasty procedure ( $p < .01$ ). These were unexpected findings. The epinephrine level in the hypnotized group was also higher than the corresponding level in the control group but did not reach a level of significance.

"At the end of the procedure, catecholamine levels had fallen in both groups, but the drop or [sic] total catecholamines in the hypnotized group of 124 pg/ml (SE 33) was greater than the corresponding drop of 37 pg/ml (SE 25) in the control group. This was significant at  $p < 0.025$ . Why the two groups handled catecholamines differently is not clear" (p. 33).

Generally it is hoped that relaxation will permit the cardiologist to keep a balloon inflated longer, not needing to end the procedure because of pain or a complication. The total time required for the procedure was 79 minutes for hypnotized patients and 86 minutes for controls. The inflation time was 353 seconds for hypnotized and 283 minutes for control patients. These differences (which are in the positive direction) did not achieve significance with statistical testing. However, considering the total procedure time, the balloon was inflated 25% longer in the hypnosis than in the control group ( $p = .10$ ).

In their Discussion, the authors note that the reduction in pain medication required by the hypnosis patients is concordant with less pain medication being required by burn patients who are treated with hypnosis (Schafer, 1975; Wakeman & Kaplan, 1978). They do not have an explanation for finding elevated catecholamines in the hypnotized patients. "Catecholamines reportedly act as a barometer of neuroanxiety (Goldstein, 1981; Zaloga, 1988). Turton, Deegan, and Coulshed had already shown in 1977 that prior to catheterization catecholamine levels were elevated and returned to control levels 3 days later. .... One would expect that if hypnosis does cause relaxation, then those patients who were hypnotized would have a lower arterial catecholamine level than their controls. This was not the case. ... It is known that prolonged stress depletes catecholamine stores (Zaloga, 1988), but it is hard to believe that a brief hospitalized stay would cause a difference in depletion between the two groups. There is no literature dealing with the effect of hypnosis on catecholamine levels" (p. 35).

Sletvold, H.; Jensen, G. M.; Gotestam, K. G. (1990). The effect of specific hypnotic suggestions on blood pressure in normotensive subjects. Pavlovian Journal of Biological Science, 26, 20-24.

Twenty normotensive subjects participated in a study of the effects of specific suggestions on blood pressure (BP). After an induction, the experimental group received suggestions presumed to be relatively nonactivating, although capable of lowering or raising BP. A control group was used to record the BP changes over time. All subjects met for one session. Eight subjects from the experimental group met for a second session. Both adaptation and induction resulted in significant BP decreases. A specific suggestion to increase BP gave a significant result when compared to the induction point. There was no significant change from induction to the BP-decrease suggestion. Both systolic and diastolic BP behaved in the same way. A second experimental session resulted in no significant change compared with the first session. Also, no significant difference was found in suggestibility scores from the first to the second session. The results are in line with previously published studies.

1989

Abelson, James L.; Curtis, George C. (1989). Cardiac and neuroendocrine responses to exposure therapy in height phobics: Desynchrony within the 'physiological response system'. Behaviour Research and Therapy, 27 (5), 561-567.

Monitored subjective, behavioral, cardiovascular and neuroendocrine responses in 2 men (aged 19 and 34 yrs) with height phobias over a full course of exposure therapy and at 6 and 8 month follow-up. Both Ss showed rising cortisol responses and stable, nonextinguishing norepinephrine responses to height exposure over the course of treatment, while improvement occurred in subjective and behavioral response systems. They had differing heart rate responses. Despite desynchrony among anxiety response systems and within the physiological system at treatment conclusion, Ss had successful outcomes with general measures of change (phobia rating scales, the Fear Survey Schedule, and the SCL-90) showing substantial improvement for both Ss. These outcomes were preserved at follow-up.

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a

hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 35, 48-58.

#### NOTES

Regional cerebral blood flow (rCBF) was measured by means of the 133-Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

1987

Goldmann, Les; Shah, M. V.; Hebden, M. W. (1987). Memory of cardiac anesthesia: Psychological sequelae in cardiac patients of intra-operative suggestion and operating room conversation. Anesthesia, 42 (6), 596-603.

Thirty elective cardiopulmonary by-pass surgery patients were interviewed pre- and postoperatively. A random selection of patients heard a prerecorded audio tape toward the end of surgery after they were rewarmed to 37 degrees C. The tape contained suggestions for patients to touch their chin during the postoperative interview, to remember three sentences, and to recover quickly. The interviewers were blind to the experimental conditions. The experimental group touched their chins significantly more often than the control group ( $p = .015$ ). Sentence recognition did not reach significance, perhaps due to the small numbers and low salience of the stimuli. Seven patients (23%) recalled intraoperative events, five with the aid of hypnosis. Three reports (10%) were corroborated. Preoperative medication ( $p < .01$ ) and postoperative anxiety ( $p < .05$ ) were significant predictors of those patients who reported recall.

Meyer, von H. K.; Diehl, B. J. M.; Ulrich, P.; Meinig, G. (1987). Kurz- und langfristige Änderungen der kortikalen Durchblutung bei Autogenem Training[Short and long-term changes in cortical circulation caused by autogenic training]. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 33 (1), 52-62.

The well-known hyperfrontal pattern of hemispheric blood flow measured with 133-Xenon is not found in 12 healthy resting men who have been practicing Autogenic Training at least six months. This might indicate a long-term decrease in the level of activation. Successfully practiced exercises of Autogenic Training lead to an increased blood flow in the Rolandic area representing the body scem (sic) and to a decreased blood flow in regions related to acoustical attention and to autonomic functions. Left hemispheric cerebral blood flow is lower in rest. The relative activation of the left hemisphere during Autogenic Training is discussed.

Ulrich, P.; Meyer, H. J.; Diehl, B.; Meinig, G. (1987). Cerebral blood flow in autogenic training and hypnosis. Neurosurgery Review, 10, 305-307. (Abstracted in American Journal of Clinical Hypnosis, 1989)

In 12 healthy volunteers with at least an experience of 6 months in autogenic training (AT), the cerebral blood flow (CBF) was measured at rest, in AT, and in hypnosis (H). The results were correlated with individual test profiles. The cortical flow pattern at rest of our AT-trained volunteers did not show the hyperfrontality which is described in the literature. This may be interpreted as an effect of better and habitualized relaxation in long-trained AT practitioners. This flow pattern corresponds to the low grades of neuroticism and aggressivity found in the tests. Furthermore, an activation in central cortical areas and a deactivation in regions which are associated with acoustic and autonomous functions occur. Possible explanations for these phenomena as well as for the relatively low perfusion of the left hemisphere at rest and activation in AT are discussed. The global rise of CBF in Hypnosis may be an activation effect caused by resistance against the hypnotizer: the deeper the trance, the smaller the catalepsy of the right arm and in temporal cortical fields processing acoustic inputs.

1986

Suls, Jerry; Sanders, Glenn S.; Labrecque, Mark S. (1986). Attempting to control blood pressure without systematic instruction: When advice is counterproductive. Journal of Behavioral Medicine, 9 (6), 567-577.

Hypothesized that, without assistance, Ss' attempts to keep their blood pressure low would produce increases in blood pressure, compared to Ss asked to respond naturally to an arousing stimulus. 50 male undergraduates watched a videotape containing a neutral (nonarousing) section and an erotic section while their blood pressure was recorded by an automated blood-pressure monitoring device. 22 Ss were asked to relax and keep their blood pressure low during the erotic parts of the videotape, and 28 Ss were asked to respond naturally. Results confirm the hypothesis, suggesting that urging people to relax can be counterproductive if they do not also receive systematic instruction on how to relax or control blood pressure.

Lichstein, Kenneth L.; Eakin, Terry L. (1985). Progressive versus self-control relaxation to reduce spontaneous bleeding in hemophiliacs. Journal of Behavioral Medicine, 8 (2), 149-162.

Investigated the effects of progressive and self-control relaxation on spontaneous bleeding and collateral symptoms with 7 hemophiliacs (average age 32.6 years) in a combined multiple-baseline partial-crossover design. Following 6 or 12 weeks of training in either or both relaxation methods, there was no strong evidence that the treatment affected bleeding or perceived pain in these Ss. Results failed to replicate findings of W. L. LaBow (1975) or J. W. Varni (see PA, Vol 65:13289) (20 ref)

Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novamatrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self-hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

1984

Conn, Lois; Mott, Thurman, Jr. (1984). Plethysmographic demonstration of rapid vasodilation by direct suggestions: A case of Raynaud's Disease treated by hypnosis. American Journal of Clinical Hypnosis, 26, 166-170.

Raynaud's Disease is a painful vasospastic disorder of the fingers and toes precipitated by cold or emotional stimuli. Treatment has usually included protection from cold stimuli and vasodilators. Biofeedback, imagery, relaxation, and hypnosis have also been used. The relationship between response to treatment and hypnotizability has been inconclusive. A case of Raynaud's Disease was treated using hypnosis. The patient was highly hypnotizable and responded rapidly to direct suggestion with a fourfold increase in her blood volume. The implications of this rapid response and its relationship to hypnotizability are discussed with suggestions for further studies.

#### NOTES

The authors review experimental literature on the usefulness of hypnosis in modifying peripheral circulation, finding both positive (Barabasz and McGeorge, 1978, Roberts, Kewman, and MacDonald, 1973) and negative (Peters, Lundy, and Stern, 1973; Black, Edholm, Fox, and Kidd, 1963) outcomes. Experiments relating outcome to hypnotizability also have positive (Block, Levitsky, Teitelbaum, and Valletta, 1977) and negative (Crosson, 1980; Roberts et al, 1973) results.

Clinical literature found that peripheral circulation could be influenced (Crasilneck & Hall, 1975; Norris & Huston, 1956; Jacobson et al., 1973) but none of those studies reported the hypnotizability of the patients. In the Crasilneck and Hall (1975) investigation, 60% of their 48 Raynaud's patients experienced marked improvement in symptoms or remission.

Hypnotizability has been investigated with respect to biofeedback results, finding both no relationship (Holroyd et al., 1982) and a positive relationship (Andreychuk and Skriver, 1975).

In this investigation, the highly hypnotizable (Stanford Hypnotic Susceptibility Scale, Form A, score = 11) female patient was treated with hypnosis when the blood vessels in her hands were constricted. Either she had arrived at the office with poor circulation, or a Raynaud's attack was induced with ice water. Hypnosis involved progressive relaxation followed by suggestions to visualize the blood vessels in her hand opening up, the blood warming and nourishing her hands. "With each beat of your pulse your hand becomes warmer as more blood reaches your fingers. It is as though you are lying in the warm sun. Try to visualize the blood vessels in your hand opening up...." (P. 168).

The patient was asked to use self hypnosis and a cassette of the office session twice a week between sessions, but in fact she either failed to practice or did the exercise once between weekly sessions.

With neutral hypnosis (no specific suggestions about circulation) there was little change in pulse volume; with suggestions to open up her blood vessels, there was an increase in blood volume that began within 20 seconds, reaching four times the

baseline in 45 seconds. This increase was reproduced in later sessions, and a somewhat lesser degree of change could be produced with self hypnosis.

In their Discussion, the authors question whether the positive results depend on someone who is high in hypnotizability, and/or on someone with a labile vascular system. They refer to a model of biological information processing to explain how suggestions might have been incorporated by the patient. "Bowers (1977) has speculated that hypnotized patients process information in a way different from when they are not hypnotized. He presents a number of different studies which have shown a significant relationship between hypnotizability and treatment response in patients with illnesses with a clear cut physiological component, including asthma, warts, and ichthyosis. He then speculates that 'suggestions delivered to deeply hypnotized subjects can be transduced into information that is somatically encodable, thereby producing a selective and specific impact on body function and structure.' This kind of processing of information could explain the very rapid response described in the patient presented here.

"In reviewing the cases in which blistering has been produced by hypnotic suggestion, Chertok (1981) states, 'It therefore clearly emerges that these experiments have all been conducted with highly hypnotizable subjects, including a very large proportion of true somnambulists. Inversely, there is not a single known case where a blister has been produced without the subject having been deeply hypnotized beforehand'" (p. 169).

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimeditation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

LeBaron, Samuel; Zeltzer, Lonnie K. (1984). Research on hypnosis in hemophilia--preliminary success and problems: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 290-295.

Although little is known about physiological effects of hypnosis on hemophilia, hypnosis for reduction of pain and/or bleeding in hemophilia has attracted

increasing attention. Literature on this topic is reviewed, and important problems in conducting clinical research on hypnosis for hemophilia are discussed.

**NOTES:**

Reviews literature on physiological effects of hypnosis on hemophilia (for reduction of pain and/or bleeding). Discusses problems in conducting clinical research on same.

**Wain, Harold J.; Amen, Daniel G.; Oetgen, William J. (1984). Hypnotic intervention in cardiac arrhythmias: Advantages, disadvantages, precautions, and theoretical considerations. American Journal of Clinical Hypnosis, 27, 70-75.**

A patient with ventricular tachycardia, which could not be controlled by various drug regimens, was treated using an hypnotic strategy. Among the positive results were a lessening of ectopic beats, an increase in exercise tolerance, a possible break in the arrhythmic pattern, and an increase in the patient's sense of participation in his treatment. Of the disadvantages noted, the most notable was a blocking of the patient's awareness that an arrhythmia was present, which deviated from his previous pattern and may have been facilitated by the dissociative strategy used. Additional well-designed, prospective studies in this area are needed to determine the overall usefulness of hypnosis in cardiac patients.

**1983**

**Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.**

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.

**1982**

**Friedman, Howard; Taub, Harvey A. (1982). Accessibility: A necessary control for studies of essential hypertension. International Journal of Clinical and Experimental Hypnosis, 30, 4-8.**

A study which was planned to compare the relative effects of relaxation and hypnosis upon essential hypertension also offered the opportunity to replicate some of the findings of a previous investigation. A failure in such replication led to

consideration of the effect of accessibility to the laboratory, a variable not typically controlled. A significant differential effect of easy versus hard access was observed.

Holroyd, Jean; Nuechterlein, Keith; Shapiro, David; Ward, Frederick (1982). Individual differences in hypnotizability and effectiveness of hypnosis or biofeedback. International Journal of Clinical and Experimental Hypnosis, 30 (4), 45-65.

8 high and 8 low hypnotizable Ss used biofeedback and hypnosis to lower blood pressure in one session and forehead EMG activity in another session. Results were analyzed by repeated measures analyses of covariance using baseline physiological level on the dependent variable as the covariate. Electromyographic level was reduced more immediately by biofeedback than by hypnosis. When the task was to lower blood pressure, blood pressure and skin conductance were more effectively reduced by hypnosis than by biofeedback, considering only the first half of each session to eliminate within-session transfer effects. Hypnotizability did not predict overall outcome. Factors which may have prevented demonstrating a clearer relationship between hypnotizability and success using biofeedback or hypnosis are discussed. State and trait anxiety, cognitive strategies used during the tasks, and self-reported hypnotic depth are examined for correlates of successful performance.

1981

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, 138, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive <sup>133</sup>Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

Case, David B.; Fogel, David H.; Pollack, Albert A. (1980). Intrahypnotic and long-term effects of self-hypnosis on blood pressure in mild hypertension. International Journal of Clinical and Experimental Hypnosis, 28, 27-38.

Self-hypnosis using the method of Spiegel (1974) was evaluated in 15 patients with labile or mild essential hypertension who were equally hypnotizable and adhered to

a regimen of 6-10 daily exercises for a 4-month period. During the hypnotic state, there were consistent rises in both systolic and diastolic pressures in hypnotizable patients, but not in non-hypnotizable controls. Similar but smaller changes were also observed in normotensive subjects. Pressure rose immediately with hypnosis and subsided gradually over 15 minutes. However, the long-term effects of the daily practice of self-hypnosis were variable: ambulatory diastolic pressure fell in 5 patients, was unchanged in 7 patients, and rose in 3 patients. The changes in blood pressure could not be specifically attributed to the daily practice of self-hypnosis; however, all patients experienced improvement in well-being, mood, and behavior patterns during the 4-month period. The study indicates that self-hypnosis can produce changes in behavior and mood which may be beneficial to cardiovascular health, although paradoxically, the act of hypnosis by this technique is pressor. Aside from its therapeutic potential, self-hypnosis may provide useful information about central mechanisms of blood pressure regulation.

Hart, R. (1980). The influence of a taped hypnotic induction treatment procedure on the recovery of surgery patients. International Journal of Clinical and Experimental Hypnosis, 28, 324-331.

A study of 40 open heart surgery patients assigned to 1 of 2 equal size treatment groups sought to evaluate the efficacy and utility of a tape-recorded hypnotic induction procedure that preoperatively prepared patients for surgery. The dependent variables included daily blood pressure measurements and postsurgical outcome data pertaining to postoperative units of blood required, state/trait anxiety, and locus of control dimensions. Results of the study tended to provide some support for the tape-recorded hypnotic induction procedure in lessening state anxiety and in promoting a more self-directed attitude toward surgical recovery.

1980

Puente, Antonio E.; Beiman, Irving (1980). The effects of behavior therapy, self-relaxation, and transcendental meditation on cardiovascular stress response. Journal of Clinical Psychology, 26 (1), 291-295.

#### NOTES

Compared Behavior Therapy (BT), self-relaxation (SR), transcendental meditation (TM), and a waiting-list control group (WL) on measures of cardiovascular and subjective stress response. Male and female respondents (N = 60) to an ad for therapy were evaluated in assessment sessions before and after treatment. The results indicate that BT and SR were more effective than either TM or WL in reducing cardiovascular stress response. These data were interpreted as resulting from therapeutic suggestion and positively reinforced client progress.

1978

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

Parwatikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, **3**, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

1977

**Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.**

**This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasms and repetitive schemes, the ever re-written plots and images of literature, art, and religion.**

**Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.**

**Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.**

**Friedman, Howard; Taub, Harvey A. (1977). The use of hypnosis and biofeedback procedures for essential hypertension. International Journal of Clinical and Experimental Hypnosis, 25, 335-347.**

**In an attempt to evaluate a procedure combining 2 techniques, hypnosis and biofeedback, which might effect significant changes in diastolic blood pressure in essential hypertensives, Ss were placed in 1 of 4 groups: hypnosis only, biofeedback only, hypnosis and biofeedback combined, or measurement only. The first phase -- training sessions and brief follow-ups (1 week and 1 month) -- of the long-term study with 6 monthly follow-up periods, was evaluated. Hypnosis only and biofeedback only procedures were both capable of providing significant lowering of diastolic pressure. However, in intergroup comparisons, the hypnosis only procedure showed the most impressive effect. Unexpectedly, the procedure of combining hypnosis and biofeedback into one technique was as ineffective as the measurement only procedure.**

#### **NOTES**

**In their discussion of the finding that hypnosis + biofeedback did not yield more positive results, the authors state, "it is possible that two opposing sets were established that negated each other: the biofeedback instructions wherein S was enjoined to direct his attention externally and to attempt to change the displayed number which reflected diastolic pressure, versus the more passive, relaxed attitude implied in hypnotic induction. It is interesting to note that Benson et al. (1974b) have similarly suggested that the set involved in biofeedback training may interfere with the elicitation of the 'relaxation response.' Also, Orne [personal communication] has indicated that, although anticipating a synergistic effect as a result of combining hypnotic and biofeedback procedures, some difficulty may lie in requiring Ss to be hypnotized during [emphasis on 'during' in original] the biofeedback training procedure" (p. 344).**

Gatchel, Robert J.; Hatch, John P.; Watson, Paur J.; Smith, Dan; Gaas, Elizabeth (1977). Comparative effectiveness of voluntary heart rate control and muscular relaxation as active coping skills for reducing speech anxiety. Journal of Consulting and Clinical Psychology, 1093-1100.

The present study investigated whether heart rate biofeedback training is as effective as muscular relaxation training in reducing speech anxiety. Also, a combined muscle relaxation/biofeedback treatment group was included in this study. All treatment groups were compared to a false-biofeedback placebo control group. This investigation also assessed whether the degree of autonomic nervous system awareness significantly influences the treatment process. Ten speech-anxious subjects, half of whom scored high on the Autonomic Perception Questionnaire (APQ) and half of whom scored low on the APQ, were assigned to each group. Results indicated that all four groups demonstrated a decrease in self-reported anxiety. Assessment of physiological measures (heart rate and skin conductance) indicated that the three treatment groups were associated with less physiological responding during the posttreatment assessment of anxiety, relative to the false-biofeedback group. Moreover, among the three treatment groups, the combined relaxation/biofeedback group demonstrated the lowest level of responding. The degree of autonomic awareness was not found to be related to therapeutic improvement.

Gatchel, Robert J.; Proctor, Janet D. (1976). Effectiveness of voluntary heart rate control in reducing speech anxiety. Journal of Consulting and Clinical Psychology, 381-389.

The effects of learned control of heart rate deceleration and therapeutic expectancy set in reducing speech anxiety were investigated in a factorial design employing 36 speech-anxious subjects. Heart rate control training and no heart rate control training were each paired with high-therapeutic-expectancy and neutral-expectancy instructions, in order to assess the individual and combined effects of the two factors. Results demonstrated that learning to control heart rate deceleration led to a significant reduction in self-report, physiological (heart rate and skin conductance level), and overt signs of anxiety, relative to the no-heart-rate control condition. High-therapeutic-expectancy instructions also contributed to a reduction in self-reported anxiety. These results demonstrate that learned heart rate control is an effective therapeutic technique for reducing anxiety.

1975

Cowings, Patricia S. (1975, September). Observed differences in learning ability of heart rate self-regulation as a function of hypnotic susceptibility. [Paper] Presented at the 3rd Congress of the International College of Psychosomatic Medicine, Rome.

Three groups of eight men and women were given personality tests and were taught to control their own heart rates. Experimental group I and the control group had

low hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale), and subjects in experimental group II had high hypnotic susceptibility. The experimental groups received autogenic therapy and biofeedback, while the control group was given biofeedback only. Subjects who received autogenic therapy and biofeedback performed better than the control group. Significant differences, however, were found in all psychological test scores between high and low hypnotic susceptibles.

1974

Redmond, Daniel P.; Gaylor, Michael S.; McDonald, Robert H.; Shapiro, Alvin P. (1974). Blood pressure and heart-rate response to verbal instruction and relaxation in hypertension. Psychosomatic Medicine, 36 (4), 285-297.

Recent data have suggested that instructional set and task awareness may play a substantial role in the achievement of directional changes in blood pressure associated with "operant conditioning" techniques. Six hypertensive patients were instructed alternately to raise (UP) and lower (DOWN) their blood pressure by concentrating on changing "heart rate, force of contraction, and blood vessel resistance to flow." Paired 10 min periods were separated by the experimenter's entry and exit. Five of the subjects were taught progressive muscular relaxation (PMR), and the protocol repeated, with PMR induced throughout this session. The immediate cardiovascular response to PMR, induced in both the presence and absence of the experimenter, was studied. Systolic (SBP) and diastolic (DBP) blood pressure and heart rate (HR) were measured every 30 sec in all sessions. Direction of changes in BP and HR for UP and DOWN periods was appropriate and significant in both instruction sessions, and these differences for BP frequently reached significant levels of magnitude. In general, interactions for HR did not reach significant levels. Comparison of the two sessions yielded little difference between them. PMR uniformly lowered BP and HR, but was of significant magnitude only when induction of PMR involved the active participation of the experimenter. Interview data revealed considerable dramatic mental imagery associated with directional shifts in BP. The results indicate that directional instruction may result in appropriate changes in BP and HR of a magnitude comparable to those reported in studies using "external biofeedback." PMR did not alter the response. This study adds to other data which point to the potential for nonspecific or "placebo" effects to be operative in conditioning studies.

**NOTES:**

The authors reviewed literature suggesting that blood pressure changes have been brought about by hypnotic suggestions of attitudes, progressive muscular relaxation, autogenic training (a form of self hypnosis), yogi, transcendental meditation, and hypnotically suggested relaxation.

The instructions to raise and lower blood pressure by concentrating on changing heart rate, force of contraction, and blood vessel resistance to flow were a repetitive monologue with a monotonous emphasis on "rate and force of heart beat and resistance of vessels to flow." Most subjects spontaneously introduced imagery appropriate to the desired change. The authors expressed the opinion that task

awareness (to change the blood pressure) influenced the results, and the changes were accomplished more by associative imagery than by responding to the literal meaning of instructions.

Surman, Owen S.; Hackett, Thomas P.; Silverberg, Elizabeth L.; Behrendt, Douglas M. (1974). Usefulness of psychiatric intervention in patients undergoing cardiac surgery. Archives of General Psychiatry, 30, 830-835.

Twenty patients undergoing cardiac surgery were seen one or more times by a psychiatrist who performed two functions. In a supportive fashion he cleared up any misconceptions the patient had about the forthcoming surgery and he taught him a simple autohypnotic technique. Twenty controls, matched for relevant variables, received routine preoperative care. Contrary to the report of others, a single visit by the psychiatrist did not influence the incidence of postoperative delirium, anxiety, depression, pain, or medication requirements. However, there was a trend for patients receiving a greater number of preoperative visits to have a lower incidence of detected delirium. Age was the only factor in this study that differed significantly between delirious and nondelirious patients.

Aiken, Linda H.; Henrichs, Theodore F. (1971). Systematic relaxation as a nursing intervention technique with open heart surgery patients. Nursing Research, 20, 212-217.

## NOTES

Psychiatric problems frequently occur after open heart surgery, usually from day 2 to day 7 postoperatively. Symptoms include impairment of consciousness, disorientation, sensory disturbances like visual and auditory hallucination, and sometimes delusions and paranoid behavior. Authors defined a postoperative adverse reaction as "when the patient experienced impairment of consciousness with motor restlessness, disordered thinking, sensory disturbances, visual and/or auditory illusions or hallucinations, and paranoid ideation. All of these symptoms do not usually occur together and an additional definition was given for a minor reaction which occurred if only one of the above symptoms was present for 12 hours or less" (p. 214).

The population from which samples were drawn consisted of adult male patients admitted to a university medical center for open heart surgery. The experimental group (N = 15) consisted of all patients admitted from September 1969 through June 1970 (omitting two who were not willing to participate). Controls were 15 adult males admitted for open heart surgery in the prior year.

A relaxation and systematic desensitization technique was used for the experimental group, each patient being given a tape recorder with a 15-minute tape of the exercise "to use whenever he wanted to relax" (p. 214) but at the least four times a day.

On basis of previous research one would expect postoperative adverse reactions of 40% but the Relaxation group had only 8%. (The control group had 27%, but the difference between groups was not significant with Fisher's exact probability test-- $p < .10$ .) Mortality rate was same in both groups.

The results must be interpreted in the context of differences between groups during surgery, which may or may not relate to the intervention. The Relaxation Group was significant lower than Control Group on 4 of 5 surgical risk factors: anesthesia time, cardiopulmonary bypass time, total units of blood, and degree of hypothermia. They were (nonsignificantly) better on duration of hypothermia; and there was no difference on multivalve replacement. This suggests the Relaxation Group were less exposed to these factors to a significant degree.

**Discussion:** The groups were matched on age, sex, preoperative diagnosis, type of surgical procedure, incidence of severe economic problems, family adjustment problems, and history of psychiatric problems (i.e. the groups did not differ). "The major difference between the two groups was in relation to the surgical stress factors studied: degree of hypothermia, amount of time on cardiopulmonary bypass, anesthesia time, and total units of blood received. The experimental group was significantly lower on mean values for all of these stress factors. Without further research it is impossible to conclude that these factors did or did not influence the lower incidence of postoperative reactions found in the experimental group. It should be noted, however, that the decreased surgical stress factors had no apparent effect on reducing mortality in this sample. Also as previously stated, prior research has not been able to demonstrate a direct relationship between these surgical stress factors and the incidence of postoperative reactions" (p. 215).

"The population used in this research ranged from patients with mild symptoms of heart disease to those with severe decompensation and congestive heart failure. It was anticipated prior to beginning the research that some patients would be physically incapable of cooperating due to fatigue and dyspnea; this prove not to be the case" (p. 216).

This intervention is usable by nurses, and "provides an alternative which the professional nurse may prescribe after systematically assessing a patient's needs" (p. 216). "It is a new skill to be learned that is comparable to the skill of giving an injection or learning to recognize arrhythmias. The amount of time required to teach a patient the technique of systematic relaxation is realistically within the scope of any staff nurse's role" (p. 216).

1970

Gray, Arne L.; Bowers, Kenneth S.; Fenz, Walter D. (1970). Heart rate in anticipation of and during a negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 18 (1), 41-51.

Gave 10 stimulating control and 10 hypnotic undergraduates a suggestion to negatively hallucinate. Heart rate responses recorded prior to and including the hallucination period indicated consistent differences between groups. Hypnotic Ss responded with heart rate acceleration in anticipation of the hallucination, while controls responded with heart rate deceleration during the same period. It is

suggested that these differences reflect differences in the subjective experiences of hypnotic and simulating Ss. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

McCord, Hallack (1968). Hypnotic control of nosebleed. American Journal of Clinical Hypnosis, 10, 219.

#### NOTES

Nosebleeds that occurred every two or three days and could not be terminated with the usual clinical interventions were stopped, without symptom substitution, when fairly direct suggestions were added almost "as a sort of after-thought, since the primary purpose of the therapy was to aid in treating the marriage difficulty" (p. 219).

Nuland, William (1968). The use of hypnotherapy in the treatment of the postmyocardial infarction invalid. International Journal of Clinical and Experimental Hypnosis, 16 (3), 139-150.

DEALS WITH THE PSYCHOLOGICAL ASPECTS OF CONVALESCENCE AND REHABILITATION OF PATIENTS FOLLOWING CORONARY INFARCTION. THE FOCUS IS ON THE SITUATIONAL FACTORS WHICH THE PATIENT ENCOUNTERS DURING CONVALESCENCE THAT SERVE TO PROLONG AND REINFORCE THE INVALIDISM. IT IS CONCERNED ESPECIALLY WITH THE VALUE OF HYPNOTHERAPY AS COMPARED WITH OTHER PSYCHOTHERAPEUTIC METHODS IN TREATING THESE CASES. THE ANXIETY AND EMOTIONAL STRESS WHICH CAN BE RELIEVED THROUGH THE USE OF HYPNOSIS IS DIRECTED PRIMARILY TOWARD REDUCING EMOTIONAL TURMOIL WHICH RESULTS FROM THE CORONARY ATTACK WITH THE CONSEQUENT FEAR OF PHYSICAL ACTIVITY AND OF SUDDEN DEATH. SPECIFICALLY, HYPNOSIS IS USED EFFECTIVELY IN REASSURANCE, REEDUCATION, DESENSITIZATION, GUIDANCE, AND OTHER DIRECT SUPPORT TECHNIQUES IN ACCORDANCE WITH THE PATIENT'S SYMPTOMS AND NEEDS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug

effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

Black, Stephen (1964). Mind and body. London: Kimber.

#### NOTES

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

1963

Black, Stephen; Edholm, O. G.; Fox, R. H.; Kidd, D. J. (1963). The effect of suggestion under hypnosis on the peripheral circulation in man. Clinical Science, 26, 223-230.

#### Summary

The effects on the circulation in the forearm and hand of both direct and indirect suggestion under hypnosis of thermal stimuli have been studied. 2. The induction of hypnosis did not significantly alter the forearm blood flow, but a small reduction in hand blood flow was usually observed. Pulse rate in general slowed slightly as did respiration rate. 3. The effect of body heating on forearm and hand blood flow was not modified by hypnosis. 4. Direct suggestion under hypnosis of body heating or body cooling, with and without body heating, produced only small changes. 5. The changes associated with suggestion were not related to the thermal suggestion. Whatever the suggestion, the usual response was a reduction in hand blood flow and an increase in forearm blood flow. 6. The rise of body temperature with heating was not modified by direct suggestion, under hypnosis, of body cooling. 7. No change in body temperature could be elicited by suggestion. 8. In a few experiments marked changes in forearm blood flow occurred. These appeared to resemble the changes in the circulation produced by emotional stimuli. 9. The smaller changes more frequently observed were also similar to those produced by mild emotional stimuli" (p. 229). [N.B. The Subjects were normal, healthy adults, N = 9, between 21-45 years old; highly hypnotizable, amnesic for trance.]

1960

Crasilneck, Harold B.; Hall, J. A. (1960). Blood pressure and pulse rates in neutral hypnosis. International Journal of Clinical and Experimental Hypnosis, 8 (3), 137-140.

Author's Summary: "Twenty-five Ss were tested for pulse rate and blood pressure in a wakeful resting state and immediately after the induction of neutral hypnosis. No change was found in the measurements by application of the t-test for differences between correlated means. These results strongly suggest that changes in

pulse rate and blood pressure do not occur simply from the induction of hypnosis. The effect of various direct, indirect (emotive), and hallucinatory suggestions remains to be established" (p. 138).

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. ( Abstracted in Psychological Abstracts, 61: 6626)

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

Raginsky, Bernard B. (1959). Temporary cardiac arrest induced under hypnosis. International Journal of Clinical and Experimental Hypnosis, 7 (2), 53-68.

#### NOTES

"An experiment is described in which the symptoms of syncope and temporary complete cardiac arrest were induced under hypnosis in a patient who had been operated on for a so-called Adams-Stokes syndrome and who had, until the time of the experiment, remained free of such symptoms. An attempt is made to correlate contemporary knowledge in explaining this phenomenon.

"It is pointed out that maturity in the biological sciences takes about twice as long to achieve as does maturity in the physical sciences. This holds especially true in the use of hypnosis" (p. 66).

The authors report that in attempting to reinduce a fainting episode, "We were not at all prepared for the complete cardiac arrest which followed the hallucinated episodes" (p. 59).

#### 1958

Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

#### NOTES

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis.

Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).

Schneck, Jerome M. (1957). Hypnoanalytic observations on the psychopathology of fainting. Journal of Clinical and Experimental Hypnosis, 5 (4), 167-171. (Abstracted in Psychological Abstracts 62: 3 II 67S)

Varieties of fainting have been described as hysterical syncope, vasodepressor syncope, and carotid sinus reactions, among others. Fainting has been linked in general with personality problems, emotional instability, and immaturity. It has been called a mechanism for blocking of ego functions in its role of primitive defense against overwhelming stimuli. The present paper gives in greater detail the specific dynamics in a patient with fainting episodes. A crucial event incorporating major dynamic ingredients was an operative procedure in childhood. The psychological impact of this trauma was revived during a spontaneous hypnotic regression. The personality matrix significant for this patient in relation to the fainting episodes consisted of passive, masochistic submission to a dominant, highly influential mother whose pressure was felt by the patient as pervasive and stifling. Circumstances associated psychologically with this feeling apparently triggered the fainting reactions. As he matured through the years and cast off increasingly this type of maternal influence, the tendency toward fainting reactions diminished" (p. 170).

1956

Bigelow, Newton; Cameron, G. H.; Koroljow, S. A. (1956). Two cases of deep hypnotic sleep investigated by the strain gauge plethysmograph. Journal of Clinical and Experimental Hypnosis, 4 (4), 160-164.

Two subjects, studied by means of a strain gauge plethysmograph, have shown greater changes in the peripheral pulse and the finger volume during deep hypnosis than they did immediately before or after. In the absence of external stimuli, the presence and the degree of such changes reflect the activity of the autonomic nervous system. This result suggests that in hypnosis the inhibiting tendency of the cortex on the autonomic nervous system is reduced or nullified" (p. 164).

Kupfer, David (1954). Hypnotherapy in a case of functional heart disorder. Journal of Clinical and Experimental Hypnosis, 2 (3), 186-190.

## NOTES

"Summary. A young soldier with functional cardiac complaints was treated with hypnosis in a total of 4 interviews. The dynamics were bypassed and the therapeutic suggestions attached to 2 significant events in the patient's childhood, dealing intimately with the oedipal conflict and castration fears. Follow-up studies of 3 weeks duration revealed that significant changes had been produced in the patient's attitudes towards himself and towards his role in the military service" (p. 190).

1953

Schneck, Jerome M. (1953). Hypnoanalytic study of a patient with extrasystoles. Journal of Clinical and Experimental Hypnosis, 1 (4), 11-17. (Abstracted in Psychological Abstracts 6413?)

### Author's Summary -

Psychosomatic studies of heart abnormalities are available in the literature. A few deal with extrasystoles. Fewer still involve hypnosis. Extrasystoles are reported to have been induced hypnotically. Hypnosis has also been used to study other aspects of cardiac functioning. This report deals with some psychological aspects of extrasystoles in a patient treated hypnoanalytically.

In the hypnotic state there appeared to be enhanced recall, less obsessiveness, greater spontaneity, more emotional involvement with material elicited, and improved integration of data made available.

A direct relationship was shown to exist between states of tension and the extrasystoles. Variation in the frequency of their occurrence set in and this was followed by progressive lessening in the symptom as tension decreased.

The symptom was related to the identification by the patient with his father in relation to pulmonary infections. The heart as a vital organ and the early death of the patient's father both assumed considerable psychological significance for the patient and were obsessively elaborated by him. His mother's death following a heart attack resulted in an exacerbation of the symptom and reenforced his concern. Use of the symptom corresponded to his passive inclinations and his conflict over passivity-aggressivity and dependence-independence problems. His failures could be rationalized on the basis of physical malfunctioning and sympathy enlisted thereby. The symptom appeared to be related also to marked guilt about his relationship with his mother and furthered a dependent masochistic relationship with his mother-in-law who dominated his household and (as revealed in other data) was identified in part with the patient's mother. (At this time, incidentally, his mother-in-law, like his mother, was said to be quite ill with hypertension.)

Therapeutic contact with this patient was time-limited. He travelled a considerable distance from another state for each of his appointments. The psychodynamics available are undoubtedly a fraction of many additional elements involved. Removal to another part of the country interrupted treatment but further opportunity for hypnoanalytic work may become available in the future.

CARELTON SKILL TRAINING PROGRAMME

1999

Comey, Gail; Kirsch, Irving (1999). Intentional and spontaneous imagery in hypnosis: The phenomenology of hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 47 (1), 65-85.

Students were given 1 of 2 versions of the Carleton University Responsiveness to Suggestion Scale (CURSS): (a) the original version, which contains instructions to intentionally imagine goal-directed fantasies, and (b) a modified version, in which instructions for suggestion-related imagery were deleted. Participants were asked to report their goal-directed fantasies and to indicate whether these occurred spontaneously or were generated intentionally. They were also asked whether they had tried intentionally to generate the suggested experience and to indicate whether they had believed that the suggested states of affairs were real (e.g., whether they thought a hallucinated cat really existed). The deletion of instructions for goal-related imagery significantly increased responsiveness to CURSS suggestions. Spontaneous goal-directed imagery was significantly correlated with behavioral response, but intentional imagery was not. Most successful responders tried to generate suggested experiences intentionally, indicated that they could have resisted challenge suggestions if they really wanted to, and reported believing in the reality of suggested ideomotor and challenge experiences but not of cognitive suggestions. Voluntary attempts to generate suggested experiences were correlated with subjective responding.

Milling, Leonard S.; Kirsch, Irving; Burgess, Cheryl A. (1999). Brief modification of suggestibility and hypnotic analgesia: Too good to be true?. International Journal of Clinical and Experimental Hypnosis, 47 (2), 91-103.

A 10-minute training procedure, based on the Carleton Skill Training Program, has previously been reported to produce substantial increments in responsiveness to hypnotic suggestion. The authors attempted to replicate this effect and also assessed the impact of the training procedure on hypnotically suggested analgesia. Ninety-eight students who had been preselected for high, medium, and low levels of initial suggestibility were randomly assigned to experimental and control groups. Training failed to increase overall suggestibility scores or to enhance the effects of a suggestion for pain reduction. Suggested pain reduction was more highly correlated with posttreatment suggestibility scores than with pretreatment suggestibility and, in a regression analysis, only posttreatment suggestibility predicted pain reduction uniquely.

1995

Gearan, Paul; Schoenberger, Nancy E.; Kirsch, Irving (1995). Modifying hypnotizability: A new component analysis. International Journal of Clinical and Experimental Hypnosis, 43 (1), 70-89.

The effects of the Carleton Skills Training Program (CSTP) on hypnotizability were compared to those of a modified training program in which instructions for physical

enactment of the response were omitted. After training, subjects in the original CSTP reported an increase in the extent to which they intentionally enacted suggested behaviors. In contrast, subjects in the modified training program reported increased fantasy without voluntary physical enactment. Nevertheless, both training programs increased behavioral and subjective responsiveness to suggestion, and there were no significant differences in response enhancement between the two programs. Across conditions, increases in behavioral and subjective responses to suggestion were correlated with increased use of fantasy. In contrast, increases in enactment were correlated only with compliance. The modified training program is recommended as a means of enhancing suggestibility with less likelihood than the original CSTP of engendering compliance.

**1993**

**Bertrand, Lorne D.; Stam, Henderikus J.; Radtke, Lorraine (1993). The Carleton Skills Training Package for modifying hypnotic susceptibility--a replication and extension: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 6-14.**

This study employed the Carleton Skills Training Package (CSTP) to attempt to enhance both objective and subjective components of hypnotic susceptibility. In addition, changes in susceptibility were compared for subjects administered a standard hypnotic induction procedure and for subjects given brief "place yourself in hypnosis" instructions. Results indicated that subjects who were administered the CSTP exhibited significant gains in both objective and subjective susceptibility scores that were maintained at two separate posttests with different scales. No differences were observed between the groups administered the standard induction and those administered the self-induction instructions.

**NOTES:**

The authors do not make much of the latter finding, but I find it to be the more interesting outcome.

"Two experiments (Barber & Calverley, 1969; Stam & Fraser, 1986) found that subjects who sat quietly for 5 minutes following an instruction to "place yourself in hypnosis" attained similar scores when responding to test suggestions as did subjects who were administered a 5-minute hypnotic induction procedure. The CSTP informs subjects that hypnotic induction procedures do not achieve their effects by inducing a trance state and that such procedures function to produce relaxation rather than to enhance responsiveness to suggestion. In addition, the CSTP emphasizes to subjects that responses to suggestions do not 'just happen' but must be actively generated. To the extent that subjects attend to these aspects of the CSTP procedure, they should exhibit equivalent increments on behavioral and subjective indexes of susceptibility regardless of whether they are administered a formal hypnotic induction procedure or simply told to 'place themselves into hypnosis.'" (p. 7).

"That naive subjects can produce equivalent objective, subjective, and involuntariness scores following such instructions highlights the degree to which

hypnotic responses are not dependent on formal induction procedures. The fact that so-called active-alert induction procedures are also equivalent in producing hypnotic responses supports this notion (Banyai & Hilgard, 1976)" (p. 13).

Spanos, Nicholas P.; Flynn, Debora M.; Gabora, Natalie J. (1993). The effects of cognitive skill training on the Stanford Profile Scale: Form I. Contemporary Hypnosis, 10, 29-33.

Low hypnotizable subjects who attained high hypnotizability scores following cognitive skill training (i.e. created highs) were compared with untrained low hypnotizables and with subjects who attained high hypnotizability scores without training (i.e. natural highs) on Form 1 of the Stanford Profile Scale (SPS:I). Created and natural highs did not differ significantly on the SPS:I and equivalent proportions of created and natural highs attained 'virtuoso performance' on the SPS:I. None of the initially low hypnotizables attained high SPS:I scores. Findings indicate that the performance of high-scoring, skill-trained subjects cannot be 'explained away' in terms of post-test hypnotizability scales with limited upper ranges.

1992

Bates, Brad L. (1992). The effect of demands for honesty on the efficacy of the Carleton Skills-Training Program. International Journal of Clinical and Experimental Hypnosis, 40 (2), 88-102.

30 low hypnotizable Ss were administered the Carleton Skills-Training (CST) program. Prior to testing, 15 Ss were administered honesty instructions (Bowers, 1967) in an effort to encourage responses that were consistent with subjective experiences and to dissuade Ss from performing in a manner intended to please E. Posttraining hypnotizability scores for Ss given honesty instructions were consistently smaller than those for 15 Ss who did not receive these instructions, implying that scores for the latter group exaggerate the extent to which hypnotic experiences are altered by the CST program. The pattern of results supports the view that demand characteristics contribute to the efficacy of the CST program, and that improvements in actual hypnotic talent are more limited than Spanos' original work implies.

1991

Bates, Brad L.; Kraft, Patricia M. (1991). The nature of hypnotic performance following administration of the Carleton Skills Training Program. International Journal of Clinical and Experimental Hypnosis, 39, 227-242.

30 low hypnotizability Ss were administered the Carleton Skills Training (CST) program, while 8 were assigned to a practice group. Prior to treatment, an attempt was made to facilitate training by altering the ecological conditions of the laboratory. All Ss were tested immediately after treatment, and trained Ss were retested after 5-7 months. Immediate training gains were large and were

comparable in magnitude to those routinely found at Carleton University. In addition, (a) trained Ss responded comparably whether screened once or twice, (b) practice alone did not enhance hypnotic performance, and (c) natural high hypnotizability Ss obtained significant larger Field Inventory of Hypnotic Depth (Field, 1965) scores than created high hypnotizables. Follow-up scores fell between scores posted at screening and immediately after training. Current findings are interpreted in the context of existing evidence concerning the CST program.

**NOTES: (based on the Discussion) "Results from these two investigations (include Bates et al., 1988) challenge the claim that lasting changes have occurred in the ability of most trained Ss to experience hypnosis. With regard to the present findings, it is reasonable to wonder whether scores would have been even lower had follow-up data been gathered a few months later. In the only other published study to address the problem of maintenance, Spanos, W. P. Cross, Menary, and Smith (1988) found that after at least 9 months, trained Ss outscored low hypnotizability Ss who had never received training. Unfortunately, these investigators do not report comparisons between trained Ss' follow-up scores and either original screening or immediate posttest scores. The authors do report, however, that 20% of trained Ss obtained high scores at follow-up. Given that at least 50%, and as high as 80%, of Ss routinely score in the high range immediately after receiving the CST program at Carleton University, a follow-up figure of 20% implies that with time, the hypnotic performance of most trained Ss began to return to baseline levels.**

**"With regard to the subjective experience of trained Ss.... These results confirm previous findings by Bates & Brigham (1990) which indicated that the hypnotic experiences of CST graduates - even those who are the most responsive to the modification program - may not be comparable in all respects to those of untrained, high hypnotizable individuals" (pp. 237-238).**

**"The present study altered the context in which training occurred by increasing the salience of the laboratory; adding, repainting, carpeting, and redecorating experimental rooms; requiring Es to dress professionally; and temporarily attributing the CST program to Washington State University. When demand characteristics were arranged in this manner, training gains were of the same magnitude as those found at Carleton University and were much larger than those found in all prior replication studies. The apparent importance of contextual factors is underscored by findings reported by Bates et al. (1988), who manipulated demand characteristics in a systematic fashion and observed that Ss' responses to the CST program are moderated by the context in which training occurs. Given the important role that ecological variables have generally played in hypnosis research, it should come as no surprise that factors like these would affect attempts to modify hypnotic performance" (p. 238).**

**Kirkeby, Judith L.; Payne, Paul A.; Hovanitz, Christine; Moser, Steven (1991). Increasing hypnotizability: A comparison of a multimedia form of the Carleton Skills Training Program with a self-administered written form. Contemporary Hypnosis, 8, 161-165.**

Compared a group-administered form of the multimedia Carleton Skills Training Program (CSTP) to a self-administered training program similar in content, but limited to written materials. One hundred and forty-one female subjects were administered one of four conditions: (1) the multimedia CSTP; (2) the self-administering booklet training; (3) a practice-only condition; or (4) a no-practice control condition. Subjects then responded to a shortened form of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGS:AS). [6 items: arm lowering, arm rigidity, hands together, fly hallucination, eye catalepsy, and amnesia.] Results indicated that objective and subjective hypnotizability measures were higher in both of the training conditions than in the practice-only or control conditions. In comparisons of the two training conditions, the booklet program was judged to be equal in effectiveness to the multi-media group form of the CSTP.

**NOTES**

**1:**

Group Hypnotizability Scale: Means for Behavioral (B), Experiential (E), Involuntariness (I) and Behavioural/Involuntariness (B/I) measures

GROUP n B E I B/I

Range 0-6 0-18 0-18 0-6 CSTP 39 4.67 12.46 11.54 3.64 Booklet 39 4.62 12.18 11.31 3.77 Practice 31 3.58 9.81 8.42 2.32 Control 32 3.44 10.66 9.22 2.75

Spanos, Nicholas P.; DuBreuil, Susan C.; Gabora, Natalie J. (1991). Four-month follow-up of skill-training-induced enhancements in hypnotizability. Contemporary Hypnosis, 8, 25-32.

Low hypnotizability subjects were exposed to skill training aimed at enhancing hypnotizability, and post-tested 2 weeks later. Those in a short delay condition were administered a second hypnotizability post-test within 2 weeks of the first, whilst those in a long delay condition were administered the second post-test 16-18 weeks after the first post-test. Skill-trained subjects in the two delay conditions did not differ on the first post-test. Skill-trained subjects in the two delay conditions did not differ significantly on behavioural or subjective indices of hypnotizability at either post-test. However, skill-trained subjects attained significantly higher hypnosis scores on both post-tests than did no-treatment control subjects. Attitudes towards hypnosis were also significantly enhanced by skill training, and these enhancements were maintained across the post-test intervals. Among the skill-trained subjects, post-tested hypnotizability was predicted by subjects' attitudes and by the trainer's ratings of subjects' receptivity and resistance towards the training.

**NOTES:**

Immediately before each hypnotizability test, subjects' attitudes towards hypnosis were assessed with a 14-item questionnaire taken from Spanos, Cross et al. (1987). On this instrument higher scores indicate more positive attitudes" (p. 27).

"Immediately following each skill-training session, the trainer evaluated the subject's receptivity to the training using a nine-item checklist. The items described aspects of the training which experienced trainers in our laboratory have judged to

be indicators of successful modification. The items (e.g. 'Does the subject volunteer that they found the ideas presented interesting/fun?') were scored dichotomously (yes/no), and summed to yield a receptivity to training score for each subject. The trainer also rated the degree to which each subject displayed resistance to the training on a global three-point scale" (p. 27)

The correlation between receptivity towards the skill training procedure and baseline attitudes toward hypnosis was .50.

"Some evidence indicates that untrained subjects (high hypnotizables included) exhibit substantial decrements in responsiveness to suggestions when they are exposed between testings to negative information about hypnosis (Barber & Calverley, 1964; Spanos & McPeake, 1975) or to information that alters their expectations about their responsiveness (Spanos, Gabora, Jarrett & Gwynn, 1989)" (p. 30)

"These findings suggest that the subjects who initially hold the most negative attitudes towards hypnosis are the least receptive to skill-training procedures. After training, these subjects continue to hold relatively negative attitudes towards hypnosis which limit the extent of their hypnotizability gain" (p. 30).

**1990**

**Bates, Brad L.; Brigham, Thomas A. (1990). Modifying hypnotizability with the Carleton skill training program: A partial replication and analysis of components. International Journal of Clinical and Experimental Hypnosis, 38, 183-195.**

3 standard components of the Carleton Skills Training (CST) program - information, modeling, and instructions - were administered in 1 of 3 sequences to 12 low- hypnotizable Ss. Hypnotizability measures were obtained after each component was given, as well as before and after training. Although objective scores showed significant gains from screening to testing, subjective scores did not, suggesting that while training encouraged behavioral compliance, few Ss learned to have the subjective experiences traditionally associated with hypnosis. Results from the component analysis were clear and consistent: whether instructions were presented first, second, or third in the training sequence, no significant changes occurred until this component was provided.

**NOTES:**

Gains shown by CURSS:O scores in the present study are larger than those obtained by Bates et al. (1988), and comparable to those reported by Spanos and his colleagues. Perhaps the attempt by trainers in the current study to develop rapport with Ss enhanced testing scores; this would be consistent with findings by Gfeller et al. (1987) who found that rapport enhances the efficacy of the CST program. Alternatively, administering the components of the CST program separately may have facilitated training.

"Unlike CURSS:O scores, subjective experience measures did not show significant gains . In addition, created highs had significantly lower CURSS:S and FIHD scores than natural highs. These findings contrast with previous work by Spanos and his associates, who consistently find large subjective gains and few if any differences

between created and natural highs (e.g., Gorassini & Spanos, 1986; Spanos et al., 1987b).

"The fact that so much of the CST program is either audiotaped, videotaped, or read from a transcript suggests that important extraprogrammatic variables have not yet been identified by Spanos and his colleagues" (p. 191).

Regarding compliance issues, "Spanos refers to the fact that created and natural highs typically respond comparably on subjective hypnotizability dimensions. Yet, results from the present study would appear to cast doubt on this finding. Moreover, demonstrating that created and natural highs report comparable subjective experiences does not preclude the possibility that the former are merely complying with experimental demands" (p. 192).

" trained Ss consistently obtain lower hypnotizability scores during testing than simulators (Spanos & Flynn, 1989; Spanos et al., 1986). According to Spanos, this indicates that the testing behavior of trained Ss involves more than compliance with experimental demands.

"In actuality, the issue is more complicated than this. ... Since trained Ss are never explicitly told to respond like "excellent hypnotic Ss," the instructions they receive are different from those given simulators. Given different instructions, it is reasonable to expect that compliance will look different for these two groups. In short, Ss given the CST program may be complying, but with experimental demands quite different from those experienced by simulators.

"In summary, the present investigation demonstrates quite clearly that the instructional component is the primary change agent in the CST program. In addition, while objective scores increased substantially in the current study as a result of the training, subjective scores did not, suggesting that behavioral compliance, but not hypnotic ability, was enhanced by the CST program. Although Spanos maintains that recipients of the CST program learn to have the subjective experiences traditionally associated with hypnosis, the available data cannot distinguish between this possibility and the equally plausible hypothesis that trained Ss act as if hypnotized and report "hypnotic" experiences only because they are instructed during training to do so, and not because their hypnotic ability has been enhanced" (pp. 193-194).

1990

Spanos, Nicholas P. (1990). More on compliance and the Carleton Skill Training Program. British Journal of Experimental and Clinical Hypnosis, 7, 165-170.

#### NOTES

In this paper the author counters Bates' (1990) criticisms of the Carlton Skills Training Program, e.g. that the program induces Subject compliance rather than genuine increases in hypnotizability. The author states that the training program is designed to induce conformance rather than simply compliance with suggested demands.

He notes that in order to avoid the twinges of conscience associated with a self-definition of cheating, most Ss fail suggestions to which they are unable to generate the requisite subjective response. (Most Ss fail most of the suggestions on

standardized hypnotizability scales despite the fact that all of these suggestions are easily fakable.)

"The findings of the Spanos et al. (1987) and Cross and Spanos (1988) studies suggest that, given appropriate attitudes and interpretations, subjects who benefit most from skill training are those who possess the cognitive abilities that enable them to vividly create and become absorbed in the imaginary scenarios called for by test suggestions. It is much less clear how these findings could be accounted for in terms of compliance. There is no evidence to indicate that imaginal propensity indexes are strongly related to a general tendency towards compliance and, at any rate, low hypnotizables who undergo skill training are, by definition, subjects who failed to comply with test demands during initial hypnotizability testing.

"In summary, when taken together the available data suggest that compliance cannot account adequately for CSTP-induced gains in hypnotizability. Obviously, this conclusion should not be interpreted as saying that compliance plays no role in training induced hypnotizability gains, or that the role of compliance in this regard should not be thoroughly investigated. As Wagstaff (1981) has repeatedly emphasized, compliance appears to be an integral component of hypnotic responding. Recent evidence from our laboratory (Spanos et al., 1989a) supports Wagstaff's (1981) contention by indicating that untrained high hypnotizables engage in substantial levels of compliance when the 'pass' at least some difficult test suggestions. Given that natural high hypnotizables engage regularly in some compliant responding, it would be rather surprising to find that created highs did not do the same. However, examining this issue empirically requires the application of experimental paradigms that allow compliance to be differentiated from conformance.

Spanos, Nicholas P.; Warnock, Sean; de Groot, Hans P. (1990). Cognitive skill training, confirming sensory stimuli, and responsiveness to suggestions in subjects unselected for hypnotizability. Journal of Research in Personality, 24, 133-144.

Subjects unselected for hypnotizability were administered cognitive skill training which taught them to actively generate hypnotic responses or expectancy enhancing procedures that provided them with sensory stimuli aimed at confirming the false belief that they had successfully experienced suggested effects. Subjects were tested for suggestibility / hypnotizability at the end of their experimental treatment session and again in two follow-up posttests. Skill trained subjects exhibited significantly higher scores than subjects in all other treatments on the behavioral and subjective dimensions of the three suggestibility / hypnotizability tests. Subjects who received confirming stimuli showed higher behavioral scores than no treatment controls only on the behavioral dimension of the first suggestibility test, and no differences from controls on the subjective dimensions of any of theory tests. Theoretical implications are discussed.

1989

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Compliance, imaginal correlates and skill training. [Comment/Discussion] .

## NOTES

The authors defend the Carlton skill training program against accusation that the trained Ss are simply complying in the context of social pressure. They also discuss characteristics of high hypnotizables (absorption and imagery), noting that the majority of lows do not have low absorption/imagery scores (citing de Groh, 1988, and noting the research on context dependency for absorption).

"Despite all of this, it is worth noting that the results of our modification studies are not inconsistent with the hypothesis that high hypnotizability requires imaginative skills that some subjects do not possess in sufficient degrees. For example, two recent studies (Spanos et al., 1987; Cross and Spanos, 1988) found that the extent to which low hypnotizables showed gains following administration of the CSTP was predicted by their pre-tested levels of imagery vividness. Lows with good imagery benefitted substantially more from the CSTP than did lows with poor imagery ability. When it is kept in mind that most low hypnotizables do not score low on measures of imagery/absorption (de Groh, 1988), then the findings that substantial numbers of low hypnotizables can be taught to attain high hypnotizability is not at all inconsistent with the notion that high hypnotizability requires at least moderate levels of imagery/absorption ability" (p. 14).

## 1989

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Simulation, compliance and skill training in the enhancement of hypnotizability. British Journal of Experimental and Clinical Hypnosis, 6, 1-8.

Subjects who underwent cognitive skill training were compared to no treatment controls and to subjects in two simulation treatments on the behavioural and subjective dimensions of two hypnotizability post-tests. Ss in a trained simulation treatment received skill training but were instructed to fake the responses of someone who had been transformed by training into an excellent hypnotic subject. Standard simulators did not receive skill training, but were instructed to fake their responses to the two post-tests. A final group of untrained Ss (i.e. naturals) who attained the same behavioural scores on a hypnotizability index as did post-tested skill-trained Ss, was also compared to the treated groups. Ss in the two simulation treatments performed similarly on all hypnotizability indexes. Simulators outperformed both skill-trained and natural subjects (who failed to differ from one another) on all indexes, and skill-trained and natural subjects, in turn, outperformed the no treatment controls. These findings suggest that sustained faking cannot account adequately for the enhancements in hypnotizability produced by skill training.

Spanos, Nicholas P.; Flynn, Deborah M.; Niles, Judy (1989-90). Rapport and cognitive skill training in the enhancement of hypnotizability. Imagination, Cognition and Personality, 9 (3), 245-262.

The role of interpersonal rapport in facilitating the enhancements in hypnotizability produced by cognitive skill training was examined in two experiments. In Experiment 1 low hypnotizable subjects either received skill training or passively oriented training that was designed to facilitate rapport with the trainer without teaching subjects how to generate the responses called for by test suggestions. Subjects in the two treatments reported equivalently high levels of rapport with their trainer, but only those given skill training attained large gains on two hypnotizability posttests. Subjects given passive training did not differ from untreated controls at posttesting. In Experiment 2 subjects received skill training under conditions designed to either heighten or minimize rapport with the trainer. Those in the high rapport condition showed large hypnotizability gains on both posttests, whereas those in the low rapport condition failed to differ from no treatment controls in the regard. Our findings indicate that high rapport is not sufficient for producing training-induced enhancements in hypnotizability. However, the absence of such rapport may interfere with subjects' learning and applying skills that can enhance hypnotizability

Spanos, Nicholas P.; Lush, Nancy I.; Gwynn, Maxwell I. (1989). Cognitive skill-training enhancement of hypnotizability: Generalization effects and trance logic responding. Journal of Personality and Social Psychology, 56 (5), 795-804.

Compared low-hypnotizable subjects who simulated hypnosis, underwent cognitive skill training, or served as no-treatment controls to subjects who scored as high hypnotizables without training (natural highs) on response to analgesia, age-regression, visual hallucination, selective amnesia, and posthypnotic suggestions. Subjects who attained high hypnotizability following skill training (created highs) did not differ from natural highs on any response index. Natural and created highs scored lower than simulators but higher than controls on the behavioral and subjective aspects of test suggestions. Simulators, however, were significantly less likely than natural highs or skill-trained subjects to exhibit duality responding or incongruous writing during age regression or transparent hallucinating. Results suggest that the hypnotic responses of natural and created highs are mediated by the same cognitive variables and that enhancements in hypnotizability produced by skill training cannot be adequately explained in terms of compliance.

Spanos, Nicholas P.; Cross, Wendi P.; Menary, Evelyn; Smith, Janet (1988). Long term effects of cognitive-skill training for the enhancement of hypnotic susceptibility. British Journal of Experimental and Clinical Hypnosis, 5 (2), 73-78.

Twelve initially low susceptible subjects, who scored in the medium or high susceptibility range on the Carleton University Responsiveness to Suggestion Scale (CURSS) following skill training, were posttested 9 to 30 months later with a group version of the Stanford Hypnotic Susceptibility Scale, Form C. Skill trained subjects scored significantly higher on behavioral and subjective dimensions of the Stanford Hypnotic Susceptibility Scale, Form C than low susceptible untrained control subjects who were posttested after an equivalent interval. Furthermore, the

posttraining CURSS scores of the skill trained subjects were matched to those of subjects who received the same CURSS scores without training. Matched subjects were posttested on the Stanford Hypnotic Susceptibility Scale, Form C after only a brief delay. Skill trained and matched subjects failed to differ significantly on Stanford Hypnotic Susceptibility Scale, Form C susceptibility dimensions, but skill trained subjects showed higher levels of suggested amnesia than matched subjects. These findings support the idea that hypnotic susceptibility is modifiable and that training induced gains in susceptibility can be enduring.

1987

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J.; Smith, Janet (1987). Effects of repeated baseline testing on cognitive-skill-training-induced increments in hypnotic susceptibility. Journal of Personality and Social Psychology, 52 (6), 1230-1235.

Subjects who pretested as low in hypnotic susceptibility either received or did not receive a second baseline susceptibility test. Half of the subjects in each baseline test condition were administered cognitive skill training to enhance susceptibility, and half were given no training. Trained subjects exhibited much higher scores than untrained subjects on the objective and subjective dimensions of two different susceptibility posttests. The number of baseline tests given to subjects did not significantly affect posttest responding. These findings support the notion that hypnotic susceptibility can be substantially modified. They argue against the idea that training-induced gains in susceptibility are an artifact of giving subjects only a single- baseline test.

Spanos, Nicholas P.; de Groh, Margaret; de Groot Hans (1987). Skill training for enhancing hypnotic susceptibility and word list amnesia. British Journal of Experimental and Clinical Hypnosis, 4 (1), 15-23.

Subjects who pretested as low on hypnotic susceptibility received either cognitive skills training aimed at inculcating positive attitudes and interpretations concerning hypnotic responding, or no treatment. Trained subjects scored significantly and substantially higher on subjective and behavioral dimensions of susceptibility than controls. A second posttest assessed amnesia for a previously learned word list. Trained subjects showed more word list amnesia than either no treatment controls or subjects who had been matched to the trained subjects in terms of posttest susceptibility. Theoretical implications for theories of hypnotic susceptibility are discussed.

1986

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J. (1986). Component analysis of cognitive skill training for the enhancement of hypnotic susceptibility. Journal of Abnormal Psychology, 95, 350-357.

Four treatments to enhance the hypnotic responsiveness of subjects who pretested as low in hypnotic susceptibility were compared. Complete skill training included information aimed at encouraging (a) positive attitudes, (b) the use of imagery strategies, and (c) an interpretation of hypnotic behavior as active responding. Partial training included only components (a) and (b). Both training packages enhanced attitudes toward hypnosis to an equivalent degree. However, complete training was much more effective than either partial training or no treatment at enhancing behavioral and subjective responding on two different posttest scales of hypnotic susceptibility. More than half of the subjects who received complete training, but none of the partial training or control subjects, scored in the high-susceptibility range on both posttests. Subjects explicitly instructed to fake hypnosis and those in the complete skill-training treatment exhibited significantly different patterns of posttest responding. Findings support social psychological perspectives that emphasize the importance of contextual factors in hypnotic responding.

## CASE STUDY

1993

Becker, Philip M. (1993). Chronic insomnia: Outcome of hypnotherapeutic intervention in six cases. American Journal of Clinical Hypnosis, 36, 98-105.

Chronic dyssomnia is highly prevalent and has multiple etiologies. Hypnotherapy has been reported as beneficial for insomnia, but the description of the subject populations has been limited. A group of patients was evaluated at a sleep disorders center for a dyssomnia that occurred on at least 3 nights per week for 6 months or more. Six patients accepted hypnotherapy for their persistent psychophysiological insomnia and other sleep disorder diagnoses. Three patients responded to two sessions of structured hypnotherapy. The three responders remained improved at 16-month follow-up. Factors that seemed to contribute to long-term response in this small group of patients included a report of sleeping at least half of the time while in bed, increased hypnotic susceptibility, no history of major depression, and a lack of secondary gain.

LaGrone, Randy G. (1993). Hypnbehavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. American Journal of Clinical Hypnosis, 36, 132-136.

A 10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnbehavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress.

Nadon, Robert (1993, October). Nomothetic and idiographic approaches to hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

Scientists and practitioners are not benefitting from each other's contributions. The central contribution to hypnosis, both basic and applied, is the logic and validity of study designs. The false memory issue is an example. Clinicians supply an answer the public likes, but scientist provide data based on nomothetic (group average) models that are not useful here.

Most of my own work is nomothetic, but it can work together with case study approach. We use a synergistic model: the combined effects of traits, cognitive, social, and affective factors are investigated. Interactions are tricky to detect, but we need a spirit of enquiry that encourages designs sensitive to interactions.

One example is Radke & Spanos' study that used a scale rating whether subject was hypnotized and another indicating degree of absorption-and-hypnotized vs absorption-and-not-hypnotized. Nadon's reanalysis showed a scale by Ss interaction: mediums were different on the 7 point scale but highs were not. (Highs were less manipulated by the scale manipulation).

Jean-Roche Laurence and Nadon replicated the interaction. Then Nadon did a study to test the idea that highs were less affected by scale manipulation because they relied more on subjective experience. They measured Absorption in a different context and hypothesized that the highs here would be less affected on the 7 point scale in the other context; it was validated. There seemed to be a linear absorption by a quadratic hypnotizability interaction.

Another simple example of interaction at work: there are different lines predicting hypnotic ability based on the Absorption scale, representing need for control on the scale. Those low in need for control have a stronger prediction of hypnotizability from Absorption scale. With high need for control, Absorption doesn't predict hypnotizability. This may explain why the correlation isn't stronger between Absorption and hypnotizability.

Nadon investigated how level of relaxation could be affected by an interaction. Measured muscle tension of masseter (?) while listening to music (half of Ss) or focusing on relaxing (50%). In an experiential condition there was a negative correlation between Absorption and muscle tension (highs relaxed more); in an Instrumental condition it was the opposite. So both high and low Absorption people were capable of relaxation, but to get the best relaxation you would have to know their Absorption score.

A second study hypothesized that predispositions for certain kinds of affect (Tellegen's positive affect, like extroversion) and negative effect (like neuroticism). High Absorption extraverts low in neuroticism worked best with music; and [missed words]. This supports Tellegen's hypothesis re the effects of positive and negative affect and Absorption.

Now we can discuss individual characteristics that suggest which relaxation strategy will benefit. The practical implications can be validated by case studies.

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available

1992

Adams, P. C.; Stenn, P. G. (1992). Liver biopsy under hypnosis. Journal of Clinical Gastroenterology, 15, 122-124.

Two patients underwent outpatient percutaneous liver biopsy under hypnosis without complications. One patient had severe anxiety about the procedure because of a previous adverse experience with liver biopsy, and the other had a history of severe allergy to local anesthesia. Both patients had undergone a session of hypnosis at least once prior to the biopsy. One received no local anesthesia, and the other received 1% lidocaine as a local anesthetic. Both patients were completely cooperative during the procedure with the required respiratory maneuvers. Both patients stated that they were aware of the procedure under hypnosis but described no pain and would be most willing to have the procedure done under hypnosis in the future.

Chantler, Lisa J. (1992). The treatment of irritable bowel syndrome using hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 20, 39-47.

ABSTRACT: A single case is reported of the hypnobeavioural treatment of a patient with chronic irritable bowel syndrome. The success of this treatment suggests that it has potential over and above relaxation and other behavioural techniques alone.

Kraft, Tom (1992). Counteracting pain in malignant disease by hypnotic techniques: Five case studies. Contemporary Hypnosis, 9, 123-129.

ABSTRACT: Five cases of patients suffering from cancer are described in which hypnotic visualization techniques were successfully employed to relieve pain and anxiety. This study supports the view that hypnosis can be an effective tool for pain relief in malignant disease, particularly when traditional methods have been exhausted.

Haanen, Huub C.M.; Hoenderdos, Henk T.W.; Van Romunde, Leo K.J.; Hop, Win C.J.; Malle, Constant; Terwiel, Jack P.; Hekster, Gideon B. (1991). Controlled trial of hypnotherapy in the treatment of refractory fibromyalgia. Journal of Rheumatology, 18 (1), 72-75.

In a controlled study, 40 patients with refractory fibromyalgia were randomly allocated to treatment with either hypnotherapy or physical therapy for 12 weeks with followup at 24 weeks. Compared with the patients in the physical therapy group, the patients in the hypnotherapy group showed a significantly better outcome with respect to their pain experience, fatigue on awakening, sleep pattern and global assessment at 12 and 24 weeks, but this was not reflected in an improvement of the total myalgic score measured by a dolorimeter. At baseline most patients in both groups had strong feelings of somatic and psychic discomfort as measured by the Hopkins Symptom Checklist. These feelings showed a significant decrease in patients treated by hypnotherapy compared with physical therapy, but they remained abnormally strong in many cases. We conclude hypnotherapy may be useful in relieving symptoms in patients with refractory fibromyalgia.

#### NOTES

The patients in this study were 38 women and 2 men, ages 30-65, who had had fibromyalgia for an average of 8.5 years (range 1.5 - 40 years). Of these, 25 were on sick leave or incapacitated, and 6 were unemployed. Patients were randomly assigned to hypnotherapy, or to training in muscle relaxation plus massage (designated "physical therapy"). They were withdrawn from analgesics, except for paracetamol (like Tylenol), at the beginning of this program. Hypnotizability was not measured.

Hypnosis treatment consisted of an arm levitation induction, imagery deepening techniques, ego strengthening suggestions, and suggestions for control of muscle pain, relaxation, and improved sleep. Patients received eight one-hour sessions in decreasing frequency over three months; after Session 3 they were given a 30-minute audiotape to assist in daily self hypnosis. Seventeen patients completed hypnotherapy but three were dissatisfied and withdrew after 3 sessions.

Patients did self ratings on (1) duration of morning stiffness, (2) muscle pain, (3) fatigue on awakening, (4) sleep disturbance, and (5) global assessment, the last four using visual analog scales (VAS). Patient assessment at 12 and 24 weeks was the primary outcome measure, since fibromyalgia is diagnosed principally from patient's self described symptoms.

Independent observers did not know to which group the patient belonged. The physician's evaluation included (1) dolorimeter measures of point tenderness (for a Total Myalgic Score, TMS), (2) presence of tender points at 30 points, with 5 control points, (3) overall pain rating with visual analogue scale.

The Hopkins Symptom Checklist (HCL-90) also was used to evaluate outcome.

Using analysis of variance techniques and correcting for initial values, the study found significantly more favorable values in the hypnosis group than in the physical therapy group for muscle pain, fatigue on awakening, sleep disturbance, patient's overall assessment, and HCL total score. However, differences were not significant

for morning stiffness, physician's overall assessment, or T.S. There were no differences between Weeks 12 and 24 for both groups; therefore the mean value for weeks 12 and 24 for each patient were used to calculate percentage change relative to baseline.

The reduction in pain medication used by the hypnosis group was quite remarkable. "Median (range) analgesic drug use at the initiation of the study (mostly paracetamol) was in the hypnotherapy group 3.0 (0-42) tablets/week and in the physical therapy group 4.5 (0-21)/week. At Week 12 this was 1.0 (0-21) tablet/week for the hypnotherapy group and 7.0 (0-34) tablets/week for the physical therapy group. At the end of the study, 10 of 12 patients in hypnotherapy group and 3 of 12 patients in the physical therapy group had reduced their paracetamol use (Fisher exact test:  $p = 0.006$ )" (pp. 73-74).

Although it was observed that the total number of tender points decreased (regardless of treatment group), the Total Myalgic Score assigned by the physician had not changed either at week 12 or at week 24. In fact, even the control points were tender in 44% of the patients; most patients showed some pain response to a control point in one or two sessions of the three. "Only 12 of 40 patients had consistently nontender control points, 4 in hypnotherapy group and 8 in the physical therapy group. ... No relation was found between the initial HCL total score and the changes in the other variables studied" (p. 74).

Figures taken from Table 2, showing percent change as compared to baseline:

Physical Therapy (%)	Hypnotherapy (%)	Morning stiffness (minutes)	0.0	-25.0	
Muscle pain (VAS)	-6.8	-10.2**	Fatigue on awakening (VAS)	-0.3	-16.7**
Sleep disturbance (VAS)	-1.0	-23.1**	Overall assessment patient	-8.4	-33.2**
physician	+5.7	-3.2	T.S. (kg/3 cm <sup>2</sup> )	-11.1	-2.4
HCL total score	-0.9	-13.0**			

In their Discussion, the authors write, "In this controlled therapeutic trial in patients with refractory fibromyalgia hypnotherapy was more successful than physical therapy in improving complaints. The assessment of fatigue on awakening, sleep disturbance, muscle pain, the patient's overall assessment and the total score of the HCL showed a significant decrease in the hypnotherapy group at the end of the hypnotherapy at 12 weeks. This decrease persisted for 3 months after finishing the hypnotherapy. The variables studied in the physical therapy group had not changed significantly at 12 and 24 weeks.

"However, the patients in the hypnotherapy group improved only subjectively. This improvement was not seen via more objective variables (T.S. and number of tender points), in accordance with others [Carette et al., 1986]. This suggests that coping with the disease may be positively influenced by hypnotherapy though the underlying disorder is still present.

"Correction of the sleeping disturbance by hypnotherapy was the most consistent finding and possibly played an important role in the subjective improvement of fibromyalgia" (p. 74).

The authors noted that the HCL yielded scores in the pathological range during the baseline period. "Thus, in our study, patients with long-standing fibromyalgia often showed pathological feelings of discomfort. In the hypnotherapy group the total score of the HCL decreased significantly suggesting that the physical disturbance

may be secondary to long-standing fibromyalgia. It is worth noting that only 3 of the 57 questions on the HCL-90 concern fibromyalgia" (p. 74).

The authors express the opinion that their data do not support a distinction between fibromyalgia and psychogenic rheumatism [Simms, Goldenberg, Felson, & Mason, 1988; Campbell, Clark, & Tindall, 1983] based on pain reported at control points. "Most patients in our study had variable tender control points. The finding of tender control points in fibromyalgia is consistent with others [Wolfe, Smythe, Yunus, et al., 1990; Scudds, Rollman, Harth, & McCain, 1987]. Also we found a positive correlation between the number of tender points and the presence of tender control points. Therefore, it seems more likely that there is a fairly large overlap between fibromyalgia and psychogenic rheumatism (tender all over)" (p. 75).

1991

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

#### NOTES

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate

1990

Hoencamp, Erik (1990). Sexual abuse and the abuse of hypnosis in the therapeutic relationship. International Journal of Clinical and Experimental Hypnosis, 38, 283-297.

In the Netherlands, individuals charged with rape may be prosecuted only in instances in which the suspect could have known that the victim was unconscious or in a state of powerlessness. Hypnosis might be looked upon as a method by which an

unscrupulous person could sustain such a state of powerlessness in a victim. As an expert witness, the present author participated in a court case against a lay hypnotist who was accused of abusing 9 women. The methods and strategy used by the lay hypnotist are presented as well as are the diverse reactions of the women involved in the case. Feelings of nonvolition appear to have been a relevant factor in the coercion, especially in women who demonstrated hypnotic phenomena such as arm levitation, catalepsy, etc. The basis for sexual coercion was established only after the interpersonal relationship had been redefined as a therapeutic relationship. Introduction within the pseudotherapeutic relationship of a sexual rationale for the presented complaints helped to provide a framework for actual sexual acts to occur. With certain individual patients, the introduction of hypnosis enhanced the subjective experience of nonvolition and with it the vulnerability for abuse. It may be hypothesized that patients with a tendency for external attribution and high hypnotizability are specifically at risk for this kind of abuse when hypnosis is used in the context of a therapeutic relationship.

Mason, Albert A. (1990, January). A psychoanalyst looks at a hypnotist; or, where the elephant skinned boy took me. [Paper] Presented at the Psychoanalytic Center of California Scientific Meeting.

#### NOTES

The results of working with hypnotism experimentally in the production of anaesthesia for surgery, dentistry and obstetrics; in controlled series of treatments of asthmatics, skin disorders, and allergic manifestations; as well as its clinical use, have convinced me that it is a delusional state akin to mania which depends on the omnipotent denial of mental pain. The mania is stimulated by the hypnotized subject having phantasies of an omnipotent object that it fuses with and shares in the omnipotence. The hypnotist has similar unconscious phantasies about himself. Both subject and hypnotist projectively identify with each others' phantasies, and together produce phenomena like anaesthesia which can be likened to delusional states. In fact, true hallucinations can also be deliberately produced.

"I believe that similar psychotic mechanisms can also occur in life between parents and children and in other relationships, and produce delusional states. These form a continuum from intractable narcissism on the one side, through Christian Science and the denial of evolution in the center, to frank folie a deux and transexualism on the other side. The therapeutic course of these states seems quite dissimilar from that of psychosis arising without the encouragement of external objects."

O'Hanlon, W. H.; Hexum, A. L. (1990). An uncommon casebook: The complete clinical work of Milton H. Erickson, M.D. New York: W. W. Norton & Co.. (Reviewed by Elgan Baker, American Journal of Clinical Hypnosis, 34, 137)

#### NOTES

According to the review by Elgan, cases are organized into sections by the presenting problems of the patients treated and include a wide range of psychopathology. Each case is given an identifying number for ease of cross-

referencing and is presented in a standard form: case summary, presenting problem, age group, modality of treatment, problem duration, treatment length, result of treatment, follow-up (if available), a summary of techniques used, and sources for the case description.

Page, Roger A.; Handley, George W. (1990). Psychogenic and physiological sequelae to hypnosis: Two case reports. American Journal of Clinical Hypnosis, 32 (4), 250-256.

Two cases of hypnotic sequelae occurring in a research context (with a non-clinical college population) are reported. Case 1 was a male who experienced retroactive amnesia following hypnosis: He was unable to recall familiar telephone numbers later that day. This was not a continuation of an earlier confusion or drowsiness (as is often found) since he indicated he was wide awake following hypnosis. Two parallels exist with previous reports: unpleasant childhood experiences with chemical anesthesia and a conflict involving a wish to experience hypnosis but a reluctance to relinquish control. Case 2 was a female who, while in hypnosis, experienced an apparent epileptic seizure that had characteristics of both petit mal and grand mal seizures. Although having a history of epilepsy, she had not had a seizure in 7 years. We suspect that the seizure was psychogenic and may have been triggered by wording used in the hypnotic scale or other similarities. Possible mechanisms are discussed and preventative recommendations are made.

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

## NOTES

A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that

they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

1989

Bierman, Steven F. (1989). Hypnosis in the emergency department. American Journal of Emergency Medicine, 7, 238-242.

Five cases are presented wherein hypnosis was used by the emergency physician either as the primary mode of treatment or as an adjuvant to standard medical care. Common hypnotic phenomena (e.g. anesthesia, analgesia), as well as novel effects, are reported. The technique used for trance induction and utilization is briefly outlined, and criteria are set forth for the bedside recognition of hypnotic trance.

Holroyd, Jean; Hill, Alexis (1989). Pushing the limits of recovery: Hypnotherapy with a stroke patient. International Journal of Clinical and Experimental Hypnosis, 37, 189-191.

Hypnotherapy was used to assist recovery of left arm function following stroke in a 66-year-old woman. Treatment protocol is described, and results are discussed in terms of how hypnosis may facilitate voluntary motor movement. Recent literature on cortical changes in hypnosis and motor improvement during hypnosis is discussed in relation to the present results.

#### NOTES:

The patient was 6 months post-stroke and physicians did not expect much additional improvement. She improved despite the fact that she measured as a low hypnotizable on the Stanford Scale, Form C. However, she appeared very absorbed in the hypnotic imagery, and she was highly motivated and exhibited much hope or positive expectation. Also, the author notes that "remarkable improvements in brain functioning have been reported through the use of sophisticated behavioral technology," (p. 124), as in the use of EEG biofeedback to treat untractable seizures (Serman & Lanz, 1981).

In rehabilitation cases, hypnotic dissociation may enhance pain control during the performance of exercises; more vivid hypnotic imagery may facilitate mental rehearsal of movements; attitudes may be reframed using hypnotic suggestion; and focusing attention on bodily sensations may be enhanced with hypnosis. Hypnosis also may improve expectancy, reduce anxiety, increase hope, provide general relaxation (reducing involuntary spasticity), increase cerebral blood flow, or in other ways promote healing.

Research by Pajntar, Roskar, & Vodovnik (1985) has demonstrated improved motor response during hypnosis for patients with hemiparesis. They attributed EMG changes under hypnosis "to a facilitory influx from supraspinal motor centers. They hypothesized that new motor units of paretic muscles were being activated or that there was an increased recruitment of the motor units already

active, and they suggested that relaxation of the spastic antagonist muscle permits the paralyzed muscle to move" (p. 125).

1988

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 96-106.

In an earlier study, DeBenedittis and Sironi (1986) demonstrated that during depth EEG studies, electrophysiological correlates of hypnotic behavior emphasize the role of the limbic system in mediating the trance experience. In the case of a young man who was affected by medically resistant temporal lobe epilepsy and who was a potential candidate for surgical treatment, diagnostic depth EEG in hypnotic and non-hypnotic conditions offered a unique opportunity to stimulate limbic structures. This permitted an evaluation of the subjective and behavioral responses, as well as of the electrophysiological correlates. During hypnosis, repeated stimulations of the left and the right amygdala produced arousal from the hypnotic state each time, whereas the stimulation of other cerebral structures (e.g., temporal neocortex, Ammon's horn) or pseudostimulations were ineffective on the hypnotic state. These data represent the first experimental, controlled evidence of the amygdala's effects on the arousal from the hypnotic state in man, thus suggesting that hypnotic behavior is mediated, at least in part, by a dynamic balance of antagonizing effects of discrete limbic structures--the amygdala and the hippocampus.

#### NOTES:

The patient was a 30-year-old man who had suffered from medically resistant psychomotor temporal lobe epilepsy since age 7; a diagnostic EEG showed right temporal seizure focus, concomitant with independent, contralateral, temporal spiking abnormalities. Hypnotizability was measured at 6 on the SHSS:C; the patient was given two training sessions in hypnosis, with suggestions for "dissociation, rehearsal and reframing of spontaneous seizure events, desensitization of their negative emotional impact, and amnesia" (p. 99).

Electrodes were implanted in deep cerebral structures (amygdala, Ammon's horn) and corresponding superficial areas of temporal cortex, with confirmation of placement by X-ray. Two weeks later the patient's brain was stimulated on two consecutive days, first in the waking state (Session 1) and then in hypnosis (Session 2). (Antiepileptic medication was discontinued three days before the stimulation sessions.) False (placebo) stimulations were randomly provided along with the true stimulations.

The false (placebo) stimulations did not result in subjective or behavioral changes in either the waking or the hypnosis condition.

In the waking condition, a psychomotor seizure was produced by stimulation of Right amygdala and Left Ammon's horn; stimulation of Left amygdala evoked only the aura patient usually had before a seizure, or a brief lapse of consciousness. Stimulating the temporal neocortex did not evoke seizure activity.

In the hypnosis condition, arousal from hypnosis into the waking condition occurred with stimulation of amygdala (either Right or Left). Stimulation of the temporal neocortex or of the Right Ammon's horn did not arouse the patient. Stimulation of Left Ammon's horn led to abortive seizures, such that it could not be determined whether the hypnotic state had been interrupted. Stimulating the Right amygdala "triggered a psychomotor attack similar to that recorded during the waking stimulation, but with reduced emotional involvement" (p. 100). For the Left Ammon's horn, "waking stimulation always induced clinical seizures with prolonged after-discharge, whereas hypnotic stimulation evoked only abortive seizures, without after-discharge" (p. 100).

In their Discussion, the authors note that animal experimental literature suggests that stimulation of the cortico-medial amygdala facilitates arousal functions, of the baso- lateral amygdala diminishes arousal and produces sleep, and lesions of the amygdala lead to 'amygdala hangover' (Weiskrantz, 1956). "The animal with amygdala destruction appears tame and placid, with reduced social reactivity, insensitive to environmental changes and reluctant to initiate new behavior, unless highly motivated (Isaacson, 1976)" (p. 101-102).

In contrast, the animal research on hippocampus suggests it is involved in inhibitory functions (Isaacson, 1976), and may be the 'internal inhibitor' theorized by Pavlov (1955) to be responsible for animal hypnosis. With lesions, animals are more willing to undertake new behaviors, less inactive, less distractible during goal-oriented behavior (Isaacson, 1976). "Moreover, normal hippocampograms show typical, slow (theta) synchronous activity opposed to the arousal desynchronized activity of the electroencephalogram. During hypnosis, desynchronization of the normal, slow activity of the hippocampal Ammon's horn has been registered as compared with the waking hippocampogram, opposite to the slow synchronous activity of the amygdala" (p. 102).

The authors note that their results are at variance with the finding by Crasilneck et al. (1956) that their patient, during brain surgery for an epileptogenic focus, aroused from hypnosis each time they stimulated the hippocampus. They explain the discrepancy as due to the fact that the hippocampus was not simply stimulated, but in fact there was 'coagulation' of a hippocampal vessel each time. Quoting from Crasilneck et al. "'The patient did not complain of pain during this [brain] excision [in hypnosis] except on one noteworthy occasion, when a blood vessel of the hippocampal region was being coagulated. The patient suddenly awoke from the hypnotic trance ... She was immediately rehypnotized. ... The surgeon then purposefully 'restimulated' the same region of the hippocampus. Once again, the patient abruptly awakened from trance... [p. 1607].'"To the present authors, the description appears misleading and responsible for subsequent misinterpretation of the observation. Because on the first occasion the hypnotic arousal effect followed 'coagulation' of the hippocampal region, it may be assumed that 'restimulation' is a misnomer for repeated coagulation. From this it may be inferred that the arousal effect observed by Crasilneck et al. (1956) could probably be ascribed to a hippocampal microlesion rather than to hippocampal stimulation. This could explain the apparent discrepancy" (p. 104).

Hawkins, Russell; Le Page, Keith (1988). Hypnotic analgesia and reflex inhibition. Australian Journal of Clinical and Experimental Hypnosis, 16, 133-139.

The major change in thinking about models of analgesia over the last decade or so may be seen as a shift away from the earlier emphasis on a one-way afferent transmission sequence. Analgesia was effected, according to the older models, by a simple blocking of afferent impulses at some level (as achieved by local anaesthesia). Recent models suggest that there are at least two CNS analgesia control systems, each operating via an active mechanism for the inhibition of nociception which includes reciprocal afferent impulses able to respond to input from lower centres by sending control signals which modify their output. One CNS analgesia system has now been quite well described. This "opiate" analgesia system has proved to be naloxone reversible and seems to be mediated by reciprocal pathways between brain stem structures and the dorsal horn and trigeminal caudalis. This is not likely to be the system responsible for all cases of hypnotic analgesia, since the common experience of continued awareness of some elements of a normally painful stimulus, in spite of a freedom from pain, implicates a higher level involvement such as input from the prefrontal cortex.

#### NOTES

The authors present a surgery case (of a cystoscopy and urethrotomy performed under hypnotic analgesia, with a highly hypnotizable patient) as an illustration of their position. The patient grimaced when the urethrotome was inserted into the urethra and dilated, but she denied discomfort and did not exhibit a reflex adduction of the thighs that is often observed even under standard general anaesthesia. She had spontaneous amnesia for the entire surgery. Later, under hypnosis, the patient could remember "discomfort and a sharp pain" which lasted for "seconds, if that" (p. 134).

The authors refer to Melzack and Wall's (1965) gate control theory as well as Hilgard's (1973) neodissociation interpretation of pain reduction in hypnosis. They review research by Hardy and Leichnetz (1981) with monkeys, in which they "traced the projections of the periaqueductal gray (PAG) to determine the extent of any possible cortical involvement in the endogenous analgesic system. Their work showed that the prefrontal cortex was the principal source of projections to the PAG" (p. 136). They quote the latter as writing that, "Patients who have had prefrontal lobotomies for relief of chronic pain report that while they still feel the pain they are no longer bothered by it ... the prefrontal cortex by virtue of its projections to the PAG may play a role in modulating nociception at the spinal level" (Hardy & Leichnetz, 1981, p. 99).

"Hardy and Leichnetz have also suggested that there may be more than one analgesic system within the CNS. The first system is a naloxone-reversible mechanism which can be activated by opiates (presumably both endogenous and exogenous) and by acupuncture. Since hypnotic analgesia has shown itself not to be naloxone-reversible (Goldstein & Hilgard, 1975) it may have little to do with the opiate reception analgesia system. Instead the mechanism of hypnotic analgesia may

lie in Hardy and Leichnetz's second system which is sensitive to affective and cognitive influences" (pp. 136-137).

The authors include a review of the work by Mayer and Price (1976) which established the importance of brain stem structures in analgesia, especially for eliciting stimulation-produced analgesia. They cite Mayer and Price as drawing a distinction between "analgesia achieved by incapacitating a component in a pain transmission system or by activating a pain inhibition system" (p. 137). They also report that Mayer and Price conclude that stimulation-produced analgesia does not result from a "functional lesion" in the brain stem, but results from stimulation of a pain-inhibiting mechanism, suggesting the dorsal horn and trigeminal nucleus caudalis may be involved. This would be consistent with the inhibition of spinal reflexes (the adductor reflex) observed in their urethrotomy case, and the spinal reflex to nociception has also been reported by Finer (1974).

"The concomitant inhibition of reflexes in humans during hypnotic analgesia can be interpreted as evidence that nociception is probably not ascending to the cerebral cortex and that therefore the source of analgesia can be localized to the brain stem areas. It may be the case, however, that the locus of effect of hypnotic analgesia is not uniform across cases and may be identified by the overall pattern of subjective reports and physiological responses. Hypnotic analgesia may be experienced in more than one way subjectively and these differences may be attributable to differing underlying physiological mechanisms. On some occasions the relevant body part may be experienced as totally anaesthetised and all sensation (not only painful sensation) may be lost. This experience matches well with a brain stem involvement, which presumably inhibits any further afferent action. On other occasions, however, and more commonly, patients are still aware of a variety of sensations, which might include pressure in the case of childbirth or even cutting in the case of surgery, but these sensations are not described as painful. This is reminiscent of the effect of frontal lobotomy and it is tempting to focus on the frontal lobe as the locus of hypnotic analgesia effects in such instances" (p. 138).

Noll, Robert B. (1988). Hypnotherapy of a child with warts. Journal of Developmental and Behavioral Pediatrics, 9 (2), 89-91.

#### NOTES

Child with 82 warts was treated using hypnosis; suggestions for removal from face only resulted in 8 of 16 facial warts disappearing after one treatment and two weeks. (Child had previous experience with hypnosis for pain and anxiety associated with lumbar punctures and bone marrow aspirates.)

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

#### NOTES

From a review in British Journal of Experimental and Clinical Hypnosis, 7, 175-178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility.

In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

1987

Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, 7-8.

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10 on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

#### NOTES

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0.

Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

1986

Aronson, David M. (1986). The adolescent as hypnotist: Hypnosis and self-hypnosis with adolescent psychiatric inpatients. American Journal of Clinical Hypnosis, 28 (3), 163-169.

This paper describes the theoretical rationale, pragmatic implementation issues, and procedure for a particular technique of clinical hypnosis which is designed as an adjunctive therapy within a multidisciplinary adolescent inpatient treatment program. A model of combined auto- and heterohypnosis which features collaborative production of audiocassettes is presented. Advantages and indications for this technique are discussed, and a case study is presented. - Journal Abstract

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

NOTES:

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

Experimental Protocol: 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia;

arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of Clinical and Experimental Hypnosis*) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha

and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

" In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), *Biofeedback: Behavioral medicine.* New York: Grune & Stratton, Pp. 147-165.

Serman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), *Biofeedback: Behavioral medicine.* New York: Plenum, 1977, Pp. 167-200.

1986

Sands, Steven (1986, August). The use of hypnosis in establishing a holding environment to facilitate affect tolerance and integration in impulsive patients. Psychiatry, 49.

This paper is concerned with the use of hypnosis in establishing a facilitating and holding environment in the treatment of impulsive behavior across a range of diagnoses. The reason for this cross-diagnostic viewpoint is to underscore the common sources of such action and the needs to be met in its treatment. Illustrations from work with two patients are presented: One was a hypomanic and bulimic woman who was successful in her profession; the other was an underemployed and sometimes unemployed schizophrenic man. Both were inclined to self-defeating impulsive action---bulimia in the woman, assault in the man.

1985

Morris, Don M.; Nathan, Ronald G.; Goebel, Ronald A.; Blass, Norman H. (1985). Hypnoanesthesia in the morbidly obese. Journal of the American Medical Association, 253 (22), 3292-3294.

The advent of chemical anesthesia relegated hypnosis to an adjunctive role in patients requiring major operations. Anesthesia can be utilized with acceptable risk in the great majority of patients encountered in modern practice. But an occasional patient will present--such as one with morbid obesity--who needs a surgical procedure and who cannot be safely managed by conventional anesthetic techniques. This report describes our experience with such a patient and illustrates some of the advantages and disadvantages of hypnoanesthesia. The greatest disadvantage is that it is unpredictable. Close cooperation between the patient,

hypnotist, anesthesiologist, and surgeon is critical. However, the technique may be utilized to remove very large lesions in selected patients. Hypnoanesthesia is an important alternative for some patients who cannot and should not be managed with conventional anesthetic techniques

1984

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention.

#### NOTES

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

Brown, Erick L.; Kinsman, Robert A. (1984). Resolving intractable medical problems through psychological intervention: A clinical report. Psychotherapy, 21, 452-455.

Treatment of chronic physical illness is often complicated by psychological factors that maintain and exacerbate the illness. Hypnotic techniques, coupled with insight-oriented psychotherapy comprised an effective strategy for favorably influencing medical outcome. A clinical report illustrates how psychological intervention initiated the resolution of severe medical problems in an asthmatic patient.

Cocores, James A.; Bender, Andrew L.; McBride, Eugene (1984). Multiple personality, seizure disorder, and the electroencephalogram. Journal of Nervous and Mental Disease, 172, 436-438.

Used the EEG to study multiple personality in a 48-yr-old ambidextrous male admitted for alcohol detoxification and individual psychotherapy. Despite conflicting reports in the literature, no changes in the EEG were found that could not be ascribed to the normal changes seen in transitions from various states of alertness. The problems of differentiating multiple personality as a psychiatric entity in itself from those cases arising as a result of chronic partial or partial-complex epilepsy are discussed.

Elkins, Gary R. (1984). Hypnosis in the treatment of myofibrositis and anxiety: A case report. American Journal of Clinical Hypnosis, 27, 26-30.

A 38-year-old woman with chronic myofibrositis pain was treated by the use of hypnosis and psychotherapy. Hypnotherapeutic techniques, including symptom alteration, relaxation, and insight, are described. This regimen resulted in reduction in pain and emotional distress, which was maintained at three months and one year after treatment.

Fogel, Barry S. (1984). The 'sympathetic ear': Case reports of a self-hypnotic approach to chronic pain. American Journal of Clinical Hypnosis, 27 (2), 103-106.

Secondary gain issues may limit the success of hypnotherapeutic approaches to chronic pain. A self-hypnotic suggestion that promotes patients' awareness of the interpersonal aspects of their pain complaints was used in the treatment of two patients with chronic headache. Hypnotic suggestions that help make secondary gains conscious may be a useful addition to hypnotic techniques of pain management.

Gould, Sol S.; Tissler, Doreen M. (1984). The use of hypnosis in the treatment of herpes simplex II. American Journal of Clinical Hypnosis, 26, 171-174.

Hypnosis training was used to treat the painful lesions and emotional symptoms associated with Herpes Simplex II in two females, ages 32 and 26. Three weekly sessions of hypnosis and daily practice sessions were initiated in the first case. During this time, the patient experienced a decline in the subjective level of pain and severity of the lesions, as well as an elevation in mood level. On three-month followup, she reported no pain or skin eruptions and significantly less feelings of stress and anxiety. The second case utilized two sessions of hypnosis and daily practice sessions, and similar results were obtained. A traumatic event caused a relapse in the latter patient, but she was again able to use hypnosis to bring the virus back under control and to experience an elevation in mood level as well. A seven-month follow-up indicated no eruptions and an improvement in self-esteem.

#### NOTES

In the first case the tape included ego-strengthening suggestions (Hartland, 1971); another tape used the patient's fantasy of water and snow skiing. The patient felt that hypnosis helped her acquire a more positive attitude toward herself and relief of guilt and blame, as well as an improved ability to cope with the unpleasant sensations.

In treatment session, ego strengthening suggestions were followed by 2 minutes of quiet for integration of suggestions, then visualization used in cancer therapy (Simonton): suggestions of a strong cell structure, perfect skin, hormonal balance, cleanliness, and a cooling refreshed feeling in the area of the vagina and perineum; imagery of internally controlled friendly white sharks was used to "devour" the

virus; of water and snow skiing, imagery of cool breezes, white refreshing snow, clean fresh water; visualized herself forgiving and releasing her previous boyfriend of guilt, thereby allowing her anger to abate.

For second patient it was similar, plus visualization of being bathed in white lights and traveling through concentric circles radiating peace and protection, being purified as she traveled through the circles until she emerged as flawless as a diamond, reflecting only clarity and light. Both patients scored 4 on Spiegel's Hypnotic Induction Profile (HIP).

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Margolis, Clorinda G. (1984). Hypnosis and cancer: An overview of the field. [Unpublished manuscript]

NOTES:

This paper apparently was presented either at American Psychological Association or the Society for Clinical and Experimental Hypnosis. The author has two tables summarizing types of cancer associated with pain, and pain syndromes in patients with cancer.

Table 3 is a list of Erickson's procedures for Controlling Pain: --Direct hypnotic suggestion for total abolition of pain --Permissive indirect hypnotic abolition of pain --Amnesia --Hypnotic analgesia --Hypnotic anesthesia --Hypnotic replacement or substitution of sensations --Hypnotic displacement of pain --Hypnotic dissociation Time and body disorientation --Hypnotic reinterpretation of pain experience --Hypnotic time distortion --Hypnotic suggestions effecting a diminution of pain (from Rossi, Ed., Innovative Hypnotherapy, Vol. IV of the Collected Papers of Milton H. Erickson on Hypnosis, 1980

Table 4 is a list of Sacerdote's Procedures for Controlling Pain: --Teleological approach --Reinterpretation of signals --Associating and conditioning --Dissociation --Simile of electric wiring --Development of amnesia --Positive and negative hallucinations --Induction of dreams --Time and space distortion, and elicitation of mystical states --Relaxation techniques --Glove anesthesia and analgesia --Pain management through control of autonomic functions (from Barber & Adrian, Eds., Psychological Approaches to the Management of Pain, 1982)

The author describes cases treated by Erickson (one in which he used 12 hours of training, in one session, reported in Rossi's 1980 edited writings of Milton Erickson, Vol. IV) and by Sacerdote.

Author notes that the Hilgards, in *Hypnosis in the Relief of Pain* (1975), describe the use of hypnosis in treating patients with cancer pain. In all three--Butler (1954), Lea, Ware, and Monroe (1960), and a larger study by Cangello (1961), both success and failure are reported. As the Hilgards point out, about 50% of the patients studied were able to reduce their pain--a percentage the Hilgards remark is rather close to what successful clinicians tend to report.

Nugent, William R.; Carden, Nick A.; Montgomery, Daniel J. (1984). Utilizing the creative unconscious in the treatment of hypodermic phobias and sleep disturbance. *American Journal of Clinical Hypnosis*, 26 (3), 201-205.

An Ericksonian hypnotherapeutic procedure is designed to access and direct creative unconscious processes toward the creation and implementation of satisfactory solutions to recurrent problem behaviors. The use of the procedure is described in 3 cases. Two of the cases involve treatment of severe hypodermic needle phobias. The third case involves use of the procedure in treatment of a somnambulistic sleep disturbance. Possible curative forces tapped by the procedure, suggestions for its continued use, and suggestions for further investigation of the procedure are also discussed.

#### NOTES

The procedure involved: 1. Pretrance discussion of unconscious mental processes 2. Hypnosis, followed by "Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that [desired therapeutic outcome], and as soon as your unconscious knows that you will [desired therapeutic outcome] it can signal by [appropriate ideomotor signal]" 3. Post-ratification.

Example: "'Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that you remain comfortably awake and alert anytime you receive an injection in the future, and as soon as your unconscious knows you will remain comfortably awake and alert when receiving an injection it can signal by lifting your right hand into the air off the chair.' This suggestion was [their] communicative effort to access and direct unconscious processes to the creation and implementation of altered behavioral responses to injections. Three minutes after the suggestion, B's right hand lifted jerkily into the air. She was then awakened and experienced a complete amnesia for the trance period" (p. 203).

"[They] then carried out a procedure to ratify the therapeutic change. This process presumably further develops expectancy of change, confirms change at the unconscious level, and puts doubt into any conscious beliefs contrary to positive change. This step is standardly carried out as was done with B. [They] had B sit with her hands resting on the arms of the chair. [They] told her they would ask her unconscious mind a question that only it would know the answer to. It could answer 'yes' to the question by lifting her left hand, 'no' by lifting her right hand, and 'I don't know' or 'I don't want to answer' by lifting both hands. Then the question was asked, 'In the future, will B remain comfortably awake and alert anytime she receives an injection or a blood test?' After a few minutes her left hand jerked

momentarily into the air. After some discussion about the ideomotor response and her trance experience they dismissed her with the prescription to 'await the surprising results'" (p. 203).

The authors cite as a source for their work two books: Erickson, Rossi, and Rossi, *Hypnotic Realities*, 1976, pp. 226-230; also Erickson & Rossi, *Hypnotherapy*, 1979.

1981

Baker, Elgan L. (1981). An hypnotherapeutic approach to enhance object relatedness in psychotic patients. *International Journal of Clinical and Experimental Hypnosis*, 29 (2), 136-147.

The present paper develops a conceptual rationale for utilizing hypnosis in the intensive psychotherapy of acutely psychotic patients which emphasizes deficits in object relatedness and associated ego pathology stemming from impaired internalized object representations. From this perspective, specific hypnotherapeutic techniques are suggested to enhance the positive aspects of the emerging transference in psychotherapy and to support the patient's capacity to establish and maintain real connections with the external environment. Special attention is directed toward the hypnotherapeutic management of various aspects of psychotic ambivalence and "primitive splitting" as significant sources of dynamic and structural resistance in work with these patients. Case material is presented to illustrate aspects of this conceptual and technical approach.

Fromm, Erika (1981). How to write a clinical paper: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, 29, 5-9.

The standards for publishing clinical papers are in some ways the same and in some ways different from those applying to experimental articles. The present paper, written by the Clinical Editor of the *International Journal of Clinical and Experimental Hypnosis*, is meant to be a guide to clinicians on how to write publishable papers and to reviewers and readers on how to evaluate them.

NOTES

1:

"An outline could follow this sample:

- a) Statement of problem.
- b) Review of literature -- and not only the literature of the last 5 years.
- c) Clinical material -- number of patients, descriptions of cases.
- d) Description of method of treatment. If it is a new technique, give a verbatim account.
- 3) Results.
- f) Discussion. (Evaluate your own results and, if appropriate, compare them to those in the literature.)
- g) Conclusion.
- h) Tables and Figures (if appropriate).
- i) Footnotes.
- j) List of references.
- k) Abstract" (pp. 6-7).

**"In closing, here is a short reviewers' and editors' guide -- a set of questions editors and referees ask. It might be helpful to be aware of these questions as you write a paper.**

- 1. Is the article appropriate for our journal? Does it deal with hypnosis?**
- 2. Has the hypothesis been made explicit?**
- 3. Has the reason for or the origin of the hypothesis been made clear?**
- 4. Does the paper describe something new or describe the approach to an old field in a new way?**
- 5. Are references missing? Are all the citations correct and necessary? Or, is there padding?**
- 6. Has the author been careful to cite prior reports dealing with the same topic? Prior theories about the same topic?**
- 7. What was the "set" given to subjects? Was there control for experimenter influence and demand characteristics?**
- 8. Were patients led to believe they were receiving treatment or not?**
- 9. How was the diagnosis arrived at? Is it correct? Or, does the material given remain unclear as to the correctness or incorrectness of the diagnosis?**
- 10. Was administration and scoring of tests and evaluation of the results done correctly?**
- 11. If statistics were used, were they used correctly?**
- 12. Are the figures, graphs, and tables used necessary and sufficient? Do they correspond logically to the textual argument of the article?**
- 13. Is the discussion properly confined to the findings or is it digressive? Does it include new post-hoc speculations?**
- 14. Has the author explicitly considered and discussed viable alternative explanations?" (p. 9).**

**Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56**

**NOTES:**

**Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.**

**Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.**

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

1979

Kleinhauz, Moris; Dreyfuss, Daniel A.; Beran, Barbara; Goldberg, Tova; Azikri, David (1979). Some after-effects of stage hypnosis: A case study of psychopathological manifestations. International Journal of Clinical and Experimental Hypnosis, 27, 219-226.

Some deleterious effects of stage hypnosis are described through a case report. A middle-aged respected member of a kibbutz who became the subject of an evening's entertainment by a stage hypnotist suffered a posttraumatic neurosis. The stage hypnotist, unaware of her traumatic childhood during World War II when she and her sister were hidden by Gentiles, requested her to regress to that age. This reactivated a former successfully repressed trauma and acted as a precipitating factor to the development of a traumatic neurosis which was left untreated. She was self-referred for adequate psychiatric treatment 11 years later. This treatment successfully restored her to an adequate level of functioning.

1978

Gruenewald, Doris (1978). Analogues of multiple personality in psychosis. International Journal of Clinical and Experimental Hypnosis, 26, 1-8.

A brief discussion of taxonomic and diagnostic problems in the multiple-personality syndrome precedes presentation of theoretical considerations. The disorder is conceptualized as a category sui generis on a continuum from neurosis to psychosis. Attenuated forms are considered as pertaining to the syndrome with supporting case material.

Sanders, Shirley (1978). Creative problem-solving and psychotherapy. International Journal of Clinical and Experimental Hypnosis, 26, 15-21.

The techniques described comprise a creative problem-solving approach to short-term individual psychotherapy which appears effective in conjunction with hypnosis. The techniques include describing and visualizing the client's problem, imagining alternative reactions, dreaming about new solutions, and trying the solutions in real life. The method is illustrated by 2 clinical examples. The discussion focuses on a comparison of the techniques used with individuals versus with small groups, the fostering of regression in the service of the ego, and the redirection of attention from the physically out of control to the recognition of the possibility of

obtaining control. This shift of attention fosters active coping on the part of the client.

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

NOTES

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus

Novaco, Raymond W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. Journal of Consulting and Clinical Psychology, 45 (4), 600-8.

Clinical interventions for anger disorders have been scarcely addressed in both theory and research in psychotherapy. The continued development of a cognitive behavior therapy approach to anger management is presented along with the results of its application to a hospitalized depressive with severe anger problems. The treatment approach follows a procedure called "stress inoculation," which consists of three basic stages: cognitive preparation, skill acquisition and rehearsal, and application practice. The relationship between anger and depression is discussed.

Pelletier, K. R.; Peper, E. (1977). Developing a biofeedback model: Alpha EEG feedback as a means for pain control. International Journal of Clinical and Experimental Hypnosis, 25, 361-371.

3 adept meditators voluntarily inserted steel needles into their bodies while physiological measures (EEG, EMG, GSR, EKG, and respiration) were recorded. Although each adept used a different passive attention technique, none reported pain. During the insertion, 2 of the 3 Ss increased their alpha EEG activity. The role of alpha EEG and its relationship to pain control is discussed.

#### NOTES

The three adepts studied were: (1) RCT, a 34 yr old Ecuadorian who had "demonstrated control over pain by placing bicycle spokes through his body, being suspended from hooks inserted under his shoulder blades, and walking through fire -- all without reported pain or observed damage to his skin;" (2) JSL, a 31 yr old Korean karate expert, who "suspended a 25-pound bucket of water from a sharpened spoke placed through a fold of skin on his forearm;" and (3) JS, a 50-yr old Dutch meditator who had "demonstrated pain and bleeding control" (pp. 363-365). "RCT, JSL, and JS each remarked that pain is principally fear of and attention to pain, and they maintained that anyone can learn to control pain through relaxation and passive attention" (p. 367). Both JS and RCT had increased alpha EEG activity during piercing, whereas JSL showed no increase. The authors suggest that "the karate expert practiced a very focused meditation, during which he mentally saw and felt the ki energy as a point, while RCT and JS employed passive attention and did not attend to the body stimuli. Thus, it is possible for physiological measurements to reflect strategies used in dissociation of pain perception, and that the quality of pain perception is altered if S is at either extreme of focused or unfocused conscious attention" (p. 368). "We hypothesize that, for nonadepts, alpha EEG training without alpha blocking to stimuli could become a distraction technique whereby S again could learn self-control and competence as he becomes more successful in controlling his EEG" (p. 369).

Sachs, Lewis B.; Feuerstein, M.; Vitale, J. H. (1977). Hypnotic self-regulation of chronic pain. American Journal of Clinical Hypnosis, 20, 106-113.

A more diverse conceptualization of pain including the motivational- affective, cognitive-evaluative, as well as sensory components has resulted in a greater emphasis on 'central' factors in pain and the development of comprehensive treatments directed at these various components. This study is one such treatment program. Eight patients with chronic pain (mean duration of 8.8 years) were trained in a hypnotic self- regulation procedure to modify pain. Pre and post measures were collected on a series of indices relevant to the pain experience. The post-treatment evaluation indicated significant reductions in: (1) daily pain intensity, (2) the degree to which pain interfered with major life areas (e.g., sleep and social activity), (3) life dissatisfaction and suffering, (4) personality characteristics relevant to chronic pain and (5) percentage of self-administered pain medication. Despite the lack of a no-treatment comparison and placebo-attention controls, the chronicity of pain and the lack of effectiveness of prior medical interventions suggest that this treatment program is an effective agent in the control of chronic pain.

1976

Gardner, G. G. (1976). Childhood, death, and human dignity: Hypnotherapy for David. International Journal of Clinical and Experimental Hypnosis, 24, 122-139.

Hypnotherapy can be a significant part of the treatment of a dying child. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to help a terminally ill child and his family cope effectively with problems and enhance their ability to use their own resources for personal growth and mastery throughout the dying process.

NOTES:

Includes report of a mother's hypnosis work with her son for the three hours before he died.

Katz, Ron (1973). Control of pain in anesthesia. [Lecture]

NOTES

1:

NOTES: Author, formerly the UCLA Anesthesiology Department Chairman, uses Herbert Spiegel's approach in hypnotic inductions. His principles of treatment include: 1. Make the patient the therapist. 2. Inform the patient, "I'll teach you everything I can in 3 sessions." 3. Decline to treat patients whom you don't feel comfortable with, and refer them to someone who can help them. 4. Some patients don't want to lose their pain; after 3 sessions with no improvement I ask them to write down (a) all the benefits they're getting from the pain, (b) all the things they're losing. Then I discuss it or confront it. Sometimes I say, "Go home and wait and see if in the future you understand why I can't help you, then call me."

Used in last 4 months at UCLA for: 1. One patient, exquisitely sensitive to medication; used a minute amount of spinal anesthesia. 2. A professor with post operative distended bowel who couldn't tolerate nasal tube. Suggested that the tube would be helpful useful friend, he wouldn't notice it, "you can pull it out yourself when you want but would suggest leaving it in till X-rays say OK to remove it." 3. A physician with neck surgery (cervical disc). Told her there are 2 ways to relieve pain: (1) relax, (2) be distracted. Explained the gate theory of pain control as a kind of disuse atrophy: if a telephone switchboard is busy day after day the signals can't get through, and the same is true with pain signals trying to enter a brain that is kept busy. 4. Burn patients 5. Failed regional anesthesia (e.g. 3 nerve areas of hand). Suggested, "You can spread numbness over the rest of your hand."

He doesn't advocate using hypnosis alone. With chronic cancer patients, he suggests that they carry pain pills in their pocket. Obstetrical patients can have hypnosis plus an epidural or hypnosis plus spinal anesthesia.

Most important use for hypnosis in anesthesia is in one's daily approach to patients.

1972

Cedercrentz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.

In his book, A System of Medical Hypnosis, Ainslie Meares writes, "Most books on

hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

#### NOTES

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

Sacerdote, Paul (1972). The nature of the hypnotherapeutic process. American Journal of Clinical Hypnosis, 15 (1), 1-11.

The author presents several clinical cases where hypnosis was successfully utilized. Through detailed description of what takes place during sessions it is shown how various approaches are adapted to the intellectual, cultural, emotional and hypnotic capabilities of the patient and to the progress of therapy. The author analyzes what takes place during and after hypnotic intervention and draws some conclusions about the nature of the hypnotherapeutic process which, he feels, is essentially a convergence of the patient's and therapist's conscious and subconscious expectations and goals. The importance of the therapeutic ego of the doctor is brought into proper focus. One of the clinical cases illustrates how the therapist can convert a therapeutic relationship that may appear sterile or even hostile into a productive one by utilizing the patient's responses, while avoiding stubborn insistence upon expectations of preconceived hypnotic responses. It is suggested that the hypnotherapeutic model may present, in clearer focus, what takes place in other psychotherapeutic exchanges which do not utilize hypnosis.

1970

Crasilneck, Harold B.; Hall, James A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18 (3), 152-158.

Hypnotherapy has been found of value in rehabilitation of many patients experiencing difficulty in the usual procedures which follow cerebrovascular or traumatic brain injury. 3 cases are reported to illustrate the approach taken. Of 25 similar cases seen over a 9-year period, 4 were unresponsive to hypnosis. Although an increase in motivation for recovery seemed to be the major change elicited by hypnotherapy, other theoretical possibilities are mentioned. Hypnosis may be a useful way of approaching motivational problems in rehabilitating patients who manifest negativism toward conventional treatment.

Owens, Herbert E. (1970). Hypnosis and psychotherapy in dentistry: Five case histories. International Journal of Clinical and Experimental Hypnosis, 18, 181-193. (Abstracted in Current Contents, 2, 35, 21)

Used hypnosis to facilitate dental psychotherapy in resolving problems specific to the dental situation. Case histories illustrate the use of hypnosis in alleviating dentophobia and in the care and control of allergic responses. Formal induction procedures are not always necessary in achieving the desired result. Through the appropriate use of hypnosis, observable benefits can accrue to some dental patients in their ability to approach the dental situation and receive proper care. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Chambers, Helen (1968). Oral eroticism revealed by hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 151-157.

A CASE STUDY OF THE OUTPATIENT TREATMENT OF A SEVERELY DEPRESSED WOMAN. THE CASE WAS COMPLICATED BY THE S'S REFUSING USUAL ANTIDEPRESSANT TREATMENTS. COMMUNICATION WAS DIFFICULT BUT WAS FINALLY ACHIEVED BY THE USE OF ETHER AT ALTERNATE INTERVIEWS. WITHDRAWAL OF ETHER WAS THEN USED TO CREATE A SITUATION OF DEPRIVATION TO AROUSE IN THE TRANSFERENCE ATTITUDE THE FEELINGS PRODUCED BY THE EARLY TRAUMA. THE S'S COMPULSION TO EAT RAW POTATOES WAS STUDIED WHILE SHE WAS DEEPLY HYPNOTIZED. PSYCHOANALYTIC THEORIES THAT PLACE THE ORIGIN OF DEPRESSION AT THE TIME WHEN THE ORAL PHASE IS PRIMARY WERE CONFIRMED. THE S REFUSED ANY OTHER ANTIDEPRESSANT TREATMENT. (GERMAN+ SPANISH SUMMARIES) (PsycINFO Database

1967

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Davison, Gerald C.; Singleton, Lawrence (1967). A preliminary report of improved vision under hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (2), 57-62.

ABSTRACT: REPORTS AN ACCIDENTAL FINDING WHICH WAS FELT TO BE PROVOCATIVE AND WORTHY OF FURTHER, MORE CONTROLLED, INVESTIGATION. THE EMPHASIS IS ON DETAILED DESCRIPTION OF THE PHENOMENON, WITH A MINIMUM OF THEORIZING. WHILE IN A VERY DEEP HYPNOTIC TRANCE, S WAS INDUCED TO HAVE BOTH POSITIVE AND NEGATIVE HALLUCINATIONS. ON THE FOLLOWING DAY, HE REPORTED SPONTANEOUSLY THAT HE HAD BEEN STRUCK BY THE CLARITY OF BOTH THE VISIONS AND THE PERCEPTIONS OF ACTUAL OBJECTS WHILE HYPNOTIZED; HE HAD NOT, HOWEVER, BEEN WEARING HIS GLASSES AT THE TIME, THOUGH, UNDER NORMAL CIRCUMSTANCES HE WORE HIS GLASSES AT ALL TIMES. NO SUGGESTIONS FOR IMPROVED VISION OR EXTRA EFFORT HAD BEEN GIVEN. 2 CAREFUL OPHTHALMOLOGICAL EXAMINATIONS WERE MADE DURING THE FOLLOWING 2 WK., CONFIRMING THE FACT THAT S'S EYESIGHT SHOWED A SIGNIFICANT IMPROVEMENT DURING HYPNOSIS AS OPPOSED TO THE WAKING STATE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Lindner, Harold; Stevens, Harold (1967). Hypnotherapy and psychosomatics in the syndrome of Gilles de la Tourette. International Journal of Clinical and Experimental Hypnosis, 15, 151-155.

REPORTS A CASE STUDY OF HYPNOTHERAPEUTIC TREATMENT OF A 19-YR-OLD MALE WITH GILLES DE LA TOURETTE SYNDROME. FROM A CONSIDERATION OF THE PROBABLE PSYCHODYNAMICS OF THE PATIENT, IT SEEMS THAT THE SYNDROME, A PRESUMED NEUROLOGICAL STATE, IS RESPONSIVE TO PSYCHOTHERAPY AND HYPNOSIS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Schneck, Jerome M. (1966). Hypnoanalytic elucidation of a childhood germ phobia. International Journal of Clinical and Experimental Hypnosis, 14, 305-307.

A PATIENT IN HYPNOANALYSIS WAS ABLE TO BECOME AWARE OF THE RELATIONSHIP BETWEEN HER CHILDHOOD GERM PHOBIA AND HER EARLIER FEAR AND FANTASY OF PREGNANCY. THIS REPORT TOUCHES ON THE ROLE OF HYPNOSIS IN FACILITATING THE CONNECTION OF ISOLATED MEMORIES. (SPANISH + FRENCH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Gruenewald, Doris (1965). Hypnotherapy in a case of adult nailbiting. International Journal of Clinical and Experimental Hypnosis, 13 (4), 209-219.

A middle-aged female nailbiter was treated in short-term hypnotherapy. Hypotheses and observations postulated in the literature for the dynamics of the symptom in children and young adults were shown to be valid in this case of more advanced age. Light-to-medium trance proved adequate for exploration and resolution of conflicts of which nailbiting was symptomatic. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

McCord, Hallack (1965). Trance induction under unusual circumstances. International Journal of Clinical and Experimental Hypnosis, 13, 96-102.

In order to obtain a test under naturalistic field conditions of the possible facilitatory or inhibitory effects of ongoing tasks on hypnotizability and the interaction of such effects with S's set either to oppose or not oppose entering hypnosis, a series of Ss were hypnotized either singly or in groups while they were performing a variety of tasks typical of those encountered in office or factory situations. Included were such tasks as typewriting, reading a book, engaging in creative writing, performing the Bennett Hand Tool Dexterity and the Minnesota Rate of Manipulation tests, and performing the Pennsylvania Bi-Manual Worksample. In many cases, it was found that hypnosis could be induced under these conditions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Naruse, Gosaku (1965). The hypnotic treatment of stage fright in champion athletes. International Journal of Clinical and Experimental Hypnosis, 13 (2), 63-70.

The use of direct hypnotic suggestion, posthypnotically produced autohypnosis, and self-hypnosis in conjunction with autogenic training and progressive relaxation in the treatment of "stage fright" in athletes is discussed. Illustrative case histories drawn from a sample of athletes participating in the 1960 Olympic Games are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Moss, C. Scott; Thompson, M. M.; Nolte, J. (1962). An additional study in hysteria: The case of Alice M.. International Journal of Clinical and Experimental Hypnosis, **10**, 54-74. (Abstracted in Index Medicus, 62, 1425)

Detailed account of the psychotherapy of one female hysteric--a treatment failure--is the stimulant for discussion of the genetics and dynamics of this nosology. Hypnosis revealed the experimental basis for the symptoms and associated adjustment difficulties. The dynamics bear a remarkable resemblance to those advanced by Freud, though issue is taken with several psychoanalytic concepts. The discussion deals largely with the phenomenology of the female hysteric. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Raginsky, Bernard B. (1962). Sensory hypnoplasty with case illustration. International Journal of Clinical and Experimental Hypnosis, **10**, 205-219. (In Index Medicus 63: March, S-543)

Sensory hypnoplasty is a technique in hypnoanalysis in which the hypnotized patient models clay to which various sensory stimuli (e.g., temperature, texture, color, smell) have been added to stimulate basic primitive memories, associations, sensations, and conflicts. This allows the patient to give plastic expression to repressed and suppressed material which is then followed by verbalization of the conflicts. The therapeutic process is reputed to be greatly accelerated. This technique has been used in the successful treatment of diverse pathological conditions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Sacerdote, Paul (1962). The place of hypnosis in the relief of severe protracted pain. American Journal of Clinical Hypnosis, **4**, 150-157.

#### NOTES

Severe chronic pain, such as associated with cancer or severe arthritis has lost any protective quality, and to some degree reflects memories of the pain stored in the central nervous system. There are three kinds of analgesics, those that modify peripheral pain receptors, those than modify central perception, and those that change the patient's reaction to pain. Hypnosis is similar to the third type.

The author reviews literature on hypnosis for severe pain and then discusses his personal experience using hypnosis for pain management. Several authors mention that pain, dysfunction and anxiety can all be present and can be treated effectively using hypnosis. Milton Erickson wrote extensively, indicating that he taught patients how to develop analgesia, anesthesia, negative and positive hallucination, profound amnesia, body disorientation and dissociation, and time distortion. Erickson noted the importance of hypnosis in permitting pain patients to maintain themselves in the warm atmosphere of their family.

Perese (1961) wrote about how to manage pain in malignant disease, based on his experience with 714 cases. Perese wrote, "'As yet, we do not have an ideal analgesic drug that will control the severest pain... cause no anorexia or gastrointestinal symptoms, produce euphoria but no addiction, suppress anxiety and fears without

dampening the mental faculties... cause no toxic symptoms, and induce on tolerance in constant daily use at the highest therapeutic dose for at least 3 months.' (To the reader [Sacerdote], the foregoing describes hypnosis properly employed)" (p. 152). Sacerdote notes that Perese himself did not use hypnosis personally, and that the patients he referred to other physicians did not usually benefit greatly from the hypnosis.

Other investigations by Lea, Ware and Monroe (1960) and Cangello (1961) obtained favorable results using hypnosis. Lea et al. (1960) obtained good results in the control of intractable pain for 12 of 17 unselected patients. They attributed the five poor outcome cases to pre-existing psychiatric problems. Cangello (1961) used hypnosis with 22 advanced cancer patients who were requiring narcotic medication every four hours, with good results: 59% had at least some reduction in narcotic intake. "The duration of effectiveness varied from one week to 4.5 months. However, none of the patients in the so-called failure group who was capable of hypnotic trance eventually required chemical or surgical approach, or developed tolerance to the drug" (p. 152).

"PERSONAL EXPERIENCE. In handling patients with protracted painful illness, the author has attempted to combine minimum quantities of analgesic and tranquilizing medications with deliberate use of placebos, and with application of hypnotic methods. ... not one single method or combination of methods will work equally well in every single case" (p. 152).

"A few excellent subjects will become very adept at using self-hypnosis either automatically or when they find it necessary. The author has found patients who easily tolerate the transfer of the hypnotic rapport from the physician to another physician or to a member of their family. Some patients learn to achieve instant deep trances over the telephone with beneficial results" (p. 153).

"It is worth while in a larger number of patients to combine hypnosis and a systematic use of placebos in such a way that the psychological reaction to pain will be beneficially influenced" (p. 156).

"In no instance has there been adverse developments from the use of hypnosis with these patients, nor was there any development of substitutive psychosomatic symptoms" (p. 156).

## 1961

Levendula, Dezso (1961). Two case presentations: Treatment of central pain with reconstruction of the body-image -- hypnoanalysis of a travel phobia. International Journal of Clinical and Experimental Hypnosis, 9, 283-289.

## NOTES

Uses analogy of phantom limb (hallucinated pain which is a central pain) with a multiple sclerosis patient who had "excruciating" pain between her thighs despite paralysis from waist down due to multiple sclerosis. She valued her sex life though she couldn't feel sexual response, and felt that she "didn't have any legs" and her husband "had to carry her."

In giving her history the patient noted an increasing numbness and weakness in her legs five years earlier. At that time she also entered menopause and developed

severe vaginitis. She became depressed when she became increasingly unable control her excretory functions. As the pain in the genital region increased, her ability to feel pleasant vaginal sensations diminished. Ultimately the pain was continually present.

The therapist attributed her problem to a faulty body image because she "denied the existence of her legs which were actually physically present, although, she could neither feel, nor see, nor move them" (p. 285). Secondly, it was most necessary for her to hold on to the myth [sic], that her vagina existed, because it made her feel wanted and needed by her husband. She was unconsciously afraid that by giving up her vagina she would lose the most important bond between herself and her husband" (p. 285).

The therapist speculated that "the pain, which was the last sensation perceived before the total sensory loss occurred, was fixated centrally. This "pain-image" served to maintain the pretense, unconsciously of course, that there was still feeling in the vagina even though it was only pain and not pleasure. The pain permitted her to avoid facing reality, just as in the case of an amputee who develops the fantasy of a phantom limb, because he cannot readjust his pre-existing body-image to the acceptance of mutilation" (p. 285). He offered the patient "the rather simple explanation... that because she really did not feel where her lower body ended or began, the pain served her need to know where the body halves were separated. If she could learn to imagine and to accept herself as a full, whole person, the pain probably would leave her. This theory seemed very logical and acceptable to the patient" (p. 285).

"Hypnosis was extensively utilized in the following sessions to regress the patient toward her youth. She went again for long walks with her boyfriend, now her husband. It was fun to re-experience the feeling of walking in her father's apple orchard and stretch up for a red apple. Autohypnosis was taught and [he] told her to exercise "walking" while hypnotized twice daily" (p. 285-286). He also tapped on the soles of her feet repeatedly, until she could localize the vibrations. "She finally learned that she did have legs and also that other sensations besides pain could originate below the waist... Gradually with the acceptance of her "wholeness and tallness" the pain became less and less. She was able to "forget" the pain for a longer period of time. ... Occasionally she does call. She tells [the therapist] that in a stressful situation, such as moving into a new house and not knowing where things are, the pain comes back temporarily, but it is much less and after [they] talk an hour she is relieved" (p. 287). The patient had a total of 20 visits.

The author describes a second case, which is not described in these notes.

**Marcus, Howard W.; Bowers, Margaretta K. (1961). Hypnosis and schizophrenia in the dental situation. A case report. International Journal of Clinical and Experimental Hypnosis, 9, 47-57. (In Index Medicus 61: 1228)**

(Author's Summary) A case is presented of a schizophrenic patient, paranoid type, whose phobic fear of dentistry had resulted in the development of a delusional system: he would get well if his teeth were repaired under hypnosis. In reality, his need of dental care was severe. He had lost three teeth by extraction because of

painful cavities which he could not permit to be treated with conventional methods. He presented deep cavities in his front teeth. The patient was consistently unable to make rapport with several psychiatrists and dental treatment was finally discontinued because of unwillingness to proceed without psychiatric supervision. Alternative methods of handling the situation and its implications are discussed.

Guinazu, S. (1960). *Relajacion de Schultz e ionotoforesis calcica trans cerebral. Acta Hipnologia Latino-Americana, 1, 65-67.* (Abstracted in *American Journal of Clinical Hypnosis, 1962, 5, 75*)

The author recommends the use of autogenic training in conjunction with transcerebral calcium iontoforesis for the treatment of neurotic and psychotic disorders. This combined therapy abbreviates treatment time and leads to greater percentage of recoveries. Four cases, taken from over two hundred, are presented and analyzed.

Lea, Paul A.; Ware, Paul D.; Monroe, Russell R. (1960). *The hypnotic control of intractable pain. American Journal of Clinical Hypnosis, 3, 3-8.*

#### NOTES

Authors located 10 articles dealing with chronic pain and hypnosis. Most reported that it was possible to reduce or control chronic pain during the hypnotic trance but virtually impossible to control it post-hypnotically; particularly for any length of time. Two exceptions were the contributions of Harold Rosen, M.D., who attempted to obtain a psychological lobotomy through hypnosis, and Milton H. Erickson, M.D., who taught his patients positive and negative hallucinations in the areas of touch, deep sensation, and kinesthesia; body disorientations and dissociations; analgesia and anesthesia for both superficial and deep sensations; and time distortions (Erickson, 1959, possibly in *American Journal of Clinical Hypnosis*).

#### SUMMARY.

Twenty unselected patients with chronic intractable pain were referred for treatment by hypnotherapy. Only one did not obtain at least a light hypnotic trance, and two others could not be evaluated [post treatment] for extraneous reasons. Of the remaining 17, three improved sufficiently to be taken off all medications and nine significantly improved in that the character of the pain was changed and less medication was needed. Of the five failures, four had severe complicating psychiatric problems. [Authors note that while one paranoid schizophrenic was a treatment failure, another with that diagnosis was one of their best successes.]

"A somnambulistic trance was not necessary with the technique we used; often as much was accomplished with medium or even light hypnosis" (p. 8). The hypnotists were medical students who had a considerable amount of induction experience but not much treatment experience or doctor-patient relationship experience. The authors noted that responses to post-hypnotic suggestions (e.g. that patients would feel better or not require as much medication) were delayed from several hours to as much as a week.

Their basic technique was to use hypnotic suggestion to alter the character of the chronic pain or to change the patient's attitude towards this pain. This was done by attempting to localize the pain in one pathological area with special emphasis on the fact that the rest of the body was normal or by suggesting that, as the patient learned to relax, the pain would not bother him as much. Only occasionally did they try to remove the pain completely or to control it through the use of self-hypnosis and posthypnotic suggestion. They based their procedure, in part, on the ideas of Wolff and Wolf (1959), who stated that, although the threshold for perception of pain was relatively constant, the reaction to this pain varied between wide limits for a given individual--in fact, for the same individual under different circumstances.

Patients were seen for 4-40 sessions (12 patients for 4-10; only 3 patients for more than 20 sessions). The authors defined results as: Excellent - Character of pain changed and all medication stopped. Good - Character of pain changed, though some medication had to be continued Failure - Character of pain was not changed. (It is important to note that some subjects who experienced only a light trance were nevertheless benefitted.)

The data given in their table are a bit discrepant from the data summarized above, in that the table lists only two who could not be evaluated, and six failures: 3 Excellent 9 Good 6 Failure 2 NA (presumably not evaluated post-therapy)

1959

Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.

## NOTES

On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.

Note: Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.

"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal, there is also a functional dissociation of the two signal systems and within the second signal system. 2. The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new

cortical dynamic structures under the verbal influences of the hypnotist, these structures representing the physiological basis for effectuating the suggested actions and states.

"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).

"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.

"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.

"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).

"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after wakening. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions. During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal

system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

1956

McCord, Hallack (1956). Hypnosis as an aid to the teaching of a severely mentally retarded teenage boy. Journal of Clinical and Experimental Hypnosis, 4 (1), 21-23. (Abstracted in Psychological Abstracts 57: 3729)

NOTES

A 16 year old boy with I.Q. measured at 55 was hypnotized for 20 minutes daily for one month. During each session he was given material to learn (multiplication tables, spelling words, reading recognition, and general information -- only one presented during each hypnosis session). "At the end of 90 days, the subject was still retaining almost 100 percent of all material presented except for the multiplication tables which showed about 50 percent loss" (p. 22). "As a result of routinely introduced hypnotic suggestions for well-being, happiness, desire to learn, and assurance of acceptance, Ben's motivation to learn in the classroom situation took a sharp surge upward. (It was for this reason that giving him parallel material in the normal state to be used to measure comparative learning rates promptly became scientifically unsound as a control in this study.)" (p. 22). Although he was not given material to study in between sessions, "it was known that he mentally reviewed the material while working and playing in the school program" (p. 23).

1955

Ament, Phillip (1955). A psychosomatic approach to the use of anesthesia for a hysterical dental patient: A case history. Journal of Clinical and Experimental Hypnosis, 3, 120-123. (Abstracted in Psychological Abstracts 56: 1280)

NOTES

Author describes a case highly resistant both to anesthesia and dentistry. Although very responsive to hypnosis, she continued moaning and moving from side to side (later determined to be her way of preventing dental work even though anesthetized). Ultimately a combination of hypnosis and multiple anesthetics was needed, including nembutal, sodium pentothal, nitrous oxide and novocain. In the author's experience, most other patients require only hypnosis or hypnosis plus novocaine.

Hershman, Seymour (1955). Hypnosis in the treatment of obesity. Journal of Clinical and Experimental Hypnosis, 3 (3), 136-139.

## NOTES

Three case histories are presented for patients treated for obesity using hypnotherapy. The procedure in hypnosis involved: (1) visualizing person on a stage who is unhappy, depressed, followed by a person who is happy, content; (2) discussing diet with indirect suggestions that adherence would lead to the happy, contented feelings and vice versa for non-adherence; (3) giving permissive suggestions regarding behavior change (e.g. "Perhaps it is only certain foods that should be distasteful and not the eating of 'allowed' foods" (p. 137). Patients were seen weekly for 4-6 weeks, then bi-weekly or monthly for several months, and then only occasionally. "The easier acceptance of the therapy in the hypnotic state cannot be too strongly emphasized. ... rapport is established more quickly and easily, and the feeling of participation on the part of the patient convinces him that the therapy will be successful" (p. 139).

Klempner, Edith (1955). The spontaneous self-portrait in hypnoanalysis. Journal of Clinical and Experimental Hypnosis, 3 (1), 28-33. (Abstracted in Psychological Abstracts 55: 8621)

## NOTES

Author presents descriptions patients gave of themselves in hypnoanalysis and compares them with material obtained with Dr. Walter Boernstein's Verbal Self-Portrait Test. On that test, the patient is asked, 'If you were an accomplished artist, how would you paint yourself?' The author concludes, "In summarizing I wanted to show that patients in hypnoanalysis can use the symbolical representation of their body as a means of bringing to the fore psychic traits, conflicts, and unconscious forces motivating them. They can even picture through it the complications of their life histories. In other words, the personality projection as it is revealed in the Spontaneous Self-Portrait here serves as a tool for the recognition and understanding of the neurotic structure" (p. 33).

Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)

## NOTES

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whom restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in

hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

1954

Kline, Milton V. (1954). Psoriasis and hypnotherapy: A case report. Journal of Clinical and Experimental Hypnosis, 2 (4), 318-322.

NOTES

"Summary: A chronic case of psoriasis in a forty-five-year-old woman has been reported upon wherein there has been demonstrated a definitive relationship between emotional factors and the onset of the psoriasis. Despite resolution of the precipitating distress, the psoriasis remained unabated for more than twenty years until successfully treated with hypnotherapy. Some of the theoretical issues related to both the origin and therapeutic rationale have been discussed" (p. 322).

Kupfer, David (1954). Hypnotherapy in a case of functional heart disorder. Journal of Clinical and Experimental Hypnosis, 2 (3), 186-190.

NOTES

Summary.

A young soldier with functional cardiac complaints was treated with hypnosis in a total of 4 interviews. The dynamics were bypassed and the therapeutic suggestions attached to 2 significant events in the patient's childhood, dealing intimately with the oedipal conflict and castration fears. Follow-up studies of 3 weeks duration revealed that significant changes had been produced in the patient's attitudes towards himself and towards his role in the military service" (p. 190).

LeCron, Leslie M. (1954). A hypnotic technique for uncovering unconscious material. Journal of Clinical and Experimental Hypnosis, 2, 76-79. (Abstracted in Psychological Abstracts, 54: 7497)

Summary.

A technique is given whereby unconscious material and information may be learned under hypnosis through automatic movements of the fingers, or of Chevreul's pendulum. The movements are controlled by the unconscious mind of the patient. Questions are asked which can be answered either 'yes' or 'no.' With most people the movements of the pendulum can even be elicited in the waking state. Essentially,

the method is a variation of automatic writing with movements substituted for writing. A brief case history is given wherein knowledge was gained in this way as to the causes for severe menstrual pains" (p. 79).

Rosen, Harold; Erickson, Milton H. (1954). The hypnotic and hypnotherapeutic investigation and determination of symptom-function. Journal of Clinical and Experimental Hypnosis, 2 (3), 201-219. (Abstracted in Psychological Abstracts, 55: 7017)

"Summary.

1. Symptoms and even syndromes may subserve the repetitive enactment of traumatic events; may reproduce, instead, specific life situations; may satisfy repressed erotic and aggressive impulses; or may at one and the same time constitute defenses against, and punishment for, underlying instinctual drives. They may mask underlying schizophrenic reactions, or hold suicidal depressions in check. They may serve these and other functions concurrently, or none, or any specific one or combination of them.

2. With selected patients under hypnosis, symptom-function may be determined rapidly and in a therapeutic setting. Various techniques can be utilized. Attacks may be precipitated and then blocked, either by direct hypnotic suggestion or by regressing the patient to a period pre-dating the onset of his disease, so that substitutive motor or other activity will be precipitated in a form accessible to therapeutic investigation; attacks may be precipitated in slow motion, so that individual components can be therapeutically investigated in detail; dissociated states may be induced; dream acting-out may be suggested; or symptoms may be suggested away while emotions back of symptoms are concurrently intensified, so that, again, underlying dynamic material will immediately become accessible for therapy. Still other techniques may be utilized.

3. If treatment, as well as evaluation, be through these techniques, and if treatment be successful, it may be that the analogy of a log jam will be of value. The jam can usually be broken by pulling out one or two key logs. The rest then start falling into place -- and the whole log jam disappears. This may be what happens, although to a limited extent, during therapy of this type.

4. Various of these techniques have been illustrated throughout this paper. Case histories however, have at times been distorted in order to maintain the anonymity of the patients involved" (pp. 218-219).

Schneck, Jerome M. (1954). An experimental study of hypnotically induced auditory hallucinations. Journal of Clinical and Experimental Hypnosis, 2, 163-170.

Summary. An experimental study of hypnotically induced auditory hallucinations was incorporated into therapeutic contact with a patient at a time when an exploratory phase of treatment process seemed appropriate. The study was divided roughly into ten parts, nine of which involved attempts to induce hallucinations on an auditory level following an initial control procedure involving 'imagined' conversation. Choice of persons to be hallucinated was made at times by the therapist

and at times this was left for spontaneous development by the patient. Some of the episodes involved marked emotional participation by the patient. Others were less intense. 'Imagined' conversations were distinct from hallucinated comments. Her own voice when hallucinated emanated from within herself. Other hallucinated voices had external origins. Some were far away. Her aunt's voice was in the same room. Spatial and temporal elements were divorced from their conventional relationships and distorted in keeping with psychodynamic needs. The patient was able to discuss her experiences and evaluate certain descriptive and dynamic qualities. Certain parts of the total experience served as controls in the evaluation of other parts. The beginning of hallucinatory behavior did not set a pattern for continuous similar activity. Responsive behavior varied from time to time. A hallucinatory episode might be followed by an 'imagined' conversation, although instructions remained the same. Deceased persons were hallucinated on an auditory level. This type of episode with her mother had considerable emotional impact. Her aunt died twenty years ago. Her husband was not hallucinated. Responses involving her daughter showed greater complexity.

"Further studies are in order in connection with the neuropsychological and neurophysiological elements in such hypnotic hallucinatory activity. Such elements as they play a role in visual imagery as described here and in visual hallucinations are also to be examined further. Aside from extensions of the type of investigation presented here, inroads may be made into an understanding of spontaneous hallucinatory activity among psychotic patients through the utilization of hypnotic exploratory methods. This would have to be preceded by more extensive studies of hypnosis in relation to psychotic patients than have been attempted thus far. The procedure discussed here and many potential ramifications makes possible a wide variety of investigations which can be planned for the future" (pp. 169-170).

Schneck, Jerome M. (1954). Hypnotherapy in a case of claustrophobia and its implications for psychotherapy in general. Journal of Clinical and Experimental Hypnosis, 2 (4), 251-260. (Abstracted in Psychological Abstracts, 55: 6064)

#### Summary.

This report presents the hypnotherapy of a patient with claustrophobia. The crucial event responsible for symptom formation occurred in military service when the patient was trapped in a trench by a tank which stopped over the patient before proceeding, and at which time the sides of the trench began to cave in. Subsequent traumatic events served as reinforcement. It is likely that a low threshold for the development of anxiety predisposed this patient to the development of the claustrophobia, although the major trauma sustained was undoubtedly of tremendous impact and a distinct threat to life. Emotional experiences were sealed and free expression was permitted through hypnotic revivification. The dynamics, further elaborated in the report, suggest that similar occurrences not necessarily in military settings may be approached therapeutically in this way. Aside from the reliving technique, recall stimulation through a dream induction approach was employed. Other hypnotic methods were described and further implications for

psychotherapy in general were elaborated. Hypnotherapeutic and hypnoanalytic approaches to phobic reactions have been described at length elsewhere" (p. 260).

Schneck, Jerome M. (1954). The divided personality: A case study aided by hypnosis. International Journal of Clinical and Experimental Hypnosis, 2 (3), 220-232.

#### Summary.

Amnesia as a symptom assumes proportions more complex than would appear on the surface and the role of memory loss with specific reference to hypnotic recovery methods has been presented in several reports. Hypnotherapy would appear to be a preferred technique for resolving the symptom and at times for more extensive investigation of the underlying problems. The case reported now involved an extensive memory loss for past life, including personal identity. This was followed after nearly a year by recall and concurrent amnesia for the intervening time period. The latter amnesia was dispelled by recall at first under hypnosis and then by post-hypnotic extension and elaboration of the nuclear material. The patient's history was outlined and several facts of apparent importance in relation to the memory loss were revealed. The purposive and motivational features were stressed. Therapy was conducted in a medico-disciplinary setting with limitations based on administrative requirements. Military-legal complications of the patient's personality disorder and functioning were outlined. The concept of the divided personality was introduced and related to multiple personality and to another type of behavior which is quite similar to the divided personality except that periods of amnesia are not involved. The divided personality involves major cleavages in the continuity of living with amnesia and the establishment of the individual in a setting where he undergoes extensive, significant operations relating to work, general activities, and even courtship and marriage. Unlike the generally accepted attributes of multiple personality involving considerable overt behavior, affect, and attitude alterations, the divided personality continues to function with his accustomed overt attitudes, interests, affect, and method of relating on an interpersonal level. Descriptively and overtly he is not too different if at all, but he seems to begin life anew in terms of setting and personal contacts. Cases of this type should be studied further with care, whenever possible, for further elicitation [sic] of psychodynamics. Hypnosis as a tool in treatment and investigation should prove helpful and is to be considered important.

#### 1953

Horan, John S. (1953). Hypnosis and recorded suggestions in the treatment of migraine: Case report. Journal of Clinical and Experimental Hypnosis, 1 (4), 7-10. (Abstracted in Psychological Abstracts 54: 6399)

#### NOTES

Author's Discussion: "The case above is presented because of its rather bizarre features. It is notable in that in the hypnotic sessions no attempt was made to explore the dynamics of the patient's resentment or her illness, no insight was given

into psychic mechanisms connected with the migraine. This had been done before, in conventional psychiatric interviewing, without much result. Under hypnosis, the only suggestions given were concerned with direct symptomatic relief of headache, insomnia and anorexia. For the patient's purposes, these were sufficient. Just how the pathological physiological state causing the migraine attacks was altered by direct and recorded suggestion is a mystery to this writer. It may be that hypnotic states can cause a dissociation of the subject from the emotional stress related to the attacks. Or perhaps the strangeness and the mystery of hypnosis was sufficient. It would be absurd to make any claims about the efficacy of hypnosis in migraine patients in general on the basis of this one case. In a disease which causes as much disability and suffering as migraine, however, it is profitable to report any safe means that gives a satisfactory result" (pp. 9-10).

**Kline, Milton V. (1953). Delimited hypnotherapy: The acceptance of resistance in the treatment of a long standing neurodermatitis with a sensory imagery technique. Journal of Clinical and Experimental Hypnosis, 1 (4), 18-22.**

#### **Author's Summary**

A case of experimental hypnotherapy of a chronic neurodermatitis has been presented within which the resistance of the patient was accepted as reasonable. Therapy was structured by the patient's limitations and the results, at least in this one case, justified the procedure. It is suggested that a more global perception of resistance be recognized apart from its unconscious meaning and that cognitive aspects of resistance be evaluated and utilized in treatment planning. The problem of an artifact neurotic reaction in resistance oriented therapy is discussed.

### **CATALEPSY**

**1984**

**Jensen, Peter S. (1984). Case report of conversion catatonia: Indication for hypnosis. American Journal of Psychotherapy, 38 (4), 566-570.**

Describes the successful hypnotic treatment of a 25-yr-old Black male who displayed symptoms of suicidal ideation, insomnia, and feelings of depression alternating with emptiness and boredom that led to an acute catatonic reaction. S met DSM-III criteria for borderline personality disorder. It is contended that since conversion mechanisms may underlie some presentations of catatonia, hypnosis may assist clinicians in the differential diagnosis of acute catatonic conditions.

**1982**

**Reese, William G.; Newton, Joseph E.; Angel, Charles (1982). Induced immobility in nervous and normal pointer dogs. Journal of Nervous and Mental Disease, 170 (10), 605-613.**

Pointer dogs learn complex hunting tasks such as vigorous aim-directed activity in tracking specific birds and sudden rigid immobility "on point" at appropriate distances from the prey. In the presence of a human, dogs of the Arkansas Line of

Nervous Pointers show markedly reduced activity. In close quarters, they usually react to humans by freezing. These responses do not extinguish. The breed demonstrates a strong capacity to inhibit motion. In the present study of 9 normal and 10 nervous dogs, this trait was greatly exaggerated in the nervous Ss. It was found that 10 of 10 nervous Ss, in contrast to kennel mates of a normal line, developed tonic immobility (TI) induced by manual inversion into a sling and stroking. This is the 1st systematic demonstration of TI in mature dogs. The TI was accompanied by reduced telemetered heart rate (HR) compared to baseline. Release from the inverted position was accompanied by marked HR increase. In the absence of humans, both before and after the inversion, all nervous Ss showed little or no movement about the testing area. This was in contrast to the 9 normal Ss of comparable age and sex. The 4 normal Ss that righted themselves soon after the inversion showed reduced HR with the resumed activity. Implications for psychiatry and behavioral biology are discussed. (35 ref).

Whishaw, Ian Q.; Flannigan, K.P.; Schallert, T. (1982). An assessment of the state hypothesis of animal 'hypnosis' through an analysis of neocortical and hippocampal EEG in spontaneously immobile and hypnotized rabbits. Electroencephalography and Clinical Neurophysiology, 54, 365-374.

Hippocampal and neocortical EEG was studied in spontaneously immobile rabbits and in immobilized rabbits, 'animal hypnosis.' Neocortical low voltage fast activity (LVFA) and hippocampal rhythmical slow activity (RSA) occurred spontaneously and were elicited by sensory stimulation, eserine and brain stimulation in normally immobile and hypnotized animals. Atropine sulfate blocked the LVFA and RSA that occurred during spontaneous immobility and hypnosis but not the LVFA and RSA that occurred during movement. RSA was also recorded from both CA1 and dentate gyrus generators of the hippocampus during both types of immobility. The results show that hypnotized rabbits have the same type II (atropine-sensitive) EEG that is found in spontaneously immobile rabbits. The presence of type II EEG during hypnosis and its sustained sensitivity to stimulation is compatible with the view that the EEG activity is not uncoupled from its normal behavioral correlates. Perhaps normal EEG during animal hypnosis allows normal sensorimotor functions. This may permit the possibility of escape from predators at opportune moments once the immobility has served its defensive function.

#### NOTES

State hypotheses of animal hypnosis suggest that "the brain of the hypnotized animal is in a physiological state that is fundamentally different from that of spontaneous immobility ... a state in which active EEG patterns are uncoupled from their usual correlate of movement. For example, Lievens (1960) suggested that hypnosis was a state of 'paroxysmal motor inhibition,' Klemm (1966) suggested that there was a 'functional disconnection' of motor activity and active EEG activity, and Scotti de Carolis et al. (1969) suggested that there was 'some type of interruption' between motor and sensory processes" (p. 365).

In their Discussion, the authors write, "The findings argue that the activated EEG that occurs during animal hypnosis need not be considered a dissociated physiological event since the normal correlate of type II EEG is immobility, regardless of whether the immobility occurs spontaneously, during anesthesia, ... during paradoxical sleep, ... or even following forebrain isolation. Of course, this conclusion does not deny the possibility that there are other physiological or behavioral events that are peculiar to hypnosis and that are dissociated from some of their normal physiological or behavioral correlates. Examples may be electrographic seizure activity that occurs in the absence of movement and the presence of inhibited spinal reflexes. Nor do these results deny that the mechanisms involved in type II EEG have a different relation to motor mechanisms in normal rabbits as compared with hypnotized rabbits. Since type II EEG is normally a correlate of immobility, its relation to movement producing neural systems even in normal animals is unknown.

"Although the function of type II EEG is not known, given its close relation with sensory events, its presence during hypnosis may mean that the animals have the same ability to process sensory information as do normal animals. This would be adaptive. ... But, since type II EEG can occur in states of anesthesia or after forebrain isolation (see above) its presence alone is no guarantee that the hypnotized animal is capable of the full range of responses available to a normal animal" (p. 372).

1981

Wallace, Benjamin; Hoyenga, Katharine Blick (1981). Performance of fine motor coordination activities with an hypnotically anesthetized limb. International Journal of Clinical and Experimental Hypnosis, 29, 54-65.

3 experiments were conducted to determine the effects of induced hypnotic anesthesia in S's dominant arm upon the performance of various motor coordination tasks. Experiment 1 assessed the ability of Ss to tap a pencil within a 20 mm diameter circle while the limb performing the task was or was not anesthetized. Experiment 2 determined the effect of hypnotic anesthesia upon the ability to perform a hand-turn task. Experience 3 considered the effects of hypnotic anesthesia on the ability to draw and duplicate a sine-wave pattern. IN all 3 experiments, hypnotic anesthesia adversely affected task performance. Their results were interpreted as indicating a possible relationship between induced hypnotic anesthesia and mimicked cerebellar dysfunction.

#### NOTES

Although the induction of hypnotic anesthesia in a limb appears to mimic cerebellar dysfunction or damage, the present authors are not implying that this is actually happening. In fact, there are few physiological correlates of hypnosis or hypnotic anesthesia (Evans, 1979; Sarbin & Slagle, 1979) and, to date at least, cerebellar involvement does not appear to be one of them. There appears to be a curious relationship, however, between performance on a motor task as a function of induced hypnotic anesthesia in a limb and as a function of cerebellar damage. This

relationship may simply be coincidental at best but before it can be dismissed as such, further experimentation should take place to study this interesting phenomenon" (p. 61).

**1976**

**Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, 18, 254-262.**

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

**1975**

**Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35**

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine

both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

1964

Karmanova, I. G. (1964). Fotogennaia katalepsiia [Photogenic catalepsy]. Moscow, USSR: Leningrad Izd. Naule. (Reviewed in American Journal of Clinical Hypnosis 1966, 3, 228)

#### NOTES

The author analyses the phenomenon of photogenic catalepsy from the evolutionary phylogenetic approach, including the phenomenon as demonstrated in the cock, frog, guinea-pig and dog. The following points of view are discussed: the physiological changes, electroencephalography and electromyography in animals, and clinical narcolepsy in man. (Review in AJCH.)

3 student nurses in whom eyelid catalepsy could not be induced during a group hypnotic session were kept for 4 hours in sensory deprivation at the end of which time another attempt at hypnotic induction of eyelid catalepsy was made and again failed. An interview revealed hallucinatory or delusional experiences in 1 and suspicions concerning the implications of the experiment in the other 2 Ss. Sensory restriction does not seem sufficient to overcome all resistances to hypnotic induction. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

#### NOTES:

Found that 3 student nurses, 4 hours in sensory deprivation, did not become more suggestible as measured by eye catalepsy.

1954

Koster, S. (1954). Experimental investigation of the character of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 42-54.

#### NOTES

In waking, hypnosis, and sleep states 6 subjects were tested for knee-jerk height, key pressing to metronome signal, doing sums, recalling a story, etc. The Summary states:

"1. The height of the knee-jerk of all 6 subjects both in T and in "S" was much lower than in (W), the average height of all knee-jerks computed of the 6 subjects was both in T and in "S" only 39% of the average height in (W).

2. The [arm] catalepsy in T and in "S" continually existed.

3. The subjects in T and in "S" could hear well and perform active movements, though they reacted somewhat more slowly, and less forcibly than in (W) and sometimes only after some provocations.

4. The subjects both in T and in "S" could not only hear well, but could also present more or less complicated psychic impressions, reproducing them later again in "S" and also after the end of the experiment" (p. 50).

The author concluded, "Hypnosis is a sleeping-condition, but a special one. The specific difference consists of the fact that the subject's many impressions, which he would observe in a waking-condition, he does not observe now, and does not react to, aside from impressions coming to him through the hypnotist. It can then be said that there is not an absence but a decrease of the active relation with the outer world. This is exactly the same state as the one during sleepwalking and the writer must repeat after all his investigations, what has already been stated: Essentially there is no difference between the condition of a hypnotized person and that of a sleepwalker" (p. 51).

1953

Guze, Henry (1953). The phylogeny of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 41-46.

#### NOTES

"The continuity of hypnotic phenomena from infrahuman through human organisms has created an array of problems in interpretation" (p. 41). "Unfortunately, most investigators in animal hypnosis have concerned themselves mainly with states of immobility. Because of this, they have neglected to recognize that hierarchical and group reactions of animals are just as fit in the category of hypnotic behavior" (pp. 41-42). "It is postulated in this paper that hypnosis or hypnotizability is a phylogenetically derived characteristic strongly akin to emotional readiness. It differs in expression from organism to organism within a species and from species to species" (p. 45).

#### CHILDBIRTH

1998

Schauble, Paul G.; Werner, William E. F.; Rai, Surekha H.; Martin, Alice (1998). Childbirth preparation through hypnosis: The hypnoreflexogenous protocol. American Journal of Clinical Hypnosis, 40 (4), 273-283.

A verbatim protocol for the "hypnoreflexogenous" method of preparation for childbirth is presented wherein the patient is taught to enter a hypnotic state and then prepared for labor and delivery. The method provides a "conditioned reflex" effect conducive to a positive outcome for labor and delivery by enhancing the patient's sense of readiness and control. Previous applications of the method demonstrate patients have fewer complications, higher frequency of normal and full-term deliveries, and more positive postpartum adjustment. The benefit and ultimate cost effectiveness of the method are discussed.

1993

Jenkins, M. W.; Pritchard, M. H. (1993). Hypnosis: Practical applications and theoretical considerations in normal labour. British Journal of Obstetrics and Gynecology, 100, 221-226.

This important, well controlled and large N study assessed effects of hypnotherapy on the first and second stages of labor in 126 primigravid women with 300 age-matched controls, and 136 parous women having their second baby with 300 age-matched controls. Only women undergoing spontaneous deliveries were included. Six sessions of hypnosis were used. The mean length of first stage labor in primigravid women was 6.4 hours after hypnosis and 9.3 hours in the control group ( $p < .0001$ ), and the mean length of the second stage was 37 minutes and 50 minutes, respectively ( $p < .001$ ). In the parous women, the corresponding times were 5.3 hours and 6.2 hours ( $p < .01$ ), and 24 and 22 minutes (not significant). The use of analgesic agents was significantly less ( $p < .001$ ) in both hypnotized groups compared with their controls.

1990

Edelmann, R. J. (1990). The treatment of infertility by hypnosis: A note of caution. [Comment/Discussion] .

A case report recently published in this journal by Maden (1989) appeared to suggest that six weekly sessions of hypnosis were responsible for facilitating conception in a woman with unexplained infertility. The present paper argues that Maden's report presented no evidence for this claim and no rationale for why hypnosis might be effective as a treatment for unexplained infertility. Both deserve a far more thoughtful and systematic investigation" (p. 184).

Harmon, Teresa M.; Hynan, Michael T.; Tyre, Timothy E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. Journal of Consulting and Clinical Psychology, 58, 525-530.

Studied the benefits of hypnotic analgesia as an adjunct to childbirth in 60 nulliparous women. Subjects were divided into high- and low-susceptibility groups before receiving six sessions of childbirth education and skill mastery using an ischemic pain task. Half of the subjects in each group received a hypnotic induction at the beginning of each session; the remaining control subjects received relaxation and breathing exercises typically used in childbirth education. Both hypnotic subjects and highly susceptible subjects reported reduced pain. Hypnotically prepared births had shorter Stage 1 labors, less medication, higher Apgar scores, and more frequent spontaneous deliveries than control subjects' births. Highly susceptible, hypnotically treated women had lower depression scores after birth than women in the other three groups. The authors believe that repeated skill mastery facilitated the effectiveness of hypnosis in the study.

McLintock, T. T.; Aitken, H.; Downie, C. F.; Kenny, G. N. (1990). Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. British Medical Journal, 301 (6755), 788-790.

Sixty-three women undergoing elective abdominal hysterectomy were randomly assigned to a tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the women. Postoperative analgesia was provided through a patient-controlled analgesia system for the first 24 hours. Pain scores were recorded every 6 hours. The outcome measures were morphine consumption in the first 24 hours and pain scores. Mean morphine requirements were 51.0 mg in women who were played positive suggestions, and 65.7 mg in those played a blank tape ( $p = 0.028$ ). Pain scores were similar in the two groups. It was concluded that intraoperative suggestions seem to have a positive effect in reducing patients' morphine requirements in the early postoperative period.

Tiba, Janos (1990). Clinical, research and organizational aspects of preparation for childbirth and the psychological diminution of pain during labour and delivery. British Journal of Experimental and Clinical Hypnosis, 7 (1), 61-64.

#### NOTES

Studied patients in Hungary and arrived at the following conclusions:

1. Hypnotizability of women coming for hypnosis preparation for birth is higher than non-pregnant women.
2. Primagravidas score higher than women having second child.
3. High hypnotizables have virtually painless delivery "if they are prepared for birth" and can maintain medium depth during birth.
4. Even highly hypnotizable women require sensory imaginative techniques and anaesthesia suggestions to maintain hypnosis throughout the process.
5. "Continuous hypnosis throughout delivery for analgesic reasons is questionable."
6. Benefits of hypnosis include "favourable effect on the course of birth, on reducing pain during birth, on the subjective judgement of birth and on developing positive experiences."
7. Imaginative ability is higher than in a non-pregnant group, and increases with progression of pregnancy.
8. Author developed "a complex psychophysical preparation for birth integrating the imaginative capacity, hypnosis and the preparation of husbands together with their wives has been developed."

The author recommends that followup studies investigate whether hypnotizability and imaginative capacity really increase during pregnancy.

1988

Omer, H.; Darnel, A.; Silberman, N.; Shuval, D.; Palti, T. (1988). The use of hypnotic-relaxation cassettes in a gynecologic-obstetric ward. In Lankton, S. R.; Zeig, J. K. (Ed.), Research, comparisons and medical applications of Ericksonian techniques (pp. 28-36). New York: Brunner-Mazel.

#### NOTES

They did three studies in which they gave women having gynecologic procedures tapes with a Rapid Induction Analgesia hypnosis experience.

**STUDY 1.** Women heard tapes before a painful Fallopian tube procedure (salpingography). The patients reported less pain, tension, anxiety, and fear than control patients. (N.B. Physicians' ratings did not show that difference.)

**STUDY 2.** Women practiced with the tapes at home before labor and delivery. One day after delivery, there was no difference in pain report or experience report between treated and control patients.

**STUDY 3.** Women used the tapes during labor. They reported worse pain and labor experiences than the control patients.

The authors conclude that their research does not support the hypothesis that Rapid Induction Analgesia is useful for acute pain.

**1987**

Venn, Jonathan (1987). Hypnosis and Lamaze method--an exploratory study. International Journal of Clinical and Experimental Hypnosis, 35, 79-82.

Literature on obstetrical hypnosis includes the hypotheses (a) that the ideal form of childbirth preparation would combine hypnosis with didactic education and (b) that Lamaze and natural childbirth methods are essentially the same thing as hypnosis. In the present study, 122 parturient women self-selected into three groups: Lamaze-only, hypnosis-only, and Lamaze-plus-hypnosis. Amount of medication, duration of labor, self- ratings, and nurses' ratings were used as dependent measures of pain and satisfaction. Treatment groups were compared by analysis of variance, and correlation coefficients were obtained between the dependent variables and scores on the SHCS. Neither hypnosis, Lamaze, nor a combination of the 2 emerged as a superior form of treatment. The SHCS scores were moderately correlated ( $r = .55$ ) with self-ratings that Lamaze had lessened pain during delivery. This may suggest a functional similarity between hypnosis and Lamaze, but the present study suffered a number of methodological problems and alternative explanations are discussed.

Omer, Haim; Friedlander, Dov; Palti, Zvi (1986). Hypnotic relaxation in the treatment of premature labor. Psychosomatic Medicine, 48, 351-361.

Hypnotic relaxation was used as an adjunct to pharmacologic treatment with 39 women hospitalized for premature contractions in pregnancy. The control group received medication alone and consisted of 70 women. Treatment was started at the time of hospitalization and lasted for 3 hr on the average. patients were also given cassettes with a hypnotic - relaxation exercise for daily practice. The rate of pregnancy prolongation was significantly higher for the hypnotic - relaxation than for the medication- alone group. Infant weight also showed the advantage of the hypnotic - relaxation treatment. Background variables of the two groups were compared and it was shown that they could not have explained the treatment effect obtained.

Wideman, Margaret V.; Singer, Jerome E. (1984). The role of psychological mechanisms in preparation for childbirth. American Psychologist, 39, 1357-1371.

Psychoprophylactic (Lamaze) preparation for childbirth consists of six to eight classes held during the last trimester of pregnancy. These classes include instruction in the anatomy and physiology of gestation and parturition, respiration techniques, controlled neuromuscular relaxation, visual focusing, and the training of a labor coach. Although the techniques are based upon psychological principles, they have remained largely unstudied by either psychologists or physicians. This article presents a brief history of the development of the training regimen and critically examines the few empirical studies that have been conducted. Because explanations for the efficacy of the preparation, if it exists, are equivocal, literature on the explicit components of the training--that is, information, respiration techniques, conditioned relaxation, cognitive restructuring, and social support--in situations other than child delivery are reviewed and their implications for the Lamaze method discussed. However, because there exist several, more implicit factors that may affect the type of child delivery a prepared woman experiences, the literature concerning social comparison, the effects of commitment and conformity, perceived control, and endorphin secretion are also discussed as they may apply to psychoprophylactic preparation. Problems associated with the study of childbirth preparation are presented, and suggestions for the direction of future research are made.

1982

Werner, William E. F.; Schauble, Paul G.; Knudson, Marshall S. (1982). An argument for the revival of hypnosis in obstetrics. American Journal of Clinical Hypnosis, 24, 149-171.

Available research, clinical reports, and extensive personal experience demonstrate that hypnosis, and especially the hypnoreflexogenous technique, facilitates the mother's comfort in pregnancy, labor, and delivery; is superior to the use of chemicals or other psychophysical methods as the primary aid in childbirth; and results in lasting benefit for the mother, the child, and the family as a whole. Prior to delivery, with the patient in hypnotic trance, a verbal conditioning technique is used that (1) neutralizes the fear of delivery with a positive emotion that exalts maternity as a sublime experience, (2) substitutes the uterine contraction concept for the pain concept, and (3) presumably lowers the excitability of the cortex by psychological sedation. While hypnosis experienced a temporary decrease in popularity due to a number of misconceptions, there has been renewed and promising application of hypnosis to obstetrics and other areas of medicine.

1980

Fuchs, K.; Paldi, E.; Abramovici, H.; Peretz, B. A. (1980). Treatment of hyperemesis gravidarum by hypnosis. International Journal of Clinical and Experimental Hypnosis, 28 (4), 313-323.

Nausea and vomiting are the most common complaints in the first trimester of pregnancy. Hyperemesis gravidarum presents a unique challenge to the obstetrician trained in medical hypnosis. Between the years 1965-1977, 138 women suffering

from extremely severe vomiting in the first trimester of pregnancy were successfully treated by medical hypnosis. 87 patients were treated in groups and 51 received individual therapy. The results with patients in group hypnotherapy were markedly better than those with patients in individual hypnotherapy. With group hypnotherapy, hospitalization was not necessary; treatment [sic] was given to a number of patients simultaneously and the women felt safer and less lonely. The common motivation of the patients consolidated the psychotherapeutic effect. This made treatment easier and more efficient.

1975

Samko, Michael R.; Schoenfeld, Lawrence S. (1975). Hypnotic susceptibility and the Lamaze childbirth experience. American Journal of Obstetrics and Gynecology, 121, 631-6.

This study explored the relationship between childbirth training and hypnotic susceptibility. A multiple linear regression analysis was performed on the various medical and attitudinal variables related to the subjects' Lamaze childbirth experience and these were tested against hypnotic susceptibility. The results of the analysis indicate that hypnotic susceptibility is not significantly related to Lamaze training, nor is it significantly related to the type of childbirth experience that a Lamaze trained woman has.

#### NOTES

Subjects used in this experiment (N = 55) were women who had received Lamaze training within the last two years, and had delivered only one child. The HIP was administered to find a score of hypnotizability and the women were given two questionnaires. The first of the questionnaires sought demographic and medical information, the second was an attitude questionnaire about her childbirth. A third questionnaire was given to the attending physician. "The correlations between hypnotic susceptibility and the physician's rating of how successful he felt the subject's use of the Lamaze technique ( $r = 0.12$ ) and the physician's rating of how helpful he found the mother's use of the Lamaze technique was to delivery ( $r = 0.17$ ) were both nonsignificant" p. 634).

1969

Rock, Nicholas; Shipley, Thomas; Campbell, Colin (1969). Hypnosis with untrained, nonvolunteer patients in labor. International Journal of Clinical and Experimental Hypnosis, 17, 25-36.

20 nonvolunteer, untrained Ss were individually hypnotized during active labor and compared with 18 controls selected by the same criteria and receiving the same obstetrical treatment. Hypnotized Ss required less medication and obtained greater relief of pain than the controls. The time involved in induction of hypnosis was only 20 min., and the total time added by hypnotic procedures was only 45 min. longer than the regular care of the control group. It was concluded that hypnosis can be used easily on nonvolunteer, untrained patients in active labor, even in a noisy

environment, without any serious sequelae. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

Cheek, David B. (1961). Value of ideomotor sex-determination technique of LeCron for uncovering subconscious fear in obstetric patients. International Journal of Clinical and Experimental Hypnosis, 9, 249-259.

**Author's Summary**

Unrecognized subconscious fears can be uncovered while using ideomotor questioning with a Chevreul pendulum or with finger signals. The technique described by LeCron for evaluating knowledge regarding the sex of an unborn child is a most helpful way of approaching subconscious fears. The frightened patient refuses to indicate knowledge of the sex of her unborn child. Uncovered fears can be resolved by appealing to conscious-level understanding with adroit questioning" (p. 258).

**1955**

Kline, Milton V.; Guze, Henry (1955). Self-hypnosis in childbirth: A clinical evaluation of a patient conditioning program. Journal of Clinical and Experimental Hypnosis, 3 (3), 142-147.

**NOTES:**

The author reports use of self hypnosis for childbirth by 30 patients. Many required no drugs or greatly reduced drugs. The obstetricians usually had no prior experience with hypnosis and were cautious in providing medication at the earliest sign of discomfort.

"Summary. A two year experimental study of the use of self-hypnosis in childbirth has indicated its general effectiveness for virtually all the patients who received this type of pre-natal preparation. Although problems of selecting patients capable of utilizing this method have not been discussed in detail in this paper, it must be understood that this study depended upon a patient population selected on the basis of specific psychological characteristics which were indicative of both the judiciousness and effectiveness of self-hypnosis for obstetrics.

"Within the limits set by these selective characteristics, which in themselves may be greatly broadened by further study, self-hypnosis as a means of patient participation in childbirth appears to have very great merit. It is a method that lends itself to simple administration and can be extended to many more patients than any other hypnotic approach. It minimizes the need of the obstetrician to utilize time and effort in patient conditioning without sacrificing any of the advantages of hetero-hypnotic techniques. Its use on a larger scale than reported upon here, with more exacting investigative techniques, seems clearly indicated" (pp. 146-147).

Kroger, William S. (1953). Hypnotherapy in obstetrics and gynecology. Journal of Clinical and Experimental Hypnosis, 1 (2), 61-70.

### **Author's Summary**

**A high percentage of gynecologic complaints [sic] are due to psychic factors. Therapeutic efforts, therefore, must be directed primarily toward the psychologic component. Until recently, the principal weapon of the dynamically oriented physician was orthodox psychoanalysis. However, the increased interest for a relatively rapid approach has demonstrated the diagnostic and therapeutic value of hypnoanalysis. This development has been concomitant with the psychoanalyst's [sic] interest in 'brief psychotherapy' and narcosynthesis.**

**"In many functional gynecologic disorders, hypnoanalysis has supplanted the parent therapy even though this form of treatment utilizes the concepts of dynamic psychiatry.**

**"The relevant literature on the use of hypnotherapy in functional obstetrical and gynecological disorders has been reviewed.**

**"Significant areas for research have been pointed out.**

**"This review emphasizes that hypnosis *per se* is only of value in obtaining symptomatic relief. On the other hand, hypnoanalysis elicits the responsible dynamics behind the symptom, and is effective in reaching all aspects of the personality.**

**"Hypnoanalysis will be more applicable in obstetrics and gynecology when there is a wider acceptance of its techniques" (p. 68).**

### **CHILDREN/ADOLESCENTS0**

**One study that shows an increase with hypnotic suggestion has been replicated and is in press.**

**The present study emerges from work using hypnosis with biofeedback. Morgan's work with athletes has suggested the relationship between imagery and physiological activation. This has been observed clinically but not heretofore documented.**

**We are not using formal hypnosis. Each child was asked to think about being in a quiet place, doing exciting activities, baseline, etc. The children exhibited no neurological disorders, cognitive dysfunction, nor were they on medications at time of the study.**

**We confirmed our clinical experience: there was an increase in pulse rate when imagery changed to activity. Skin temperature continued to go up during the period (despite imagery of being active like being on roller coaster). Skin conduction went down during baseline. EDA [electrodermal activities] was higher during active imagery.**

**How do average daily thinking processes impact on autonomic changes over long periods of time? Do these changes affect cardiovascular status?**

**Clinically we observed that some children are more labile in different modalities, and under stress they react more in that system.**

1994

**Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

#### **NOTES**

**Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.**

**Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.**

**Case #2: Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty**

bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

1994

Eisen, Marlene (1994, August). Children and adolescents in hypnotherapy in the clinical setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

NOTES

Sanders & Sostis are publishing a book on Hypnosis with Children (Norton Press). Elliotson used Mesmeric passes for dentistry with children. Eisen thinks that the classic age-related curve for hypnotizability is wrong. She notes that some very young children respond to soothing inductions, whereas children 6-11 want to please so much that they engage in simulation. Furthermore the aged respond well to hypnotic inductions as long as you don't ask for arm levitation.

Considering Piaget's developmental theory, what works is related to developmental stages.

Before age 2-3 are sensorimotor operations (stroking, rocking, colored pinwheel, mobile, floating balloon).

Ages 2 1/2 to 5 or 6, preoperational stage (anthropomorphic thought - enables use of puppets; children think aloud in monologues, with no attempt to be communicative, so techniques that are nonverbal but engage child in focused activity are good (e.g. watching the fish in tank, talking about what the fish might be doing, what they would like to do); or telling stories. Physiological suggestions are useful (to feel like a raggedy doll). Using a transitional object that they have at home. Or an imaginary companion can come along, be invested with powers to protect the child.

Ages 6-12 Operational thought stage. Moving to higher levels of abstraction, becoming masters of world. Good for inductions are heroic stories of power; or magic rituals (give them magic fingers, that can do wonderful things (stop pain, not fall down). Magic buttons are good.

Adolescents can use, in addition to what we use with adults, anything involving experimentation. They play hypnotic games (e.g. light as a feather, stiff as a board). It is important to know where patients are developmentally, not simply the chronological age.

Visual techniques: imagine your favorite place. Can suggest "there's an animal here in your lap. What does it feel like?" etc. Or cloud gazing; or think of TV show, movie-- "you can be the star of the show. Tell me what you do. And then?" Flying blanket, big bird, merrie go round, little car in amusement park, are all useful images. Ideomotor suggestions are useful (magnets).

Food images are good, because they are soothing--"filled with good feelings," like jelly beans. Sliding down big ice cream mountain.

Story time imagery is useful: "I'm going to tell you a story. You can close your eyes to imagine all the people."

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human

ethics are violated can influence the nature, form, processes, and responses to trauma.

#### NOTES

A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

1994

Krippner, Stanley (1994, August). Improvement of academic skills for children and adolescents with hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

Literature and research in this area are sparse, though there is clinical evidence that hypnosis is useful. My definition of hypnosis is a procedure facilitating a variety of structured goals or procedures in which a suggestion or motivation is enhanced by a mechanical device, another person, or oneself.

There are 3 areas of application in academics:

study habits

test taking

strengthening academic motivation

The hypnotist should know the specifics of academic achievement, because specific suggestions (e.g. "Imagine you are at desk focusing well for 20 minutes,") are better. Emphasis on the positive is better than negative. Use the words "imagination," "concentration," or "imagining pictures," rather than "hypnosis." I try to determine what they expect, based in part on what words they use.

In elementary school I focus on attitude and self esteem. I have them imagine reading a story, then how well they feel; that when they notice mistakes they won't be bothered because everyone makes mistakes.

For high school, I help them develop good habits for time motivation (e.g. suggestions to "make an outline to follow while you study"). At college level, I introduce self hypnosis. I make frequent use of mental imagery, at all levels--especially imagery rehearsal, in which the person is engaged in a particular activity. In the NSF report on accelerated learning techniques (a project sponsored by the Army), Lozonov's "suggestopedia" techniques were studied. This review indicated it might enhance training effectiveness and reduce training time.

I have observed the suggestopedia classes in Bulgaria and Hungary. Classes had a relaxed comfortable learning environment. Rather than individual learning, it was group learning. It included preliminary exercises, new material, and a review of what was learned. The first stage used 2/3 of the time. Then suggestions were given by the teacher to promote learning. The presentation phase took one third of the time. The method encourages students to make mental images of the material. In foreign language classes, people take on new roles.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

## RESULTS.

Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them

with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

1993

Banerjee, Sanjay; Srivastav, Anita; Palan, Bhupendra M. (1993). Hypnosis and self-hypnosis in the management of nocturnal enuresis: A comparative study with imipramine therapy. American Journal of Clinical Hypnosis, 36, 113-119.

Various therapeutic modalities have been used for treating enuresis due to the lack of a single identifiable cause. We carried out a comparative study of imipramine and direct hypnotic suggestions with imagery used for the management of functional nocturnal enuresis. Enuretic children, ranging in age from 5 to 16 years, underwent 3 months of therapy with imipramine (N = 25) or hypnosis (N = 25). After termination of the active treatment, the hypnosis group continued practicing self-hypnosis daily during the follow-up period of another 6 months. Of the patients treated with imipramine, 76% had a positive response (all dry beds); for patients treated with hypnotic strategies, 72% responded positively. At the 9-month follow-up, 68% of patients in the hypnosis group maintained a positive response, whereas only 24% of the imipramine group did. Hypnosis and self-hypnosis strategies were found to be less effective in younger children (5-7 years old) compared to imipramine treatment. The treatment response was not related to the hypnotic responsivity of the patient in either group.

Sivec, Harry; Lynn, Steven Jay (1993, October). Hypnosis and early memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

The investigators hypnotized people and asked that they recall their earliest memories. Gorham & Hafner tested highs and lows in 2 sessions, one with a hypnotic induction. Ss in hypnosis reported more themes, whether high hypnotizables or not. Ss might have held back in non hypnosis condition however.

Hypothesized that early memories would have affect-laden materials.

20 Ss in hypnosis group, 20 Ss in relaxation condition, all highs (scored minimum of 9 of 12 on the Harvard Scale). Ss were told they were randomly selected from a pool and that it was a study of personality. Ss were administered a number of questionnaires and tests.

The two groups received either a Stanford Form C Scale induction or a relaxation procedure.

We used the procedure of Bloom [spelling?] for recall of two memories, and to probe the earliest memory. Also to recall two recent memories. Counterbalanced for order of presentation.

Positive affect, negative affect, affect intensity, and primary process were rated; 12 themes were rated. ANOVA was used.

Earliest memory at 3.8 yrs. Next earliest is 7.5 for hypnosis and 5.2 for relaxation groups. 4.3 is earliest for hypnosis group; there may be a basement effect. Negative affect varied by condition and by order of administration and recency of memory assessed. When early memories were elicited first, no differences were found in groups; when elicited second, negative affect was greater for [missed words]. Affect was more abundant and intense in the hypnosis group, but only when recent memories were elicited before early memories and only in the [missed words].

Early recollections were slightly more primary process (bizarre) than later, which should alert clinicians.

Themes didn't differ between groups. Early memories involved more trauma than later memories. Negative affect correlated with psychopathology measures for earliest memory but not later memory.

Used posthypnotic experiences scales. There is a decrease in unpleasant experiences, suggesting the benefit of catharsis when recalling early memories.

## 1992

Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic

experience and waking fantasies. None of the dissociators described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociators, 7 scored below the norm on the Absorption Scale (Mean - 26).

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. *Psychotherapy*, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Hall, Howard R. (1992, October). Voluntary immunomodulation in adolescents: A cyberphysiologic approach. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

He is working with a normal population studying neutrophils.

Gave Ss 30 minutes of an imagery exercise to increase neutrophil adherence when compared with controls; e.g., imagery could be ping pong balls in the blood stream, clumping together with honey.

Phase 1: blood sample; strategy or rest; blood sample  
practice for 1 week at home

blood sample; strategy; blood sample Hypothesis 2 Healthy adolescents who practice cyberphysiologic (imagery) strategies for 2 weeks will increase neutrophil adherence compared with controls.

Phase 2:

2 week training in cyberphysiologic technique

Session 1 and Session 2 same as in first study. (Thus, these Ss had practiced the technique already.)

Results were analyzed with ANOVA. Only one factor was significant: neutrophil adherence, the one they were studying.

The experimental group with no prior training showed less adherence than controls, as did the trained group in session 1; but the trained group in session 2 showed a large increase over session 1.

Does this reflect relaxation or an active cognitive process? The group that showed the most change did not show relaxation effect of lowered pulse and finger temperature, though the other two groups lowered pulse rate some. Therefore, it is not relaxation.

There was no association of hypnotizability to the increase in neutrophils, using the Penn State Group Hypnotizability Scale, which correlates with the Stanford Scale. In future the author will look at whether Ss can increase and decrease neutrophil adherence.

1991

Chu, James A.; Dill, Diana L. (1991). Dissociation, borderline personality disorder, and childhood trauma. American Journal of Psychiatry, 148 (6), 812.

Comments on the article by S. N. Ogata et al (see PA, vol 78:4681) on the high prevalence of childhood physical and sexual abuse in inpatients with borderline personality disorder. It is suggested that dissociative symptoms in borderline patients may simply be a less severe form of intrapsychic fragmentation than multiple personalities.

Cornell, William F.; Olio, Karen A. (1991). Integrating affect in treatment with adult survivors of physical and sexual abuse. American Journal of Orthopsychiatry, 61 (1), 59-69.

Presents a theoretical and technical model for affectively centered treatment of adults abused as children, focusing on the function of denial and dissociation as central defense mechanisms. The concept is introduced of working at an "affective edge." At this experiential point, a client can maintain both cognitive understanding and emotional and bodily awareness without triggering denial and dissociation. This approach fosters careful monitoring of the client's functioning both during and between therapeutic sessions. The proposed therapeutic approach uses noninvasive touch and body-centered techniques. Focus is on integrating affect and on the importance of the therapeutic relationship.

Sanders, Barbara; Giolas, Marina H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. American Journal of Psychiatry, 148, 50-54. Tested the hypothesis that dissociation in adolescence is positively correlated with stress or abuse experienced earlier by assessing the relationship between degree of dissociation and degree of reported childhood stress, abuse, or trauma in 47 13- 17 year old disturbed adolescents. Subjects had been institutionalized for periods of 1-13 weeks. Subjects completed a Dissociative Experiences Scale (DES) and a child abuse and trauma questionnaire. Scores on the DES correlated significantly with self-reported physical abuse or punishment, sexual abuse, psychological abuse, neglect, and negative home atmosphere but not with abuse ratings made from hospital records. Findings support the view that dissociation represents a reaction to early negative experience and places multiple personality disorder at the extreme end of a continuum of dissociative sequelae of childhood trauma.

Rhue, Judith W.; Lynn, Steven Jay; Henry, Stephanie; Buhk, Kerry; Boyd, Patti (1990-91). Child abuse, imagination and hypnotizability. Imagination, Cognition and Personality, 10, 53-63.

Research was designed to provide a rigorous test of J. R. Hilgard's hypothesis that hypnotizability is related to a history of physical punishment and to imaginative involvements. College students who reported a history of physical abuse (N = 21) and sexual abuse (N = 23) were compared with control subjects who either lost a parent by way of death or divorce (N = 20) or who were from intact homes (N = 35), under test conditions that minimized the possibility that context effects would prejudice the findings. No support was found for the hypothesis that increased hypnotizability was associated with a history of physical or sexual abuse: All of the groups are indistinguishable on measures of objective and subjective response to hypnosis. However, consistent with Hilgard's hypothesis, physically and sexually abused subjects were found to be more fantasy-prone than subjects in both nonabused control conditions.

Bogenberger, Robert; Allen, Steven (1988, November). Relationship between Rorschach responses and hypnotic responsiveness. [Lecture] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

**NOTES:**

The Rorschach is stable in adults, in terms of introversive vs. extroversive direction. Investigated four dependent variables: (1) distortions (e.g. "I felt the walls closing in."), (2) Loss of Distance (e.g. "I thought of abortions and infanticide."), (3) abstract/conceptual, (4) irrelevant imagery (e.g. "I thought of the book Watership Down.")

Highs gave responses more often in these groups. The combination of these four and some others discriminated Highs hypnotized from Highs not hypnotized and from Lows in both hypnotized and not hypnotized conditions.

Chu, James A. (1988). Ten traps for therapists in the treatment of trauma survivors. Dissociation, 1, 24-32.

**ABSTRACT:** Patients who have survived trauma, particularly those who have experienced early childhood abuse, stand out in the clinical experience of many therapists as being among the most difficult patients to treat. These patients have particular patterns of relatedness, along with intense neediness and dependency which make them superb testers of the abilities of their therapists. They often push therapists to examine the rationales and limits of their therapeutic abilities, and frequently force therapists to examine their own personal issues and ethical beliefs. A conceptual framework for understanding treatment traps is presented, along with 10 traps which these patients present, consciously and unconsciously, in the course of treatment. Included are traps around trust, distance, boundaries, limits, responsibility, control, denial, projection, idealization, and motivation.

1988

Kuttner, Leora (1988). Favorite stories: A hypnotic pain-reduction technique for children in acute pain. American Journal of Clinical Hypnosis, 30, 289-295.

For young children (aged 3 to 6-11) with leukemia, a hypnotic trance consisting of a child's favorite story was found to be statistically more effective than behavioral distraction and standard medical practice in alleviating distress, pain, and anxiety during painful bone marrow aspirations. Measured by a behavioral checklist and judgment ratings by physician, parent, nurse, and observers, the favorite-story hypnotic technique had immediate therapeutic impact on these young patients, and the reduction in distress, pain, and anxiety was sustained on subsequent medical procedures. Self-report measures, however, were nonsignificant.

LeBaron, Samuel; Zeltzer, Lonnie K. (1988). Imaginative involvement and hypnotizability in childhood. International Journal of Clinical and Experimental Hypnosis, 36, 284-295.

2 pilot studies assessed the relationship between hypnotizability in children and extent of involvement in fantasy-related activities during early childhood. The Stanford Hypnotic Clinical Scale for Children and a structured interview questionnaire regarding fantasy activities based on previous work by Singer (1973) were given to 30 medical patients aged 6-18 years in the first study and to 37 healthy children aged 6-12 years from a school population in the second study. In both studies, hypnotizability correlated moderately (.42 and .39, respectively) with extent of involvement in fantasy-related activities. Results support Hilgard's (1979) findings that hypnotizability is related in part to the development of imaginative involvement in childhood.

Noll, Robert B. (1988). Hypnotherapy of a child with warts. Journal of Developmental and Behavioral Pediatrics, 9 (2), 89-91.

#### NOTES

Child with 82 warts was treated using hypnosis; suggestions for removal from face only resulted in 8 of 16 facial warts disappearing after one treatment and two weeks. (Child had previous experience with hypnosis for pain and anxiety associated with lumbar punctures and bone marrow aspirates.)

1987

Jay, Susan (1987, October). Hypnotic susceptibility and response to psychological intervention for distress related to painful procedures in leukemic children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

Presented children with a cognitive behavioral intervention package that involved five elements 1. Filmed Modeling (child modeling and talking about it with good coping skills) 2. Positive Reinforcement - trophy 'for doing the best you can,' to change aversive situation to a positive situation 3. Breathing Exercises - 'puff yourself up like a tire' 4. Emotive Imagery/Distracton - super hero image

(Superman), or being in a favorite place 5. Behavioral Rehearsal - dollplay, reviewing the procedure with medical equipment.

For Numbers 4 and 5 the therapist would actively guide the procedures; numbers 3, 4 & 5 are hypnotic elements.

Valium had lowered children's distress prior to procedures but not during the procedures. This study involved Valium plus cognitive behavior therapy.

25 Subjects ages 6-12, were measured for hypnotizability

2 groups: (1) Cognitive Behavior Therapy + Valium given just before intervention started, after film ended; (2) Cognitive Behavior Therapy alone.

Dependent Measures: 1. Observation Scale of Behavioral Distress coded every 15 seconds. 2. Faces Scale for Fear (self report) before procedure

Faces Scale for Pain (self report) after procedure 3. Blood pressure

RESULTS. No Significant Differences were found between the two groups (CBT vs CBT + Valium). Pre-Post Analyses: Post intervention scores were significant lower than Pretest on [missed notes]

Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.

This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.

#### NOTES

Lonnie Zelzer, M.D., in a UCLA Hypnosis Seminar lecture in 1992, stated that in pre-treatment with Valium the patients did worse during the procedure, vs no pretreatment with Valium, because the medicated patients didn't have clarity of attention during the cognitive behavioral learning.

Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

1986

Aronson, David M. (1986). The adolescent as hypnotist: Hypnosis and self-hypnosis with adolescent psychiatric inpatients. American Journal of Clinical Hypnosis, 28 (3), 163-169.

This paper describes the theoretical rationale, pragmatic implementation issues, and procedure for a particular technique of clinical hypnosis which is designed as an adjunctive therapy within a multidisciplinary adolescent inpatient treatment program. A model of combined auto- and heterohypnosis which features collaborative production of audiocassettes is presented. Advantages and indications for this technique are discussed, and a case study is presented. - Journal Abstract

Olness, Karen N. (1986, March). Hypnotherapy in children: New approach to solving common pediatric problems. Postgraduate Medicine, 79 (4), 95-105.

Hypnotherapy, once thought of as magical and mysterious, is rapidly becoming accepted as an appropriate form of treatment for a wide range of disorders. Some primary care physicians are beginning to discover the value of hypnotherapy in controlling chronic disease and pain, in changing negative behavior, and in facilitating self-regulation of autonomic responses. Dr. Olness explores such use of hypnotherapy in children, the age-group that most readily acquires self-hypnosis skills and in which this technique has had dramatic results.

1985

Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a

transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novamatrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self-hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

1984

Hogan, Marjorie; MacDonald, John; Olness, Karen (1984). Voluntary control of auditory evoked responses by children with and without hypnosis. American Journal of Clinical Hypnosis, 27 (2), 91-94.

Reports ability of children to voluntarily change brainstem auditory evoked responses (BAER). Fifteen children were studied. Both control and hypnosis groups showed changes in interwave latencies after verbal suggestions when compared to a normal control group. These findings suggest that children may be able to modify peripheral auditory input into the brainstem through simple suggestion alone. Children in the formal hypnosis group did have more specific control for the task suggested. However, it is possible that children in the control group moved into an altered state of consciousness after listening to a taped story, reading a book, or spontaneously. They may have attained the observed changes in BAER while in a hypnosis-like state. This study encourages additional research in self-regulatory skills of autonomic processes in children.

Kohen, D.; Olness, K.; Colwell, S.; Heimel, A. (1984). The use of relaxation-mental imagery (self-hypnosis) in the management of 505 pediatric behavioral encounters. Journal of Developmental and Behavioral Pediatrics, 5, 21-25.

This report assessed outcomes of hypnotherapeutic interventions for 505 children and adolescents seen by four pediatricians over a period of one year and followed from four months to two years. Presenting problems included enuresis, acute pain, chronic pain, asthma, habit disorders, obesity, encopresis, and anxiety. Using strict criteria for determination of problem resolution (e.g., all beds dry) and recognizing that some conditions were intrinsically chronic, the authors found that 51% of these children and adolescents achieved complete resolution of the presenting problem; an additional 32% achieved significant improvement, 9% showed initial or some improvement; and 7% demonstrated no apparent change or improvement. Children as young as three years of age effectively applied self-hypnosis techniques. In general, facility in self-hypnosis increased with age. There was an inverse

correlation ( $p$  less than 0.001) between clinical success and number of visits, suggesting that prediction of responsivity is possible after four visits or less.

#### NOTES

Discusses the treatment of 505 pediatric patients with a variety of problems(enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic examinations).

Nash, Michael R.; Lynn, Steven Jay; Givens, Deborah L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 6-11.

Earlier empirical and theoretical work has suggested that there is a relationship between higher hypnotic susceptibility and severity of childhood punishment. Experiment 1 surveyed the parents of 14 extremely high and 11 extremely low susceptible Ss concerning punishment. Low susceptible Ss were found to be more frequently punished than highs; no significant differences were found on the severity measure. Experiment 2 assessed the hypnotizability of 16 adult Ss who reported being physically abused before the age of 10 and compared these scores to those of 300 adult Ss who had not reported being abused. The mean hypnotizability of abused Ss was greater than that of controls, and the distribution of their scores appeared bimodal. Limitations of both experiments are discussed and suggestions are made for future investigations.

Smith, Mark Scott; Kamitsuka, Michael (1984). Self-hypnosis misinterpreted as CNS deterioration in an adolescent with leukemia and Vincristine toxicity. American Journal of Clinical Hypnosis, 26 (4), 280-282.

A thirteen year-old girl with leukemia was taught self-hypnosis techniques for symptom control. She was hospitalized with probable vincristine toxicity and a superimposed hyperventilation syndrome. Her spontaneous use of the self-hypnosis technique was misinterpreted as central nervous system deterioration until her apparently comatose state resolved with suggestions from the therapist.

#### 1982

Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. International Journal of Clinical and Experimental Hypnosis, 30, 417-442.

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported

pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5 more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched- pairs signed ranks test) were found in nausea ( $Z = 2.37$ ,  $p < .02$ ), vomiting ( $Z = 2.52$ ,  $p < .01$ ), bother ( $Z = 2.24$ ,  $p < .02$ ), and disruption of activities ( $Z = 2.38$ ,  $p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

1981

Gardner, G. G. (1981). Teaching self-hypnosis to children. International Journal of Clinical and Experimental Hypnosis, 29, 300-312.

Hypnotherapy with children increasingly includes teaching self-hypnosis in order that young patients may make the fullest possible use of their hypnotic talent. This paper discusses indications and contraindications, reviews issues of patient resistance and parental involvement, and describes in detail Gardner's 3-step method of teaching self-hypnosis to children.

NOTES

1:

Table 1 lists the problems treated by self-hypnosis in children aged 3-20 years as: anxiety, asthma, bleeding disorders (hemophilia), body cast immobilization, burns and burn therapy, depression, drug abuse, enuresis, functional megacolon, hair-pulling, helpless feelings, insomnia, learning difficulties, muscle spasm, nausea, pain, poor self-esteem, psychogenic seizures, stuttering, tension. The author lists references discussing the use of self hypnosis with each of these problem areas.

1978

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (19656) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

1977

Lazar, Billie S. (1977). Hypnotic imagery as a tool in working with a cerebral palsied child. International Journal of Clinical and Experimental Hypnosis, 25 (2), 78-87.

Hypnotic imagery was used with a moderately severe athetoid cerebral palsied 12-year-old boy who was mildly retarded and a poor hypnotic subject. Techniques included imagery, observation of the self, revivification of relaxing experiences, proprioceptive feedback about the athetoid movements, and dealing with feelings and motivation. Athetoid movements were reduced, results extended beyond the treatment situation, and improvement was made in practical skills.

Call, Justin D. (1976). Children, parents, and hypnosis: A discussion. International Journal of Clinical and Experimental Hypnosis, 24, 149-155.

Ease of hypnotic induction in children depends on the setting, expectancies and nature of the relationship between the child, parent, and hypnotist. The capacity to center attention seems to be reflected in an increased alpha base rate. The capacity to suspend reality testing and to become subject to the authority of the hypnotist has its counterpart in the child's relationship with idealized authoritarian parents. Hypnotic induction utilizes the child's readiness for regressive object relations in which union of self and idealized parent imago is reactivated leading to high degrees of both suggestibility and feelings of omnipotence in the child. It is hypothesized that the child shares reality testing with the hypnotist as the infant did earlier with the all-powerful parent.

The fact that children can easily be hypnotized by the experienced hypnotist tells us nothing about indication for, dangers of, or potential success of treatment. Brief

symptomatic improvement of single symptoms means little and proves nothing. Success of hypnotic treatment with children depends on appropriate articulation of hypnotic procedures with total need-systems of child and family.

1976

Cooper, Leslie M.; London, Perry (1976). Children's hypnotic susceptibility, personality, and EEG patterns. International Journal of Clinical and Experimental Hypnosis, 24, 140-148.

19 boys and 16 girls, aged 7 to 16, were given the EEG and then the Children's Hypnotic Susceptibility Scale, while a parent watched. About 1 week later, after some separate tests and interviews, each child was given a puzzle to solve in the parent's presence, while Es recorded offers and requests for help. Hypnotic susceptibility was positively correlated with the alpha duration with eyes open, but not with eyes closed. Both susceptibility and alpha duration tended to be negatively correlated with age. Highly susceptible children tended to wait longer than low susceptibles before asking parents for help with the puzzle, and their parents tended to be more strict, anxious, and impatient than did the parents of low susceptible children.

Gardner, G. Gail (1976). Attitudes of child health professionals toward hypnosis: Implications for training. International Journal of Clinical and Experimental Hypnosis, 24, 63-73.

A survey of child health professionals -- pediatricians, pediatric nurses, child psychologists, and child psychiatrists -- revealed that they have generally positive attitudes toward hypnosis but little knowledge of its specific advantages or applications. Recommendations are made for designing training opportunities in hypnosis which might enhance the probability that the professional will actually use hypnosis or refer a child elsewhere for hypnotherapy.

Gardner, G. G. (1976). Childhood, death, and human dignity: Hypnotherapy for David. International Journal of Clinical and Experimental Hypnosis, 24, 122-139.

Hypnotherapy can be a significant part of the treatment of a dying child. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to help a terminally ill child and his family cope effectively with problems and enhance their ability to use their own resources for personal growth and mastery throughout the dying process.

NOTES:

Includes report of a mother's hypnosis work with her son for the three hours before he died.

Illovsy, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97

**This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).**

**Laguaite, J. K. (1976). The use of hypnosis with children with deviant voices. International Journal of Clinical and Experimental Hypnosis, 24, 98-104.**

**Hypnosis was used with 18 children aged 4 years, 7 months to 10 years, 1 month, with a mean age of 6 years, 8 months. All children had deviant voices -- 7 had vocal nodules, 4 had hypertrophy of the vocal bands, 5 had normal larynges, and 2 could not be visualized adequately. All but 1 of the children responded by entering some degree of trance state. The younger children responded better when eye closure was not suggested. Post-therapy judgments of voice quality and laryngeal examinations showed that only 2 had shown no improvement. The 2 were the least responsive to hypnosis. Factors thought to be important in influencing the children's responses are discussed.**

**Lawlor, E. D. (1976). Hypnotic intervention with 'school phobic' children. International Journal of Clinical and Experimental Hypnosis, 24, 74-86.**

**Case studies are used to illustrate the use of hypnosis in working with children who exhibit symptoms of "school phobia." Responses obtained during and after hypnosis are utilized to uncover underlying conflicts and fears.**

**The literature (Ansbacher, 1956; Friedman, 1959; Johnson, 1957; Johnson, Falstein, Szurek, & Svendsen, 1941; Kessler, 1966; Waldfogel & Gardner, 1961) confirms the findings that a child through his symptoms has fears which he is unable to bring to consciousness and talk about. Typical are fears of abandonment by parents; fears of disaster befalling parents, especially the mother; fears based on destructive wishes toward siblings due to severe rivalry for the mother's love and attention; fears that exhibiting angry feelings will be punished by the parents; and fears of annihilation and starvation.**

Hypnosis has aided in restoring these children to a school environment more quickly than more traditional methods. One case is reported with excerpts from a session. The perceptions uncovered through the use of hypnosis can be utilized with children in various school settings.

7-12 yr. olds received 2 role-playing tests in 1 session and London's Children's Hypnotic Susceptibility Scale (CHSS) 1 wk. later. Performances were compared to a previous sample of 42 children who had received the same tests in reverse order of administration. Means of the role test were essentially the same in both samples. 1 of the role tests, Dramatic Acting, was unrelated to hypnotic susceptibility in both samples; the other, Hypnotic Simulation, was uncorrelated with overall susceptibility in the present sample, unlike the previous one, but seemed to have inhibited 1 aspect (Subjective Involvement scores) of performance on the CHSS. Order of administration of the simulation test and CHSS also differentially affected some Overt Behavior item scores; CHSS functioned as a rehearsal for the subsequent simulation performance of low-susceptibles, and the simulation test had the same function for the CHSS performances of high-susceptibles. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1969

Nowlis, D. P. (1969). The child-rearing antecedents of hypnotic susceptibility and of naturally occurring hypnotic-like experience. International Journal of Clinical and Experimental Hypnosis, 17, 109-120.

Data pertaining to early and mid-childhood socialization experiences available from a sample of children and their mothers as studied earlier by R. R. Sears, E. E. Maccoby, H. Levin, and others were related to hypnotizability scores and scores of susceptibility to naturally occurring hypnotic-like experiences for a part of the same sample when the children reached late adolescence. As hypothesized by J. R. Hilgard and E. R. Hilgard (see 37:3) after retrospective interviewing with college-age hypnotic Ss, the present study, using a longitudinal method of investigation, indicated some relationship between firm parental discipline in childhood and subsequent susceptibility to hypnosis and hypnotic-like experiences in adolescence. Correlations, however, were low and the overall yield of significant data was judged to be meager. This was particularly true of hypnotizability scores in relation to the other variables available for analysis. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Long, T. E. (1968). Some early-life stimulus correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 16, 61-67.

34 MALE COLLEGE SS WERE PLACED INTO 3 HYPNOTIZABILITY GROUPINGS WITH THE USE OF THE PASCAL TECHNIQUE OF HYPNOSIS. THE PASCAL-JENKINS BEHAVIORAL SCALES WERE USED TO INVESTIGATE STIMULUS SITUATIONS PRESENTED BY MOTHER AND

FATHER DURING THE 1ST 10 YR. OF SS' LIVES. THE SPECIFICALLY DEFINED BEHAVIORAL VARIABLES OF ACTIVITIES WITH S AND DISPLAYS OF AFFECTION FOR THE FATHER STIMULUS CATEGORY AND THE VARIABLE VERBAL PUNISHMENT FOR MOTHER SIGNIFICANTLY DIFFERENTIATED THE HIGH HYPNOTIZABLE SS FROM THE COMBINED MIDDLE-LOW HYPNOTIZABLE SS. THE OTHER PHYSICAL CONTACT VARIABLES, WHICH INVOLVE INTIMATE CONTACT BETWEEN S AND THE PARENT, SHOWED CONSISTENT TRENDS IN THE SAME DIRECTION. THUS, EARLY LIFE FAMILY EXPERIENCES OF A MORE POSITIVE AND LESS DEVIANT NATURE SEEM TO BE ASSOCIATED WITH HIGHER SUSCEPTIBILITY TO HYPNOSIS. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Cooper, Leslie M.; London, Perry (1966). Sex and hypnotic susceptibility in children. International Journal of Clinical and Experimental Hypnosis, 14, 55-60.

Sex differences in hypnotic susceptibility were investigated in a sample of 240 children. The Children's Hypnotic Susceptibility Scale was administered to 10 boys and 10 girls at each age level for 5-16 yr. There were no differences between the means of the boys and girls at any age for the 3 scores yielded by the measure. The percentage passing each item at each age for each sex was also computed. Of the resulting 264 comparisons only 1 (Item 10, Eye Catalepsy) was found to be significantly different at 1 age level (7 yr. of age) and was attributed to chance. It was concluded that there were no sex differences for the various items at the ages tested. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Moore, R. K.; Cooper, L. M. (1966). Item difficulty in childhood hypnotic susceptibility scales as a function of item wording, repetition, and age. International Journal of Clinical and Experimental Hypnosis, 14, 316-323.

THE CHILDREN'S HYPNOTIC SUSCEPTIBILITY SCALE (CHSS) AND A REVISED VERSION FOR CHILDREN OF THE STANFORD HYPNOTIC SUSCEPTIBILITY SCALE, FORM B (REV. SHSS:B) WERE ADMINISTERED TO 26 CHILDREN, AGES 8-16 YR., TO WHOM THE CHSS HAD BEEN ADMINISTERED 3 YR. EARLIER. COMPARISON OF THE RESULTS OF THE 2 ADMINISTRATIONS OF CHSS SHOWED NO SIGNIFICANT DIFFERENCES IN MEANS OR STANDARD DEVIATIONS. THE RELIABILITY WAS .72 ( $P = .001$ ) WHEN 3 ATYPICAL SS WERE ELIMINATED. THE ITEM DIFFICULTIES OF EYE CLOSURE AND ARM IMMOBILIZATION DIFFERED ( $P = .05$ ) OVER THE 2 ADMINISTRATIONS, BOTH BEING MORE DIFFICULT AT THE EARLIER TESTING. IT IS SUGGESTED THAT THESE CHANGES WERE A RESULT OF BOTH PRACTICE AND AGE EFFECTS. THE COMPARISON OF THE 2 DIFFERENT SCALES USED AT THE LATER TESTING ALSO SHOWED NO SIGNIFICANT DIFFERENCES IN MEAN SCORES OR STANDARD DEVIATIONS. THE CORRELATION BETWEEN

THE 2 SCALES WAS .77 (P = .01). 3 ITEMS, EYE CLOSURE, ARM IMMOBILIZATION, AND AMNESIA, SHOWED SIGNIFICANT DIFFERENCES (P = .05) IN THE PERCENT PASSING THE ITEM, THE 1ST BEING LESS DIFFICULT ON THE REV. SHSS:B, AND THE LATTER 2 BEING MORE DIFFICULT. CONTENT AND PROCEDURAL DIFFERENCES ARE SUGGESTED TO EXPLAIN THESE DIFFERENCES IN ITEM DIFFICULTIES. (SPANISH + FRENCH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Kolouch, Fred T. (1962). Role of suggestion in surgical convalescence. Archives of Surgery, 85, 144-155.

#### NOTES

The author is a surgeon who has offered hypnosis to many patients in his practice. His inductions were usually rapid (30 seconds to 10 minutes), stressing optimistic expectations. The procedure is described as follows: "Suggestion is then utilized in a purposeful manner to communicate a reality image of the entire surgical procedure to the patient. A frank but optimistic discussion of morbidity and mortality is made. An estimate of the pain to be experienced is offered with the emphasis that this can be controlled in part and it will be temporary. The patients are told that they may use opiates or sedatives if they feel a need for chemical pain relief. Any subconscious fears of surgery are investigated using ideomotor questioning. These are ventilated by the patient and put in the proper perspective in relationship to the realities of the forthcoming surgical procedure. If the patient is capable, he is taught glove anesthesia of the hand and given a posthypnotic suggestion for the transference of this to his operative site. He is asked to visualize himself at the conclusion of his convalescence, free of his pathology, alive and well and rehabilitated to normal productivity. It is emphasized to him that by judicious application of his subconscious thoughts to relaxation, pain control, normal respiratory, gastrointestinal, and urinary functions, he may rapidly accomplish his own preconceived notion of his convalescence.

**"He is given a posthypnotic suggestion that he will never respond to hypnosis without his consent. ...**

**"A posthypnotic suggestion is given to establish a simple signal as a trance inducer for future hypnosis or to enable him to use autohypnosis.**

**"The patient who is to have a general anesthetic is given the suggestion that while asleep he will not listen to any conversation in the operating room except that which is directed toward him by name.**

**"In the patients undergoing minor outpatient surgery, hypnosis is frequently induced in the operating room during the scrub time.**

**"Patients undergoing general or regional anesthesia are frequently placed in a trance before the anesthetic period. ...**

**"During the surgery care is taken to keep discussion at a level unrelated to the surgical procedure. ...**

**"At the conclusion, consistent with an honest appraisal of the situation, optimistic, purposeful suggestions are offered the patient while he is still asleep or in hypnosis" (p. 305.**

**The author evaluated the outcome for 100 surgical patients who had received this procedure, using subjective measures (confidence, well-being, freedom from fear and anxiety) and two objective measures (needs for postoperative pain-relieving drugs, and postoperative hospitalization). Seventy-five patients aged 6-80 had 81 different procedures (breast biopsies, tenorrhaphies, orchiopexies, herniorrhaphies, thyroidectomies, a radical neck dissection, radical mastectomies, cholecystectomies, gastrectomies, rectal surgery, etc.); the remaining 25 patients had minor outpatient procedures under local or hypnoanesthesia.**

**The author compared the dosage of medications needed by patients he judged to have benefitted from hypnosis and those who didn't benefit. He did the same analysis for length of stay. Based on his own observations, he judged that 75% of the hospitalized patients and nearly all of the OPD patients benefitted and experienced a simplified convalescence. Laparotomy patients required more medications than the other patients.**

**The author compared the hospitalized patients who received hypnotic suggestion to a similar group who were not subjected to such suggestion, on needs for opiates and postoperative hospitalization. There was a reduction in drug needs in most categories of cases, but equal needs in the biliary cases. Patients subjected to thyroidectomy or herniorrhaphy left the hospital sooner if they had been given hypnosis, but the patients undergoing biliary and gastric surgery still required the usual hospital care.**

**Herniorrhaphy patients benefitted in terms of catheterization: only was catheterized in the hypnosis group compared to 7 in the nonhypnosis group. The author attributed this outcome to a combination of suggestion and local anesthesia. Postoperative complications were rare in the patients utilizing hypnosis.**

**The economic advantages of suggestion are illustrated in a comparison of the costs of hospitalization of the series of patients undergoing herniorrhaphy and thyroidectomy with and without hypnosis: average cost of thyroidectomy with hypnosis used effectively (\$196) and without hypnosis (\$311); of herniorrhaphies with hypnosis used effectively (\$125) and without hypnosis (\$181). N.B. These costs**

are presumably from the time period of approximately 1959-60, inasmuch as the paper was read at the Annual Session of the Western Surgical Association on December 1, 1961.

"Probably the most pleasure for the surgeon results from the observation of the responses of children to suggestion in hypnosis. A degree of cooperation and freedom from fear is exhibited that is nearly unbelievable. With hypnosis in children one may utilize local anesthesia in situations which previously required general anesthetics" (p. 310).

1961

Klopp, Kirk K. (1961). Production of local anesthesia using waking suggestion with the child patient. International Journal of Clinical and Experimental Hypnosis, 9, 59-62.

#### NOTES

Author describes the use of waking suggestion with children, as opposed to hypnosis. The technique "is simply the presentation of an idea which is sold to the child with such emphasis that when it is communicated to him, he accepts it with conviction. As children reason for the most part paralogically, the absence of logical grounds for the acceptance of the idea is arrived at easier than with the more mature mind of the adult" (p. 59).

1956

McCord, Hallack (1956). Hypnosis as an aid to the teaching of a severely mentally retarded teenage boy. Journal of Clinical and Experimental Hypnosis, 4 (1), 21-23. (Abstracted in Psychological Abstracts 57: 3729)

#### NOTES

A 16 year old boy with I.Q. measured at 55 was hypnotized for 20 minutes daily for one month. During each session he was given material to learn (multiplication tables, spelling words, reading recognition, and general information -- only one presented during each hypnosis session). "At the end of 90 days, the subject was still retaining almost 100 percent of all material presented except for the multiplication tables which showed about 50 percent loss" (p. 22). "As a result of routinely introduced hypnotic suggestions for well-being, happiness, desire to learn, and assurance of acceptance, Ben's motivation to learn in the classroom situation took a sharp surge upward. (It was for this reason that giving him parallel material in the normal state to be used to measure comparative learning rates promptly became scientifically unsound as a control in this study.)" (p. 22). Although he was not given material to study in between sessions, "it was known that he mentally reviewed the material while working and playing in the school program" (p. 23).

### COGNITION

1994

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

**NOTES:**

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall sequence of light changes that occurred during 60 sec when arm was in the cold water.

Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)

Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.

Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.

30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).

60 second pain scores: Showed same trend

There was no difference whatsoever for the lows.

Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).

Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.

**RESULTS.** Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.

Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.

P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more

ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.

State and trait differences are apparent.

The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory

The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."

Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.

1993

Atkinson, Richard P. (1993, October). Shifts in Muller-Lyer Illusion difference thresholds: Are high hypnotizables more sensitive than lows in hypnosis?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

Refers to Wallace (1979) finding that hypnotizability correlates with afterimage persistence. Atkinson showed highs perform better than lows in perceptual tasks in hypnosis only. Also studies indicate highs are more susceptible to illusions. Our study showed difference in threshold and point of subjective equality for highs and lows.

32 undergraduates had Harvard and Group Stanford Form C, were 9-12 or 0-3 on both scales. Counterbalanced conditions of waking and hypnosis. Used computer monitor to compare length of lines. Waking condition Ss had to close eyes for 15 minutes before the trials, same length of time as for hypnosis condition.

Significant interaction between hypnotizability and sessions was observed: highs had significantly decreased difference thresholds in hypnosis compared to waking, and significantly decreased difference thresholds compared to lows in hypnosis. Thus they had greater sensitivity than lows.

The point of subjective equality ANOVA did not yield significant effects.

Highs show higher sensitivity to illusion in hypnosis than in waking, and more than the lows.

NOTES

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## NOTES

Author is developing Ernest Hartman's Mental Boundaries Questionnaire. Hartman does research on chronic nightmare sufferers. He says they have thin mental boundaries, defined in various ways. Art students have thin boundaries, Navy officers thick boundaries. The questionnaire has 145 items, less 7 that are scored zero.

Item Groups: Sleep/wake/dream Unusual experiences (e.g., déjà vu) Thoughts, feelings, moods Child, Adolescent, Adulthood feelings Sensitivity Neat, exact, precise Edges, lines, clothing (flexible space) = Personal score

Opinions about children about organizations about people, nations, groups, about beauty, truth = World total

Sumbound (personal + world total) Hypnotizability should relate to Personal score more than World total.

Also used: 2. Field's Inventory 3. Kirsch's Inner subjective experiences (of the Harvard Scale) 4. Tellegen's Absorption Scale 5. Harvard Hypnotizability Scale

Gave the measures in different contexts from the hypnotizability measures. The Absorption scale (different subscales) correlated best with the Hartman's scale, but subjective scales also correlated with "Personal Score."

The lack of significant correlation between Harvard and Thinness of Boundaries questionnaires may be due to differences in voluntariness experience on the Harvard. Or Woody and others suggest hypnotic response may be due to compliance in some samples. Barrett had found a correlation of .19 with hypnotizability; and Robert Kunzendorf found a similar correlation.

1993

Dabic-Jeftic, Mirjana; Barnes, Graham (1993). Event-related potentials (P300) during cognitive processing in hypnotic and non-hypnotic conditions. Psychiatria Danubina, 5 (1-2), 47-61.

In this study authors investigated to find out if there were any specific changes of event related potentials in subjects before hypnosis, entering hypnosis, in deep hypnosis and leaving hypnosis, and to compare mental activities of subjects such as capability of correctly calculating and remembering the exact number of unexpected stimuli delivered by stimulator with their verbal or nonverbal reports

during any of the conditions investigated. The methodology was of testing the cognitive evoked potentials elicited by auditory stimuli, using the oddball paradigm. Obtained results show that the most constant values of shortest latency and highest amplitudes of the cognitive waves, especially P300 were found during deep hypnosis. All five subjects in the investigation answered with the exact number of delivered target stimuli only after deep hypnosis. Conversely, in all other conditions their answers were approximate to the correct number of delivered target stimuli. (Author abstract.)

**NOTES:**

In this experiment, 5 adult volunteers were told to attend to one of two tones delivered through headphones. The tones were randomly delivered but one occurred 85% of the time (the 'frequent, non-target tone') and the other occurred 15% of the time (the 'rare, target tone'). The subjects were to notice, remember, and count the target tone. Measures were taken during five periods: pre-hypnosis, entering hypnosis, deep hypnosis, leaving hypnosis, and post-hypnosis.

Some subjects had extensive hypnosis experience prior to the experiment; others had little.

The EEG P300 wave was sensitive to condition. Latency of P300 was significantly shorter in deep hypnosis compared with other periods. Higher amplitude of P300 also occurred during deep hypnosis compared with other periods. (Notes taken from secondary reference, Ericksonian Newsletter.)

Elter-Nodvin, Sabette; Lynch, Gregory; Nash, Michael R. (1993, October). Is primary process mentation a feature of hypnotic responding?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES**

1:

**NOTES:** It is difficult to measure primary process; usually measures from Rorschach are used. Recently Steven Lynn and Ken Bowers have done interesting work.

From literary criticism, we took the newer method of lexical pattern analysis--like a fingerprint (e.g. of Shakespeare's language). Wanted to determine whether there are differences between High and Low hypnotizables; or a difference in waking and hypnotic state. Martindale has a measure based on a lexical dictionary.

In Martindale's method, you take a long verbal sample, transcribe it into computer text file (response to TAT cards, and 3 tasks like--"Imagine you are ascending a spiral staircase and see someone at the top; describe what you see"); then do word count.

Farvolden, Peter; Bowers, Kenneth S.; Woody, Erik Z. (1993, October). Hypnotic amnesia: Avoiding the 'Intentional Loop'. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES**

The social cognitive view is that Ss actively try to forget and fool themselves, making an attributional error. Davidson & Bowers say (in neo-dissociation theory) the information is temporarily unconscious--like forgetting a friend's name at a cocktail party. Executive initiative, effort, and control are bypassed.

We used heart rate as indicator of cognitive effort. For highs there should be little increase in heart rate. 20 lows and 20 highs who passed amnesia item on Waterloo-C were used. Post-experimentally we asked them what they were doing following the suggestion of amnesia, and had judges evaluate the degree of effort.

Gruzelier, John; Warren, Kristen (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. Psychological Medicine, 23, 93-101.

Individuals with high and low susceptibility to hypnosis were compared in a baseline condition and after instructions of hypnosis on tests of anterior left and right hemispheric functions of word fluency to letter categories, word fluency to semantic categories, design fluency and bilateral finger tapping dexterity. With hypnosis high susceptibles showed a reduction in word generation to letter categories, no significant change in word generation to semantic categories, an improvement in design fluency, and bilateral reductions in finger tapping dexterity. Low susceptibles showed the opposite changes except for the improvement in design fluency. These results, together with correlational results, were interpreted as evidence of central inhibitory processes, particularly of the left hemisphere, in response to instructions of hypnosis in high susceptibles.

#### NOTES

The authors discussion of their study includes the following statements. "The main result of the study was the differential influence of instructions of hypnosis on high and low susceptibles for word fluency to letter designated categories, as distinct from semantic categories, and design fluency" (p. 98).

"The absence of effects of hypnosis on word generation to semantic categories (left fronto-temporoparietal) versus letter categories (left frontal) has a bearing on evoked potential evidence (Gruzelier et al. 1987). Bilateral comparisons at temporal lobe and central locations showed that high susceptibles were characterized by asymmetric changes in evoked potential amplitude (N116 component) with hypnosis. Activity at the central electrodes was compatible with a left-to-right hemispheric shift of function, but this was not the case at the temporal electrodes. Instead of an inhibition of left temporal activity with hypnosis activation was maintained. Maintenance of activity in the left temporal lobe follows consideration of the fact that hypnosis requires sustained attention to the voice of the hypnotist, which is predominantly a left temporal function" (p. 99).

"The absence of differences in the pre-hypnotic condition between high and low susceptibles indicates that hemisphericity per se may not be a factor that characterizes susceptibility. The fact that lateral differences were found in some experiments (e.g. Gruzelier et al. 1984; Gruzelier & Brow, 1985) but not others (e.g. Cikurel & Gruzelier, 1990; McCormack & Gruzelier, 1993) may indicate that such

effects, when apparent, were secondary to another factor such as cognitive flexibility as conceptualized by Crawford (1989)" (p. 99).

Laidlaw, Tannis M. (1993). Hypnosis and attention deficits after closed head injury. International Journal of Clinical and Experimental Hypnosis, 31, 97-111.

In a controlled study of patients attending a concussion clinic because of ongoing postconcussion symptoms, attention deficits were recorded in the head-injured group for the aspects of alertness, assessed by the Continuous Performance Test (CPT), and processing capacity, assessed by a version of the Paced Auditory Serial Addition Test (PASAT). Selective attention was intact. Hypnotizability was assessed by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), with normal means and standard deviations found in both the concussed and control groups. There was a significant correlation, however, between HGSHS:A scores and PASAT scores in the concussed group only. The results of this preliminary study suggest that slower processing capacity after a closed head injury may predict higher hypnotizability and that hypnosis could be an appropriate rehabilitation technique for these patients who present with postconcussion symptoms.

1992

Greenwald, Anthony G. (1992). New Look 3: Unconscious cognition reclaimed. American Psychologist, 47, 766-779.

Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long-term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

Hilgard, Ernest R. (1992). Dissociation and theories of hypnosis. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 69-101). New York: Guilford Press.

## NOTES

[These Notes were made from a prepublication copy and the pagination for quotes added later.]

The author reviews the history of dissociation theory, the hidden observer, and the credible-skeptical arguments regarding hypnosis. He briefly summarizes alternative theories about hypnosis, and asserts that we can turn aside from debate by examining the common topic studied, the "domain of hypnosis" or what happens

when hypnotist, with consent of subject, attempts to induce hypnosis through conventional procedures: production of hallucinations, contractions, paralyses, age regression, analgesia, posthypnotic amnesia, etc. Even if one disagrees about the nature of these phenomena or the appropriate explanatory concepts, one can agree on the area to be investigated.

The author notes that one never sees these behaviors in the same situation, in any other context. They are distinguishable from other phenomena like meditation, highway hypnosis, responses to a persuasive leader, and even some waking suggestions by several delimiting factors:

1. Hypnosis is not simply a response to suggestion, because that kind of response occurs in other situations. Suggestions can be divided into personal and impersonal (Hull, 1933); and suggestibility can be divided into primary and secondary (Eysenck & Furneaux, 1945). Primary suggestibility includes responses to waking suggestion (e.g. postural sway) that correlate with hypnotizability; secondary suggestibility involves responses to waking suggestion that do not correlate with primary suggestibility. Hypnotizability does not correlate with social suggestibility (i.e. gullibility or conformity) (Burns & Hammer, 1970; Moore, 1964); nor does it correlate with placebo response (McGlashan, Evans, & Orne, 1979).

2. Test-retest correlations are approximately  $+0.70$  between scores on hypnotizability scales with and without formal inductions. Thus, responses to the type of suggestion on hypnotizability scales--even when in the waking context--belong within the domain of hypnosis. The individual differences in responsivity to items on hypnotizability scales persist over time (Piccione, Hilgard, & Zimbardo, 1989:  $r = .64$  for 10 years test- retest,  $.82$  for 15 years, and  $.71$  for 25 years, on Stanford Form A); and this persistence is observed in twin studies as well (Morgan, 1973; Morgan, Hilgard, & Davert, 1970).

3. Additional evidence of coherence of the domain comes from reports of hypnotized Subjects about their phenomenological experience.

Hilgard's discussion of the executive and monitoring functions within hypnosis place his theory within the area of cognitive psychology. He presents a theory of a central regulating mechanism, with a hierarchy of subsystems that may be activated (and once activated may continue with some autonomy). When autonomous action occurs, the conscious representation of the control system may recede. Furthermore, the hypnotist's suggestions may alter the relationships within the hierarchy of subsystems and may also influence the executive functions. He gives as a common example, when a bilingual person talks in one language, the other language is temporarily inhibited.

There are a number of concepts or positions in the history of psychology that relate to Hilgard's theory of hierarchical control with executive and subsystems:

1. 'Cognitive structure' (Edward Tolman, 1932; 1938; Kurt Lewin, 1935). There may be communication problems between cognitive structures.
2. 'Habit family hierarchy' (Clark Hull, 1934). Habits are organized in a preferential system, so that if one is blocked the next is activated.
3. 'Cell assemblies' (Hebb, 1949; 1975), which are a physiological counterpart of the 'hidden observer' phenomenon.
4. 'Roles' (Sarbin & Coe, 1972) may be considered cognitive substructures.

5. 'Cognitive networks' (Blum, Geiwitz, & Stewart, 1967) serve similar functions.
6. 'Images' and 'plans' (Miller, Galanter, & Pribram, 1960) provide for control of thought and action and have some kind of hierarchy.
7. 'Subordinate ego-structures' (Gill & Brenman, 1959) with a dominant ego; or the ego-apparatuses in a 'conflict-free ego sphere' (Hartmann, 1958).

In hypnosis, central executive functions may be shared between hypnotist and Subject. Hilgard gives extensive examples of varying degrees of split in the executive control system.

"It can be argued that, except for relinquishing control over the subsystems that are specifically dissociated from control by suggestion, and the readiness for relinquishing control, the central executive functions have not been much modified in hypnosis. In superficial hypnosis, these mild dissociations can occur through waking suggestions, with little alteration of the general state of consciousness. When varied suggestions to a talented hypnotic subject have cumulative effects, as in suggestions of relaxation and detachment from the environment, the more general features of the hypnotic state begin to appear. A more massive dissociation, so far as the executive is concerned, may be the consequence of the summing up of many specific subsystems for which control has been relinquished. Such an interpretation permits hypnosis as a state to be a relative matter, the specific dissociations being identifiable, but the general state being a matter of how many specific dissociations are operative and how pervasive they are. Only when they are sufficiently pervasive is it appropriate to speak of a change of state" (p. 96).

Hilgard also discusses the monitoring function extensively, relating it to trance logic and contrasting it with the waking state. Less of the usual monitor is retained when the hypnotic involvement is greater, as in deep hypnosis, or when the subject becomes more deeply engrossed in an activated system that has been aroused. He also relates the monitoring function to the Hidden Observer phenomenon.

Kihlstrom, John F.; Barnhardt, Terrence M.; Tataryn, Douglas J. (1992). The psychological unconscious. American Psychologist, 47, 788-791.

In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.

Lewicki, Pawel; Hill, Thomas; Czyzewska, Maria (1992). Nonconscious acquisition of information. American Psychologist, 47, 796-801.

The authors review and summarize evidence for the process of acquisition of information outside of conscious awareness (covariations, nonconscious indirect and interactive inferences, self-perpetuation of procedural knowledge). Data indicate that as compared with consciously controlled cognition, the nonconscious

information - acquisition processes are not only much faster but are also structurally more sophisticated, in that they are capable of efficient processing of multidimensional and interactive relations between variables. Those mechanisms of non-conscious acquisition of information provide a major channel for the development of procedural knowledge that is indispensable for such important aspects of cognitive functioning as encoding and interpretation of stimuli and the triggering of emotional reactions.

**Loftus, Elizabeth F.; Klinger, Mark R. (1992). Is the unconscious smart or dumb?. American Psychologist, 47, 761-765.**

How sophisticated is unconscious cognition? This is one of the most fundamental questions about the unconscious that has been posed by research psychologists over the past century. Anthony Greenwald takes a contemporary look at this classical problem and concludes that unconscious cognition is severely limited in its analytic capability. In response, other leading scholars agree that the reality of unconscious processes is no longer questionable. Although there is some disagreement about just how sophisticated these processes are, the consensus is that exciting times are ahead for both research and theory concerning the mental processes involved in unconscious cognition.

**1991**

**Hasher, L.; Stoltzfus, E. R.; Zacks, R. T.; Rypma, B. (1991). Age and inhibition. Journal of Experimental Psychology: Learning, Memory, and Cognition, 17 (1), 163-169.**

Two experiments assess adult age differences in the extent of inhibition or negative priming generated in a selective-attention task. Younger adults consistently demonstrated negative priming effects; they were slower to name a letter on a current trial that had served as a distractor on the previous trial relative to one that had not occurred on the previous trial. Whether or not inhibition dissipated when the response to stimulus interval was lengthened from 500 ms in Experiment 1 to 1,200 ms in Experiment 2 depended upon whether young subjects were aware of the patterns across trial types. Older adults did not show inhibition at either interval. The age effects are interpreted within the Hasher-Zacks (1988) framework, which proposes inhibition as a central mechanism determining the contents of working memory and consequently influencing a wide array of cognitive functions.

**1990**

**Bartis, Scott P.; Zamansky, Harold S. (1990). Cognitive strategies in hypnosis: Toward resolving the hypnotic conflict. International Journal of Clinical and Experimental Hypnosis, 38, 168-182.**

Two experiments were carried out to assess the relative contributions of dissociation and absorption as cognitive strategies employed by high and low hypnotizability Ss in responding successfully to hypnotic suggestions. Of special interest was the manner in which Ss deal with conflicting information typically inherent in hypnotic

suggestions. In the first experiment, Ss rated their attentional focus and the involuntariness of their experience after responding to a number of hypnotic suggestions administered in the usual manner. In the second experiment, the level of conflict was varied by instructing some Ss to imagine a circumstance that was congruent and other Ss to imagine a circumstance that was incongruent with the suggested behavioral response. The results of the 2 experiments were consistent in suggesting that, depending upon the nature of the hypnotic suggestion, high hypnotizability Ss are able to employ dissociation or absorption in order to respond successfully. Low hypnotizability Ss, on the other hand, seem to be relatively ineffective dissociators. When the structure of the hypnotic suggestion precludes the use of absorption, the performance of low hypnotizables deteriorates.

Burgess, Cheryl A.; Du Breuil, Susan C.; Jones, Bill; Spanos, Nicholas P. (1990-91). Compliance and the modification of hypnotizability. Imagination, Cognition and Personality, 10 (4), 293-304.

This study compared compliance-induced reporting bias in subjects who attained high hypnotizability scores following skill training and subjects who obtained equivalent scores without benefit of skill training (naturals). Low hypnotizables in one condition were administered the Carleton Skills Training Package and later posttested for hypnotizability. Control subjects were posttested without benefit of skill training. As in previous studies, skill-trained subjects attained substantially higher posttest hypnotizability scores than controls. In a final session, skill trained subjects, untrained naturals matched against the skill trained subjects on hypnotizability scores, and low hypnotizable controls were tested in a suggested deafness paradigm designed to assess compliant responding. Skill-trained subjects and matched naturals reported significantly greater suggested deafness than did the controls. However, only theory matched naturals exhibited significant levels of compliance-induced reporting bias. These findings indicate that skill-trained subjects exhibit no more compliant responding than do natural high hypnotizables.

1990

Fellows, Brian J. (1990). Current theories of hypnosis: A critical overview. British Journal of Experimental and Clinical Hypnosis, 7, 81-92.

The present state of theory in hypnosis is reviewed and observations are made concerning future prospects. The state- non-state issue continues to dominate theoretical debate, although no satisfactory reply has yet been made to T. X. Barber's criticisms of the 'hypnotic trance' concept. The impact of social-psychological theory has been considerable and the results of Spanos's hypnotic training programme could have significant implications for our understanding of hypnosis. Future theorizing should see a move towards a more integrated sociocognitive approach. Neodissociation theory has generally not fulfilled its early promise and is encumbered with the 'hidden observer' concept. The role of imaginative processes continues to be a dominant theme in hypnosis theory, although the relatively small correlation between imaginative and hypnotic abilities

remains a problem. The links between hypnosis, sleep and relaxation deserve further research, although, as theories of hypnosis, their scope seems limited. Suggestibility and role enactment theories have shown few signs of development in recent years. Theoretical problems over the interpretation of hypnosis need to be more widely recognized and the use of question-begging terminology curtailed. One advantage of the imagination hypothesis is that it provides a bridge, or a point of convergence, between state and non-state approaches (Spanos & Barber, 1974). It also handles certain hypnotic phenomena very well. For example, the known facts of age regression can be readily interpreted, together with the oddities of age progression and past life regression, as imaginative reconstructions (Barber, 1979). However, other phenomena, such as amnesia and analgesia, are less easily explained.

**Freeman, William B., Jr.; Kessler, Marc; Vigne, Jeffery (1990). Random number generation, absorption, and hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 10-16.**

Graham and Evans (1977) found that a measure of random number generation (RNG) was related to hypnotizability. In 2 studies, the relationship between hypnotizability and Graham and Evans' RNG (1977) index was examined. In Study 1 Evans' (1981) measures of controlled and automatic absorption were also evaluated. In Study 1 no relationship was found between the measures of absorption or RNG and hypnotizability. Since Study 1 was carried out primarily to evaluate methods for modifying hypnotizability, Study 2 was designed to evaluate RNG measure directly. Study 2 found no consistent relationship between RNG and hypnotizability, or between RNG and measures of the experience of hypnotic depth and nonvolition.

**Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.**

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity

Heyneman, Nicholas E. (1990). The role of imagery in hypnosis: An information processing approach. International Journal of Clinical and Experimental Hypnosis, 38 (1), 39-59.

Imagery is widely agreed to be an important component of hypnosis. The theoretical framework from which to conceptualize the role of imagery in hypnosis, however, has remained controversial. A model is presented which attempts to reconceptualize hypnotic imaginal processing in terms of current theory and research in cognitive psychology and psychophysiology. This model draws from a propositional approach to imagery (e.g. Pylyshyn, 1973), particularly as adapted by Lang's (1979) bioinformational theory. It is argued that the hypnotic image is fundamentally more complex than simple iconic mental representation, containing instead both stimulus and response components. It is proposed that the critical properties of the hypnotic image are not the stimulus components or propositions which give rise to the experience of the image but instead are response propositions which are associated with overt behavior. Processing of these response propositions is conceptualized as a negative feedback system between the brain and effector site. Some preliminary sources of support as well as implications and research suggested by this model are discussed.

#### NOTES

The author notes that the brain does not store a kind of "photograph," but rather stores "meanings" (Anderson, 1978); and that images actually represent response processes, as observable in physiological concomitants (Lang, 1977).

The hypnotic suggestion that a Subject's arm is being pulled up into the air by a large helium balloon is represented by two separate propositions: "There is a helium balloon tied to your arm" (a stimulus proposition) and "Your arm is moving up into the air" (a response proposition). According to Peter Lang (1979), an image is not a mental stimulus to which a response is made, but is in itself an active response process, accompanied by physiological activity. Verbal instructions to a Subject determine whether they will access stimulus propositions or response propositions. "Lang et al. (1980) found that only those Ss given response training coupled with response proposition scripts showed significant physiological arousal. These Ss were presumably better able to access and process that portion of the propositional network which controls visceral and motoric responding" (p. 46).

This author proposes that cognitive processing of a hypnotic image involves (internal) responding, and that 'responsive propositions' provide the basis for understanding the function of imagery in hypnosis, and are more important to hypnotic imagery than stimulus propositions. "In other words, the experience of a visual image and thus the vividness or controllability of that image is not critical for hypnosis. What is important to note is that the hypnotic behavior is not a response to a visual image but is instead a function of the processing of the image itself (cf. Lang, 1979)" (pp. 47-48).

In explaining how an image might facilitate amplification of a subtle response (such as in arm levitation), the author suggests that physiological and external feedback systems are involved--principally a neural feedback loop between brain and target

organ (in this case, arm muscles). "Efferent signals, which are activated by processing response propositions, initiate the overt behavior while afferent signals feed back to the brain and modulate further input to the effector system. The process progressively reduces the mismatch between the image instructions and behavior until the hypnotic task is completed" (p. 48). The feedback loop "provides information on the discrepancy between desired behavior and actual behavior:  $e = B_d - B_a$ , where  $e$  = error,  $B_d$  = desired behavior, and  $B_a$  = actual behavior (Arbib, 1972). The error signal generated by this discrepancy modifies the efferent output so as to eventually approximate  $e = 0$ " (p. 49). The author notes that this complex process of physiological feedback may be "augmented by external feedback such as modified verbal instructions or vocal intonations of the hypnotist and self-observation by S" (p. 49).

The author's model is summarized as: "1. The context, setting, and expectations implied by being hypnotized as well as the wording of the hypnotic suggestions provides S with: (a) explicit or implicit instructions to use imagery, (b) repetitious wording which may increase the probability of fully accessing the relevant propositions, and (c) instructions that task completion is expected. This may function to increase the probability that the deep structure of the response propositions will be processed. 2. The hypnotic suggestion proper is composed of stimulus and response propositions embedded within a propositional network. 3. Stimulus propositions give rise to the phenomenological characteristics or the percept-like experience of the image but may be unimportant in determining hypnotic behavior. 4. Processing of the response propositions includes an active response. This response process is facilitated by S's expectation to become actively involved in the imagined scene. Response propositions are the critical features of hypnotic imagery. 5. During hypnosis, the propositional network may be systematically modified by physiological or external feedback regarding the relative progress of the behavior toward task completion. This processing of response propositions is conceptualized as a negative feedback system. Efferent signals are delivered to the appropriate effector site while afferent signals feed back to the brain in order to modify further neural input, functioning to reduce the error between image and behavior. While the initial feedback is probably physiological, additional feedback may be obtained from the hypnotist's instructions and S's self-observations. 6. If stimulus propositions are simultaneously accessed, S experiences an image" (p. 51).

Kihlstrom, John F.; McConkey, K. M. (1990). William James and hypnosis: A centennial reflection. Psychological Science, 1, 174-178.

For William James, hypnosis was both an experimental technique for creating divisions of consciousness, and a laboratory model of naturally occurring disorders of awareness. James' treatment of consciousness in hypnosis presages contemporary interests in dissociation and implicit cognition, and underscores the role of the self in conscious mental life. At the same time, James recognized the complexity of hypnosis as an interpersonal process. In the end, James' views suggest how a

rapprochement between the cognitive and social approaches to hypnosis might be achieved.

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, 10, 117-128.

#### NOTES

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or 'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations.

Martin, Maryanne (1990). On the induction of mood. Clinical Psychology Review, 10, 669-697.

#### NOTES

Increasing interest in the relation between emotion and cognition has led to the development of a range of laboratory methods for inducing temporary mood states. Sixteen such techniques are reviewed and compared on a range of factors including success rate, the possibility of demand effects, the intensity of the induced mood, and the range of different moods that can be induced. Three different cognitive models (self- schema theory, semantic network theory, and fragmentation theory) which have been successfully used to describe long-term mood states, such as clinical depression, are elaborated to describe the process of temporary mood induction. Finally, the use of mood induction is contrasted with alternative methods (such as the study of patients suffering from depression) for investigating emotion.

**1989**

Blum, Gerald S. (1989). A computer model for unconscious spread of anxiety-linked inhibition in cognitive networks. Behavioral Science, 34, 16-45.

Unconscious inhibitory processes, triggered by a potential anxiety reaction, are reviewed in the context of an emerging rapprochement between psychodynamic and cognitive approaches in experimental psychology. Conditions underlying spread of inhibitory action to other cognitive networks are first explored in three tachistoscopic experiments utilizing words posthypnotically tied to a potential anxiety, pleasure, or neutral reaction. Response times of subjects, instructed to ignore those words while naming pictures or solving anagrams as quickly as possible, reveal a highly differentiated pattern of circumstances governing likelihood of inhibitory spread from anxiety-linked words to target stimuli. Next a computer model is constructed to simulate cognitive processes from onset of display to eventual response, and the model is then tested for its fit to the empirical data. Finally, an illustrative study shows that a subset of computer- generated predictions for spread of inhibitory action is verifiable experimentally.

Edelson, Jeffrey; Fitzpatrick, Jody L. (1989). A comparison of cognitive-behavioral and hypnotic treatments of chronic pain. Journal of Clinical Psychology, 45, 316-323.

27 male chronic pain patients were assigned to 1 of 3 treatment groups: hypnosis, cognitive-behavioral, and attention control. Hypnosis and cognitive-behavioral treatments were identical, with the exception of the hypnotic induction. Scores on the McGill Pain Questionnaire (MPQ) and a measure of the overt motor behavior element of chronic pain were collected at pretreatment, posttreatment, and follow-up intervals. Analyses showed significant increases in activity and decreases in pain intensity for the cognitive-behavioral treatment. Changes for the hypnosis treatment were noted only on the MPQ. Changes for both groups were sustained on the 1-mo follow-up. Findings generally support the superiority of the cognitive-behavioral treatment on behavior measures and its equivalence to hypnosis on subjective measures.

**1989**

Jupp, J. J.; Collins, J. K.; Walker, W. L. (1989). Relationships between behavioural responsiveness to hypnotic suggestions and estimates of hypnotic depth following 11 sequential instances of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 17, 93-98

Behavioral responsiveness to suggestions was assessed in an initial hypnosis session, and hypnotic depth was assessed in this session, followed by 10 weekly standardized hypnotic experiences. Correlations were calculated between behavioral responsiveness, initial and subsequent depth estimates, and between successive trance depth estimates. Levels of trance depth estimates were found to increase through weeks 1 to 11. Significant positive correlations were found between behavioral responsiveness scores and trance depth estimates to the fourth week but not beyond. Significant positive relations were found between successive estimates of trance depth except for the correlation between estimates for the fourth and fifth weeks. These results are discussed in terms of the estimates of trance depth being attributions from self-observations of behavioral responsiveness to hypnotic suggestions.

Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.

#### NOTES

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGSHS:A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47- item scale designed to demonstrate the existence of five factors of the hypnotic experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General Depth, was also derived to provide a summary measure of the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

de Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

Cross, W. P.; Spanos, Nicholas P. (1988-89). The effects of imagery vividness and receptivity on skill training induced enhancements in hypnotic susceptibility. Imagination, Cognition and Personality, 8, 89-103.

#### NOTES

This article is cited by Spanos & Flynn (1989) as indicating that high hypnotizability requires imaginative skills that some people do not possess in sufficient degrees.

#### 1988

De Pascalis, Vilfredo; Silveri, Alessandra; Palumbo, Giovanni (1988). EEG asymmetry during covert mental activity and its relationship with hypnotizability. International Journal of Clinical and Experimental Hypnosis, 36, 38-52.

Parietal-occipital EEG was recorded bilaterally while 20 high and 20 low hypnotizable Ss performed, in the eyes-closed condition, 2 covert right-hemisphere tasks (visual long-term memory and fantasy) and 2 covert left-hemisphere tasks (multiplication and verbal long-term memory). Ss were not, however, hypnotized during any aspect of the psychophysiological testing. After each task, Ss rated orally their degree of involvement in the tasks. The integrated amplitude alpha, the alpha density, and the alpha ratio as a measure of hemispheric asymmetry, were evaluated. Finally, the proportion of relatively greater right activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks was used as index of hemispheric specificity. The high hypnotizable Ss showed significantly higher alpha amplitude than the low hypnotizables; the alpha amplitude was correlated with hypnotizability, while the alpha density was not. The alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than the same amplitude during left-hemisphere tasks, while no significant differences related to task-type were detected in the left hemisphere. The pattern of task-effect on alpha ratio scores was the same as that on alpha amplitudes. Verbal and multiplication ratings were related to the alpha ratio, imaginative- visual memory ratings were not. No differences in hemispheric specificity between high and low hypnotizable Ss were found to exist, and no relationship between hypnotizability and hemispheric specificity was observed.

## NOTES

The authors review the literature on differences between the two hemispheres' involvement during hemisphere-specialized tasks. The ratio between left- and right-hemisphere alpha amplitudes has been shown to be a reliable measure of hemisphere lateralization as a function of task demands (Amochaev & Salamy, 1979).

They also review the literature on EEG asymmetry and hypnotizability. Most investigations used tasks with a problem solving component, whereas this study used "a covert numeric task and other covert self-generated tasks in which the range of cognitive activities resembled natural thinking" (p. 40).

Purposes of this research were "to investigate whether (a) the amount of alpha in EEG is correlated with hypnotizability, (b) high hypnotizable Ss would reveal higher hemispheric specificities during covert mental tasks than low hypnotizable Ss, and (c) verbal-numeric tasks involve more left-hemisphere activation and imaginative-visual tasks more right-hemisphere activation" (p. 40).

The subjects were 40 women (from an original pool of 71), aged 19-23, with no previous experience using hypnosis. To minimize the possible effects of expectation, hypnosis was not mentioned in the invitation to participate in research. All subjects were tested first with the Harvard Group Scale of Hypnotic Susceptibility, then with the Stanford Scale of Hypnotic Susceptibility (SHSS:C). The SHSS:C was used to select 20 high hypnotizables (defined as having a score 1 standard deviation above the group mean of 6.51) and 20 low hypnotizables (with scores 1 standard deviation below the group mean). The mean score for highs was 10.05 (S.D. = .88) and mean score for lows was 2.75 (S.D. = 1.49).

Although subjects were selected on the basis of their measured hypnotizability, hypnosis was not used during the investigation's psychophysiological testing. However, they were required to relax and keep eyes closed during trials on the tasks. After each trial, the subjects rated their involvement in the task.

Tasks used for this research were: 1. Visual long-term memory. Ss were asked to recall from memory pictures, places, faces, or visual scenes that were in a movie, but not scenes with a negative content. 2. Fantasy. Ss were requested to fantasize about something new that they like (nothing from past experience, and nothing sexual). 3. Multiplication. Ss were asked to multiply 2 serially, as,  $2 \times 2 = 4$ ,  $\times 2 = 8$ , etc., and to do it verbally without visual representation. 4. Verbal long-term memory. Ss were requested to think of some poem, speech, or other verbal material that they could recall from memory, and to repeat it mentally, to themselves.

Results can be summarized as follows.

Hypnotizability correlated .38 and .35 with right alpha amplitude and left alpha amplitude during baseline (statistically significant).

There was a significant association between alpha density and hypnotizability, when the group was divided at the median on density. (Alpha density = the time periods in which the alpha was present over the 6-second epochs accumulated during each 1-minute period which preceded the tasks). This association may be seen in the Table that follows:

SHSS:C Alpha Density Low High

+ 6 13

- 14 7

Chi Square = 3.61,  $p < .05$

There was a significant interaction between type of task (verbal-numeric, imaginative-visual memory) and hemisphere, which was attributable to changes in alpha amplitudes in right hemisphere, according to tasks. "Alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than during left-hemisphere tasks, while no significant differences were detected in the left hemisphere as a result of the differences between left- and right-hemisphere tasks" (p. 44)

Alpha ratio =  $(\text{Right-hemisphere alpha} - \text{Left-hemisphere alpha}) / (\text{Right-hemisphere alpha} + \text{Left-hemisphere alpha})$  exhibited the same pattern as for alpha amplitudes. The ANOVA 2 (high/low)  $\times$  2 (right tasks/left tasks) repeated measures on alpha ratio revealed a significant main effect for tasks, and a significant interaction between right-left tasks and hypnotizability. "During right-hemisphere tasks there were no significant differences ( $p < .5$ ) [sic] in alpha ratio between high and low hypnotizable groups, while during the multiplication task, the low hypnotizable Ss evidenced a higher mean alpha ratio ( $p < .05$ ) than the high hypnotizable group (.08 & .04, respectively); identical ratios were found during verbal tasks" (p. 45).

Task involvement was expected to be positively related with left-hemisphere tasks, but negatively related to right-hemisphere tasks (i.e. greater subjective involvement in the task would be associated with more negative alpha ratios, showing a bias towards right-hemisphere activation. "Verbal ratings were substantially related to alpha ratios ( $\rho = 0.82$ ;  $p < .01$ ), and multiplication ratings moderately related to alpha ratios ( $\rho = 0.31$ ;  $p < .05$ ); visual memory and fantasy ratings were not related to alpha ratios ( $r = -.04$  &  $r = -.18$ , respectively)" (p. 45).

Hemispheric specificity was defined as the proportion of greater relative right-hemisphere activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks. The authors did an analysis to "verify whether the task rating moderates the hemispheric specificity (i.e., the level of subjective involvement in a task is related to the level of hemispheric lateralization, while S is carrying it out)" (p. 46). They concluded that hypnotizability (SHSS:C) is not significantly related to Ss' hemispheric specificity.

In the discussion, the authors present a Table summarizing the results of similar investigations. They mention that the alpha-hypnotizability relationship may depend on which alpha variable is taken into account, or whether eyes-open/closed is varied. They conclude that the different methodological procedures render any comparison of results across studies very difficult.

They note that there was a significant correlation between alpha amplitude and hypnotizability even though Ss did not know in advance that hypnosis would be part of the experiment (the hypothesis proposed by Dumas, 1977, to account for this type of correlation). "One possible explanation of these data might lie in a different level of arousal in the high and low hypnotizable Ss: the high hypnotizable Ss might have been simply more relaxed than the lows.

"Nevertheless, his explanation must be taken with caution. The study of Paskewitz and M. T. Orne (1973), in fact, pointed out that in dark-adapted Ss, the relaxation condition does not produce increases of alpha activity. In a further study, contrary to previous reports, M. T. Orne and Paskewitz (1974) also found that a reduction in alpha activity is not a necessary consequence of apprehension or heightened arousal. Thus, it is not yet clear whether a decrease in anxiety tends to cause an increase in alpha density and vice versa" (p. 48).

1988

Dywan, Jane (1988). The imagery factor in hypnotic hypermnesia. International Journal of Clinical and Experimental Hypnosis, 36, 312-326.

Week-long repeated recall attempts were used as baseline against which to assess the effects of hypnosis on the recall of pictures. Hypnosis increased errors for all Ss but especially for high hypnotizables. In Experiment 1, dividing Ss on the basis of imagery ability had the same effect on recall as dividing them on the basis of hypnotic ability. In Experiment 2, imagery ability was found to interact with hypnosis in mediating the level of error during waking trials. Results do not support the claim that hypnosis enhances recall, but they do suggest that further study is needed to clarify the role that imagery ability plays in recall patterns over time.

#### NOTES

Author reviews research indicating that introduction of confident errors is a reliable finding in hypnosis-memory research, and notes that the role of imagery ability has not as yet been examined even though imagery is viewed as important to memory functioning. She also reviews the imagery- hypnotizability correlation literature.

EXPERIMENT 1 involved 54 Ss screened by Harvard Scale and SHSS:C, divided into highs (7-12) and lows (1-6) by SHSS:C. Stimuli were 60 black and white line drawings. There were 3 baseline trials in the lab; Ss were then given 6 envelopes, each containing a 60 blank item recall sheet, and asked to complete one each day and return it via campus mail. (When unable to recall more items, they were asked to draw a line under the last item recalled and then use "educated guesses." ) After a week of repeated recalls, Ss in the hypnosis condition were told they would be able to 'see' the slides appear before them; in the task motivating condition Ss were informed about such things as context dependent recall, the importance of focused attention, and the importance of good recall for forensic investigations.

Results were analyzed for increase in recall over the cumulative number of correct items recalled. Neither hypnotizability nor visual imagery ability influenced the cumulative baseline measures. High hypnotizable Ss produced a small but significantly greater increase in new, correct information during hypnosis than other Ss, but also made 3 times as many errors.

Dividing Ss by imagery score produced similar results. That is, people with very good imaging ability reacted in the same manner as the highly hypnotizable Ss: in hypnosis they increased the number of items they were willing to call a memory but also increased the number of errors.

**EXPERIMENT 2** differed from Experiment 1 in that Ss were selected for hypnotic ability and imagery ability so that both would be adequately represented. (The high hypnotizable - low visual imagery group is a group that hasn't been represented much in earlier research, and the author notes that those Ss are rather difficult to locate. ) The task motivation condition was not used, based on results of Experiment 1. Ss who were low on hypnotizability and imagery ability served as the controls.

Ss were told that they could be either in a hypnosis condition or a control condition but actually all Ss received a hypnotic induction. (This is like the London- Fuhrer, 1961, research design, which goes on the assumption that low hypnotizables do not enter into hypnosis even though they are exposed to an induction. Thus, hypnotic effects are not assumed for lows in the hypnotic condition and they become "controls.")

Results of correct and error recall over the baseline week were analyzed. There was no difference in correct recall as a function of hypnotic ability or visual imagery ability. However, there was a main effect for visual imagery ability and for hypnotizability, and a significant interaction between trials, for cumulative errors over the baseline week.

Effects of hypnosis were weaker than in Experiment 1 but followed same pattern. Those Ss most likely to have been hypnotized (highs) produced slightly more correct information than lows, and showed a greater increase in errors than lows. However high and low visualizers did not differ in response to hypnosis for correct information or for errors.

Since there was an interaction between hypnotic ability and visual imagery ability for error rate during waking trials, the author tested for the interaction during hypnosis. Using a 2 x 2 ANOVA with new errors as the dependent measure; no interaction was found. Hypnotic ability was therefore responsible for determining Ss' responses in the hypnosis condition. Author attributes the effect to being hypnotized rather than to individual differences in hypnotizability or to context effects.

**DISCUSSION** includes the author's delineation of differences between the two experiments that might explain differences in results. The increase in errors that was observed may be due to increased fluency in producing items under hypnosis (Sheehan & Tilden, 1984, 1986) or to a shift in reporting criterion (e.g., M. T. Orne, Soskis, Dinges, & E. C. Orne, 1984).

"Both high and low hypnotizable Ss produced more memories in the task-motivating condition, and low hypnotizables are not totally immune from the effect in the hypnotic context. What the report-criterion hypothesis does not explain is the reason why the memory reports of high hypnotizable Ss are differentially affected by task demands (e.g., task-motivating instructions versus hypnosis in Experiment 1) nor why hypnotized Ss so often seem surprised by the ease with which information seems to be 'recalled' during hypnosis . An alternative hypothesis is that being hypnotized results in a shift to a more imagistic style of information processing. The enhanced vividness of items generated during the retrieval process may convince Ss that these items must have been part of the original stimulus presentation (Dywan, 1985).

"Whatever the mechanisms might be, it is clear that the hypnotic effect is the result of an interaction between contextual factors and pre-existing characteristics of the individual. Moreover, these same mechanisms would likely be at work when hypnosis is actually used in the forensic situation, where the pressure to retrieve information could be more acute than what can be mustered in the experimental context. This should cause some concern because the differential increase in errors did not occur only for the relatively small proportion of Ss who were very high in hypnotic ability. The 'high' hypnotizable group in these experiments consisted of Ss of moderate to high levels of hypnotic ability and so the results can be generalized to at least one-half the population" (p. 323).

"In summary, it would seem that any pressure for Ss to increase their recall--whether it be repeated trials, task-motivating instructions, or hypnotic suggestion--results in higher levels of output and lower levels of accuracy. Repeated recall attempts lead to increases in recall and in errors. Some Ss (viz., those with high levels of hypnotic ability and low levels of imagery ability) are particularly prone to producing false-positive responses over the course of repeated recall attempts. When Ss are pressed to recall more information, they all try to do so by increasing their output and this increased output is usually accompanied by an increase in error. When hypnosis is introduced, however, those Ss who are hypnotizable show a differential increase in output. The amount of new correct information retrieved by hypnotized Ss is small and not a highly reliable phenomenon. The increase in errors that occurs in the recall of hypnotized individuals, however, is a substantial and highly reliable effect. Irrespective of how many errors were made as a function of repeated recall attempts, hypnosis can be counted on to increase errors over and above the increases in errors that occur when Ss are not hypnotized. Further work is needed to identify the mechanisms involved in the hypnotic distortion of recall. The role that imagery ability might have in the context of waking and hypnotic recall has not been resolved and this also presents an interesting problem for future study" (pp. 323-324).

Fine, C. G. (1988). Thoughts on the cognitive perceptual substrates of multiple personality disorder. Dissociation, 1, 5-10.

Although MPD [multiple personality disorder] patients typically present to treatment with affective symptoms, trauma-related information is originally encoded in the patients' perceptions and mediated by their cognitions. This paper describes the dysfunctional assumptive and perceptual categories that form the building blocks of MPD patients' distorted experiences. Perceptual shifting techniques and cognitive reframing will consequently be the recommended interventions prior to therapeutic abreactive work.

Gabel, Stewart (1988). The right hemisphere in imagery, hypnosis, rapid eye movement sleep, and dreaming: Empirical studies and tentative conclusions. Journal of Nervous and Mental Disease, 176, 323-331.

Reviews studies that have addressed the issue of whether there is an increased

activation or efficiency of right-hemispheric processes during imagery, hypnosis, REM sleep, and dreaming. Evidence strongly supports the notion of increased right-hemispheric activation in simple imaginal or visual states during usual consciousness. There are also studies supporting this view of REM sleep, dreaming, and hypnotic phenomena. It is concluded, however, that the lack of adequate studies, contradictory or negative findings, and moderating variables (e.g., task difficulty, cognitive style) make it difficult to draw definitive conclusions concerning right-hemispheric processes.

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

1987

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Monty, Richard A. (1987). Visual information processing speed in hypnotized and nonhypnotized subjects. Journal of General Psychology, 114 (4), 363-372.

Using a backward-masking paradigm with a bias-free and ceiling-free psychophysical task, we tested hypnotized and control subjects for speed of visual information processing. Approximately half of each group received visual imagery suggestions in an attempt to influence attention. Imagery produced no significant differential effect. Although an absence of a hypnotizability-performance relationship was in keeping with findings of a previous study, those subjects in the present study who performed under hypnosis were, as a group, significantly superior to the other subjects in speed of information processing.

Geiselman, R. Edward; Machlovitz, Helen (1987). Hypnosis memory recall: Implications for forensic use. American Journal of Forensic Psychology, 1, 37-47.

NOTES

Examines 38 major published experiments (1930-1985) on hypnosis memory recall. Concludes that differences in experimental methodology significantly predict the success versus failure of hypnosis aided recall and remarks that, "Even if forensic hypnosis aids in the solution of only a small percentage of cases, it is still a valuable tool from the perspective of law enforcement." As Tarasoff has balanced the right of the victim to enjoy protection from violence with the patient-litigant's right to confidentiality, so too does the increased acceptance of hypnotically induced testimony go toward redressing in part the uneven balance between the slender compensations afforded the innocent victim of violent crime and the multiple constitutional protections and indemnities enjoyed by criminal perpetrators in our judicial system.

Gfeller, Jeffrey D.; Lynn, Steven Jay; Pribble, W. Eric (1987). Enhancing hypnotic susceptibility: Interpersonal and rapport factors. Journal of Personality and Social Psychology, 52 (3), 586-595.

This research supported the hypothesis that hypnosis can be thought of as a set of potentially modifiable social-cognitive skills and attitudes. A low-interpersonal-training treatment devised by Gorassini and Spanos (1986) was compared with a treatment designed to modify not only cognitive factors but also to augment rapport with the trainer and diminish resistance to responding (high-interpersonal training). Fifty percent of the initially un hypnotizable subjects in the high-interpersonal condition tested as being highly susceptible to hypnosis (high susceptibles) at posttest on the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962); 25% of the un hypnotizable subjects in the low-interpersonal condition responded comparably. Eighty-three percent of the medium- susceptibility (medium susceptibles) subjects tested as being highly susceptible at posttest in both conditions. Practice-alone control subjects' performance was stable across testings. The study was the first to demonstrate that treatment gains generalize to a battery of novel, demanding, suggestions (generalization index) that have been found to differentiate highly susceptible subjects from un hypnotizable simulating subjects. The importance of rapport was evidenced by the finding that rapport ratings paralleled group differences in hypnotic responding and that rapport correlated substantially with susceptibility scores at posttest and with the generalization index. Whereas initial hypnotizability scores correlated significantly with retest susceptibility scores, initial hypnotizability failed to correlate significantly with the generalization index.

#### NOTES

On p. 593 one could get the impression that S's feelings of rapport may result from success in the hypnotic experience.

1987

Jacobs, Sharon B.; Salzberg, Herman C. (1987). The effects of posthypnotic performance-enhancing instructions on cognitive-motor performance. International Journal of Clinical and Experimental Hypnosis, 35, 41-50.

The effects of performance-enhancing instructions on a cognitive-motor task (typing) was assessed using 3 groups: hypnosis and control groups with performance-enhancing instructions, and a control group without instructions. Unlike previous hypnosis research, the performance-enhancing instructions were given after substantial learning had occurred. Results indicated that posthypnotic performance-enhancing instructions, or performance-enhancing instructions alone, did not have a facilitative effect on performance. The results also suggested potential negative performance effects following hypnotic induction, depending on Ss' initial typing ability. The implications of these findings are discussed.

#### NOTES

The research investigated whether hypnotic suggestions could influence various factors thought to inhibit peak performance by increasing confidence, increasing motivation, and decreasing performance anxiety. 84 undergraduates of varying levels of typing ability were recruited, not mentioning in advance that the research involved hypnosis (in order to avoid selection bias). The experimental materials included a modified version of the Apple Typing Tutor program, which measures words per minute (WPM), key strokes missed (KM), and net words per minute (NWPM, which was obtained by subtracting 2 (KM) from WPM). These measures were obtained for the average of every 9 paragraphs.

Subjects received nine practice sessions and then were assigned to Experimental or Control group based on NWPM and sex. The hypnosis group received the Stanford Hypnotic Susceptibility Scale, Form C, minus suggestions for drowsiness, sleepiness, or posthypnotic amnesia. Additional suggestions for performance enhancement were introduced. The control group watched a film. The average of every nine paragraphs was used.

The analyses of variance for dependent measures revealed no significant effects except for one interaction effect that actually was in the unexpected or wrong direction. That effect appeared to be spurious as it was due to extreme errors produced by one subject.

"Only speed of typing (WPM) changed from pre to posttreatment, and this effect interacted with ability level. Post hoc analyses (Scheffe) indicated that beginner typists became less proficient, intermediate typists did not change, and advanced typists became more proficient" (p. 46).

Hypnotizability on SHSS:C did not correlate with change on NWPM.

A 3 x 3 x 2 ANOVA indicated a significant change over time on KM. "Although no change occurred from pretreatment to posttreatment, there was a decrease in errors at follow-up. There was also a significant Group x Level x Time interaction for KM ( $F = 2.57, p < .05$ ). This was accounted for by post hoc analyses showing that hypnotized beginner Ss changed over time, while control beginner Ss did not. Hypnotized Ss made significantly more errors following hypnosis than at pretreatment or follow-up" (p. 46).

"There was a significant main effect for time on NWPM. ... The Ss' overall typing performance decreased from pretreatment to posttreatment, but increased at

follow-up. Only the advanced Ss demonstrated significant improvement between pretreatment and follow-up.

"There was also a significant interaction between time and ability level on WPM. ... beginner Ss typed significantly slower at posttreatment than at pretreatment or follow-up" (p. 47).

In their Discussion, the authors note that the outcomes of their investigation are consonant with results obtained by other investigators studying hypnosis effects on skills (Arnold, 1971; Edmonston & Marks, 1967). In contrast, earlier studies on reaction time demonstrated that either motivational instructions and/or alert hypnotic inductions improved performance (e.g. Ham & Edmonston, 1971; Rader, 1972). They raise the question whether Ss' relaxation following hypnosis may have slowed response time and canceled the effects of motivating instructions.

"When looking at all groups combined, Ss did not improve between pretreatment and posttreatment. At follow-up, however, Ss showed significant improvement on two out of the three measures. This suggests that learning had occurred, but that temporary inhibitory factors such as S restlessness and indifference observed by Es may have affected performance at posttreatment. The length of the task (90 minutes in one sitting) may have been responsible for the fatigue and boredom that seemed to set in. It is probable that the performance-enhancing instructions were not potent enough to counteract these effects. At follow-up (which took much less time) fatigue and boredom were apparently absent, hence typing improved. In addition, other factors may have affected performance (e.g., anxiety, lack of motivation). The data indicate that Ss of different ability levels responded differently over time.

"The results of the present study cast doubt on the utility of hypnosis in improving performance on a cognitive-motor task. Although there are many anecdotal reports of hypnosis improving performance, research studies indicate that hypnosis, with motivational instructions, is effective only in improving reaction time and not more complex measures of performance. This apparent inconsistency may be explained by considering the level of motivation of participants. It is likely that a person requesting hypnosis to help improve performance is more motivated than experimental Ss" (p. 48).

Kihlstrom, John F. (1987). The cognitive unconscious. Science, 237, 1445-1452.

Contemporary research in cognitive psychology reveals the impact of nonconscious mental structures and processes on the individual's conscious experience, thought, and action. Research on perceptual-cognitive and motoric skills indicates that they are automatized through experience, and thus rendered unconscious. In addition, research on subliminal perception, implicit memory, and hypnosis indicates that events can affect mental functions even though they cannot be consciously perceived or remembered. These findings suggest a tripartite division of the cognitive unconscious into truly unconscious mental processes operating on knowledge structures that may themselves be preconscious or subconscious

Subjects low and medium in hypnotic susceptibility were administered cognitive strategy and instructional set information and also practiced responding to test

suggestions in order to enhance susceptibility. Those in one modification treatment received this information both from the experimenter and by observing a videotaped female model who responded successfully to suggestions and reported on the cognitive strategies she used to do so. Those in a second modification treatment received the information and practice but were not exposed to the model. Low and medium susceptibles in a third condition (practice alone) received a hypnotic induction procedure and practice suggestions but neither modification information nor modeling. No-treatment controls performed a filler task. All subjects were posttested on two different susceptibility scales. Information plus modeling produced significantly greater increments on all objective and subjective indices of susceptibility on both posttests than did practice- alone or control treatments. Susceptibility increments in the information without model treatment always fell between those of the model and practice-alone treatments. In the modeling treatment, over half of the initial low susceptibles and over two thirds of the initial medium susceptibles scored as high susceptibles on both posttests. These findings provide strong support for a social-cognitive skill formulation of hypnotic susceptibility.

Laurence, Jean-Roch; Nadon, Robert (1986). Reports of hypnotic depth: Are they more than mere words?. International Journal of Clinical and Experimental Hypnosis, 34, 215-233.

The empirical work relating hypnotizability, the hypnotic situation, and the reports of hypnotic depth is reviewed and evaluated. Asking Ss to assess their hypnotic depth is a complex task involving the interaction of experiential, cognitive, and contextual variables. Accordingly, future experimental work should take into account this multidimensionality; phenomenological, situational, cognitive, and motivational factors implicated in verbal reports should be explored in terms of their respective relationships with both hypnotizability and self-ratings of hypnotic depth. More sophistication in the experimental inquiries of hypnotic depth is required in order to further our understanding of the cognitive and affective structures underlying the hypnotic experience.

#### NOTES

In past years, hypnotic susceptibility and hypnotic depth were regarded as the same thing, and depth was inferred from responses to test suggestions on hypnotizability scales (e.g. Davis & Husband, 1931; LeCron, 1953).

There has been little investigation of the relationship between Subjects' subjective experiences and reported "depth." Research suggests that "hypnotic depth reports are usually significantly higher for Ss who have undergone a hypnotic treatment than for those who have received task-motivation (Ham & Spanos, 1974; Spanos & Barber, 1968; Spanos, Stam, D'Eon, Pawlak, & Radtke-Bodorik, 1980); imagination-control; or relaxation-control instructions (Connors & Sheehan, 1978; Gilbert & Barber, 1972; Spanos & Barber, 1968; Spanos, Radtke-Bodorik, & Stam, 1980, Experiment 2)" (pp. 217-218). Others have found that changes in inward experiencing (e.g. feelings of unreality, a sense of disappearance of body parts) could

not be attributed simply to sitting quietly with the eyes closed (Barber & Calverley, 1979). [A footnote on p. 218 indicates some studies didn't find this difference between a hypnosis group and a task-motivation control group.]

When Ss are asked to estimate subjective depth after having experienced hypnotizability test items, they are likely to infer depth from whether or not they passed the items (and indeed, early scales promoted that assumption). Reports of subjective depth taken before rather than after the test items still correlate with overall hypnotizability score, though not to as high a degree (E. R. Hilgard & Tart, 1966; Tart, 1970). Although usually depth estimates correlate with hypnotizability in the .50 to .75 range (Perry & Laurence, 1980), the correlations were obtained in the hypnotic context, and Ss may use their own behaviors as one determinant of their estimated depth.

From another line of study it is observed that Ss' subjective depth may be at variance with behavioral performance on hypnosis scales (Bowers, 1981). High hypnotizables judge their own depth from their performance on cognitive items (e.g. amnesia, hallucinations) while mediums and lows judge their own performance based on their responses to motor items and challenge items (Kihlstrom, 1981). In one experiment on amnesia, it appeared that Ss did not judge their own depth by how well they did on the amnesia task (Spanos, Stam, D'Eon, Pawlak, and Radtke-Bodorik, 1980). "M. T. Orne (1966, 1980) has emphasized that although it is necessary to operationalize S's responses to hypnotic suggestions, behavioral concomitants are only valid if they accurately reflect subjective alterations in an individual's experience" (p. 221).

"The social-psychological approach (see Barber, 1969; Radtke & Spanos, 1981, 1982; Spanos, 1982; Wagstaff, 1981) rejects the notion of hypnotic depth as an indicator of a unique state. These authors argue that the reports of having been hypnotized reflect attributions made by Ss when confronted with a hypnotic context. ... Bem (1972) and Kelley (1972) have emphasized the idea that the more ambiguous an experience is, the more a person is likely to base his or her judgment primarily on available external information" (p. 222). In this case, defining the situation as involving "hypnosis" is one of the most potent predictors of Ss' reports of subjective experience (Spanos, Radtke-Bodorik, and Stam, 1980). Other variables that influence subjective depth estimates are the wording of the hypnotizability scale, expectancy, and information provided directly or indirectly. On the other hand, McCord (1961) found that his patients had widely disparate expectations for how they thought they would feel when hypnotized, so expectancy as a predictor would not necessarily determine specific experience.

Direct experimental work on predicting response to hypnosis test items from expectancies (Council, Kirsch, Vickery, & Carlson, 1983; Kirsch, Council, & Vickery, 1984) suggests that expectations may predict test response when people are given a cognitive skill type of induction, but not when given a 'typical trance' type of induction. Also, another study from that laboratory (Council & Kirsch, 1983) established that only when expectancies are assessed after an induction (but before the test items) do they effectively predict hypnotic behaviors. The present authors express the view that these results are difficult to account for on the basis of social

psychology theories that weight heavily the role of expectancy in generating hypnotic response.

When Ss are permitted to use several different descriptors for their experience (being hypnotized, experiencing the effects, being absorbed, and responding to the suggestions), most Ss rated their own experiences as nonhypnotic (Radtke & Spanos, 1982). This was particularly true for medium hypnotizable Ss. Thus, unidimensional scales purporting to measure "depth" actually force Ss to interpret their multi-aspect experience in terms of the investigator's frame of reference, in this case "hypnotic depth." Nevertheless, the highly hypnotizable Ss were the least likely to be swayed from their self description of being "deep" when offered alternative ways of describing their experience. This is concordant with results reported earlier by Barber et al. (1968).

"The attribution literature may provide clues as to why most highly hypnotizability Ss retain their high ratings of experienced depth when confronted with situational manipulations. Self-perception theory strictly applies when Ss' experiences are ambiguous, forcing them to fall back on contextual factors to make self-appraisals. The relationship between expectancies, absorption, effect of scale wording, and hypnotizability scores suggest, however, that high hypnotizable Ss do not rely heavily on contextual factors when assessing their levels of hypnotic depth. Most of these Ss maintain their reports of altered experiences, even when situational determinants are changed (Harackiewicz, 1979; Kihlstrom, 1984; Lepper, Greene, & Nisbett, 1973). Thus, the hypnotizability by depth scale interaction found by Radtke and Spanos (1981) may suggest that experiences reported by high hypnotizable S are not inherently ambiguous. Accordingly, self-perception theory may not apply to them" (pp.226-227).

In their Discussion, the authors state, "Several studies have attempted to relate personal, real-life events to the experience of hypnosis. A number of studies (e.g., As, 1963; Field, 1965; Shor et al., 1962; Wilson & Barber, 1982) have shown that absorption, tolerance of unusual experiences, automaticity, compulsion, and trust are related to the capacity to be hypnotized. Other studies (Bowers & Brenneman, 1981; Tellegen & Atkinson, 1974; Van Nuys, 1973) have shown that certain variants of attention are also related to hypnotizability. Extensive work by J. R. Hilgard (1970, 1979) has shown that patterns of personal development relate to hypnotizability in adult life. It appears then that hypnotizable individuals bring a host of experiences and abilities with them to the hypnotic context. It makes intuitive sense which is supported by the available empirical data, that a complex interaction among these experiences and abilities, the hypnotic context, and hypnotic responsiveness is implicated in Ss' assessments of their hypnotic depth. Studies are needed in which all of these potential determinants of hypnotic depth reports are taken into account. Only then will a clearer picture of their respective importance emerge" (p. 228).

1986

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

Madigan, R. J.; Bollenbach, A. K. (1986). The effects of induced mood on irrational thoughts and views of the world. Cognitive Therapy and Research, 10 (5), 547-562.

Sixty college students participated in an experiment concerning the influence of somatic mood induction statements on measurements of irrationality as defined by Ellis. Subjects were randomly assigned to depression, elation, and neutral mood induction groups. There were significant differences between groups on mood and irrationality. Results are discussed in terms of the Ellis and Beck cognitive models of depression, the Isen cognitive loop model, and the relationship between irrationality and depression. This study added irrational thinking as defined by Ellis to the growing list of cognitions that have been manipulated by mood, and it supports a body of findings that demonstrate the reciprocal influence of cognition and mood in depression. The study also has implications for the Beck and Ellis hypothesis that cognitions are the dominant causes of depression.

Markus, Hazel; Nurius, Paula (1986). Possible selves. American Psychologist, 41 (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self-relevant form, meaning, organization, and direction to these dynamics. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self-distortion, and the relationship between the self-concept and behavior

1985

Acosta, Enrique; Crawford, Helen J. (1985). Iconic memory and hypnotizability: Processing speed, skill or strategy differences?. International Journal of Clinical and Experimental Hypnosis, 33, 236-245.

The purported relationship between hypnotizability and speed of information transfer from iconic to short-term memory was studied in a comparison of 12 low and 12 high hypnotizable Ss. As in Ingram, Saccuzzo, McNeill, and McDonald (1979), high hypnotizable Ss showed less interference from a visual mask in the report of a briefly presented item than did low hypnotizable Ss when the mask delays were predictable. When the delay of the mask could not be anticipated, however, differences between high and low hypnotizable Ss disappeared. It is suggested that differences in information processing related to hypnotizability may be due to differences in strategy, skills, or other factors, rather than underlying information processing speed.

#### NOTES

Hypnosis may require concentrative or selective attention, which usually is measured by self-report (e.g. Absorption) or by experimental measures. Several investigations indicate that high hypnotizable people are better than low hypnotizables at focusing on a task and ignoring extraneous information (Brown, Crawford, Smith, Leu, & Brock, 1983; Graham & Evans, 1977; Karlin, 1979; Miller, 1975; Wallace, 1979; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976). One way to study attentional processes is through the effect of presenting a mask (e.g. \$\$\$\$) shortly after presenting a stimulus (e.g. ABCDE). Ingram (1979) found that highs had faster information processing, but that might be due to anticipation bias associated with the method of limits employed. This study uses both an ascending method of limits, like Ingram, and a condition in which the mask delays were presented randomly within another block of trials.

#### RESULTS

"While the present study replicated Ingram et al.'s (1979) findings when an ascending method of limits was used (the same used by Ingram et al.) differences were not found in processing when ISIs were presented randomly. Thus, these results suggest that high and low hypnotizable Ss do not differ in their information transmission rates, but rather they may differ in other aspects which mediate performance in this task" (pp. 241- 242).

"Several lines of evidence point towards strategy or skill differences between high and low hypnotizable Ss as a possible explanation for the present findings. First, it was found that when Ss could anticipate the mask delay (the ascending condition), high hypnotizable Ss outperformed the low hypnotizables. When this anticipation was controlled, as in the random condition, the two groups did not differ when the data were scored by serial position. When the data were scored by a free recall scheme, there was a nonsignificant trend for high hypnotizable Ss to score higher than did the low hypnotizables. This trend suggests that high hypnotizable Ss may be more willing to guess, and to guess more accurately than low hypnotizables, when they have partial information about a letter, and/or they may have greater skill in

perceiving incomplete information. The latter suggestion finds indirect support from Crawford (1981) who reported that high hypnotizable Ss can process fragmented stimuli (Gestalt Closure tests, see Thurstone & Jeffrey, 1966), significantly better than can low hypnotizables. High imagers have been shown also to perform significantly better than low imagers in Gestalt Closure tasks (Ernest, 1980). At a speculative level, given that recent research has suggested that iconic memory may be a right hemisphere phenomenon (e.g. Cohen, 1976, but also see DiLollo, 1981), and high hypnotizable Ss outperform low hypnotizables on certain right hemisphere tasks (e.g. Crawford, 1981), it may be asked if the trends found with the free recall scoring scheme in the present study might be a reflection of differential right hemisphere processing. Such a hypothesis could be investigated in future research by comparing the performance of high and low hypnotizable Ss, as possibly moderated by visuo-spatial ability, for stimuli presented to the left versus the right visual hemifield (Ernest, 1983).

"A second set of evidence in favor of strategy differences was found in Saccuzzo et al. (1982) which was published after the data for the present experiment were collected. In the Saccuzzo et al. (1982) paper, which was an extension and replication of Ingram et al. (1979), the same mask delay was used throughout a 10-trial block. The order of the blocks (i.e., the mask delays) was random. Thus, while S did not know which mask delay was used in the first trial of a block, the remaining 9 trials were the same and could be anticipated. During the first session, high hypnotizable Ss outperformed the low hypnotizables, but these differences disappeared on the second testing session. These results suggest that practice may have affected performance, rather than any underlying information processing speed differences" (pp. 242-243).

Kerry Buhk; Rhue, Judith; Henry, Stephanie; Lynn, Steven Jay (1985, November). Fantasy proneness: Are their word associations richer?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

## NOTES

Experimenters screened 7000 students to get 6 samples of fantasy prone Ss (top 2.4% on Wilson and Barber's ICMI). They found less association between fantasy proneness and hypnotizability than did Wilson and Barber.

They had fantasizers hallucinate a second cup next to a first styrofoam cup. Results were that 87% of High fantasizers, < 50% Medium fantasizers, < 25% Low fantasizers could do it, but they didn't describe seeing the hallucinated cup "as real as real" as Wilson and Barber said they did.

Experimenters were concerned about context effects (expectancy) because the Creativity and Fantasy Proneness tests were run proximal in time, so they separated in time the administration of Fantasy Prone and Creativity tests and also looked at word associations.

23 High and 20 Low fantasy prone students selected by ICMI, which was administered to Subjects 18 mos before the creativity study. At the time of the creativity study, Ss were informed they were randomly picked. There were two 90' sessions, counterbalanced.

Sessions: 1. Hallucinate image of R.A. and of styrofoam cup. Other tests were administered for intelligence and personality: Shipley-Hartford, MMPI, Crowne-Marlowe, etc. 2. Creativity tests (Revised Art Scale, Hilgard's Alternate Uses; story production which was scored on detail, imagery and fantasy and on imagery nouns.) Results of this study which was independent of context (i.e. the tests being correlated were administered independently of each other, separated by time). 1. Fantasizers were more creative than low fantasizers on both Creativity Scales. 2. Fantasizers show more divergent thinking on Hilgard Alternate Uses test, but relationship between fantasy proneness and creativity were not strong,  $r = .30$ . 3. Fantasizers and non fantasizers did not differ on the story measures! This diverges from Wilson and Barber's results. Fantasizers may have more vivid images, but storytelling does not capture that.

1985

Geiselman, R. Edward; Fisher, Ronald P.; MacKinnon, David P.; Holland, Heidi L. (1985). Eyewitness memory enhancement in the police interview: Cognitive retrieval mnemonics versus hypnosis. Journal of Applied Psychology, 70, 401-412.

Compared effectiveness of three interview procedures for optimizing eyewitness memory performance: (a) the 'cognitive interview' based on memory-retrieval mnemonics from current memory theory, (b) the presently controversial hypnosis interview, and (c) the standard (control) police interview. Both the cognitive and hypnosis procedures elicited a significantly greater number of correct items of information from the Ss than did the standard interview. This result, which held even for the most critical facts from the films, was most pronounced for crime scenarios in which the density of events was high. The number of incorrect items of information generated did not differ across the three interview conditions. The observed memory enhancement was interpreted in terms of the memory-guidance techniques common to both the cognitive and hypnosis interviews. Neither differential questioning, time nor heightened subject or interviewer motivation could explain the results

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious /Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and

**Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion.** "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

**1984**

**Bakker, Dirk J. (1984). The brain as a dependent variable. Journal of Clinical Neuropsychology, 6, 1-16.**

The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical, neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

#### **NOTES**

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing

Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right- hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P- type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12).

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post- Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

#### NOTES

This is an abstract of an unpublished Ph.D. dissertation, University of Waterloo, 1984. It won the American Psychological Association Division 30 award for Best Student Paper at the 1984 APA Convention.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

#### NOTES

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-

behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsivity. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsivity generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

Dillon, F. Richard; Spanos, Nicholas P. (1983). Proactive interference and the functional ablation hypothesis: More disconfirmatory data. International Journal of Clinical and Experimental Hypnosis, 31, 47-56.

According to the functional ablation hypothesis, memories for which amnesia has been hypnotically suggested do not interact with other information in memory. This hypothesis was tested in 2 interrelated experiments. In Experiment 1, Ss high and low in hypnotic susceptibility were administered a hypnotic induction procedure and tested on a Brown-Peterson (e.g., Wickens & Gittis, 1974) memory task designed to induce proactive interference (PI). Ss were exposed to 10 blocks of successive 3-word lists. Within each block, all words were strongly related, and, therefore, lists presented early in a block interfered with the retention of lists presented later (PI "buildup"). Following the "buildup" of PI, Ss were administered either a cue to be amnesic for the previous words of a block or a cue to relax. Contrary to the functional ablation hypothesis, the amnesia suggestion did not produce a "release" from PI in high susceptible hypnotic Ss. In other words, the amnesia suggestion did not prevent previously learned material from interfering with newly presented material. Experiment 2 demonstrated that the amnesia cues employed in the Brown-Peterson task produced a reversible recall deficit even though they failed to produce PI "release." These findings are consistent with the results of studies of the functional ablation hypothesis using the retroactive interference paradigms.

1982

Crawford, Helen J. (1982). Cognitive processing during hypnosis; much unfinished business. Research Communications in Psychology, Psychiatry and Behavior, 7, 169-179.

Studies of cognitive processing during hypnosis per se are reviewed suggesting that hypnotically responsive individuals not only experience subjective changes during hypnosis that are seen as often being discontinuous from their normal consciousness but also may exhibit measurable cognitive changes. Evidence (ego functioning changes, enhanced creativity, enhanced imagery processing, etc.) is presented to support the hypothesis that hypnosis may involve a shift in cognitive functioning away from a verbal, detail-oriented strategy towards a more imaginal, non-analytic, holistic- oriented strategy. Limitations of present research and potentially valuable research areas are discussed.

#### NOTES

The author reviews evidence for cognitive changes during hypnosis--evident especially in high hypnotizables but also to some degree in moderate hypnotizables. She concludes that there may be changes in ego functioning, imagery functioning, creativity, and strategy preferences and that high hypnotizables are more flexible in cognitive processing . "The question remains whether or not there are accompanying objectively measurable cognitive changes during hypnosis" (p. 170).

**"In normal waking consciousness, the hypnotically responsive individual is typically found to be more involved in nonhypnotic imaginative activities and experiences (Hilgard, 1979; Tellegen & Atkinson, 1974), more able to image things (for review, see Sheehan, 1979) and daydream vividly and positively (Crawford, 1982), more able to perceive gestalt closure figures (Crawford, 1981), more able to divert attentional process (e.g., Karlin, 1979), and more creative on certain tasks (e.g., P. Bowers, 1979). Experiential reports indicate that it is these very cognitive processes, amongst others, which are perceived to be enhanced or changed during the hypnotic state" (p. 170).**

**"Levin and Harrison (1976) found that hypnosis ego changes occurred most in those individuals who also demonstrated good capacity for adaptive regression in the waking state" (p. 171).**

**"Dave (1979) compared hypnotically induced dreams with rational-cognitive treatment as to their effects on creative problem solving of the problems or projects. 'Conditional support' was given to the significantly stronger effect form the hypnotically induced dreams" (p. 172).**

**There are many investigations of the effect of hypnosis on imagery, with a number of methodological problems. "Self-reports can be criticized on the grounds that they are easily subject to demand characteristics, subject expectations, and social desirability influences. Coe et al. (1980) found order of condition influenced their findings, while Crawford (1979) found that imagery rating scales suffered from a low ceiling effect among high imagers" (pp. 172-173).**

**"Surprisingly, while the field of cognitive psychology has devoted extensive attention to the study of the enhancing effects of imagery upon memory, few of their paradigms have been applied to the study of hypnotic processing of information. Germaine to the field of hypnosis are three operational approaches to the investigation of imagery: (a) the manipulation of the availability of imagery as a coding device, such as varying the degree to which stimuli may evoke imagery, (b) the manipulation of the processing strategy in cognitive performance, such as asking subjects to use imagery in the mediation of stimuli information, and (c) the comparing of information processing strategies and performance in subjects who are low and high in imagery ability (Paivio, 1971)" (p. 173).**

**"Several studies (Nomura, Crawford, & Slater, 1981; Walker, Garrett, & Wallace, 1976; Wallace, 1978) found that a very few high hypnotizables can successfully produce eidetic imagery, using nonfakable stereograms, during hypnosis even though they cannot during waking. Spanos, Ansari, & Stam (1979) were unable to replicate these findings. It was only self-reported childhood eidetikers who exhibited eidetic imagery during hypnosis, and then only a few. This research suggests that hypnosis permits certain individuals to access the "lost" ability to image eidetically, possibly through a shift in cognitive strategies" (p. 174).**

**"An underlying emphasis of this paper is the need for hypnotic investigators to integrate findings from cognitive psychology into their research, as well as apply the many new approaches to understanding brain functioning which are now being developed, in their search for a better understanding of what occurs during hypnosis" (p. 176).**

**1980**

**Ericsson, K. Anders; Simon, Herbert A. (1980). Verbal reports as data. Psychological Review, 87 (3), 215-251.**

**NOTES**

**Proposes that verbal reports are data and that accounting for them, as well as for other kinds of data, requires explication of the mechanisms by which the reports are generated, and the ways in which they are sensitive to experimental factors (instructions, tasks, etc.). Within the theoretical framework of human information processing, different types of processes underlying verbalization are discussed, and a model is presented of how ss, in response to an instruction to think aloud, verbalize information that they are attending to in short-term memory (STM). Verbalizing information is shown to affect cognitive processes only if the instructions require verbalization of information that would not otherwise be attended to. From an analysis of what would be in STM at the time of report, the model predicts what could be reliably reported. The inaccurate reports found by other research are shown to result from requesting information that was never directly heeded, thus forcing Ss to infer rather than remember their mental processes. (112 ref)**

**1979**

**Karlin, Robert A. (1979). Hypnotizability and attention. Journal of Abnormal Psychology, 88 (1), 92-95.**

**An attentional explanation of cognitive hypnotic phenomena (e.g., hallucinations and amnesia) based on the ability to shift the pertinence of stored information was developed. It was hypothesized that individuals who were successful at a difficult attentional task would also succeed on cognitive hypnotic items. The Harvard Group Scale of Hypnotic Susceptibility, Form A was used to assess hypnotizability. To measure pertinence-shift ability, two tape recordings made by the same person were played through a single sound source. One tape was designated the target tape. Amount remembered and perceived task ease were summed to form an additive score of task success. Subjects above the median on the task were assigned to the good pertinence shift group (GP); those below the median were assigned to the poor pertinence shift group (PP). As predicted, GP subjects passed significantly more cognitive hypnotic items than did PP subjects ( $p < .05$ ). When task difficulty and compliance were controlled for, the results remained significant ( $p < .05$ ). These results were replicated in a second study.**

**NOTES**

**A brief version of this paper was presented at the Annual Meeting of the Society for Clinical and Experimental Hypnosis, Asheville, North Carolina, October, 1978**

**1978**

**Kihlstrom, John F. (1978). Context and cognition in posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 26, 246-267**

Coe's (1978) contextualist analysis of posthypnotic amnesia appears to be predicated on the mistaken assumption that the amnesic S actually remembers the critical material. This position leads Coe to place inappropriate emphasis on the social context in which amnesia takes place and to focus on the social-psychological processes that might lead Ss to say that they do not remember something, be believed by others, and even believe themselves. An alternative view is outlined which affirms the surface similarities between posthypnotic amnesia and other failures of memory. From this vantage point, the investigator seeks to understand the cognitive processes that produce subjectively compelling disruptions of memory retrieval, whether found in association with hypnosis or in other circumstances.

1976

Coe, William C.; Basden, B.; Basden, D.; Graham, C. (1976). Posthypnotic amnesia: Suggestions of an active process in dissociative phenomena. Journal of Abnormal Psychology, 85, 455-458.

A retroactive inhibition design was used to examine the process of posthypnotic amnesia. The results supported the notion that "forgotten" material is as available to amnesic subjects at some level as it is to nonamnesic subjects. Further, so-called forgetting appears to be the result of an active process, that is, something the subject does. Implications for understanding dissociative phenomena in general are discussed.

Krippner, Stanley; Bindler, P. R. (1974). Hypnosis and attention: A review. American Journal of Clinical Hypnosis, 16 (3), 166-177.

Two seemingly contradictory formulations in hypnosis literature are reviewed: that hypnotic induction can produce a condition of diffuse attention, and that hypnotic induction can produce a condition of selective attention. It is concluded that either condition can be produced, depending on the set, level of arousal, individual differences, type of task to be performed, type of instructions, etc. It is also suggested that diffuse attention and selective attention be kept conceptually distinct since the terms may reflect a series of related processes rather than a dichotomy. (Authors' abstract.)

Kihlstrom, J. F.; Edmonston, W. E., Jr. (1971). Alterations in consciousness in neutral hypnosis: Distortions in semantic space. American Journal of Clinical Hypnosis, 13, 243-248.

30 highly hypnotizable Ss were equally divided into three groups, equated for age, sex and hypnotic susceptibility. A semantic differential scale was administered to each S in waking, individual sessions. An oral form of the same scale was administered during: (a) hypnosis (E), (b) waking -- post hypnosis (C1), and (c) waking -- no hypnosis (C2). All groups showed significant change between administrations of the scale; E showed more change than C1, and the latter more

than C2. Ratings of "My Self" changed toward the negative pole in the evaluative factor. Results were interpreted as indicating a distortion in semantic space and an alteration in ego-state occurring spontaneously with hypnosis.

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

#### NOTES

The authors used High hypnotizables (SHSS>9) in this investigation.

1969

Hunt, Sonja M. (1969). The speech of the subject under hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 209-216.

Attempts to objectify changes taking place in the speech of 12 undergraduates under hypnosis as compared with their waking speech. A series of open-ended questions was asked in the waking and hypnotized states and the responses compared. Results indicate that the latency of response may be longer, the rate of speech slower, and the number of words in the response fewer under hypnosis. The rate of speech of E, however, also differed significantly between Ss in waking and hypnotized conditions. It was therefore not possible to attribute the speech changes only to the hypnotized state. They could have arisen from E's differential verbal treatment of hypnotized and waking Ss. The need for future research and its nature are discussed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Graham, K. R.; Patton, Ann (1968). Retroactive inhibition, hypnosis, and hypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 16, 68-74.

**THE RELATIONSHIP OF HYPNOSIS AND POSTHYPNOTIC AMNESIA TO RETROACTIVE INHIBITION. 4 GROUPS OF 10 STUDENTS EACH LEARNED**

LISTS OF ADJECTIVES IN A RETROACTIVE INHIBITION PARADIGM. 2 GROUPS LEARNED THE INTERVENING LIST WHILE THEY WERE HYPNOTIZED. SS OF 1 OF THESE WERE GIVEN INSTRUCTIONS FOR POSTHYPNOTIC AMNESIA, WHILE SS OF THE OTHER WERE TOLD TO RECALL WHAT THEY HAD LEARNED UNDER HYPNOSIS. THE SAVINGS AND RECALL SCORES OF BOTH GROUPS FOR ITEMS OF THE ORIGINAL LIST WERE NOT DIFFERENT FROM A 3RD GROUP WHICH HAD LEARNED ALL 3 LISTS IN THE WAKING STATE. ALL GROUPS SHOWED SUBSTANTIAL RETROACTIVE INHIBITION WHEN COMPARED TO CONTROLS WHO HAD LEARNED NO INTERVENING LIST. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kline, Milton V. (1968). Sensory hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 16, 85-100.

ABSTRACT: SENSORY HYPNOANALYSIS AS A PSYCHOTHERAPEUTIC APPROACH EMPHASIZES THE REORGANIZATION OF COGNITIVE CORRELATES OF SENSORY AND MOTOR COMPONENTS ENCOUNTERED IN BEHAVIORAL DISORDERS. NONVERBAL STIMULATION IS UTILIZED IN ELUCIDATING AREAS OF SENSORY DEPRIVATION AND SENSORY OVERLOADING WHICH APPEAR LINKED TO DISORGANIZING OR INTERFERING EFFECTS UPON THE BEHAVIORAL PROCESS. (SPANISH + GERMAN SUMMARIES) (16 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1957

Barber, Theodore Xenophon (1957). Hypnosis as perceptual-cognitive restructuring: I. Analysis of concepts. Journal of Clinical and Experimental Hypnosis, 5 (4), 147-166.

NOTES

Summary

1. 'Trance' involves a selective and relative inattention to internal and external stimulation.
2. Hypnosis involves one type of 'trance' behavior but hypnosis differs from other types of 'trance' in that it is an interpersonal relationship in which one person, the operator, restructures the 'perceptions' and conceptions of the other person, the subject.
3. The operator can restructure the thoughts and 'perceptions' of the 'good' hypnotic subject because (a) the subject is relatively detached and inattentive to his self and his surroundings and (b) the subject is 'set' -- he is ready and willing -- to accept the operator's words as true statements and to 'literally think as the operator wants him to think.'
4. 'Perceptual-cognitive restructuring' and not 'suggestion' is the essential element in hypnosis.

5. We can begin to understand hypnosis and the phenomena of hypnosis by one general principle: the hypnotic subject behaves differently because he 'perceives' and conceives differently. The behavior of the hypnotic subject is in strict accordance with his altered conceptions of his self and his surroundings" (p. 162).

1953

Beigel, Hugo B. (1953). Hypnosis as an instrument in psychological experimentation. Journal of Clinical and Experimental Hypnosis, 1, 13-17. (Abstracted in Psychological Abstracts, 53: 6385)

**Author's Summary -** In this paper various areas of psychological research were pointed out in which experimentation with hypnotized subjects has been or could be employed to advantage. It is held that there are several problems which offer no point of attack unless hypnosis is used and several others which, in view of their complexity, cannot be effectually approached by the classic method of experimentation. Specifically mentioned were the areas of thinking, learning, perception, apperception, imagination, and emotion, in which the hypnotic experiment proves valuable when either amnesia for preceding experiences, isolation from concomitant influences, or the introduction of an as-if situation is necessary. While it is undeniable that some of the experiments cited need improvement if their results are to be considered reliable -- a remediable shortcoming they share with most first experiments -- it is also evident that the use of hypnosis in experiments offers an approach to some areas that have thus far been inaccessible. Needless to say, hypnosis should not be used when similar results can be as readily obtained by the customary experimental method, but as Gidro-Frank and Bull (10) state, our scant knowledge of the nature of the hypnotic state should not bar it from use as a scientific tool. Still the only one available technique to solve a problem. It must be added, however, that the experimenter must be thoroughly familiar with the technique but also to their physical and mental health.

Israeli, Nathan (1953). Experimental study of projection in time: I. Outlook upon the remote future--extending through the quintillionth year. Journal of Clinical and Experimental Hypnosis, 1 (2), 49-60.

**Author's Summary -** This report on research now under progress is concerned with time projection and with hypnotic imagination and dreams of projection into varying remote future periods extending to the very distant quintillionth year. The work proceeded in stages including (a) orientation to the general procedure, (b) hypnotic future autobiographic material (age progression), (c) going successively from one future period to another from the end of the 21st century through the quintillionth year -- devoting usually one experimental session to any future period. This paper reports on the self-ratings for hypnosis depth reached by the subjects, their description of life, things, and events, in connection with each projection into a future period, and their visual or nonvisual imagery.

1. Self-ratings for hypnosis depth show with one insignificant exceptional instance that all subjects were always at least at the trance-level or in a deeper hypnotic

stage. Individual differences in level reached were indicated with a general trend towards more profound trance in later sessions. The deeper levels on the scale used were not described by the experimenter. Each subject gave those levels his own interpretation in setting up his own scale.

2. The time projections are to be explained in terms of changing space-time framework, social topographic reorientation, recentering, and non-conventional time centering.

3. Hypnotic suggestion to imagine and dream about being suddenly transported and projected into a specified future period is followed by rapid recentering as the subjects follow out the suggestions.

4. Although no specific instructions or sets of suggestions were included about the nature of their anticipations, the description of life, things, and events of any future period was on a predominant impersonal level, with the personal aspects in the background. Nonetheless, the suggestion of transportation and projection into a future period leads to various changes in one's present-situation perceptions, imagery, space-time framework, and system of concepts and beliefs. With a change in time reference, the description of life, things, and events is adjusted to the era or epoch specified. This involves description of technological, biological, psychological, and anthropological changes. The extinction of mankind is anticipated in the very remote future by some subjects. The earth and the moon are expected to disappear by collision or otherwise.

5. Individual analysis shows that the descriptions of the different future periods approximately fit into patterns and are not discontinuous. An individual subject's descriptions beginning with the first future period and taking in all the other periods show constructive or catastrophic trends or cyclical variation between both extremes. Descriptions of life, things, and events of each future period in the main change in a constructive or in a catastrophic direction. They are continuous but with certain discontinuities and incoherence.

6. A geocentric orientation and a heliocentric preoccupation are invariant and predominant. The subjects are unable to abandon their basic planetary orientation or schemata.

7. Colored imagery includes mainly the primary colors. They comprise both expanse colors and surface colors. Auditory imagery is quite frequent. There are also references to olfactory, tactile, and kinesthetic imagery. Thermic imagery becomes increasingly prominent in the more remote future periods when the sun's heat is described as more intense. Imagery changes with the outlook patterns and appears to have personal, structural, and social determinants. One subject's imagery was macropic

## COMMUNICATION

Spanos NP. De Groh M. Structure of communication and reports of involuntariness by hypnotic and nonhypnotic subjects. *Perceptual & Motor Skills* 1983;57(3 Pt 2):1179-86

We hypothesized that phrasing a communication to move the arm as either a suggestion, a directive, or an instruction would differentially affect subjects' interpretations of the movement. 45 hypnotic and 45 nonhypnotic subjects who responded positively to a suggestion tended to describe the movement as involuntary both on open-ended questionnaires and later on an explicit involuntariness scale. Subjects given a directive to move the arm, or an instruction to reach for a pencil, rarely described their experience as involuntary on the open-ended questionnaires but sometimes rated it as involuntary on the scale. The ratings of involuntariness by subjects given suggestions seem likely to reflect interpretations made concurrently with the movement suggested. However, such ratings by subjects given directives or instructions are likely to reflect retrospective interpretations cued by the instrument used to assess subjects' experiences.

1998

Vandenberg, Brian (1998). Infant communication and the development of hypnotic responsivity. International Journal of Clinical and Experimental Hypnosis, 46 (4), 334-350.

The research on the development of hypnotic responsivity indicates that it emerges, ex nihilo, sometime after the age of 3. The measures used to assess hypnotic responsivity rely on complex verbal instructions, thus precluding investigation of infancy. Recent research on infancy, however, suggests that the ontogenesis of hypnotic responsivity is likely to be found in fundamental human capacities that emerge in the first weeks and months of life. The aims of the article are threefold: (a) to demonstrate that infants possess capacities on the nonverbal plane of communication that are analogous to those required for hypnosis; (b) to identify situations in infancy that are analogous to the hypnotic context; and (c) to examine dispositional and relational attributes in infancy that may account for later individual differences in hypnotic responsivity.

Erickson, James C. (1994, October). The metaphors of pain and therapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES:

Metaphors of Pain may be: 1. Anatomically or physiologically descriptive. 2. Extremely common, especially in chronic pain syndromes. 3. Unrecognized by many therapists. 4. Often pithy, succinct phrases (like puns). "Pain in the neck, pain in the butt" may reflect symbolic meaning of the pain, which if attended to may benefit the patient.

Head and neck pain metaphors include such things as "a headache, a pain in the neck, grit your teeth, and grin and bear it" (related to bruxism and TMJ syndrome). Also pertains to post-rhinoplasty pain in the nose.

Back pains: upper thoracic pain "a load on my shoulders" like Atlas carrying the world. Or "a cross to bear" which implies uncomplaining, but bearing a heavy burden. Low back pain - a "weak spine," or "spineless." With laminectomy, a "yellow streak up the back."

Dermatitis: Pruritis or dermatitis when "something gets under the skin."

Chest pains when "sick at heart."

Nagging, nasty situation is a "thorn in my side."

"A stab in the back" when wronged by society or a person. "Pain in the ass" may be a spouse or a situation. [Other material provided by the speaker is not reported here.]

1993

Dabic-Jeftic, Mirjana; Barnes, Graham (1993). Event-related potentials (P300) during cognitive processing in hypnotic and non-hypnotic conditions. Psychiatria Danubina, 5 (1-2), 47-61.

In this study authors investigated to find out if there were any specific changes of event related potentials in subjects before hypnosis, entering hypnosis, in deep hypnosis and leaving hypnosis, and to compare mental activities of subjects such as capability of correctly calculating and remembering the exact number of unexpected stimuli delivered by stimulator with their verbal or nonverbal reports during any of the conditions investigated. The methodology was of testing the cognitive evoked potentials elicited by auditive stimuli, using the oddball paradigm. Obtained results show that the most constant values of shortest latency and highest amplitudes of the cognitive waves, especially P300 were found during deep hypnosis. All five subjects in the investigation answered with the exact number of delivered target stimuli only after deep hypnosis. Conversely, in all other conditions their answers were approximate to the correct number of delivered target stimuli. (Author abstract.)

NOTES:

In this experiment, 5 adult volunteers were told to attend to one of two tones delivered through headphones. The tones were randomly delivered but one occurred 85% of the time (the 'frequent, non-target tone') and the other occurred 15% of the time (the 'rare, target tone'). The subjects were to notice, remember, and count the target tone. Measures were taken during five periods: pre-hypnosis, entering hypnosis, deep hypnosis, leaving hypnosis, and post-hypnosis.

Some subjects had extensive hypnosis experience prior to the experiment; others had little.

The EEG P300 wave was sensitive to condition. Latency of P300 was significantly shorter in deep hypnosis compared with other periods. Higher amplitude of P300 also occurred during deep hypnosis compared with other periods. (Notes taken from secondary reference, Ericksonian Newsletter.)

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

1992

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

Schacter, Daniel L. (1992). Understanding implicit memory. American Psychologist, 47 (4), 559-569.

Dissociations between implicit and explicit memory have attracted considerable attention in recent memory research. A central issue concerns whether such dissociations require the postulation of separate memory systems or are best understood in terms of different processes operating within a single system. This article presents a cognitive neuroscience approach to implicit memory in general and the systems-processes debate in particular, which draws on evidence from research with brain-damaged patients, neuroimaging techniques, and nonhuman primates. The article illustrates how a cognitive neuroscience orientation can help to supply a basis for postulating memory systems, can provide useful constraints for

processing views, and can encourage the use of research strategies that the author refers to as cross-domain hypothesis testing and cross-domain hypothesis generation, respectively. The cognitive neuroscience orientation suggests a complementary role for multiple systems and processing approaches.

**NOTES:**

Implicit memory is an unintentional, nonconscious form of retention that can be contrasted with explicit memory, which involves conscious recollection of previous experiences" (p. 559). The author provides examples of memory dissociations, some of them from neuropathology and some from experimental psychology.

Different brain systems may account for some of the dissociations. For example, there are "studies of patients who show relatively intact access to perceptual-structural knowledge of words or objects, despite severely impaired access to semantic knowledge of the same items. ... Similarly, studies of lexical processing using positron emission tomography (PET) indicate that visual word form information and semantic information are handled by separate brain regions. ... These kinds of observations suggest the existence of a perceptual representation system (PRS)" (p. 561). .

"Marsolek et al. (1992) drew on independent evidence from cognitive neuroscience concerning the characteristics of the hemispheres to argue that a left hemisphere subsystem computes abstract word form representations that do not preserve specific features of particular inputs, whereas a right-hemisphere subsystem computes perceptually specific word form representations (in the present terminology, both could be viewed as PRS subsystems)" (p. 562)..

"Our approach to auditory implicit memory was guided by neuropsychological studies of patients who exhibit dissociations between access to form and semantic information in the auditory domain that are similar to those discussed earlier in the visual domain. ... More specifically, patients with so-called word meaning deafness are unable to understand spoken words (e.g. Ellis & Young, 1988). However, they can repeat spoken words quite well and show some ability to write words to dictation, thus suggesting that they can gain access to stored auditory word form representations. ... Rather more frequently encountered are patients with transcortical sensory aphasia (e.g. Kertesz, Sheppard, & MacKenzie, 1982), who exhibit spared abilities to repeat spoken words and write them to dictation, together with impaired comprehension. In these patients, however, the comprehension deficit is also observed in other modalities, thus indicating damage to the semantic system itself.

"These dissociations point toward the existence of a PRS subsystem that handles information about auditory word forms separately from semantic information (cf. Ellis & Young, 1988)" (p. 565)..

"Various investigators have argued that auditory processing differs in the two hemispheres: The left hemisphere relies on categorical or abstract auditory information and operates primarily on phonemes, whereas the right hemisphere relies more on 'acoustic gestalts' and operates primarily on prosodic features of speech, including voice information... In addition, studies of normal subjects using dichotic listening techniques have shown a left-ear (i.e., right-hemisphere)

advantage for certain types of voice information, in contrast to the usual right-ear advantage for speech" (p. 566).

1991

Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.

**NOTES:**

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginative sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

Spiegel, David (1991, August). New directions in traumatic stress research. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

**NOTES**

Trauma is the experience of being made into an object of someone else's rage. It is a sudden discontinuity in experience: our physical and mental state can be changed radically. The experience of loss of control is what is most horrifying, more than fear of death. Guilt, (blaming oneself) helps deny the loss of control. People who

experience trauma distance from the information but the cortex maintains the traumatic memories.

Author reviewed literature on effective interventions with trauma victims. 1. Harbor & Pennebaker: Contrast how earthquake victims can talk about it but rape victims often are isolated. The importance of having someone listen raises the question of usefulness of only writing about the trauma. 2. Greenberg: Studied 103 trauma cases; employed a clever methodology, using 2 control groups (but it is difficult for the imaginary control group to be free of associating to their own traumas). I believe the health findings, but it troubles me that there were intrusions (thoughts); the control group utilization [of health services?] went up. 3. Kilpatrick: It is important not to blame the victim for being traumatized. But there may be some people who for sociological or other reasons do not get out of dangerous situations. 4. Terri Orbach: There is a process of "going public" about the trauma, like in Alcoholics Anonymous disclosures. Trauma victims create an account and they go to someone else to tell about it.

Summary of what seems important about treatment: There are three means of working with trauma, with thinking, writing, and talking. If you just think but don't talk, assault rate goes up (Pennebaker); and if you don't talk with someone else you feel worse physically. In simply writing about the trauma, there may be an increase of mental intrusions, or avoidance. What seems to be beneficial is not just making sense to oneself about the experience cognitively, but the traumatized person must get feedback from another individual that they are not transformed as a person.

1990

Ovens, H.; Talbot, Y.; Harris, F.; Newman, B. (1990). Hypnosis training enhances communication skills. Medical Teacher, 12 (3-4), 357-361

NOTES:

Found in a controlled study that family medicine residents who went through an introductory hypnosis workshop made more comments on their patients' nonverbal behavior, helping to reveal a patient's hidden agenda.

1988

Kirmayer, Laurence J. (1988). Word magic and the rhetoric of common sense: Erickson's metaphors for mind. International Journal of Clinical and Experimental Hypnosis, 36 (3), 157-172.

Milton Erickson did not produce a systematic theory of psychotherapy. His talent was as a storyteller, inventing metaphors and more extended healing fictions for his patients. A great many of Erickson's cases did not involve hypnosis in any conventional sense of the term. He used a wide range of persuasive rhetorical forms to encourage behavioral change in his patients. Nevertheless, taken together his work represents a significant shift in paradigm from prevailing schools of psychotherapy. Erickson captured the power of word magic in the language of common sense. This coupling of magical power with folk psychology accounts for much of his current popularity. Attempts to experimentally test his techniques are

likely to be unsuccessful because these techniques were unique inventions tailored to the individual idiosyncrasies of patient and context. Although regularities in his work can be found, Erickson's most important contributions are not techniques but changes in the values or ethos under which psychotherapy is conducted.

## NOTES

This paper focuses Erickson's implicit models of mind and the values they carry. "It is here that Erickson made his most significant contribution to the general practice of psychotherapy . Erickson avoided systematization. His writing is unusually anecdotal, even for psychotherapy (Erickson, 1980; Vol IV, passim). Erickson's writing format consists of 'thin' case descriptions, freely recycled in parable or homiletic form to serve his immediate rhetorical purpose. ... For Erickson, flexibility and eclecticism were not signs of a lack of coherence but a spirited rejection of rigid dogma that needlessly limited therapeutic possibilities" (pp. 158-59).

Erickson used language of the common man rather than a technical vocabulary, even when speaking of 'hypnosis' or 'trance' or 'the unconscious.' He called his approach 'naturalistic' and viewed hypnotic phenomena as an extension of normal experience and behavior. His common sense descriptions of events and techniques are easily understood in general terms. "Erickson took magic and dressed it in the familiar clothes of common sense. Some of his less critical followers, however, seem intent on taking common sense and dressing it in the cloak of magic" (p. 163).

Erickson used metaphors as a way of actively involving the patient in conceptual, affective, and sensory qualities of experiences, i.e. as a "tool for thought" (p. 164).

In attempting to understand Erickson's psychotherapy, one must note his "elastic use of the word 'hypnosis.' Sometimes Erickson uses the term narrowly with a focus on the elicitation of trance or dissociative phenomena, but more often he uses it broadly to mean any state of absorption" (p. 165). For him, this was "\_a state of special awareness characterized by a receptiveness to ideas\_" [Erickson, 1985, p. 223, emphasis in original]. By this he does not mean exclusively the classic suggestion effect where motor acts are experienced as involuntary (Evans, 1967). ... The hypnotic subject exhibits a "\_special willingness to examine ideas for their inherent values\_" [p. 224, emphasis in original]. ... For Erickson, any move in the direction of increased absorption is an instance of hypnosis. Dissociation accounts for a great deal but not all of hypnotic behavior" (p. 165). That is why he used the word hypnosis to describe heightened attention that might occur when someone is surprised. But in fact, his published cases include many other kinds of interventions, such as reframing, symptom prescription, etc.--forms of influence and persuasion used by many therapists who do not consider themselves working with hypnosis.

Erickson also emphasized that hypnosis enables one to work with 'the unconscious.' "Ordinarily, we view our consciousness as the causal agent of doing while our unconscious is the place where things just 'happen to us.' Erickson reversed this attribution, emphasizing the unconscious as the agent of active control working for the benefit of the patient while consciousness adopts the attitude of 'wait and see.' This leads consciousness into reverie--the state where images and events move of their own accord, animated by emotion, before the 'passive audience' of consciousness" (p. 167). So Erickson viewed hypnosis as liberating the unconscious.

There was healing potential in helping the ego to relinquish "rigid control over the creative and benevolent processes of the unconscious" (p. 168). From this theoretical position, the patient and therapist are seen as allies and psychotherapy is a collaboration; there is no need for the Freudian concepts of resistance and defense. "Erickson's metaphors for hypnotherapy link it with normal processes of learning and imagining. His image of the unconscious as a storehouse of creative potential supports a non-pathologized view of man amid all his troubles and craziness. In contrast to psychiatry's current preoccupation with nosology, and the emphasis of psychoanalysis on the dimensions of human frailty, Erickson adopted a non-pathologizing attitude. He did not deny his patient's difficulties but neither was he excessively fascinated by them. He recognized that healing depends not on cataloguing deficiency but on fully mobilizing the person's intelligence, imagination, and integrity. This message of therapeutic optimism was balanced by his own example of the benefits and limitations of hypnotherapeutic practice" (p. 170).

Kuttner, Leora (1988). Favorite stories: A hypnotic pain-reduction technique for children in acute pain. American Journal of Clinical Hypnosis, 30, 289-295.

For young children (aged 3 to 6-11) with leukemia, a hypnotic trance consisting of a child's favorite story was found to be statistically more effective than behavioral distraction and standard medical practice in alleviating distress, pain, and anxiety during painful bone marrow aspirations. Measured by a behavioral checklist and judgment ratings by physician, parent, nurse, and observers, the favorite-story hypnotic technique had immediate therapeutic impact on these young patients, and the reduction in distress, pain, and anxiety was sustained on subsequent medical procedures. Self-report measures, however, were nonsignificant.

Spanos, Nicholas P.; Cross, Wendi P.; Lepage, Mark; Coristine, Marjorie (1986). Glossolalia as learned behavior: An experimental demonstration. Journal of Abnormal Psychology, 95, 21-23.

60 Ss listened to a 60-s sample of glossolalia (defined to them as pseudolanguage) and then attempted to produce glossolalia on a 30-s baseline trial. Afterward, half of the Ss received two training sessions that included audio- and videotaped samples of glossolalia interspersed with opportunities to practice glossolalia. Also, live modeling of glossolalia, direct instruction, and encouragement were provided by an experimenter. Both the trained subjects and untreated controls attempted to produce glossolalia on a 30-s posttest trial. About 20% of subjects exhibited fluent glossolalia on the baseline trial, and training significantly enhanced fluency. Seventy percent of trained subjects spoke fluent glossolalia on the posttest. Our findings are more consistent with social learning than with altered state conceptions of glossolalia.

Coe, William C.; Scharcoff, J. A. (1985). An empirical evaluation of the neurolinguistic programming model. International Journal of Clinical and Experimental Hypnosis, 33 (4), 310-318.

The neurolinguistic programming hypothesis that most people have a preferred way of dealing with the world -- a primary representational system -- was tested. 50 Ss were evaluated for sensory modality preference in 3 ways: (a) they chose among written descriptions using either visual, auditory, or kinesthetic wording (preference); (b) their eye movements were recorded during an interview; and (c) their verbal responses were scored for sensory predicates. The results did not support neurolinguistic programming theory in that preference of 1 modality on 1 measure did not relate to the same modality on the other measures as would be expected if primary representational systems were characteristic of the sample. Other studies have shown mixed results. The conclusion seems warranted that a good deal more empirical support is needed before the positive therapeutic claims of neurolinguistic programming proponents can be taken seriously.

Spanos, Nicholas P.; de Groh, Margaret; Weekes, John R. (1984). Involuntariness and attributions: A reply to Zamansky and Bartis. [Comment/Discussion] .

#### NOTES

The authors take the position "that hypnotic subjects (like almost everyone else) retain control over their behaviour (Spanos, 1982). These subjects sometimes define (i.e., interpret) their responses as involuntary, because this interpretation is sometimes fostered and legitimated by contextual demands. However, interpretations of involuntariness do not mean that purposeful, goal-directed actions have been somehow transformed into automatic, nonvoluntary happenings" (p. 54).

1982

Chertok, Leon (1982). The unconscious and hypnosis. International Journal of Clinical and Experimental Hypnosis, 30 (2), 95-107.

This paper reviews Soviet approaches to the unconscious and to hypnotic phenomena, before examining psychoanalytic theories of hypnosis which are generally based on transference. The author believes the existing theories are inadequate, arguing that there is a psychophysiological dimension to hypnosis; but what unconscious processes does this conceal? Psychoanalysis opened one road to the unconscious, but affect, nonverbal communication, and psychophysiological process are still uncharted territories towards which hypnosis may yet prove to be another royal road.

#### NOTES

The author concludes, "hypnosis and the unconscious ... are closely linked. Historically, experiments on posthypnotic suggestion were in fact the starting point for the discovery of the unconscious. Posthypnotic suggestion is in effect one of the most irrefutable proofs that psychical contents can influence behavior, albeit eluding the subject's consciousness.

"In this paper, the present author provides a description of Soviet researchers' conceptions of the unconscious, and of the point of view from which they approach

hypnotic phenomena. Psychoanalytic theories of hypnosis are then presented, which are essentially based on transference. It is shown why this notion seems to the present author powerless to account for the specific nature of the hypnotic relationship. There is, in effect, a psychophysiological dimension to hypnosis. It lies at the crossroads between the instrumental and the relational dimension. But nothing is known about what unconscious processes hide at the psychophysiological level. Psychoanalysis has brought to light the laws governing the functioning of unconscious representations. But the realm of the affect, the nonverbal communication, and bodily processes still remain beyond our knowledge. This is a hidden side of the unconscious, in relation to which hypnosis may serve as another 'royal road'" (pp. 104-105).

Hong, G. K.; Skiba, A. H.; Yepes, E.; O'Brien, R. M. (1982). Effects of ethnicity of hypnotist and subject on hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 30 (1), 23-31.

The effect of ethnic similarity of hypnotist and hypnotic S on hypnotic susceptibility was examined in a 2-part study. The first part of the study compared the performance of Anglo versus Chinese hypnotists on Anglo versus Chinese Ss. In the second half of the study, Anglo and Hispanic Ss and hypnotists were compared using the same Anglo hypnotist-S control group. In total, 112 volunteers were administered the Stanford Hypnotic Susceptibility Scale, Form A, of A. M. Weitzenhoffer and Hilgard (1959), with 16 Ss (8 males and 8 females) in each condition. A 2 x 2 ANOVA was performed on the data for each part of the study. Ethnic similarity of hypnotist and S was found not to enhance hypnotic susceptibility. The implications of these results are discussed in relation to the assumed superiority of homoethnicity in psychotherapy

Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.

Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

1980

Ericsson, K. Anders; Simon, Herbert A. (1980). Verbal reports as data. Psychological Review, 87 (3), 215-251.

**NOTES:**

Proposes that verbal reports are data and that accounting for them, as well as for other kinds of data, requires explication of the mechanisms by which the reports are generated, and the ways in which they are sensitive to experimental factors (instructions, tasks, etc.). Within the theoretical framework of human information processing, different types of processes underlying verbalization are discussed, and a model is presented of how ss, in response to an instruction to think aloud, verbalize information that they are attending to in short-term memory (STM). Verbalizing information is shown to affect cognitive processes only if the instructions require verbalization of information that would not otherwise be attended to. From an analysis of what would be in STM at the time of report, the model predicts what could be reliably reported. The inaccurate reports found by other research are shown to result from requesting information that was never directly heeded, thus forcing Ss to infer rather than remember their mental processes. (112 ref)

Zeig, Jeffrey K. (1980). Symptom prescription and Ericksonian principles of hypnosis and psychotherapy. American Journal of Clinical Hypnosis, 23, 16-22.

The technique of symptom prescription is used by therapists with diverse theoretical backgrounds. Using three historical case examples, the use of symptom prescription is explored from the perspective of three principles of hypnosis and psychotherapy espoused by Milton H. Erickson: (1) meeting the patient within his frame of reference, (2) using the patient's own behavior and understandings to make small therapeutic modifications, and (3) eliciting the cure from the patient in a manner that allows the opportunity for patient-initiated change.

1978

Schumann, John H.; Holroyd, Jean; Campbell, Russell N.; Ward, Frederick A. (1978). Improvement of pronunciation under hypnosis: A preliminary study. Language Learning, 28, 143-148.

This paper reports an experiment which was designed to determine whether foreign language pronunciation could be improved through hypnosis. Twenty subjects were first given the Harvard Group Scale of Hypnotizability to familiarize them with the state of hypnosis. In the second session each subject was individually tested on his/her ability to pronounce Thai words under three conditions: Baseline, Hypnosis, and Post- Hypnosis. For each experimental condition the subjects heard and repeated the stimulus items on one of three lists of 15 Thai words. The subjects' responses were later evaluated by a native Thai linguist. The results indicate that deeply hypnotized subjects (as defined by self-reported depth) performed significantly better than less well hypnotized subjects.

#### **NOTES:**

**Guiora (1972) suggested that pronunciation of a foreign language is more difficult than vocabulary, syntax, and grammar skills because it requires modifying a basic method of self-identification, the way one sounds. He introduced a concept of language ego, analogous to body ego" (p. 143). During hypnosis subjects were evaluated for subjective estimate of hypnotic depth by asking them to "visualize themselves on a stairway in which the top (zero) represented their normal waking state and the bottom (ten) a very very deep relaxed state of hypnosis, and to report the number of the step on which they stood" (p. 146). Thus, "it was not assumed that administration of an induction assured a hypnotized subject, nor was it assumed that subjects rated highly hypnotizable were in a deep trance at the time Thai words were being spoken" (p. 146).**

#### **1977**

**Buckner, Linda G.; Coe, William C. (1977). Imaginative skill, wording of suggestions and hypnotic-susceptibility. International Journal of Clinical and Experimental Hypnosis, 25, 27-36.**

**3 groups of 20 s based on preselected imaginative capacity were administered either a hypnotic susceptibility scale containing item wording that suggested a goal-directed fantasy or one that did not. Preselected imaginative ability did not predict hypnotic susceptibility or the production of goal-directed fantasies during hypnosis. However, Ss who received the hypnotic scale containing item wording that suggested goal-directed fantasies reported more goal-directed fantasies than Ss who received the other scale. Limitations of the study are discussed and the causal role of goal-directed fantasy in hypnotic responsiveness is questioned.**

#### **1976**

**Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, 18, 153-171.**

**The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.**

**Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it! American Psychologist, 29, 785-795.**

#### **1974**

Weitzenhoffer, Andre M. (1974). When is an 'instruction' an 'instruction?'. International Journal of Clinical and Experimental Hypnosis, 22 (3), 258-269.

In the course of validating with 100 undergraduate Ss the concept of a "classical suggestion-effect" (i.e., the existence of a class of nonvoluntary behaviors elicited by communications intended to serve as traditional "suggestions"), evidence was incidentally obtained showing that many "instructions" given to presumably hypnotized Ss also function like "suggestions." In these circumstances it is not possible to state a priori that a verbal communication will function as an "instruction" rather than as a "suggestion." Such a statement can be made with certainty only a posteriori, on the basis of the nature of the resulting behavior. The implications of this finding for research and for the clinical uses of hypnotic suggestion are discussed. (German, French & Spanish summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)

NOTES

1:

Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703.

NOTES

2:

This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

1971

Kihlstrom, J. F.; Edmonston, W. E., Jr. (1971). Alterations in consciousness in neutral hypnosis: Distortions in semantic space. American Journal of Clinical Hypnosis, 13, 243-248.

30 highly hypnotizable Ss were equally divided into three groups, equated for age, sex and hypnotic susceptibility. A semantic differential scale was administered to each S in waking, individual sessions. An oral form of the same scale was administered during: (a) hypnosis (E), (b) waking -- post hypnosis (C1), and (c) waking -- no hypnosis (C2). All groups showed significant change between

administrations of the scale; E showed more change than C1, and the latter more than C2. Ratings of "My Self" changed toward the negative pole in the evaluative factor. Results were interpreted as indicating a distortion in semantic space and an alteration in ego-state occurring spontaneously with hypnosis.

1965

Vasilev, L. (1965). Mysterious phenomena of the human psyche. New York: University Books. (Abstracted in *American Journal of Clinical Hypnosis*, 1965, 8:2, 146-147)

#### NOTES

The review of this book by Leo Wollman (*American Journal of Clinical Hypnosis*, 1965, vol. 8, pp. 146-147) states, "Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B. N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

" An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent" (pp. 146-147).

1964

Neveu, P. (1964). La psychotherapie d'induction [Induction psychotherapy]. [Paper] Presented at *Comptes-rendus du Congres de Psychiatrie et de Neurologie*, Sept. 1963. (Abstracted in *American Journal of Clinical Hypnosis*, 1965, 7, 364)

Neveu gives the name 'Induction' to his own development of the techniques of Bernheim, which he regards as a more comprehensive system than classic hypnosis and as primarily an interpersonal communication with ensuing mobilization of the patient's abilities to modify affective and other psychosomatic aspects of his condition. Neveu uses the method on hospitalized patients as treatment and research, citing its advantages over psychoanalysis, narcoanalysis, and other therapies which have many limitations. (E.M.E.)

Neveu, P. (1964). La psychotherapie d'induction des schizophrenes. [Induction psychotherapy of schizophrenic patients]. [Paper] Presented at *Comptes-rendus du*

Congres de Psychiatrie et de Neurologie, Sept. 1963. (Abstracted in American Journal of Clinical Hypnosis, 1965, 7, 364)

Neveu utilizes his 'induction' method to treat hospitalized schizophrenic patients, finding it a means of establishing communication and enabling the patient to control the frequent circulatory and respiratory disturbances. Through the induction method in group and individual therapy the schizophrenic patients learn to control and understand their fantasy productions. Statistical evaluation of results is encouraging, showing a high percentage of improvement. (E.M.E.)

**1958**

Sears, Alden B.; Talcott, Martha M. (1958). Hypnotic induction by use of non-meaningful languages: A pilot study. Journal of Clinical and Experimental Hypnosis, 6 (3), 136-138.

**NOTES**

In order to explore the question of whether hypnosis is due to suggestion, rhythm, monotony, etc. a spiral disk focus induction was delivered to 46 college students in 3 different languages (Bohemian, Japanese, and Spanish) by female native speakers. The students were asked to rate which part was "most relaxing." Language sequence was counterbalanced.

Fourteen students went into light trance; in a later induction they were found to be hypnotizable -- 13 to a medium trance level (higher number than would be expected based on results with students who had not listened to the tapes). However the authors did not know which aspect of the preparatory 3-language period to which to attribute the better response.

**1955**

Weitzenhoffer, Andre M. (1955). The influence of hypnosis on the learning process. Some theoretical considerations: II. Recall of meaningful material. Journal of Clinical and Experimental Hypnosis, 3 (3), 148-165.

**Summary.**

1. Past investigations of recall in hypnosis have been reviewed. The results appear to indicate that hypnosis favors the recall of 'meaningful' material over that of nonsense material above and beyond the difference in recall known to exist in the waking state for the recall of these two kinds of material. The results also suggest that the hypnotic increment is a monotonic increasing function of the 'degree of meaningfulness.'

2. Various important issues inherent in the problem under discussion have been examined. It is concluded that further gains in knowledge in this area demand the development of an adequate theory of 'meaning,' the recognition of the multidimensionality of 'meaning,' and the designing and constructing of satisfactory scales of 'meaning.'

3. A model was derived from Osgood's Mediation Hypothesis and Hull's theory of learning. This model accounts for the effects of 'meaningfulness' upon learning and recall in the waking state. According to it, a stimulus has 'meaning' to the extent that certain kinds of implicit cue-producing responses are attached to it. When such a stimulus becomes associated with an overt response in a learning situation, each implicit response takes on the function of a stimulus and as such becomes associated with the overt response. The net effect is a stimulus compounding situation in which the net reaction potential increases with the number of implicit responses involved, hence with the degree of 'meaningfulness' of the stimulus. From this the well-known greater recall associated with 'meaningful' material follows. With increase in 'meaningfulness' there is, however, also an increase in interference due to stimulus generalization. Application of the principle of the hypnotic stimulus shift developed in a previous paper allows one to account for the reported effects of hypnosis upon recall.

4. In final conclusions the value of hypnosis as a tool for deciding between alternate theories, and as a guide in theory construction and in the designing of experiments is emphasized in the light of the material of this paper" (p. 164).

#### COMPLIANCE

1998

Perugini, Eve Marie; Kirsch, Irving; Allen, Sarah T.; Coldwell, Eleanor; Meredith, Janelle M.; Montgomery, Guy H.; Sheehan, Julia (1998). Surreptitious observation of responses to hypnotically suggested hallucinations: A test of the compliance hypothesis. International Journal of Clinical and Experimental Hypnosis, 46 (2), 191-203.

Suggestions for arm levitation and for visual, auditory, tactile, and taste hallucinations were administered twice via audiotape to a group of high suggestible students and low suggestible simulators. During one of the administrations, participants were led to believe they were alone, but their behavior was surreptitiously recorded on videotape and observed on a video monitor. During the other administration, they were observed openly by an experimenter who had not been informed about group assignment. When unaware that they were being observed, simulators were significantly less responsive to suggestion and engaged in substantially more role-inappropriate behavior. In contrast, the responsiveness of nonsimulating students was not affected by the presence of an experimenter, and they exhibited little role-inappropriate behavior even when alone. These data indicate that the responses of suggestible individuals reflect internally generated changes in experience and are not due to simple intentional compliance (i.e., faking).

1997

Ruehle, Beth L.; Zamansky, Harold S. (1997). The experience of effortlessness in hypnosis: Perceived or real. International Journal of Clinical and Experimental Hypnosis, 45 (2), 144-157.

Hypnotized individuals who successfully respond to a suggestion typically report

that the response requires little or no cognitive effort. It is important, however, to distinguish between whether this effect occurs in actual effort or is only perceived. In addition, the authors distinguish between cognitive effort expended to initiate a response and that required to maintain it. The authors examine the different predictions of four theories-compliance theory, sociocognitive theory (Lynn & Rhue, 1991), Hilgard's (1986) neodissociation theory, and Bowers's (1992) theory of dissociated control-regarding both of these distinctions. Experimental evidence bearing on the various predictions is examined. Additionally, the authors propose a number of design modifications that may help sort out the variables contributing to the effortlessness of the hypnotic response. -- Journal Abstract

Reed, Steven B.; Kirsch, Irving; Wickless, Cynthia; Moffitt, Kathie H.; Taren, Paul (1996). Reporting biases in hypnosis: Suggestion or compliance?. Journal of Abnormal Psychology, 105 (1), 142-145.

The tendency of highly hypnotizable participants to bias their retrospective perceptual reports in response to instructional demands was reexamined with the addition of low-hypnotizable control participants instructed to simulate hypnosis. Mean scores of high-hypnotizable participants and simulators did not differ, but the responses of simulators to the demand instruction was less variable than those of high-hypnotizable participants, and the shape of the response distribution was different. Unlike simulators, some high-hypnotizable participants who had reported changes in perception that were consistent with a hypnotic suggestion subsequently reported changes opposite to those suggested by a demand instruction. These data were interpreted as suggesting that the responses of high-hypnotizable participants to both the demand instruction and the preceding hypnotic suggestion were not entirely due to compliance.

1995

Gearan, Paul; Schoenberger, Nancy E.; Kirsch, Irving (1995). Modifying hypnotizability: A new component analysis. International Journal of Clinical and Experimental Hypnosis, 43 (1), 70-89.

The effects of the Carleton Skills Training Program (CSTP) on hypnotizability were compared to those of a modified training program in which instructions for physical enactment of the response were omitted. After training, subjects in the original CSTP reported an increase in the extent to which they intentionally enacted suggested behaviors. In contrast, subjects in the modified training program reported increased fantasy without voluntary physical enactment. Nevertheless, both training programs increased behavioral and subjective responsiveness to suggestion, and there were no significant differences in response enhancement between the two programs. Across conditions, increases in behavioral and subjective responses to suggestion were correlated with increased use of fantasy. In contrast, increases in enactment were correlated only with compliance. The modified training

program is recommended as a means of enhancing suggestibility with less likelihood than the original CSTP of engendering compliance.

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

Zamansky, Harold S.; Ruehle, Beth L. (1995). Making hypnosis happen: The involuntariness of the hypnotic experience. International Journal of Clinical and Experimental Hypnosis, 43 (4), 386-398.

The authors tested the hypothesis that hypnotized individuals do not truly experience their responses to suggestions as occurring involuntarily, but instead absorb themselves in imagery that is congruent with the suggestions while avoiding critical thoughts, or even simply comply with suggestions without genuinely experiencing their responses as nonvolitional. Participants were instructed to engage in thoughts and imagery that conflicted with the suggestions given, were urged to pay attention to their behavior, and were questioned regarding the perceived involuntariness of their responses. Simultaneously, electrodermal skin conductance responses provided a measure of the truthfulness of their reports. It was found that responses to all hypnotic suggestions were reported as being involuntary, in spite of the conflicting imagery and increased saliency, and that these reports were truthful. These findings provide disconfirming evidence for the sociocognitive theories of hypnosis.

Balthazard, Claude G. (1993). The hypnosis scales at their centenary: Some fundamental issues still unresolved. International Journal of Clinical and Experimental Hypnosis, 41, 47-73.

Current approaches to the measurement of hypnotic performance can be traced back to the 19th century. In part because of these early origins and in part because of the nature of hypnotic phenomena, the hypnosis scales are unique psychometric instruments. The classic hypnosis scales are based on the notion of a "performance ladder"; items are scored on a pass/fail basis and can be arranged in increasing order of difficulty. Some of the implications on [sic]this "performance ladder" approach are reviewed. The evidence for two-mechanism models of hypnotic performance is reviewed. It is argued that this kind of formulation is at least as plausible as one that argues that the hypnosis scales measure "one thing" or "mostly one thing." If it were the case that the hypnosis scales were tapping two different and distinct processes, the label "hypnotic susceptibility" could not be unambiguously applied to scores on the hypnosis scales. The hypnosis scales would appear well-suited to the investigation of underlying mechanisms, yet no consistent picture of the mechanisms underlying hypnotic performance on the scales has emerged thus far. No resolution is presented, but some of the reasons why such a resolution is so elusive are discussed. The future of hypnosis scales is discussed with respect to multidimensional assessment and alternatives to the "work sample" approach.

#### NOTES

Author discusses the hypnotizability scales' history and psychometric properties, suggesting that they cannot have construct validity if more than one construct is involved. He states that many of the alternative formulations "posit structurally similar two- mechanism models, where the relative contributions of one and the other mechanism changes gradually with the difficulty of the hypnotic performance-

-that is, one mechanism is more important for easy items and the other more important in the difficult range. This kind of formulation has been advanced by a number of authors .... Although these formulations are structurally similar, the nature of the mechanisms has been variously conceptualized: nonability and ability components (Shor, Orne & O'Connell, 1962), primary suggestibility and somnambulism (Weitzenhoffer, 1962), minor and major dissociations (Hilgard, 1977), compliance and true hypnosis (Tellegen, 1978-1979), and cooperativeness and expectation at one end and absorption at the other (Spanos, Mah, Pawlak, D'Eon, & Ritchie, 1980). ... In a formulation such as Hilgard's (1977), where both mechanisms are dissociative, it may be that it makes some sense to understand both mechanisms as aspects of the same complex construct. In other formulations... it would appear more cogent to speak of two constructs. Spanos et al. (1980) found that 'cooperativeness and expectation may be particularly important in responding to ideomotor and challenge suggestions, while the ability to convincingly treat imaginings as real (i.e., absorption) becomes increasingly important for more difficult 'cognitive' items" (p. 21). Balthazard & Woody (1992) presented evidence that the more difficult items on hypnotizability scales are related to absorption more than the easier items.

Balthazard & Woody (1989) investigated the proposition that hypnotizability scores are distributed bimodally, and concluded that statistical problems clouded the issue. Furthermore, most analyses previously have been of surface structure, which does not relate directly to the underlying mechanisms of hypnosis, and current psychometric methods cannot address the mechanisms that underlie surface relations. "There are two aspects of hypnotic processes ... that obscure underlying mechanism: synergisms and overdetermination. Synergisms occur when mechanisms potentiate each other in such a way that a combination of processes becomes more than the sum of its parts. Overdetermination occurs when co-occurring mechanisms do not potentiate each other, such that any one of the mechanisms would have been sufficient to produce the observed effect" (p. 63-64).

The author suggests there are two options at present: Corrective Scoring (like the Curss.OI, an objective-involuntary score which, although unreliable on test-retest, appears it could be more a measure of "pure" hypnotizability) and not using the typical "work sample" approach. Balthazard and Woody (1992) suggested the Absorption Scale may provide a better measure of "hypnotizability" than the standard hypnosis scales because absorption scores are more strongly related to difficult hypnotic performances.

1992

Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. International Journal of Clinical and Experimental Hypnosis, 40, 21-43.

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum.

Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

**NOTES:**

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum---which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5 " (p. 27). "In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance . He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine

responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965); Hilgard's general factor would probably correspond better to the Tellegen genuine responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales.

Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the instructions used to introduce the particular hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

**Bowers, Kenneth S. (1992). Imagination and dissociation in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 40 (4), 253-275.**

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic

ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

1992

Nadon, Robert; Dywan, Jane; Adams, Barbara (1992, October). The social psychology of depth reports: Skirting the important data. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, ones who are affected by scale manipulations.

#### NOTES

Radke & Spanos used a new 7-point scale that permitted Ss to say they passed an item but were not hypnotized, and only 25% (instead of 88% on usual 4-point scale) said that they were hypnotized.

Do we delude ourselves in thinking reports of hypnotic depth just reflect scale wording, or is something genuine being measured? Radke & Spanos found that breaking down Ss into low, medium, and high hypnotizable groups, the mediums are the ones who are affected by scale manipulations.

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

1991

Wagstaff, Graham F. (1991). The role of compliance in hypnotic and nonhypnotic analgesia. Contemporary Hypnosis, 8, 176-180.

NOTES

This is a review of the paper by Spanos, Perlini, Patrick, Bell, & Gwynn (1990), The role of compliance in hypnotic and nonhypnotic analgesia, *Journal of Research in Personality*, 24, 433-453.

The author interprets the Spanos et al. results to indicate that high hypnotizables are more compliant or conforming when a measure of compliance is taken close to the hypnosis situation, and that hypnotic analgesia demonstrated in laboratory studies is largely the result of compliance (and Highs are most likely to exhibit compliance here as well). He suggests that compliance is not rare and frequently contributes to hypnotic response (especially among highly hypnotizable people), and would 'explain' such phenomena as hypnotic hallucinations (both positive and negative), automatic writing, and hypnotic amnesia and analgesia. Highly hypnotizable people seem to reinterpret their experiences in line with what is expected of them, then they come to believe in their own reinterpretations.

He emphasizes that "there is no necessary contradiction between the operation of compliance and the efficacy of techniques employing suggestion in some therapeutic situations especially when patients present with symptoms that are social in origin. In clinical contexts, not only might compliance motivate patients to obey instructions, and modify deviant behaviours, it could also operate as a useful social device to modify undesirable behaviours, by enabling the patient to 'save face' ... Also, for some subjects at least, some degree of compliance may be necessary to experience certain effects genuinely; for example, reports from some subjects in our laboratory at Liverpool suggest that it may be necessary to voluntarily initiate suggested 'involuntary' movement, before the movement can subsequently be interpreted as involuntary (see also Cardena & Spiegel, 1991, p. 104 [Cardena, E. &

Spiegel, D. Suggestibility, absorption, and dissociation, In J. F. Schumaker (Ed.), *Human Suggestibility: Advances in Theory, Research and Application*. New York: Routledge] (p. 179).

1990

Bates, Brad L. (1990). Compliance and the Carleton Skill Training Program. *British Journal of Experimental and Clinical Hypnosis*, 7, 159-164.

#### NOTES

He presents examples of how the Carleton training program for increasing hypnotizability encourages compliance, which suggests that the results are not truly an increase in suggestibility or hypnotizability.

Burgess, Cheryl A.; Du Breuil, Susan C.; Jones, Bill; Spanos, Nicholas P. (1990-91). Compliance and the modification of hypnotizability. *Imagination, Cognition and Personality*, 10 (4), 293-304.

This study compared compliance-induced reporting bias in subjects who attained high hypnotizability scores following skill training and subjects who obtained equivalent scores without benefit of skill training (naturals). Low hypnotizables in one condition were administered the Carleton Skills Training Package and later posttested for hypnotizability. Control subjects were posttested without benefit of skill training. As in previous studies, skill-trained subjects attained substantially higher posttest hypnotizability scores than controls. In a final session, skill trained subjects, untrained naturals matched against the skill trained subjects on hypnotizability scores, and low hypnotizable controls were tested in a suggested deafness paradigm designed to assess compliant responding. Skill-trained subjects and matched naturals reported significantly greater suggested deafness than did the controls. However, only theory matched naturals exhibited significant levels of compliance-induced reporting bias. These findings indicate that skill-trained subjects exhibit no more compliant responding than do natural high hypnotizables

Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects. *American Journal of Clinical Hypnosis*, 32 (4), 225-236.

Five experimental approaches to the resolution of the century-old Bernheim/Janet dispute and the issue of involuntariness or coercion (the classical suggestion effect) are presented. Four experiments are reported that follow one of the approaches: attempts to induce hypnotic subjects to resist suggestions made in trance. The design is one in which a "resistance instructor" proposes a reward for the resisting subject. Tentative inferences from the results are that the classical suggestion effect is found with a small number of subjects; for a larger number of subjects there is no classical suggestion effect, and for many subjects the outcome is equivocal. Relational factors in the hypnotic dyad influence responsiveness in the subject, the effect being least for those whose susceptibility is high.

## NOTES

**Study I.** Used a \$5 bribe, two suggestions, and Ss resisted average of 1.2 suggestions. 9 Ss resisted both, 5 resisted neither, and 6 (30% of Ss) resisted one test suggestion. Resistance appeared to be related to impression of the resistance instructor, suggesting that "neither the monetary bribe nor hypnotic responsiveness was as important to the resistance/compliance dimension as relational factors" (p. 228).

**Study II.** Used only one suggestion, obtained quantitative ratings of the two instructors, and offered \$10 to resist one suggestion. 19/40 Ss (48%) resisted. The authors wondered whether the difference in impressions of hypnotist and resistance instructor might be due to very limited contact with the latter.

**Study III.** Ss were greeted by the resistance instructor, who accompanied Ss to the experimental room, discussed the information under 'Establishing Rapport Prior to the Initial Induction' in the SHSS:A and a condensed version of the introduction to the Eye Closure item (10 minutes). Then he left, the hypnotist entered and administered the same 9-item SHSS:A that had been employed in Studies I and II. The resistance instructor then entered and offered \$10 if the S could successfully resist the hypnotist's suggestion on the second try [of an item just passed successfully]. The hypnotist re-entered, repeated SHSS:A instructions for the selected item, brought S out of hypnosis, and then a different experimenter did a structured interview--to give impressions of the hypnotist and the resistance instructor on an Adjective Rating Form (ARF), to estimate depth of their trance on 0-8 scale before and after contact by the resistance instructor. Then S was paid if he/she had resisted. The resisters obtained a mean on the SHSS:A of 4.8 compared to 7.9 for the nonresisters, significant t-test for the difference ( $p < .01$ ).

**Table 1 A Comparison of Interview Ratings of Hypnotists and Resistance Instructors in Two Studies**

Hypnotist\* Resistance Instructors\*\* Study N Pos Neutral Neg Pos Neutral Neg II 39 69% 31% 0% 5% 72% 23% III 30 63% 20% 17% 43% 27% 30%

\* Chi square (2) = 7.71,  $p < .05$  \*\* Chi square (2) = 24.3,  $p < .001$  [N.B. Figures were rounded to nearest whole number by JH.]

The correlation between hypnotizability on the SHSS and Resistance may be found in Table 2, along with the percentage of nonresisters in each of the four studies.

**Table 2**

Correlation SHSS Percent Study N R-NR/SHSS Mean Nonresisters I 20 -.37\* 7.1 40 II 40 -.44 6.2 52 III 30 -.54 5.8 33 IV 12 -- 8.8 50

\* Not significant

In Table 1 it may be seen that perceptions of the hypnotist and the resistance instructor changed from Study II to Study III. "In summary, the manipulation of time spent in the second experiment increased the proportion of resisters and dramatically improved the impression of the resistance instructor. Nevertheless, the evidence suggests that the hypnotist continued to be perceived positively and, according to our best measure, was still perceived more positively than the resistance instructor" (p. 232).

Because they suspected that the impressions of the experimenters might be confounded by hypnotic susceptibility, and \$10 might not be enough reward for

behavior shaping, the experimenters designed Study IV. Study IV used 12 high hypnotizables (scoring 11 or 12 on Harvard Scale; with a group mean of 8.8 on a 9-item version of the SHSS:A). The same procedure as in Study II was carried out, except that four experimenters other than the authors were the hypnotists and resistance instructors; each experimenter worked with three subjects. The incentive was \$100 to resist.

The results of this procedure were that six Subjects resisted and six complied; each group scored 8.8 on the SHSS:A 9-item scale; resisters had 5.7 mean and nonresisters 5.1 mean depth (nonsignificant).

Resisters and compliers were exactly alike in their perceptions of the hypnotist, but appeared different in perception of the resistance instructor (and the N was too small to test statistically).

**Table 3**

**Rated Impression of Hypnotist (%)**

Resisters	Nonresisters	Overall	Study	Pos	Neut	Neg	Pos	Neut	Neg	Pos	Neut	Neg	II	68
32	0	76	24	0	73	28	0	III	55	25	20	80	10	10
63	20	17	IV	83	17	0	83	17	0	83	17	0		

**Table 4**

**Rated Impression of Resistance Instructor (%)**

Resisters	Nonresisters	Overall	Study	Pos	Neut	Neg	Pos	Neut	Neg	Pos	Neut	Neg	II	11
79	11	0	67	33	5	73	23	III	45	30	25	40	20	40
43	27	30	IV	50	0	50	17	83	0	33	42	25		

**Table 5**

Adjective Rating Form Means*	Study	Resisters	Nonresisters	Overall	Resisters
Nonresisters Overall	II	46	38	42	65
	III	54	40	50	61
	IV	41	54	48	50
		65	57		

\*Lower score is more favorable.

**Summary of the Four Studies:**

The data in Tables 2-5 reflect a critical finding. "There was a sharp drop in the number of Ss who did not resist, or it may be clearer to put it as a sharp increase in the number of resisters. The change is nearly 40%.

"However, when only responsive subjects were used as in Study IV, the percentage of nonresisters is much the same as it was in Study II" (p. 233). The authors conclude that "relational factors are more important in hypnotic behavior among less responsive subjects" (p. 233).

"The data contrasting resisters and nonresisters are somewhat confusing. There were more positive and negative impressions among subjects who resisted and more neutral impressions and no negative impressions among the nonresisters," (pp. 233-234) though the number of cases involved is quite small. Using the ratings, the nonresisters had a more favorable impression of the hypnotist than did the resisters, which is in accord with the interviewers' ratings.

"A striking finding is that nonresister Ss in Study IV had a less favorable impression of both hypnotist and resistance instructor ... a clear reversal from Study III for the hypnotist, not quite so clear for the resistance instructor" (p.234).

Levitt, Baker, & Fish draw the following inferences: "1. Hypnotic influence is truly coercive for a very small number of what Register & Kihlstrom (1986) have called the 'hypnotic virtuoso,' the most responsive individuals; for them, the classical suggestion effect is a reality; 2. Hypnotic influence, though perhaps not truly coercive, is manifestly strong for a somewhat larger group of highly responsive

individuals; the classical suggestion effect may exist for them; 3. For many individuals who behave in accordance with hypnotic suggestions, the classical suggestion effect does not exist; 4. Relational factors in the hypnotic dyad influence hypnotic responsiveness. The influence is strongest among individuals of low-to-moderate hypnotic responsiveness; 5. The more positive the impression of the hypnotist, the greater will be his influence on the hypnotized individual; 6. A subject's impression of a hypnotist will tend to be favorable even though the sole interaction between the two is the induction of the trance; 7. Preliminary efforts to build rapport with the subject will tend to improve the already positive impression created by the hypnotist" (pp. 234-235).

Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects: A rejoinder to invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 246-249.

#### NOTES

We cannot see how Lynn can allege that in three of the studies there was no relationship between resistance-nonresistance and perception of the hypnotist. The appropriate correlation coefficients are reported in Studies II and III.

"Coe's point about the confounding of incentive and susceptibility might be valid if we had no prior knowledge of the relationship between resistance and susceptibility. But we already knew that the most susceptible Ss were likely to be the nonresisters. In Study IV, we abandoned susceptibility as an independent variable and made it a sample descriptor. ... [However] we resonate to Coe's suggestion of simulators" (p. 247).

"In our first three studies, we reported no relationship between occupation and resistance, an admittedly crude but unobtrusive approach to the question of whether the most financially needy subjects were the resisters. We usually compared the students in the sample with the employed subjects. We did not report this lack of relationship in Study IV in which only three subjects were students. Two resisted, one did not.

We must accept responsibility for provoking Coe's question about the credibility of the financial incentive in Study IV, by poor reporting. In a postexperimental inquiry, one subject (a resister) was mildly suspicious of the offer. All other Ss found the resistance instructor credible" (pp. 247-248).

"Our own more recent research suggests that offering undergraduate students additional points toward the final class grade can yield more resisters than the money incentive in Study IV (Levitt, Baker, Hacker, Klion, Krause, Lytle, & Vanderwater- Piercy, 1990 in press)" (p. 248).

"We have suggested that the hypnotic phenomenon is apparently experienced differently among subjects, and the critical factors are thus also likely to vary from subject to subject. We would be quite willing to accept Bernheim's estimate that 17% are incapable of resisting hypnotic suggestions, as cited by Weitzenhoffer. We agree with Spiegel that the issue of the coercive potential of hypnosis is 'not really

settled by mean differences across groups.' Measures of central tendency are apt to obscure the minority of Ss who may experience coercion in experiments with designs different from ours" (p. 248).

[The study referred to above is Levitt, E. E., Baker, E. L., Hacker, T., Klion, R., Krause, A. A., Lytle, R., & Vanderwater-Piercy, J. (1990 in press). Compliance and resistance in the hypnotic state: the effect of a social or an academic countermotivation. In R. van Dyck, P. Spinhoven, . J. W. van der Does, Y. R. van Rood, & W. De Moor (Eds.), *Hypnosis: Current theory, research, and practice.* Amsterdam: Free University Press.]

Lynn, Steven Jay (1990). Is hypnotic influence coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. *American Journal of Clinical Hypnosis*, 32 (4), 239-241.

#### NOTES

Unlike Levitt, Baker, & Fish (1990), Lynn, Rhue, & Weekes (Psychological Review, 1990 in press) concluded that nonvoluntary behaviors in hypnosis are similar to other spontaneous social behaviors (like conversational response to social stimuli). "Hypnotized subjects, like nonhypnotized subjects, act in terms of their aims, according to their point of view, and in relation to their interpretation of appropriate behavior and feelings" (p. 239).

"Research shows that hypnotizable subjects resist and even oppose suggestions as a function of their expectancies and perceptions about appropriate hypnotic behavior (Lynn, Nash, Rhue, Frauman, & Sweeney, 1984; Lynn, Snodgrass, Rhue, & Hardaway, 1987; Lynn, Weekes, Snodgrass, Abrams, Weiss, & Rhue, 1986; Spanos, Cobb, & Gorassini, 1985). In one study (Spanos et al., 1985), when subjects were informed that deeply hypnotized subjects were capable of becoming involved in suggestions and simultaneously resisting them, subjects resisted 95% of the suggestions. When subjects were told that deeply hypnotized subjects were incapable of resisting suggestions, they passed the majority of suggestions. Thus, knowledge about what constitutes appropriate hypnotic role behavior is a reliable determinant of resistance, apparently more reliable than the monetary lures used by Levitt et al." (P. 240).

These studies by Levitt et al. only used behavioral measures of resistance and hypnotizability, and Ss' perceptions of the resistance instructor and hypnotist. "The ratings of global perceptions are, however, no substitute for measures of subjects' perception of the *\_relationship\_*. ... The failure to measure important variables relevant to the central dimensions of concern--coercion, compliance, involuntariness, and relational factors--precludes meaningful interpretation of the nonresisters' motivation and behavior" (p. 240).

As Orne (1959) has suggested, we should not attribute behavior in the hypnosis context to something unique to hypnosis (such as coercive influence), because other kinds of social context also constrain behavior, e.g. psychotherapy and psychology experiments, with coercive features. Therefore, it seems important in the future to compare the responses of hypnotized subjects with those of subjects in waking-

imagination and hypnosis-simulating conditions. In addition to looking at their behavior, it is important to examine their own perceptions of their actions, given the complexity of the social situation entailed in hypnosis.

"Finally, there are statistical grounds to be wary of the authors' conclusions. They assert that 'relational factors in the hypnotic dyad influence hypnotic responsiveness,' yet in three of the studies (I, II, and IV), subjects' ratings of the hypnotist failed to discriminate whether they resisted or responded to the suggestion" (p. 241). Even where Study III was compared with Study II, the difference in the percentage of Ss who resisted failed to reach statistical significance. "In fact, across all studies, differences in overall resistance rates were not documented by statistical tests--despite procedural variations and differing monetary incentives. So contrary to authors' assertion, relational factors \_in the hypnotic dyad\_ generally had little bearing on resistance behavior. If anything, ratings of the resistance instructor had greater weight" (p. 241).

Spanos, Nicholas P. (1990). More on compliance and the Carleton Skill Training Program. British Journal of Experimental and Clinical Hypnosis, 7, 165-170.

#### NOTES

In this paper the author counters Bates' (1990) criticisms of the Carlton Skills Training Program, e.g. that the program induces Subject compliance rather than genuine increases in hypnotizability. The author states that the training program is designed to induce conformance rather than simply compliance with suggested demands.

He notes that in order to avoid the twinges of conscience associated with a self-definition of cheating, most Ss fail suggestions to which they are unable to generate the requisite subjective response. (Most Ss fail most of the suggestions on standardized hypnotizability scales despite the fact that all of these suggestions are easily fokable.)

"The findings of the Spanos et al. (1987) and Cross and Spanos (1988) studies suggest that, given appropriate attitudes and interpretations, subjects who benefit most from skill training are those who possess the cognitive abilities that enable them to vividly create and become absorbed in the imaginary scenarios called for by test suggestions. It is much less clear how these findings could be accounted for in terms of compliance. There is no evidence to indicate that imaginal propensity indexes are strongly related to a general tendency towards compliance and, at any rate, low hypnotizables who undergo skill training are, by definition, subjects who failed to comply with test demands during initial hypnotizability testing.

"In summary, when taken together the available data suggest that compliance cannot account adequately for CSTP-induced gains in hypnotizability. Obviously, this conclusion should not be interpreted as saying that compliance plays no role in training induced hypnotizability gains, or that the role of compliance in this regard should not be thoroughly investigated. As Wagstaff (1981) has repeatedly emphasized, compliance appears to be an integral component of hypnotic responding. Recent evidence from our laboratory (Spanos et al., 1989a) supports Wagstaff's (1981) contention by indicating that untrained high hypnotizables engage

in substantial levels of compliance when the 'pass' at least some difficult test suggestions. Given that natural high hypnotizables engage regularly in some compliant responding, it would be rather surprising to find that created highs did not do the same. However, examining this issue empirically requires the application of experimental paradigms that allow compliance to be differentiated from conformance.

Spiegel, David (1990). Theoretical and empirical resistance to hypnotic compliance. Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 243-245.

#### NOTES

Does hypnosis bypass the will, facilitate coercion? The hardest thing for trauma victims to do is to admit helplessness. Furthermore, it is interesting that these same dissociative phenomena seem to be elicited by traumatic experience, the stark imposition of involuntariness (Stutman & Bliss, 1985; Spiegel, Hunt, & Dondershine, 1988). What, then, are we to make of experiments that purport to show that hypnotizable and hypnotized individuals comply with hypnotic instructions irrationally? At some level this challenges our comfortable belief that we always act in our enlightened self-interest, unaffected by unwanted influence. If that can happen even once, our pride of self-ownership is reduced.

Taken as a whole, the studies show that high hypnotizables comply with hypnotic instructions, even in the face of resistance instructions, whereas low hypnotizables are less likely to, especially when conditions foster a relatively less negative view of the resistance instructor. As the authors note, subjects always viewed the hypnotist more positively than the resistance instructor, which in itself suggests the nonrational influence intrinsic to hypnosis. Free will is not abrogated, it is simply not exercised. The Ss are fundamentally choosing whether or not to comply. Half of the highs in Study IV resisted the hypnotic instruction. However, hypnotized individuals tend to narrow the focus of attention, thereby reducing their ability to consider alternatives such as the resistance instruction.

William James (1890) believed that all ideas were invitations to action. Why, then, do we not act on every idea we have, he pondered on a snowy morning while lying in bed. He observed that he would try to get himself to arise by picturing himself doing so. "Why, then, am I still in bed?" He realized that he was editing the primary idea, reflecting on how cold it was, how long it would take to light a fire, and how much time he had until his classes. In a state characterized by a narrowing of the focus of attention, we are less likely to edit the primary idea, and therefore more likely to act. In the experiments presented, the resistance instructor attempts to act as an external editor on the primary hypnotic instruction. Those capable of focusing attention sufficiently disattend to the editing and comply. These studies show that, thankfully, hypnosis is less than automatic submission to instruction but, interestingly, more than simple conscious response to new information.

Weitzenhoffer, Andre M. (1990). Are induced automatism necessarily coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 245-246.

## NOTES

For the sake of maintaining historical accuracy, I would like first to remark that the ability of hypnotized Ss to resist suggestions was probably never a central issue in the Nancy-Salpetriere controversy. The main quarrel was about other fundamental matters (Crocq, 1900; Barrucand, 1967). It also needs to be said that Pierre Janet should not be seen as representing the Salpetriere in the above controversy. Very little of his extensive writings reflect the ideas of Charcot with whom he was associated for only 4 years (1889- 1893) (Barrucand, 1967; Ellenberger, 1970). Lastly, let it be noted that the association of automatism with hypnotic behavior antedates Bernheim. Despine wrote about it at length as early as 1868, and Charcot (1882) clearly stated before Bernheim that automatic responses to suggestions were characteristic of induced somnambulism. This was at least one view they shared.

Referring to the material quoted from my 1978 paper, the authors assert Bernheim's definition of automatism implies a subject responding to a suggestion qua suggestion is "unable to resist" it. But all the definition says is that the will does not directly enter into the production of automatism. It does not say the will cannot effectively intrude at some point or other. This definition, quoted out of context, was part of a more extensive discussion of what the nature of an automatism was for Bernheim. The discussion also went into details regarding the conditions under which Bernheim understood automatism can occur and hold sway. In this greater context, Bernheim (1888a, 1888b) viewed the occurrence of automatism as normally subject to control by the ego processes responsible for volitional activities. He saw the degree to which a person's behavior can be controlled by automatism initiated by suggestions to be a function of the extent to which certain ego processes become inactive, ineffective, or cooperatively permit the automatism to occur. Bernheim recognized that both cognitive and relational factors played an important part in the latter case. Bernheim (1888a, 1888b) also stated that data he had collected showed subjects could resist suggestions to varying degrees, with only 17%, who made up the class of somnambules, being totally incapable of resisting" (pp. 245-246).

"Stating the matter more concretely, I doubt many people would speak of an individual having been 'coerced' into producing a knee-jerk reflex under appropriate stimulation. Should the situation be any different in the case of other reflexes and, more particularly, the reflex ideodynamic action presumed to underlay suggested acts (Weitzenhoffer 1978, 1989)? I do not think so. It seems to me that what the authors have really and directly examined in their article is the extent to which the classical suggestion effect can be countered by conscious, voluntary control" (p. 246).

Baker, Elgan L.; Levitt, Eugene E. (1989). The hypnotic relationship: An investigation of compliance and resistance. International Journal of Clinical and Experimental Hypnosis, 37, 145-153.

The purpose of this investigation was to assess the ability of hypnotic Ss to voluntarily resist a neutral suggestion when a monetary reward was offered for resistance. 19 of 40 Ss (47.5%) successfully resisted after money was offered by the "resistance instructor." The correlation between resistance/compliance and hypnotizability was  $-.44$  (high hypnotizables were more likely to comply). Ss' impressions of the hypnotist tended to be positive; impressions of the resistance instructor tended to be neutral. There was a tendency for nonresistors to have a more positive view of the hypnotist but it is not as marked as was found in an earlier study (Levitt & Baker, 1983).

#### NOTES

Twelve (75%) of the high hypnotizables did not resist; two (16.7%) of the low hypnotizable Ss did not resist.

In their discussion, they state that "these data support the conclusion that hypnotizability or talent accounts for a significant portion of the variance in determining compliance with suggestions during trance. ... [Further], this research may be conceptualized as examining the contributions of a trait variable (hypnotizability) as compared with a variety of situational or state variables (motivation, social perception, environmental contingencies) in determining compliance and suggestibility. Inherent in this model of research is the assumption that many observed hypnotic phenomena (such as suggestibility) are interactive in nature, representing the outcome of the interplay between trait and state variables and between historically determined and contemporary forces. Such a perspective is consistent with the emerging view of trance behavior and experience and validly parallels the phenomenology of experimental and clinical hypnosis which describe both consistency and variability in hypnotic responsiveness for a specific subject or patient across varying conditions and time" (p. 151).

"This study also serves to clarify the important role of positive social perception and a positive sense of alliance with the hypnotist as a correlate of compliance with suggestion. It is clear that Ss who complied despite inducements to resist reported a more positive perception of the hypnotist and a more gratifying sense of relatedness with him than did their counterparts who resisted in response to financial inducement. These data do not indicate whether the positive perceptions contributed to compliance, as transference theories of trance involvement would predict, or whether they were consolidated after the fact due to other variables such as management of potential cognitive dissonance. It does seem reasonable to conclude, however, that the relationship is influential in the process of suggestibility and compliance" (p. 151).

1989

Holroyd, Jean; Maguen, Ezra (1989). And so to sleep: Hypnotherapy for lagophthalmos. American Journal of Clinical Hypnosis.

We used hypnosis to facilitate eye closure during sleep for a 44-year-old woman whose nocturnal lagophthalmos prevented use of a contact lens following cataract surgery and could have resulted in severe corneal damage. On three separate occasions the symptoms remitted following a very brief course of treatment. We discuss the results in terms of alternate theories of hypnotic performance.

#### NOTES

The Discussion section notes, "There was an excellent correlation between the onset of hypnotherapy and the cessation of the recurrent corneal erosion secondary to nocturnal lagophthalmos. Healing of corneal erosion, disappearance of the superficial punctate keratopathy, and alleviation of ocular foreign body sensation occurred promptly following hypnotherapy (with two separate therapists)" (pp. 267-268).

The authors present the view that "heightened suggestibility, more vivid imagery, and more specific influence of thoughts upon organ systems probably came into play (Brown & Fromm, 1986; Holroyd, 1987). Social influence explanations (role taking, expectancy, compliance) seem less relevant as explanations. This highly motivated patient had not been able to keep her eyes closed during sleep despite her conscious efforts, her "good-patient" role, her positive expectations about the benefits of standard treatments, and respectful incorporation of the assistance provided by her ophthalmologist" (p. 268).

Jupp, J. J.; Collins, J. K.; Walker, W. L. (1989). Relationships between behavioural responsiveness to hypnotic suggestions and estimates of hypnotic depth following 11 sequential instances of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 17, 93-98.

Behavioral responsiveness to suggestions was assessed in an initial hypnosis session, and hypnotic depth was assessed in this session, followed by 10 weekly standardized hypnotic experiences. Correlations were calculated between behavioral responsiveness, initial and subsequent depth estimates, and between successive trance depth estimates. Levels of trance depth estimates were found to increase through weeks 1 to 11. Significant positive correlations were found between behavioral responsiveness scores and trance depth estimates to the fourth week but not beyond. Significant positive relations were found between successive estimates of trance depth except for the correlation between estimates for the fourth and fifth weeks. These results are discussed in terms of the estimates of trance depth being attributions from self-observations of behavioral responsiveness to hypnotic suggestions.

Nash, Michael R.; Spinler, Dwayne (1989). Hypnosis and transference: A measure of archaic involvement. International Journal of Clinical and Experimental Hypnosis, 37, 129-144.

20 Likert-type items were derived directly from Shor's theoretical propositions concerning the occurrence of transference-like experiences among hypnotic Ss. In 3 separate experiments, this 20-item Archaic Involvement Measure (AIM) was administered to 452 Ss following termination of both group and individually administered hypnosis procedures. Results suggest that: (a) AIM is internally consistent, and is significantly correlated with hypnotizability; (b) among high hypnotizable Ss, AIM scores assess an important aspect of hypnotic experience which is relatively unrelated to behavioral response to hypnotic suggestions; (c) there is no change in AIM scores associated with the sex of the hypnotist or S; and (d) there are 3 clusters of AIM items; perceived power of the hypnotist, positive emotional bond to the hypnotist, and fear of negative appraisal. Possible validation and clinical research applications of AIM are presented, along with a plea for further empirical examination of the relational dimensions of hypnosis.

**NOTES:**

Relates these findings to 'countering' (Sheehan, P., *Countering preconceptions about hypnosis: An objective index of involvement with the hypnotist. Journal of Abnormal Psychology, 1971, 78, 299-322*). "Countering is the tendency of some highly hypnotizable Subjects to comply with the intent of the hypnotist, even when there are strong nonhypnotic influences (e.g., social influences, expectations derived from previous lectures, perceptual constraints) to perform otherwise. ... Sheehan and Dolby (1979) found that hypnotic Subjects' dreams about the hypnotist were different than nonhypnotic Subjects' dreams, by being more positive and more often containing themes of protection, care, and authority. Interestingly, these themes were especially evident in the dreams of hypnotic Subjects who countered" (p. 130). The several experiments in this study investigate reliability, concurrent validity, and factor structure of the AIM. In their discussion, Nash and Spinler make the following points. As is the case with hypnotizability, AIM scores may have a bimodal distribution, at least when administered in the same context as a hypnosis measure. It is possible that these two modes define qualitatively different kinds of involvement with the hypnotist. "For high hypnotizable Ss, behavioral response to hypnotic suggestions appeared unrelated to the extent of archaic involvement with the hypnotist across both Experiments 2 and 3. Considering only the overall correlation between AIM and hypnotic responsiveness, one might argue that both scales measure general behavioral compliance and conformity, and that this explains their degree of association. It may indeed be correct to associate AIM scores with an overall conformity to respond, but only among low hypnotizable Subjects. For high hypnotizable Subjects, behavioral compliance (task performance) was not associated with AIM scores. Just as Sheehan's (1971, 1980) 'countering' studies suggest, among high hypnotizable Ss there appears to be no clear-cut relationship between the ability to perform hypnotic tasks and the special, motivated commitment to the hypnotist evidenced in some Ss. The theory of Shor (1979) and the empirical work of Sheehan and Dolby (1979) strongly suggest that an intense involvement with the hypnotist (archaic involvement) is a distinctive feature of the hypnotizable S's experience. The present work corroborates Sheehan and

Dolby's (1979) finding that, among high hypnotizable Ss, this involvement is not equivalent to overt response to the demands of standard test suggestions.

"Three findings further suggest that AIM scores assess an important aspect of the hypnotic S's experience which is relatively unrelated to behavioral task performance. First, AIM scores correlated significantly with a measure of subjective depth during hypnosis (Hypnotic Depth Inventory, Field, 1966). Second, the correlation between hypnotic depth and AIM scores was substantial for both low and high hypnotizable Ss. Thus, for high hypnotizable Ss, AIM scores were significantly correlated with hypnotic depth, even though they were unrelated to behavioral task performance. Finally, regression analysis suggested that AIM scores accounted for variance in hypnotic depth which was not explained by task performance scores. These findings, then, conform to Shor's proposition and Sheehan's (1971, 1980) later observations that archaic involvement with the hypnotist is a fundamental dimension of hypnotic experience which may not be directly related to the extent of behavioral response to hypnotic suggestions (see Shor, 1979, p. 119)."

"It is of some interest that the mean AIM score for low hypnotizable Ss was roughly equivalent to that of control Ss who had listened to a lecture prior to AIM administration. Only Ss who were exposed to hypnosis and who were behaviorally responsive to hypnotic suggestions evidenced elevated AIM scores" (pp. 140).

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Compliance, imaginal correlates and skill training. [Comment/Discussion] .

#### NOTES

The authors defend the Carlton skill training program against accusation that the trained Ss are simply complying in the context of social pressure. They also discuss characteristics of high hypnotizables (absorption and imagery), noting that the majority of lows do not have low absorption/imagery scores (citing de Groh, 1988, and noting the research on context dependency for absorption).

"Despite all of this, it is worth noting that the results of our modification studies are not inconsistent with the hypothesis that high hypnotizability requires imaginative skills that some subjects do not possess in sufficient degrees. For example, two recent studies (Spanos et al., 1987; Cross and Spanos, 1988) found that the extent to which low hypnotizables showed gains following administration of the CSTP was predicted by their pre-tested levels of imagery vividness. Lows with good imagery benefitted substantially more from the CSTP than did lows with poor imagery ability. When it is kept in mind that most low hypnotizables do not score low on measures of imagery/absorption (de Groh, 1988), then the findings that substantial numbers of low hypnotizables can be taught to attain high hypnotizability is not at all inconsistent with the notion that high hypnotizability requires at least moderate levels of imagery/absorption ability" (p. 14).

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Simulation, compliance and skill training in the enhancement of hypnotizability. British Journal of Experimental and Clinical Hypnosis, 6, 1-8.

Subjects who underwent cognitive skill training were compared to no treatment controls and to subjects in two simulation treatments on the behavioural and subjective dimensions of two hypnotizability post-tests. Ss in a trained simulation treatment received skill training but were instructed to fake the responses of someone who had been transformed by training into an excellent hypnotic subject. Standard simulators did not receive skill training, but were instructed to fake their responses to the two post- tests. A final group of untrained Ss (i.e. naturals) who attained the same behavioural scores on a hypnotizability index as did post-tested skill-trained Ss, was also compared to the treated groups. Ss in the two simulation treatments performed similarly on all hypnotizability indexes. Simulators outperformed both skill-trained and natural subjects (who failed to differ from one another) on all indexes, and skill-trained and natural subjects, in turn, outperformed the no treatment controls. These findings suggest that sustained faking cannot account adequately for the enhancements in hypnotizability produced by skill training.

1988

Coons, P. M. (1988). Misuse of forensic hypnosis: A hypnotically elicited false confession with the apparent creation of a multiple personality. International Journal of Clinical and Experimental Hypnosis, 36 (1), 1-11.

A case is presented in which there was flagrant misuse of forensic hypnosis. The patient, a woman in her early 30s, was accused of shooting her 2 children. During a hypnotic interview, the police hypnotist used an extremely suggestive interrogative technique, and the suspect produced an apparent secondary personality who confessed to the shootings. Subsequently the prosecutor tried to enter the "hypnotic confession" as evidence against the defendant. The evidence was dis-allowed because of the manner in which it was obtained and because of the lack of verification from other sources. The literature regarding the use of forensic hypnosis is reviewed as is the literature regarding multiple personality and the experimental production of multiple personality-like phenomena.

Gudjonsson, Gisli H. (1988). The relationship of intelligence and memory to interrogative suggestibility: The importance of range effects. British Journal of Clinical Psychology, 27 (2), 185-187.

60 normal adults and 100 adult psychiatric patients completed a suggestibility scale and the Wechsler Adult Intelligence Scale (WAIS). Clear range effects of IQ and memory were evident in their relationship with suggestibility

Spanos, Nicholas P.; Cross, Wendi P.; Menary, Evelyn; Smith, Janet (1988). Long term effects of cognitive-skill training for the enhancement of hypnotic susceptibility. British Journal of Experimental and Clinical Hypnosis, 5 (2), 73-78.

Twelve initially low susceptible subjects, who scored in the medium or high susceptibility range on the Carleton University Responsiveness to Suggestion Scale (CURSS) following skill training, were posttested 9 to 30 months later with a group version of the Stanford Hypnotic Susceptibility Scale, Form C. Skill trained subjects scored significantly higher on behavioral and subjective dimensions of the Stanford Hypnotic Susceptibility Scale, Form C than low susceptible untrained control subjects who were posttested after an equivalent interval. Furthermore, the posttraining CURSS scores of the skill trained subjects were matched to those of subjects who received the same CURSS scores without training. Matched subjects were posttested on the Stanford Hypnotic Susceptibility Scale, Form C after only a brief delay. Skill trained and matched subjects failed to differ significantly on Stanford Hypnotic Susceptibility Scale, Form C susceptibility dimensions, but skill trained subjects showed higher levels of suggested amnesia than matched subjects. These findings support the idea that hypnotic susceptibility is modifiable and that training induced gains in susceptibility can be enduring.

1987

Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo? Hypnosis, 4, 135-140.)

#### NOTES

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in Psychosomatic Medicine, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly

the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects. The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

1986

Milne, Gordon (1986). Hypnotic compliance and other hazards. Australian Journal of Clinical and Experimental Hypnosis, 14, 15-29.

Hypnosis is not an external 'force' or 'power' but a special kind of interaction between two persons. The outcome depends on the skill and intentions of the hypnotist and the responsiveness and compliance of the subject. Skill may be marred by procedural errors, 'sins of omission'; intentions by a self-centred rather than a patient-centred approach, 'sins of commission'. A hazard peculiar to the use of hypnosis is a fallacious belief in the power it enables the operator to wield over the subject.

1985

Stone, Jennifer A.; Lundy, Richard M. (1985). Behavioral compliance with direct and indirect body movement suggestions. Journal of Abnormal Psychology, 94 (3), 256-263.

Investigated the effectiveness of 2 types of suggestions in eliciting body movement by presenting 96 high-, medium-, and low-susceptible undergraduates, in hypnotic or nonhypnotic conditions, with either of 2 series of body movement suggestions. The indirect suggestions were designed to represent the approach of M. H. Erickson (see

PA, vol 60:11116 and 12262) and resulted in greater compliance in the hypnotic condition. Direct suggestions resulted in greater compliance in the nonhypnotic condition. Susceptibility to hypnosis was related to compliance in the hypnosis condition, but no interactions were found between susceptibility and type of suggestion. Sense of volition in responding was unrelated to the major findings. Discussion of the results includes a call for the accurate reporting of the wording of hypnotic suggestions in future research.

1983

Levitt, Eugene E.; Baker, Elgan L. (1983). The hypnotic relationship--another look at coercion, compliance and resistance: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 125-131.

The purpose of the present investigation was to assess the ability of hypnotic Ss to voluntarily resist neutral suggestions on a monetary reward incentive. The results were ambiguous; Ss resisted with a mean of 1.2 of 2 suggestions each. Postexperimental interviews disclosed that all Ss felt that the instructions to resist were asking them to be disloyal to the hypnotist or to betray him. Ability to resist was positively correlated with Ss' impressions of the "resistance instructor" and tended to be negatively correlated with the impression of the hypnotist. These findings are interpreted to suggest support for an interactional conception of the hypnotic state.

Spanos, Nicholas P.; Dubreuil, Debora L., Saad, Carol L., Gorassini, Donald (1983). Hypnotic elimination of prism-induced aftereffects: Perceptual effect or responses to experimental demands?. Journal of Abnormal Psychology, 92 (2), 216-222.

Two experiments assessed adaptation to displacing prisms in hypnotically limb-anesthetized Ss. Experiment I with 18 college students disconfirmed the hypothesis that the displacement aftereffect is eliminated in limb-anesthetized hypnotic Ss who adapt to prisms in the absence of a visual target. Such Ss showed as large a displacement aftereffect as control Ss who received neither a hypnotic induction procedure nor an anesthesia suggestion. Experiment II with 30 undergraduates demonstrated that under some testing conditions hypnotic Ss complied with experimental demands and eliminated the behavioral but not the perceptual component of the aftereffect.

Wagstaff, Graham F. (1983). Comment on McConkey's "Challenging hypnotic effects: The impact of conflicting influences on response to hypnotic suggestion". [Comment/Discussion] .

## NOTES

"Probably the most consistent finding to emerge from McConkey's review is that hypnotic subjects tend to respond in accordance with what they feel the hypnotist really wants, regardless of conflicting experimental demands" (p. 13).

**Conn, J. H. (1981). The myth of coercion through hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29 (2), 95-99.**

A brief history of coercion through hypnosis is presented. Hypnosis is not an external "force," which can be used to overcome a subject's "will power." It can be used as an alibi, a folie a deux, a neurotic compromise, a legitimatization, or rationalization of behavior, as well as being genuine, involuntary, automatic hypnosis. Unwitting simulation occurs frequently. Laboratory crimes and stage hypnosis are "make believe" performances occurring in a completely protected situation. Neither a long-term relationship, nor an attempt to distort perception is a necessary or sufficient cause of coercion. The possibility of "motivated helplessness," a "self-fulfilling prophecy" or a "believed in efficacy" must be considered. Coercion through hypnosis is a myth which will not disappear so long as it is fostered by uninformed hypnotists, who believe that all initiative and self-determination is surrendered by the subject to an "all powerful" hypnotist.

**1981**

**Graham, K. R.; Greene, L. D. (1981). Hypnotic susceptibility related to an independent measure of compliance - Alumni annual giving: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29 (4), 351-354.**

An attempt was made to relate hypnotic susceptibility to an objective measure of compliance in a real-life setting. Hypnotic susceptibility scores for 235 college graduates, who graduated between the years 1971-1979, were compared to their records for alumni annual giving. Those who had made at least 1 contribution to the college since graduation were significantly higher in hypnotic susceptibility than those who had made no contribution. The results suggest that willingness to respond to a persuasive appeal may be related to a person's susceptibility to hypnosis.

**1980**

**Sheehan, Peter W. (1980). Factors influencing rapport in hypnosis. Journal of Abnormal Psychology, 89 (2), 263-281.**

The phenomenon of countering expresses the tendency of some highly susceptible subjects to favor the intent of the hypnotist when placed in a conflict situation where social influences of another kind dictate an alternative response. The present research explored the parameters of this objective index of involvement with the hypnotist to investigate the special relevance of rapport processes to the hypnotic setting. Rapport was manipulated in five different experiments, varying either the warmth or genuineness of the hypnotist. It was predicted from transference theorizing that countering would decrease in the negative context and increase in the positive one. Results confirmed predictions for highly susceptible subjects tested in the former context but not the latter. In the negative setting, subjects were inhibited in their rate of countering, but maintained their previous level of response

to the hypnotist when rapport was facilitated. Results highlighted the relevance of interpersonal processes to theorizing about hypnosis.

**1979**

Perry, Campbell (1979). Hypnotic coercion and compliance to it: A review of evidence presented in a legal case. International Journal of Clinical and Experimental Hypnosis, 27 (3), 187-218.

There are 2 main positions concerning the potential of hypnosis to coerce unconsenting behavior. One position asserts that coercion is possible through the induction of distorted perceptions which delude the hypnotized person into believing that the behavior suggested is not transgressive. The other position asserts that where hypnosis appears to be a causal factor in coercing behavior, other elements in the situation -- especially a close hypnotist-client relationship -- were the main determinants of behavior. The present paper analyzes the court transcript of a recent case in Australia in which a lay hypnotist was found guilty of 3 sexual offenses against 2 female clients. The uniqueness of the case is that it pits the 2 main positions on hypnotic coercion against each other. The hypnotist admitted the acts attributed to him; his defense was that hypnotic coercion is impossible since a hypnotized person would resist immediately any transgressive suggestion. The women involved stated that they were aware of what was happening but that, because they were hypnotized, they were unable to resist. Analysis of the court transcript indicates that neither a hypothesis of hypnotically induced perceptual distortion, nor one of a close hypnotist-client relationship can account for the events that occurred. Other alternative explanations are discussed within the context of the inherent difficulties of analyzing a court transcript.

**1977**

Wickramasekera, Ian (1977). The placebo effect and medical instruments in biofeedback. Journal of Clinical Engineering, 2 (3), 227-230.

This article defines a "placebo effect" and identifies some of its parameters in pain control and in other areas of medicine. It proposes a new model of the placebo effect and advances the hypothesis that biomedical instruments used in biofeedback studies, like drugs, can acquire and generate placebo effects. Such placebo effects can complicate the interpretation of specific experimental treatments in human clinical research in which biomedical instruments are used.

**1963**

Sarbin, Theodore R.; Lim, Donald T. (1963). Some evidence in support of the role-taking hypothesis in hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 98-103.

A study was conducted to test the hypothesis that hypnosis is a form of role-taking behavior. Independent measures of hypnotizability as measured on the Freidlander-

Sarbin Scale and role-taking ability (improvisations) as judged by the Dramatics Department faculty were found to be significantly related. Those rated high in role-taking were above the mean in hypnotizability, but some high on hypnotizability were low in dramatics ability. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Rosenberg, M. J.; Gardner, C. W. (1958). Some dynamic aspects of posthypnotic compliance. Journal of Abnormal and Social Psychology, 57, 351-366.

Within the context of a general, psychoanalytically-oriented theory of hypnosis there were presented two hypotheses on the nature of compliance with posthypnotic suggestions. According to the first, such compliance is viewed as facilitated by the subjects being able to interpret the posthypnotic suggestion in a manner consistent with the mechanisms and affective reactions that, for him, characterize and maintain the hypnotic relationship. In the second, compliance with a posthypnotic suggestion is viewed as facilitated if that suggestion permits the subject safely to express and indulge a previously warded-off and conflicted drive. Case record data drawn from a recent experimental study were presented which tend to confirm these two hypotheses.

## CONDITIONING

1996

Montgomery, Guy H.; Kirsch, Irving (1996, August). Conditioned placebo effects: Stimulus substitution or expectancy change. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Stimulus substitution models posit that placebo responses are due to pairings of conditional and unconditional stimuli. Expectancy theory maintains that conditioning trials produce placebo response expectancies, rather than placebo responses, and that the expectancies elicit the responses. I tested these opposing models by providing some participants with information intended to impede the formation of placebo expectancies during conditioning trials and by assessing placebo expectancies. Although conditioning trials significantly enhanced placebo responding, this effect was eliminated by adding expectancies to the regression equation, indicating that the effect of pairing trials on placebo response was mediated completely by expectancy. Verbal information reversed the effect of conditioning trials on both placebo expectancies and placebo responses, and the magnitude of the placebo effect increased significantly over 10 extinction trials. These data disconfirm stimulus substitution models and provide strong support for an expectancy interpretation of conditioned placebo effects. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

1995

Montgomery, Guy H. (1995). Mechanisms of placebo analgesia: Expectancy theory and classical conditioning (Dissertation, University of Connecticut). Bulletin of Division 30, Psychological Hypnosis, APA, 5 (3), 2.

Stimulus substitution models posit that placebo responses are due to pairings of conditional and unconditional stimuli. Expectancy theory maintains that conditioning trials produce placebo response expectancies, rather than placebo responses, and that the expectancies elicit the responses. I tested these opposing models by providing some participants with information intended to impede the formation of placebo expectancies during conditioning trials and by assessing placebo expectancies. Although conditioning trials significantly enhanced placebo responding, this effect was eliminated by adding expectancies to the regression equation, indicating that the effect of pairing trials on placebo response was mediated completely by expectancy. Verbal information reversed the effect of conditioning trials on both placebo expectancies and placebo responses, and the magnitude of the placebo effect increased significantly over 10 extinction trials. These data disconfirm stimulus substitution models and provide strong support for an expectancy interpretation of conditioned placebo effects. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

1993

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

Wickramasekera, Ian (1993). Observations, speculations and an experimentally testable hypothesis on the mechanism of the presumed efficacy of the Peniston and Kulkosky procedure. Biofeedback, 21, 17-20.

Raises the speculation that alpha/theta EEG brainwave training procedures that have shown preliminary effectiveness with alcoholics and PTSD war veterans may be effective, at least in part, because of an enhancement of hypnotizability resulting from such training. Research to evaluate this is suggested.

1992

Kay, L. M. (1992, October). The effects of hypnosis, relaxation, and suggestion on visual acuity (Dissertation, California School of Professional Psychology, San Diego). Dissertation Abstracts International, 53 (4), 2065-B. (Order No. DA 9221587)

Evaluated the relative efficacy of several aspects of the hypnotic process on facilitating change in hypnotic state-dependent visual acuity in myopic student subjects. Five conditions included hypnosis with suggestions, neutral hypnosis, nonhypnotic suggestion, progressive relaxation, and a control (comedy). Visual acuity was assessed as baseline (a task-motivational situation where they were to try to see as well as possible) and after the experimental condition. Results found that hypnosis facilitated a significant improvement in visual acuity ( $p = .002$ ), although no differences were found in the other conditions" (p. 2065).

Page, Roger A. (1992). Clark Hull and his role in the study of hypnosis. American Journal of Clinical Hypnosis, 34, 178-184.

#### NOTES

The contributions of Hull include his attempts to dispel misconceptions about hypnosis, comparisons of capacities in the hypnotic state with those in the awake state, a sampling of early findings that are still valid today, and examples of his contributions to methodology. Additionally, the roots of many modern-day models and concepts are to be found in his early works.

"Bernheim (1902) had believed hypnosis was identical to natural sleep, while Braid (1899) had believed the resemblance between hypnosis and natural sleep was just superficial. Pavlov (1923) held an intermediate position; he hypothesized that hypnosis was a transition to true sleep involving selective inhibition of certain brain centers" (p. 179).

"His proposition that hypnosis conforms to the basic principles of habit formation was supported by his own work (1933) and, with few exceptions, holds true today. For example, many studies have found that hypnotic responding improves with practice and eventually reaches a plateau (e.g., As, Hilgard, & Weitzenhoffer, 1963; Evans & Schmeidler, 1966). Parenthetically, one can see a resemblance here to the later notion of 'plateau hypnotizability' (Shor, Orne, & O'Connell, 1966). Although Barber and Calverley (1966) did demonstrate that an exception to this proposition will occur if subjects become bored and disinterested, it is still true that hypnosis is generally facilitated by practice" (p. 181).

"Yet another example from the same work can be found in the following description of the results of a conditioning experiment: '... it is possible that the hypnotic group were conditioned more readily because they were the kind of individuals who are susceptible to hypnosis rather than because they were actually in the trance when subjected to the conditioning procedure.' (p. 219) In this statement, one can see the now taken-for-granted distinction between hypnotic susceptibility and being hypnotized, as discussed, for example, by Graham and Leibowitz (1972)" (p. 182).

"Still other now familiar concepts can be gleaned from his 1933 book. One would be the notion of trance having a kind of 'inertia.' Yet another stems from his hypothesis

that hypnotic suggestions produce relaxation, which in turn suppresses '... the spontaneous activity of the symbolic or thought processes.' (p. 310) This may well be the first conceptualization of what most recently has been referred to by Plotkin and Schwartz (1985) as the lack of a disposition or capacity to generate final-order appraisals" (p. 183).

Wall, Patrick D. (1992). The placebo effect: An unpopular topic [Editorial]. Pain, 51, 1-3.

## NOTES

The author presents a useful, brief review of the placebo effect. He suggests three hypotheses about the placebo response mechanism: 1. The effect is attributable to a decrease in anxiety (Evans, 1974). This view has not been validated (White, Tursky, & Schwartz, 1985). 2. Expectation, cognitively mediated, leads to behavioral effects. Certain personalities, described as placebo responders, report a stronger analgesia with a fixed dose of morphine than do people who are placebo non-responders (Beecher, 1968). White et al. (1985) proposed that simply asking what is expected of a medicine will identify who the placebo responders will be. Also, the placebo response to morphine is stronger than the placebo response to aspirin. Physician or nurse expectancy is influential as well as patient expectancy, and that means that 'blind' experimental trials are not truly blind. Kanto et al. (1966) found that the placebo effect is stronger when the placebo is given second than when it is given first in a crossover design. 3. The effect is due to a classical conditioned Pavlovian response (Wickramasekera 1980). Support for this comes from experiments on normal subjects whose pain and tolerance threshold had been established (Voudouris et al. 1989, 1990). For example, in one experiment in which electric current was the stimulus, a purportedly anesthetic ointment was applied to the locus of stimulation; some of the subjects showed a placebo response of diminished pain. A second group, treated in the same manner, had the pain producing electric current secretly reduced by the Experimenter. This second group, who had experienced reduction in pain that suggested the cream was truly analgesic, subsequently became strong placebo responders to the originally painful current and cream.

The author views the expectancy hypothesis and the conditioning hypothesis as not necessarily incompatible. Unlike the cognitively mediated expectation hypothesis, conditioning does not necessarily require cognition. But there is little support for the idea that human conditioning does not involve cognition [See Brewer, W. F. (1974). There is no convincing evidence for operant or classical conditioning in adult humans. In W. B. Weimer and D. S. Palermo (Eds.) *Cognition and the Symbolic Processes*. N.Y.: Wiley, pp 1-42.]

"If then the expectation and conditioning hypotheses are not clearly separate, it may be relevant to add an apparently unrelated group of phenomena. Humans and animals frequently show no signs of pain in the presence of overt injury (Wall 1979). It seems that pain appears only when reaction to injury is biologically appropriate. Could it be that expectation-conditioning is one of the factors which determines which item of our behavioural repertoire with its associated sensation is appropriate?" (p. 3).

1991

Rapee, Ronald M. (1991). The conceptual overlap between cognition and conditioning in clinical psychology. Clinical Psychology Review, 11, 193-203.

Given the fact that contemporary theories of conditioning regularly utilize information processing concepts such as memory and expectancies, classifying clinical theories as either cognitive or conditioned appears to be outdated. Yet, this dichotomy is still upheld in many clinical writings. Such a false dichotomy seems to serve more of a political function than a theoretical one and thus is likely to interfere with a complete understanding of psychopathology. While the terms conditioning and cognition are often used to imply unconscious learning on the one hand versus conscious, rational learning on the other, this usage is not consistent. A more empirically useful way to describe pathological behavior may be in terms of the amount of attentional resources utilized.

Russell, Christine; Davey, Graham C. (1991). The effects of false response feedback on human 'fear' conditioning. Behaviour Research and Therapy, 29 (2), 191-196.

Describes a human electrodermal conditioning experiment in which 28 students (aged 19-30 yrs) were given false skin conductance feedback during conditioned stimulus/stimuli (CS) presentation. In comparison with attentional control groups, Ss who believed they were exhibiting a strong conditioned response (CR) did actually emit a greater magnitude CR, while Ss who believed they were exhibiting a weak CR emitted a lower magnitude CR. When both self-report and behavioral measures of unconditioned stimulus/stimuli (UCS) evaluation were taken after conditioning, response feedback (RFB) had not differentially affected Ss' evaluation of the aversiveness of the UCS. The response modulating effects of RFB may not be caused by RFB influencing evaluation of the UCS, but they are consistent with the hypothesis that beliefs about the nature of RFB influence the strength of the UCS representation itself.

Badia, Pietro (1990). Memories in sleep: Old and new. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and cognition (pp. 67-76). Washington, DC: American Psychological Association.

#### NOTES

Reviews literature. Conclusion: First, with reinforcement for responding, control of learned behavior can be maintained reliably by stimuli presented during sleep. Second, when stimuli are presented 4 min or more apart, behavioral control results in little or no change in sleep structure, in daytime sleepiness, or in perceptions of sleep quality. Neither perceived wakefulness nor wakefulness as it is scored on the sleep record are necessary for responding, although stimulus/response events typically result in brief EEG or EMG change. Third, within-subject, within-night variance in responsiveness is complexly related to time of night, sleep stage, and REM/NREM cycle.

Evans, Frederick J. (1990). Behavioral responses during sleep. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and Cognition (pp. 77-87). Washington, DC: American Psychological Association.

#### NOTES

Subjects were 19 male student nurses who met a criterion of having EEG alpha density of at least 40% during an eyes closed, waking condition. They slept in the laboratory for two nights in succession, while being monitored by an EEG, and were told only that sleep cycles were being studied. Suggestions were presented while they were sleeping, e.g. "Whenever I say the word itch, your nose will feel itchy until you scratch it" "Whenever I say the word pillow, your pillow will feel uncomfortable until you move it." Then they were tested by Experimenter saying the cue word ("itch" or "pillow") during subsequent REM periods later that night and again on the next night. (The suggestions were not repeated on the second night; but two new suggestions were given on the second night when possible.)

After the Subjects awakened in the morning, they were interviewed to test their memory for the events that had occurred, and also cue words were presented in the context of a word association test to assess memory indirectly by observing behavioral and physiological responses. A more detailed inquiry was made after the second night.

The results were as follows. Ss responded to a mean of 21% of cue words administered. Ss continued to demonstrate REM sleep for at least 30 seconds for 71% of all cues administered, indicating that they were not aroused by the cue. When a suggestion was successfully completed (i.e., without eliciting alpha activity) it was not repeated. However, the cue words were tested in several subsequent REM periods. Cue word testing occurred immediately (during the same REM period as the suggestion) on the same night, as well as in a later REM period, and during REM on Night 2 (after the suggestion had been given during Night 1).

Correct responses were given for 20% of immediate, 23% of delayed, and 23% of carry-over conditions. Ss did not remember the suggestion, verbal cues, or their responses when they awoke. Since Ss often responded to the cue the next night without repetition of the suggestion itself, the authors inferred amnesia rather than forgetting had occurred. Responses were not elicited by repeating the cue word in the waking state, but appeared to be specific to the sleep condition.

Six Ss returned five months later for a third night of testing. Four had shown carryover response on Night 2 to a Night 1 suggestion. When verbal cues were presented (without re-administering the suggestion) those 4 Ss responded, even though there was no intervening waking memory about the procedure or the suggestions. Some Ss responded even more frequently than during the original two nights; hypnotic depth did not seem to account for the increased responsivity. Experimenters attempted to reverse the amnesia observed during the waking condition by using hypnosis, age regression, and other hypnotic techniques, with some positive effect. The author speculates that perhaps the techniques originally used to probe morning recall were not sufficiently sensitive. He also raises the

question of whether this waking state amnesia is related to the amnesia for night dreams when people awaken in the morning.

The relationship between hypnotizability and sleep suggestibility was analyzed. Hypnotizability was measured with the Harvard Group Scale, several weeks later, by Experimenters who were blind to the Ss' rate of responding to suggestions given during sleep. More hypnotizable Ss slept through the verbal stimuli more than low hypnotizable Ss; so they slept longer and more cues could be tested. Ss who responded most frequently to sleep-induced suggestions were more responsive to hypnosis. Analysis of response rate percentage (which controls for higher number of cues administered when Ss slept longer) showed that correlations between sleep suggestibility and hypnotizability were higher for percentage of delayed responses than for percentage of immediate responses.

Analysis by type of item on the hypnotizability scales suggested that the correlation with sleep suggestibility was due to the hallucinatory-reverie and the posthypnotic-dissociative clusters of hypnotic behavior, which are more difficult kinds of items. Correlations were significant for carry-over responses but not for immediate responses. These items represent phenomena experienced by Subjects who can be deeply hypnotized. The author reports that this relationship observed between hypnotizability and response to sleep-induced suggestions was not significant in a later study by Perry et al. (1978).

This author raises a question about why high hypnotizable subjects sleep better than low hypnotizables. The 6 Ss who were least susceptible accounted for 48% of all awakenings that occurred during the 2 experimental nights; the 6 Ss who were most hypnotizable accounted for only 26% of the awakenings ( $p < .01$ ).

Because sleep learning ("hypnopedia") has been extensively practiced in Russia and Eastern Europe, especially for language learning, the author investigated language learning with nine subjects. (Hoskovec, 1966, and Rubin, 1968, have reviewed the hypnopedia literature, which suggests that only "suggestible" subjects respond; it is not clear whether "suggestible" refers to hypnotizable, or whether expectation of success is cultivated by information given in the waking state.) The nine Ss had responded to the suggestions at least twice while remaining asleep, had no waking recall of the suggestions, but were given pre-sleep instructions (increasing expectancy) that they would learn during sleep.

The verbal association material ("A is for apple; P is for palace;" etc.) was given during EEG sleep stages 2, 4, and REM. (Eight letter-word stimuli pairs were given, two per sleep stage whenever possible.) When they awakened, Ss were asked to check "any familiar word" on a list of 10 words beginning with the letter A, with the letter P, etc. So the probability was .10 for each of the eight lists that they might check one correct word by guessing. They also responded to two dummy lists containing letter-word pairs not used during sleep.

None of the dummy list words were checked, whereas 28% of the administered words were correctly checked; also, Ss selected the correct letter (without identifying the word and with instructions not to "guess") in an additional 17% of all lists. Words were rarely recalled from Stages 2 and 4, but Ss often recognized letters from those stages. False positives (incorrectly recalled words or letters) was

almost never observed. Furthermore, no control Subjects (people who had not received a presleep set that they would recall) recalled any words correctly.

It was observed that whenever words presented during REM were later recalled, a transient slower frequency alpha (10.25 Hz vs. 9.64 Hz,  $p < .01$ ) had been evoked within 30 sec after the presentation of the stimuli during sleep.

Total recall of words correlated with the Harvard Group Scale of Hypnotic Susceptibility .69 and the Stanford individually administered scale .42, for the 7 Ss administered hypnotizability tests.

The author concludes that under optimal conditions, sleep learning of relatively easy material can occur with subsequent waking recall.

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

#### NOTES

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespectively whether they are of opioid or nonopioid nature)" (p.550)

McNally, Richard J. (1990). Psychological approaches to panic disorder: A review. Psychological Bulletin, 108 (3), 403-419.

Panic disorder has been the subject of considerable research and controversy. Though biological conceptualizations have been predominant, psychological theorists have recently advanced conditioning, personality, and cognitive hypotheses to explain the etiology of panic disorder. The purpose of this article is to provide an empirical and conceptual analysis of these psychological hypotheses. This review covers variants of the "fear-of-fear" construal of panic disorder (i.e., Pavlovian interoceptive conditioning, catastrophic misinterpretation of bodily sensations, anxiety sensitivity), research on predictability (i.e., expectancies) and controllability, and research on information-processing biases believed to underlie the phenomenology of panic. Suggestions for future research are made

Alexieva, A.; Nicolov, N.A. (1989). Brain mechanisms in classical conditioning. Behavioral and Brain Sciences, 12, 137.

#### NOTES

This is a Commentary on article by J. S. Turkkan (1989), Classical Conditioning: The new hegemony. In Behavioral and Brain Sciences.

Commentators note that the objective of the target article is to show how current thinking about Pavlovian conditioning differs substantially from the historical view; also that this has been recently emphasized by Rescorla (1988). Commentators note that the neural pathways and neural mechanisms involved in Pavlovian conditioning are of great interest and are investigated by many neuroscientists all over the world (Grigoryan & Tchilingaryan 1988; Kositsyn N.S. & Dorochoy 1986; Onifer & Durkovic 1988; Storzhuk 1986; Vartanyan & Pirrgov 1986). Commentators also note the work of Ramachandran & Pearce (1987) and Uryvaev Yu.V. et al. (1988).

They express the opinion that Turkkan's review affords a thorough description and interpretation not only of basic data and new conceptual views, but also of certain key notions in the modern theories of Pavlovian associative learning.

1989

Gardner, Beatrix T.; Gardner, Allen R. (1989). Beyond Pavlovian classical conditioning. Behavioral and Brain Sciences, 12, 143-144.

#### NOTES

This is a commentary on the article by Turkkan (1989) entitled "Classical conditioning: The new hegemony" in Behavioral and Brain Sciences, 12, 121-179. (Pavlov's theory of hypnosis was based on a conditioning model, which is why this material may be relevant.)

"Traditionally, the mechanism of stimulus association proposed by Pavlov early in this century is invoked to account for conditioning that is independent of the positive and negative consequences of responding. ... Pavlov attributed this result to stimulus substitution (i.e., the subject responds to the Sa as if it were the S\*) and this has been the dominant view throughout this century" (p. 143).

'In Pavlov's classical procedure, only increases and decreases in the original consummatory or defensive response are counted as conditioned responses. ... Pavlov's classical procedure is only a special case of a much broader case of a phenomena" (p. 143).

"Key-pecking by pigeons and lever-pressing by rats are responses that were long held up as prototypes of arbitrary behaviors that could only be shaped by response-contingent reinforcement. In the autoshaping procedure, however, these same responses have been easily conditioned to an arbitrarily selected stimulus (Sa) when the delivery of food was entirely independent of the response of the subjects. Not only that, but robust rates of responding have been maintained when food was withheld if the pigeons pecked the key or the rats pressed the lever, that is, when the contingency was negative (Williams & Williams 1969)" (p. 143).

"Turkkan follows a grand tradition when she discusses the similarities between associative conditioning and fundamental aspects of human verbal behavior. Yet an essential characteristic of verbal behavior is the difference between the response to an object and the response to a word for the object. The response to the spoken or written word 'apple' must be distinctly different from the response to an actual apple. Whatever we learn when we acquire vocabulary, it cannot be the simple stimulus-stimulus connection advocated in Pavlov's classical theory. Even the popular Rescorla (1967) design for separating stimulus-stimulus contiguity from stimulus-stimulus contingency only succeeds in comparing two sources of stimulus-stimulus association. Meanwhile, the recently discovered autoshaping experiment does offer us a laboratory model in which associative conditioning can result in a response to the Sa that is different from the consummatory response to the S\*" (p. 144).

"The theory of stimulus-stimulus association that Pavlov built upon the results of his special procedure is inadequate to deal with the wide range of phenomena of associative conditioning that have been discovered since his time.

"We wholeheartedly agree with Turkkan regarding the enormous theoretical and practical significance of the new discoveries but we are convinced that the terms 'Pavlovian conditioning' and 'classical conditioning' serve us best in their historical usage. ... The new discoveries seem to us to show that a wide range of significant phenomena fall outside the boundary conditions of traditional Pavlovian and Skinnerian theories" (p. 144).

Griffiths, M. D.; Gillett, C. A.; Davies, P. (1989). Hypnotic suppression of conditioned electrodermal responses. Perceptual and Motor Skills, 69, 186.

## NOTES

With 5 subjects who had previously been aversively conditioned to a stimulus, during hypnosis previously acquired electrodermal responses were found to be

significantly lower than in 12 control Ss. Thus previously conditioned electrodermal responses were suppressed. This contradicts findings of Edmonston (1968) who found that neutral hypnosis does not influence conditioned electrodermal responses and the validity of Pavlov's (1927) conditioning (inhibition) theory of hypnosis.

Holroyd, Jean; Maguen, Ezra (1989). And so to sleep: Hypnotherapy for lagophthalmos. American Journal of Clinical Hypnosis.

**ABSTRACT:** We used hypnosis to facilitate eye closure during sleep for a 44-year-old woman whose nocturnal lagophthalmos prevented use of a contact lens following cataract surgery and could have resulted in severe corneal damage. On three separate occasions the symptoms remitted following a very brief course of treatment. We discuss the results in terms of alternate theories of hypnotic performance.

#### NOTES

The Discussion section notes, "There was an excellent correlation between the onset of hypnotherapy and the cessation of the recurrent corneal erosion secondary to nocturnal lagophthalmos. Healing of corneal erosion, disappearance of the superficial punctate keratopathy, and alleviation of ocular foreign body sensation occurred promptly

following hypnotherapy (with two separate therapists)" (pp. 267-268). The authors present the view that "heightened suggestibility, more vivid imagery, and more specific influence of thoughts upon organ systems probably came into play (Brown & Fromm, 1986; Holroyd, 1987). Social influence explanations (role taking, expectancy, compliance) seem less relevant as explanations. This highly motivated patient had not been able to keep her eyes closed during sleep despite her conscious efforts, her "good-patient" role, her positive expectations about the benefits of standard treatments, and respectful incorporation of the assistance provided by her ophthalmologist" (p. 268).

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no

difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

Davies, Peter (1988). Some considerations of the physiological effects of hypnosis. In Heap, Michael (Ed.), Hypnosis: Current clinical, experimental and forensic practices (pp. 61-67). London: Croom Helm Ltd.

#### NOTES

This chapter reviews literature on physiological correlates of hypnosis, but these notes are limited to only one fact reported in the review. The author writes, 'A recently completed, and as yet unpublished study by C. Gillett and H. D. Griffiths at Bradford University investigated the relation between hypnosis and classical conditioning of psychophysiological responses. In a complex design involving both normal conditioning and normal test trials and a repetition of both acquisition and test trials under hypnosis, they found not only suppression of the conditioned response but also suppression of skin conductance responses to the half-second bursts of a 115-dB tone used as the unconditioned stimulus. Not to produce a significant autonomic response to such an intrinsically aversive stimulus is a remarkable feat which is probably outside the repertoire of simulators. However, even such results are not conclusive as the design did not include simulator control groups nor even neutrally instructed non-hypnotized group' (pp. 64-65).

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Tsushima, W. T. (1988). Current psychological treatments for stress-related skin disorders. Cutis, 42, 402-404.

Surveys current methods used by psychologists in the management of stress-related skin disorders, including hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive behavioral therapy. These techniques offer promise in

the treatment of certain dermatologic conditions, but the limited amount of well-controlled and replicated studies of their use suggests that caution be taken in their application.

Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, 7-8.

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10 on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

#### NOTES

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0.

Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

1984

Fogel, Barry S. (1984). The 'sympathetic ear': Case reports of a self-hypnotic approach to chronic pain. American Journal of Clinical Hypnosis, 27 (2), 103-106.

Secondary gain issues may limit the success of hypnotherapeutic approaches to chronic pain. A self-hypnotic suggestion that promotes patients' awareness of the interpersonal aspects of their pain complaints was used in the treatment of two patients with chronic headache. Hypnotic suggestions that help make secondary gains conscious may be a useful addition to hypnotic techniques of pain management.

Kolb, Lawrence C. (1984, October/1986). Comments on post-traumatic stress disorder and dissociation. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 171-178). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

**NOTES:**

Kolb indicates that people may not be able to overcome the neurological changes consequent upon trauma. In this event, post traumatic stress disorder would have lasting, irremediable effects.

Venturino, Michael (1984, August). Perceptual monitoring and allocation of attention (Dissertation, University of Maine). Dissertation Abstracts International, 45 (2), 707-B.

The processing ability of perceptual monitoring was investigated using a dichotic listening and shadowing task. Individual differences in the effectiveness of perceptual monitoring were also investigated by using susceptibility to hypnosis as a grouping factor. Subjects' skin conductance response (SCR) was conditioned to specific words by an electric shock. These conditioned words, and words semantically and acoustically related to them were presented in the relevant and irrelevant messages of the dichotic listening and shadowing task. Probability and magnitude measures of SCRs and subjects' verbal shadowing accuracy were used to assess performance. SCRs to critical words were significantly greater than to control words in both the relevant and irrelevant messages. However, the SCRs to words in the irrelevant messages were not as great as those responses elicited to words in the relevant message. The pattern of responding to the semantically and acoustically related words was similar for both the relevant and irrelevant messages. Subjects low in hypnotic susceptibility responded to critical words with significantly greater probability and magnitude of response than did subjects high in hypnotic susceptibility. Analysis of the shadowing performance data showed that the perceptual monitoring process was quite effective. The occurrence of the conditioned word in the irrelevant message caused a shift in attention to the irrelevant message, manifested by a shadowing error. Subjects shadowing the message in their left ear committed significantly more shadowing errors than subjects shadowing the message in their right ear. No differences in shadowing performance were obtained for the hypnosis factor. The results were interpreted in terms of the deployment of attention to the environment, and the relationship of this deployment to the perceptual monitoring process" (p. 707).

1983

Spanos, Nicholas P.; Dubreuil, Debora L., Saad, Carol L., Gorassini, Donald (1983). Hypnotic elimination of prism-induced aftereffects: Perceptual effect or responses to experimental demands?. Journal of Abnormal Psychology, 92 (2), 216-222.

Two experiments assessed adaptation to displacing prisms in hypnotically limb-anesthetized Ss. Experiment I with 18 college students disconfirmed the hypothesis that the displacement aftereffect is eliminated in limb-anesthetized hypnotic Ss who adapt to prisms in the absence of a visual target. Such Ss showed as large a displacement aftereffect as control Ss who received neither a hypnotic induction procedure nor an anesthesia suggestion. Experiment II with 30 undergraduates demonstrated that under some testing conditions hypnotic Ss complied with experimental demands and eliminated the behavioral but not the perceptual component of the aftereffect.

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

1982

Redd, William H.; Andrykowski, Michael A. (1982). Behavioral intervention in cancer treatment: Controlling aversion reactions to chemotherapy. Journal of Consulting and Clinical Psychology, 50 (6), 1018-1029.

**ABSTRACT:** During the protracted course of cancer chemotherapy, approximately 25% of patients develop aversion reactions to treatment by becoming nauseated and/or vomiting before their chemotherapy treatments. This phenomenon has been conceptualized as a result of respondent conditioning. Since commonly used antiemetic drugs do not reliably control anticipatory nausea/emesis, behavioral techniques of control have been studied. They include hypnosis used in conjunction with guided-relaxation imagery, progressive muscle relaxation with guided imagery, and systematic desensitization. (67 ref)

Redd, William H.; Andresen, Graciela V.; Minagawa, Rahn Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50 (1), 14-19.

## NOTES

Deep muscle relaxation hypnosis controlled nausea, gagging, retching in all cases. Anticipatory emesis recurred when hypnosis was not used. During subsequent sessions in which hypnosis was reinstated, anticipatory emesis was again controlled.

Redd, William H.; Rosenberger, Patricia H.; Hendler, Cobie S. (1982-83). Controlling chemotherapy side effects. American Journal of Clinical Hypnosis, 25 (2-3), 161-172.

Severe nausea and vomiting are commonly experienced by cancer patients after receiving chemotherapy treatments. Moreover, approximately 25% of these patients develop conditioned aversions to treatment and become nauseated before they receive their chemotherapy injections. The use of deep muscle relaxation hypnosis in conjunction with guided imagery to control pre- and post-chemotherapy nausea and emesis is discussed. Theoretical and clinical issues raised by this application of hypnosis in cancer treatment are also addressed.

Werner, William E. F.; Schauble, Paul G.; Knudson, Marshall S. (1982). An argument for the revival of hypnosis in obstetrics. American Journal of Clinical Hypnosis, 24, 149-171.

Available research, clinical reports, and extensive personal experience demonstrate that hypnosis, and especially the hypnoreflexogenous technique, facilitates the mother's comfort in pregnancy, labor, and delivery; is superior to the use of chemicals or other psychophysical methods as the primary aid in childbirth; and results in lasting benefit for the mother, the child, and the family as a whole. Prior to delivery, with the patient in hypnotic trance, a verbal conditioning technique is used that (1) neutralizes the fear of delivery with a positive emotion that exalts maternity as a sublime experience, (2) substitutes the uterine contraction concept for the pain concept, and (3) presumably lowers the excitability of the cortex by psychological sedation. While hypnosis experienced a temporary decrease in popularity due to a number of misconceptions, there has been renewed and promising application of hypnosis to obstetrics and other areas of medicine.

1979

Clarke, Christopher (1979). Hypnotherapy in the treatment of alcoholism. Australian Journal of Clinical and Experimental Hypnosis, 7 (1), 1-5.

If an aversive technique is used as a part of a hypnotic or behavior therapy treatment programme for problem drinking, the therapist is faced with the question of which aversive stimulus (or image) to use. This question has been given little in the way of systematic attention because of the widespread belief that there are no grounds for choosing between aversive stimuli which are equally safe, convenient and, of course, noxious. However, recent research in behavioural biology as well as certain clinical results call this assumption into question. Instead this work supports the contrary view: that the quality of the aversive stimulus is a crucial determinant of the effectiveness of aversion therapy. Specifically, this research strongly suggests that an illness or "malaise" experience must occur in conjunction with the alcohol for the conditioning (of an aversion) to be successful. Specific suggestions for the conduct of hypnotic aversion therapy are made in light of this work.

1978

Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables. The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

1977

Avila, Donald; Nummela, Renate (1977). Transcendental meditation: A psychological interpretation. Journal of Clinical Psychology, 33 (3), 842-844.

The authors suggest that Transcendental Meditation offers a great deal of promise for use in helping relationships. They also suggest that the technique might receive wider acceptance if it could be explained in other than a purely philosophical or mystical way. For that reason, in their article they offer a psychological interpretation of the TM process.

Wickramasekera, Ian (1977). The placebo effect and medical instruments in biofeedback. Journal of Clinical Engineering, 2 (3), 227-230.

This article defines a "placebo effect" and identifies some of its parameters in pain control and in other areas of medicine. It proposes a new model of the placebo effect and advances the hypothesis that biomedical instruments used in biofeedback studies, like drugs, can acquire and generate placebo effects. Such placebo effects can complicate the interpretation of specific experimental treatments in human clinical research in which biomedical instruments are used.

1976

King, Dennis R.; McDonald, Roy D. (1976). Hypnotic susceptibility and verbal conditioning. International Journal of Clinical and Experimental Hypnosis, 24, 29-37.

18 Subjects highly susceptible to hypnosis and 18 Subjects refractory to hypnosis were studied in a verbal conditioning task modeled after the one used by Taffel (1955). Results indicated that the highly susceptible group showed significantly greater conditioning than the low group. Awareness of the reinforcement contingency by S was not related to the learning task nor to hypnotic susceptibility. A measure of S's attitude toward the reinforcement cue during learning showed that the highly susceptible group had a more positive set toward the cue, whereas the low group tended to respond to it in a neutral or negative manner. Results were interpreted in terms of the theoretical nature of hypnotic susceptibility.

## NOTES

They review literature on attempts to correlate hypnotizability with verbal conditioning ability.

Volunteer students participated; screened by HGSHS:A: highs 10-12, lows 0-4.

Verbal conditioning procedure: S viewed 100 3x5 cards on which were a two-syllable, past tense verb, below which typed in upper case letters on one line were the pronouns I, WE, HE, SHE, THEY, and YOU (randomly assigned to different orders). E was blind to hypnotizability. E instructed S to make up a sentence using the verb and a pronoun; gave no response for first 20 trials; said "good" to usage of I or WE during conditioning.

Afterwards, S filled in an Awareness Questionnaire (What was purpose? If E gave cues, what were they? If you noticed cues, what do you think they indicated?) and attitude toward the reinforcement cue (Did you notice that I did anything special? What? Did I say "good" for a special reason? What was the reason for my saying "good"? How did hearing the word "good" affect you during the experiment? IN a positive, negative, or neutral way?

Results. Groups did not differ at baseline but did differ at Blocks 2 (highs 9.7 vs lows 6.3;  $p < .05$ ) and 3 (highs 10.4 vs lows 6.3;  $p < .05$ ). Although the High group continued to maintain a somewhat higher level of responding than the Low group during extinction (9.8 vs 7.6), this difference did not reach statistical significance. (The graph shows an increase for Lows during extinction!)

Using a liberal definition of awareness and a learning index computed for each S by subtracting his operant level of response from the mean number of correct responses shown during the 3 blocks of acquisition trials, Subjects were ordered and a median test applied; contingency coefficient of .28 not significant ( $p < .10$ ).

Attitude significantly differentiated High and Low hypnotizability groups (see Table 2) with Highs more often responding in positive manner to reinforcement cue and Lows giving a neutral rating. Awareness of reinforcement contingency was equally represented in High and Low groups. The Aware High Positive groups learning index differed significantly from Aware Low Neutral group ( $p < .01$ ); the Unaware Low Positive group ( $p < .05$ ); and the Unaware Low Neutral group ( $p < .001$ ).

Thus, the Aware High Positive group's learning index score was significantly higher than that of the 3 Low groups. Also, the Unaware High Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ). No other High groups differed from the Low groups and none of the High groups differed among themselves.

Among the Low groups, only the Unaware Low Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ).

Discussion. Data show that hypnotizability is important in response to verbal conditioning, extending findings of Das (1958) by showing that primary suggestibility is associated with operant as well as classical conditioning but also those of Weiss et al. (1960) in illustrating that higher hypnotic susceptibility leads to enhanced verbal conditioning, using an improved measure of hypnotic susceptibility.

Awareness of reinforcement contingencies is not sufficient to account for subject differences in verbal conditioning; the characteristics tapped by HGSHS:A produce conditioning which cannot be accounted for by awareness alone.

The fact that high susceptible Subjects here rated E's cue more positively than low susceptible Subjects is further consistent with some of the personological descriptions associated with hypnotic susceptibility which have been offered by Hilgard (1968). In addition, Cairns and Lewis (1962) and Spielberger et al. (1962) found that persons who assigned more positive value to the kind of reinforcement present in verbal conditioning experiments produced greater conditioning than Subjects whose attitudes were less favorable or non-committal toward the reinforcement. This relationship is not clear-cut in the present data in that although the High groups had an overall more positive attitude regarding reinforcement, only the Aware High Positive group learned better than all the Low groups, while the only other High group learning better than a Low group was the Unaware High Positive which had a significantly better learning index score than the Unaware Low Neutral group. Moreover, positive attitude did not differentiate learning within the High groups or the Low groups. Thus, the present data are unclear regarding the role attitude plays in the acquisition of verbally conditioned responses.

The roles of awareness and attitude could probably be better defined in future research using larger experimental groups. The attitude measure employed here was a gross one and a more sophisticated assessment of the valence characteristics of reinforcement cues could reveal more complex relationships in subsequent research. In addition, a more careful assessment than was done here of the role of cooperation and demand characteristics would contribute substantially to understanding more completely the effect of awareness on these phenomena.

The general indications regarding attitude may in part account for the increased interest in production of conditioned responses in Figure 1 shown by the Low group (graph) during the extinction phase of this experiment. Although highly susceptible Subjects show a decrease in the correct response with nonreinforcement, low susceptible Subjects begin to evidence an increase in the correct response. The attitude measure indicates that Subjects in the Low group did not respond positively to the reinforcement cue, and one of these Subjects reported in the interview that he did not like being told what to do by the E. It can be speculated that these Subjects were aware of the reinforcement contingency but did not "cooperate" until the reinforcement was absent. This follows the interpretation of Farber (1963) who found that aware Subjects who conformed to the demand characteristics of the experimental situation showed greater verbal conditioning than those who were aware and nonconforming. It thus appears that a willingness to go along with E's

expectations and a positive, cooperative attitude are common features in individuals who make good hypnotic Subjects and who evidence an enhanced propensity for verbal conditioning.

1975

Bender, V. L.; Navarett, F. J.; Nuttman, D. (1975). Effects of neutral hypnosis on a conditioned physiological response. Psychological Reports, 37, 1155-1160.

The objective of the present experiment was to determine whether hypnosis without explicit suggestion of analgesia would diminish physiological responses to an operationally defined painful shock stimulus. Muscle tension (EMG) was significantly lower during hypnosis than pre- or posthypnosis. Pulse rate remained stable throughout all conditions. Also, the question of whether a tone paired with shock might acquire some unique property because of that association was investigated. It was found that EMG response to the tone alone was significantly greater than to the tone-shock combination, in prehypnosis and posthypnosis, but not during hypnosis.

Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

1973

Tori, Christopher; Worell, Leonard (1973). Reduction of human avoidant behavior: A comparison of counterconditioning, expectancy, and cognitive information approaches. Journal of Consulting and Clinical Psychology, 41 (2), 269-278.

This study was designed to compare the fear-reducing efficacy of procedures based on three major theories that have been proposed to account for the success of systematic desensitization therapy: (a) cognitive information storage and retrieval, (b) cognitive expectancy, and (c) counterconditioning. Predictions were confirmed in that the outcome measures of the high-expectancy placebo group and the two cognitive-coping groups were significantly superior to those of the counterconditioning and no-treatment groups. Thus, this experiment supports the supposition that changes in human avoidant behavior may be attributed to demand and expectancy variables rather than the conditioning of "antagonistic responses" as has been previously suggested.

1972

Greene, R. J.; Reyher, J. (1972). Pain tolerance on hypnotic analgesic and imagination states. Journal of Abnormal Psychology, 79 (1), 29-38.

NOTES

Found that a hypnotic-analgesic-plus-pleasant-imagery condition was not as effective as was an analgesia suggestion only, in modifying tolerance.

1969

Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3

in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Barber, Theodore Xenophon; Calverley, David S. (1966). Toward a theory of hypnotic behavior: Experimental evaluation of Hull's postulate that hypnotic susceptibility is a habit phenomenon. Journal of Personality, 34, 416-433.

#### NOTES

Examines Hull's 1933 theory that hypnotic susceptibility is a habit phenomenon, which he derived from a review of the literature and an experiment. Also presents his own experiment to test it.

Davison, Gerald C. (1965, June). Anxiety under total curarization: Implications for the role of muscular relaxation in the desensitization of neurotic fears. [Paper] Presented at the annual meeting of the Western Psychological Association, Honolulu.

#### NOTES

I began by describing the Jacobson-Wolpe position on the use of deep muscular relaxation as an anxiety-inhibitor: these writers assume that the considerable reduction in proprioceptive feedback from muscles which are in a relaxed state is incompatible with a state of anxiety. Then I mentioned the evidence that at least modern neuromuscular blocking-agents operate solely at the myoneural junction, with no direct central effects. I went on to discuss the various studies which have used paralytic drugs, primarily d- tubocurarine chloride, to show the learning of fear-responses under complete striate muscle paralysis: the fact that these animals are able to acquire classically-conditioned fear-responses under curare was taken as evidence inconsistent with the views of Jacobson and Wolpe. Several studies were then reviewed which purport to furnish confirmatory evidence for the Jacobson position: these studies showed considerable central depression during curare paralysis. I re-interpreted these studies in the light of the over-riding importance of exteroceptive stimulation, stressing that the animals in the curare learning experiments were likewise deprived of proprioceptive feedback and yet were hardly non- anxious: the important difference was that the animals in the conditioning experiments were stimulated frequently from the environment while curarized, this stimulation maintaining an alert, often anxious state. Finally, two hypotheses were put forward as to why training in muscular relaxation does, in fact, inhibit anxiety: the one suggested that relaxing one's muscles generates strong positive affect states, which in turn inhibit anxiety; the other hypothesis called attention to the fact that

the states of muscular relaxation under curare versus under self-induced relaxation differ in the important respect that only with self-induced relaxation is there a reduction in efferent activity--perhaps this elimination of efferents, rather than afferents, inhibits anxiety.

1965

Vasilev, L. (1965).

Mysterious phenomena of the human psyche. New York: University Books. (Abstracted in *American Journal of Clinical Hypnosis*, 1965, 8:2, 146-147)

NOTES:

The review of this book by Leo Wollman (*American Journal of Clinical Hypnosis*, 1965, vol. 8, pp. 146-147) states, "Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B. N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

" An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent" (pp. 146-147).

1963

Dittborn, Julio M.; Munoz, L.; Aristeguita, A. (1963). Facilitation of suggested sleep after repeated performances of the sleep suggestibility test. *International Journal of Clinical and Experimental Hypnosis*, 11, 236-240.

The sleep suggestibility test (SST) was individually administered to a group of young volunteer soldiers. There was increased susceptibility with each successive SST administration. It was possible to transform suggested sleep into somnambulistic hypnosis in a majority of Ss. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Webb, Robert A. (1962). Suggestibility and verbal conditioning. *International Journal of Clinical and Experimental Hypnosis*, 10, 275-279.

Evidence is advanced that postural sway suggestibility is positively correlated with verbal conditioning. No S below 100 mm. of body sway showed any indication of

conditioning. The lowest suggestibility group appeared to be counter-conditioning. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Black, Stephen; Wigan, E. R. (1961). An investigation of selective deafness produced by direct suggestion under hypnosis. British Medical Journal, 2 (5254), 736-741.

**NOTES:**

Conditioned cardiac response extinguished by hypnotic deafness.

Farber, S. M.; Wilson, R. H. L. (1961). Control of the mind. New York: McGraw-Hill. (Reviewed in American Journal of Clinical Hypnosis, 1964, 7, 2)

**NOTES**

Contains papers presented by multidisciplinary group at a symposium. Covers broad areas of: 1. The mind and its integration. 2. The influence of drugs on the individual. 3. The mind and society 4. The effect of technology on the mind 5. Restrictions and freedom of the mind.

**1961**

Stolzenberg, Jacob (1961). Technique in conditioning and hypnosis for control of gagging. International Journal of Clinical and Experimental Hypnosis, 9, 97-104.

**Author's Conclusion** The practitioner who is competently trained in hypnosis will find that there is a diminished need for the use of hypnosis per se, with most of his patients. His understanding of the psychodynamics will aid immeasurably in establishing rapport with his patients, and develop an excellent patient-dentist relationship. His semantics will be a vocabulary of positive words which will not trigger off negative reactions in his patients. The dentist as a rule, who has been exposed to hypnosis indoctrination, usually displays kindness and understanding, and treats his patients with tender loving care.

"The highest achievement in a dentist-patient relationship is attained when the parent says, "You know, doctor, I would almost think you had hypnotized my daughter when I see how nicely she cooperates"" (p. 104).

**1960**

Tinterow, Maurice M. (1960). The use of hypnoanalgesia in the relief of intractable pain. American Surgeon, 26, 30-34.

**NOTES:**

The author begins with a statement that the experience of pain requires consciousness. He continues by suggesting that hypnotic control of pain requires establishing selective thinking and bypassing the critical thinking aspect of consciousness. "[Hypnosis] raises the threshold of pain and is the only means of anesthesia which carries no danger to the patient. ... Hypnosis obeys the laws which govern conditioning in general, and suggestion causes new conditioned patterns to be developed" (p. 30).

"Success in hypnotherapy depends on the ability of the individual and, of importance, on constant practice. ... Under the influence of hypnosis the sensory end organs continue to function but the patient's attitude may be altered that the pain is no longer experienced the same way. ... Intractable pain is not responsive to conservative measures. It is usually produced by a disease which cannot be treated directly. Drug therapy will usually give relief, particularly opium and its derivatives, but with continued usage the severity of pain has no relationship to the amount of narcotic necessary. ... Hypnosis is nothing more than the suggestive placebo effect presented in a specific personal setting" (p. 31).

"Nearly all of the patients with intractable pain reach debilitating states through exhaustion, loss of sleep, decrease of appetite and weight loss. ... The use of suggestive therapy should be attempted early and before addiction to narcotics or alcohol has occurred. ... The word hypnosis is not used because of the fear the patient has toward the mystery and the unknown. The term 'medical relaxation' is referred to as the method of therapy" (p. 31).

"Hypnotherapy was attempted in 15 cases of intractable pain. Success depended upon the early referral of the cases and before addiction to narcotics has occurred. Five of the eight cases with metastatic carcinoma were relieved of the severe intractable pain. Of the two patients with intractable pain following herpes zoster, relief was successful in one of them. A patient with diabetic neuropathy had no pain after five sessions of hypnosis. After an operation for repair of a hiatal hernia, the patient had severe intractable pain which was relieved with hypnotic therapy. Another patient, who developed pain after a subtotal gastrectomy, was also successful in returning to a normal life. Two other patients ... were unable to be hypnotized" (p. 32).

1959

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. ( Abstracted in Psychological Abstracts, 61: 6626)

## NOTES

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

Das, J. P. (1959). A theory of hypnosis. International Journal of Clinical and Experimental Hypnosis, 7 (2), 69-77.

NOTES

1:

"Summary

"The present theory of hypnosis assumes two things -- that hypnosis is a form of conditioning and that it is a state of inhibition. Evidence relevant to the assumptions is presented briefly. The theory views hypnosis as a learned state of partial cortical inhibition and formalises it as a multiplicative function of learning and inhibition:  $H = f(L \times I)$ . Some predictions are made and explanations provided for several phenomena associated with hypnosis. The orientation of the theory is Pavlovian" (p. 75).

H = Hypnosis, L = Learning (conditionability, habit formation, etc.), I = partial cortical inhibition.

"Purely mechanically produced monotonous stimuli may induce a state of inhibition. But the task of the hypnotist is to select the cortical points to keep in a state of excitation, thus preventing inhibition from spreading over the entire cortex to produce sleep" (p. 71).

Pascal, G. R.; Salzberg, H. C. (1959). A systematic approach to inducing hypnotic behavior. International Journal of Clinical and Experimental Hypnosis, 7 (3), 161-167.

NOTES

1:

"Summary

The paper reports an experiment in inducing hypnotic behavior. Hypnotic behavior is considered as operant behavior subject to the principles of such behavior. Using a procedure based on this systematic position 52 per cent of 56 subjects were brought to the deep trance state in one session, a considerable gain over results reported in the literature. It is felt that the approach presented suggests that hypnosis may be brought into the realm of behavioral science" (p. 166).

A detailed description of the procedure is provided. It begins with providing information, establishing rapport, using demonstrations of hypnotic-like behavior (the Kohnstamm phenomenon and body sway suggestions), followed by relaxation in a stimulus-attenuated room with verbal suggestions and operant (verbal) reinforcement. It proceeds with a series of frankly hypnotic suggestions for arm analgesia and lightness/floating, amnesia, etc.

Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.

NOTES

1:

NOTES: On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.

Note: Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in

treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.

"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal, there is also a functional dissociation of the two signal systems and within the second signal system. 2. The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new cortical dynamic structures under the verbal influences of the hypnotist, these structures representing the physiological basis for effectuating the suggested actions and states.

"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).

"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.

"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.

"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The

more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).

"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after waking. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions. During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

1957

Weitzenhoffer, Andre M. (1957). Posthypnotic behavior and the recall of the hypnotic suggestion. Journal of Clinical and Experimental Hypnosis, 5 (2), 41-58.

### Summary

1. Posthypnotic phenomena may be spontaneous or suggested in origin. Although no single mechanism appears to exist which will account for all of the spontaneous manifestations, their explanations are relatively straightforward. On the other hand, suggested posthypnotic phenomena are not so readily dealt with.

2. ... It seems likely that a relation exists between posthypnotic suggestions and waking instructions of the everyday variety; however, lack of basic information regarding the retention and activation of the latter has made this line of approach unproductive to date. Nor is it possible to talk of posthypnotic phenomena as learned if one regards the posthypnotic signal as stimulus and the suggested act as response. The definition of learning excludes this case because of the presence of hypnosis at the time the response is acquired. In addition, the acquisition and evocation of the posthypnotic effect does not follow any standard paradigm for learning.

3. If, however, one views the posthypnotic suggestion as a whole as being the stimulus, and the act of subjectively, if not objectively, giving reality to the content of the suggestion as the response, then suggested posthypnotic phenomena can be fitted within the framework of modern learning theory. They appear to arise through some form of classical conditioning, abstract conditioning being the most likely form at present. Seen in these terms, posthypnotic suggestions function through the same mechanisms as any other hypnotic suggestion, being merely a

special instance of a deferred suggestion. It must be emphasized that posthypnotic phenomena are learned in the sense only that they are brought into being through the use of previously acquired response tendencies. The learning process has usually reached completion by the time the hypnotic subject is capable of giving good posthypnotic responses.

4. The posthypnotic signal holds a unique position in posthypnotic phenomena which allows it to acquire unique and distinctive features with respect to the elicitation of the suggested behavior, among which is the capacity to cause reintegration.

5. The spontaneous [sic] trance said to accompany the initiation of any posthypnotic act appears to be a natural outcome of the learning process involved in the acquisition of posthypnotic behavior. There is a reinstatement of the original trance state because the posthypnotic trance is the result of associations taking place between the stimulus-suggestion and the symptoms of the initial hypnosis, these symptoms acting as responses.

6. Acquisition and retention of the contents of the suggested posthypnotic act may need to be differentiated from the acquisition and retention by the posthypnotic signal of the capacity to initiate the posthypnotic act. In the light of this observation, experimental data showing that posthypnotic suggestions are forgotten just like any other instructions may hold true only for the memory of the content. The capacity to initiate posthypnotic action, although subject to the same laws of forgetting may be far more enduring because of certain features of the learning process which underlie it" (pp. 55-56).

Solovey, Galina; Milechnin, Anatol (1956). Concerning some points about the nature of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (2), 83-88.

#### NOTES

Two experiments with young children explored the similarity between mothers' sleep inducing speech and hypnotic induction. The first group were six normal children ranging in age from 25 to 37 months. Author interviewed their mothers for details on their sleep inducing behavior. Then "we followed a procedure that as a rule consisted in leaning over the little one, dedicating all our attention to him, repeating the mother's own series of soothing diminutives in a softly-modulated voice, and stroking gently the child's hair, forehead, or arm. In four to thirty-five minutes, the children relaxed, stopped moving, let their eyelids droop, and showed a particularly placid facial expression. Their appearance was completely similar to that of a hypnotized person" (p. 83). Signs of catalepsy (e.g. following suggestions of holding a teddy bear more and more tightly) and concentration of attention to the exclusion of outside stimuli were taken to indicate the hypnotic state.

The second experiment involved infants 3 to 24 months old, lulling them into a state of quiet relaxation. "The difficulty does not consist in producing this special state, but in demonstrating that it is really hypnosis. However, if we consider the identity of the means employed in bringing it about, and the similarity of the results to those occurring at a slightly later age, it would be unreasonable to think that there is a

certain reaction up to a certain age and a fundamentally different one from that age on" (p. 85).

The author relates her findings to those of investigators who studied populations of infants and children who, lacking "psychological mothering" failed to thrive or even died. She concludes that the "psychological mothering" in normal families "produces hypnotic states in the infant daily, from the moment of birth" (p. 88).

Leuba, Clarence (1955). Conditioning during hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 256-259.

#### NOTES

The author is responding to an article that concludes that conditioning during hypnosis leads to effects better accounted for by the research subjects' attempts to conform or please the Experimenter (Fisher, Seymour. An investigation of alleged conditioning phenomena under hypnosis. *J. clin. exp. hypnosis*, 1955, 3, 71-103).

"Informal attempts have been made to eliminate the personal subjective influence of the hypnotist when testing for the effects of 'alleged' conditioning under hypnosis. The conditioned stimulus has been administered post-hypnotically by other persons than the hypnotist, or when S was occupied, offguard, and presumably not set to please the hypnotist. The results have been equivocal. Usually, the conditioned responses occurred when the conditioned stimulus was administered by others than the hypnotist and in a variety of situations; when caught offguard, however, the S may not respond, at least not overtly; he may, for instance, only feel a tendency to cough when touched. This might be, of course, because coughing is often inhibited in social circumstances and the tendency, therefore, does not become overt. Sometimes when told by the hypnotist post-hypnotically that the experiments were over, the alleged conditioning disappeared; sometimes, on the other hand, when the hypnotist emphatically stated post-hypnotically that there was no odor present and that it had been just hallucinated, the S nevertheless smelled it when the cue was again present" (p. 258).

1955

McCranie, E. J.; Crasilneck, H. B. (1955). The conditioned reflex in hypnotic age regression. Journal of Clinical and Experimental Psychopathology, 16, 120-123.

#### NOTES

During age regression and testing of reflexes, voluntary hand withdrawal was lost; however the conditioned eyelid reflex was not lost.

Naruse, Gosaku; Obonai, Torao (1955). Decomposition and fusion of mental images in the post-hypnotic hallucinatory state. II: Mechanism of image composing activity. Journal of Clinical and Experimental Hypnosis, 3 (1), 2-23.

#### NOTES

"Summary. This is a report of the studies continued from the previous work, as regards the mode and law of modification of images, by experiments on the image-

fusion which is observed in a post-hypnotic hallucinatory state. The writers investigated the configuration law of the Gestalt school, also whether there was nothing other than the overlapping of images. Various experiments were performed using accorded figures (Fig.1), discorded figures (Fig. 3), the composed image partly changed in size (Fig. 4), the incomplete figures with concrete meaning (Fig. 5,A) and the figures in which the perception and meaning were discorded with each other (Fig. 6). The results were as follows:

(1) There were some subjects whose images were clear, and others whose images were vague. In general, the images were clear in deep hypnotic trance, and vague in the medium trance.

(2) In the case of the clear images, they were prominently overlapping while in the case of the vague images, they overlapped one another and were disjointed or integrated.

(3) After conditioning two kinds of figures with two kinds of sounds, a composed image could be aroused by the two stimuli; in this case, by changing the tempo of one kind, a part of the composed image was changed. This fact would prove that the composed images were combinations of elements.

(4) In the case of the integrated images, the modification of both clear and vague images could be explained satisfactorily not by the Gestalt theory but by the intervention of the meaning. Moreover, the hypothesis of the integration or hierarchy of cerebral functions corresponding to these phenomena was possible.

(5) Modification through meaning was more frequent in the vague images than in the clear ones.

(6) The spontaneous effect of meaning of the image was dependent on the depth of trance. This effect was comparatively weak in deep trance and strong in medium trance. It was assumed that in medium trance which reproduced the integrated images, meaning activity still remained.

(7) Having presented incomplete figures with concrete meanings to examine the effect of meaning, it was clear that the modification of images by meaning took place distinctly under the influence of suggestion.

(8) If perception and meaning of the figure were made to be in discord with each other, the meaning suggested at the time of conditioning produced more effect on the modification of the image than that at the time of recall" (p. 22).

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

#### NOTES

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-

words in an association word test" (p. 139). Freud's predictions were only partially supported.

Howarth, Edgar (1954). Postscript to a new theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 91-92.

#### NOTES

Referring to a theory of internal and external signalling systems, the author describes situations in which an individual's behavior comes under other than willed control by virtue of external circumstances. "In normal behavior the individual provides his own 'will' and may, to some extent, choose among a variety of alternative action sequences on the basis of guiding integrations between the second (externally directed) signalling system and the primary (internally directed) signalling system. ... it appears that a considerable degree of control may be obtained by the 'top' semantic command system over internal process, particularly those 'inhibited' by the cranial and sacral subdivisions of the 'autonomic' nervous system. .. [In anecdotal case reports] control was gained over breathing, heart rate and bladder and the person may feign death for several days. In such cases surface wounds do not exude other than lymph. The method for such control remains for experimental examination, but a necessary part of the procedure seems to be the use of mild occasional reward during a prolonged period of fasting. Solitary confinement is also necessary and both deserts and prison cells are reported ... to have been used" (pp. 91-92).

#### 1953

Dittborn, Julio (1953). Conditioning of hypnosis to different signs of the same significance. Journal of Clinical and Experimental Hypnosis, 1 (3), 1-3.

BSTRACT: No Abstract or Summary available. The author's conclusions state, in part:

1. The difference of the periods of latency to condition a deep hypnotic trance between the different signs of the number six, is remarkable. This difference is significant between the pair (6; six,) and the pair (VI; 12:2).
2. The mean periods of latency are peculiar to each subject, but the subjects tend to gather themselves into two groups: a more rapid (subjects C and D) and a slow one (subjects A and B).
3. It is worthy of notice that one of the subjects, B, did not respond to the idea of six when this was not presented explicitly, but had to be deducted from a calculation (12:2=).

..... It is suggestive that with three somnambulists the idea was enough to produce the phenomenon, while the other always required the objectivation of the idea, even though the sign implied it in a very evident and simple way. It might be worth while to ask if this phenomenon might not be another way to measure the depth of a somnambulant trance.

Guze, Henry (1953). Posture, postural redintegration and hypnotherapy. Journal of Clinical and Experimental Hypnosis, 1, 76-82. (Abstracted in Psychological Abstracts 53: 6559)

#### **SUMMARY**

The use of postural analysis, and directives regarding posture and their importance in hypnotherapy are discussed. Theoretically, it is indicated that a chronic postural condition may act to elicit an emotional state with which it was originally associated. Such an emotional condition may have caused the posture in the first place, and then established a feed-back relationship with it. The breaking of feed-back mechanisms of this kind depends largely upon postural change when a chronic situation is established in the absence of realistic cause for the emotion. Posture may also act redintegratively, when directly suggested, in rearousing traumatic memories. Several clinical cases are reported.

Howarth, Edgar (1953). A new theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (4), 42-46.

Author's Summary - A new theory of hypnosis was suggested on the basis of interaction between the neural representations of the primary and secondary systems. It was suggested that the hypnotizer was able to integrate his own semantic commands into the neural representations as previously conditioned within the brain of the subject from past experience from semantic visual/auditory distal invariants. This was done by input contiguity between the verbal "commands" or "suggestions" from the experimenter accompanying stimulus or input reduction and the later "necessary events." We realize that our terminology is "new" (or may seem new to some) but the older terminology is largely anthropomorphic, and certainly does not offer explanations of psychological phenomena, such as hypnosis. (p. 46).

Naruse, Gosaku; Obonai, Torao (1953). Decomposition and fusion of mental images in the drowsy and post-hypnotic hallucinatory state. Journal of Clinical and Experimental Hypnosis, 1 (4), 23-41.

#### **Summary of Part I**

"From the above we can conclude the following main facts.

- 1) When one sensory stimulus is given to a subject in a drowsy state, images of other objects associated with it often appear.
- 2) These images sometimes have forms, and sometimes are devoid of forms, only light and color being present. This phenomenon resembles the experience of color-hearing, and is called a new type of synaesthesia [sic] by Bachen.
- 3) These images are sure to disappear when they are observed attentively, a passive attitude being necessary for the image observation.

- 4) The remarkable character of these images are such that elements of forms and colors of various objects have been disjointed and connected with each other in different relationships which construct new images.
- 5) The longer and stronger persistence of stimulus, the more easily and clearly conditioned images appear. Conversely if the stimulus is momentary, the recalled images appear also momentarily.
- 6) Not only the visual images but also the sensory images can be elicited in a similar way" (p. 25).

#### **Summary of Part II**

"The chief results of Naruse's experiments with the various subjects are as follows:

1. When one stimulus (C.S.) is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in deep hypnotic trance, a mental image corresponding to the other stimulus (U.C.S.) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears.
2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images.
3. Such images tend to disappear when subjects try to observe them attentively.
4. Images which are broken into elements of the original figure appear as distinct images.
5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image.
6. When two C.S.'s, which were already conditioned individually to two U.C.S.'s are presented at the same time, the images corresponding to each stimulus appear to overlap. This is the composed image.
7. In image composing, which involves the strong-weak stimulus relationship or the spatial positions of two C.S.'s, the clear-vague or positional relationships of the composed images are changed.
8. In the complex of meaningful images, there are two types, primarily. The one grasps the image as a whole, the other observes it in many mosaic elements. The latter can recall the original figure more correctly in an image form than the former.
9. Some positive and negative reports on sensory conditioning in the normal waking state are reviewed" (p. 36).

#### **NOTES**

The investigators do not show that hypnosis enhances imagery, compared with the waking state. They studied sensory-sensory conditioning under hypnosis, with amnesia suggestions, followed by testing for the conditioning effect. This study is relevant to studies of amnesia, "repression." In some studies they paired sound of a buzzer or metronome (the Conditioned Stimulus) with images (the Unconditioned Stimuli) as in [Oo, X); other studies compared a color patch (CS) with an image (Oo, X). Some studies presented both CS's together, in different spatial arrangements (in the instance of the color patch CS).

Results (partial) included: "1. When one stimulus (CS.) Is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed

between two sensory stimuli in a deep hypnotic trance, a mental image corresponding to the other stimulus (UCS) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears. 2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images. 3. Such images tend to disappear when Ss try to observe them attentively. ... 5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image. 6. When two CS's, which are already conditioned individually to two UCS's, are presented at the same time, the images corresponding to each stimulus appear to overlap. ..." (P. 36).

## CONSCIOUSNESS

Gibbons, Don E.; Sanchez, George P. (undated). Hyperempiria, a new 'altered state of consciousness'. [Unpublished manuscript]

### NOTES

The authors suggest that any induction procedure legitimizes acceptance of primary-type suggestions that are at variance with everyday experience. Such primary (i.e. "waking") suggestions are actually accepted at a higher rate than most people think (Barber & Calverley, 1962), and passing those suggestions convinces the subject he must be "hypnotized." However, inductions with the word "sleep" tend to retard subject's response to suggestions. An induction that is more oriented to alert states would be very useful for many people and situations. "Hyperempiria" in Greek means hyper-experience or enhanced quality of experience. The hyperempiric induction contains suggestions of increased alertness, mind expansion, enhanced awareness, and enhanced sensitivity.

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

### NOTES

1:

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

Theories of Hypnosis

Chapter:

1. An Introduction to Hypnosis

2. Hypnosis in the Management of Chronic Pain

3. Hypnosis in Conjunction with Chemical Anesthesia

4. Hypnosis in Conjunction with Regional Anesthesia

5. Hypnosis as the Sole Anesthetic

6. Hypnosis in the Intensive Care Unit

7. Hypnosis in the Emergency Unit

8. Hypnosis in Pediatric Surgery

9. Hypnosis in Obstetrics and Gynecology

10. Perspectives from Physician-Patients

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. (([available online:] <http://www.iuniverse.com/bookstore/marketplace>))

#### NOTES

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

2000

Gibbons, Don (2000). Applied hypnosis and hyperempiria. New York NY: Plenum Press. ([available online:] <http://www.iuniverse.com/bookstore>)

#### NOTES

The book features both traditional hypnotic procedures and hyperempiric inductions based on suggestions of increased awareness, mind expansion, and increased alertness and sensitivity. It contains sections on the use of suggestion as an instrument of personal growth in areas such as improving study skills, taking examinations, achievement motivation, artistic expression, emotional enrichment, aesthetic appreciation and enjoyment, interpersonal effectiveness, musical performance, problem solving, public speaking, salesmanship, sports performance, theatrical performance, and writing ability.

1999

Barabasz, A.; Barabasz, M.; Jensen, S.; Calvin, S.; Trevisian, M.; Warner, D. (1999). Cortical event-related potentials show the structure of hypnotic suggestions is crucial. International Journal of Clinical and Experimental Hypnosis, 47 (1), 5-22.

Electroencephalographic cortical event-related potentials (ERPs) are affected by information processing strategies and are particularly appropriate for the examination of hypnotic alterations in perception. The effects of positive obstructive and negative obliterating instructions on visual and auditory P300 ERPs were tested. Twenty participants, stringently selected for hypnotizability, were requested to perform identical tasks during waking and alert hypnotic conditions. High hypnotizables showed greater ERP amplitudes while experiencing negative hallucinations and lower ERP amplitudes while experiencing positive obstructive hallucinations, in contrast to low hypnotizables and their own waking imagination-only conditions. The data show that when participants are carefully selected for hypnotizability and responses are time locked to events, rather robust physiological markers of hypnosis emerge. These reflect alterations in consciousness that correspond to participants' subjective experiences of perceptual alteration. Accounting for suggestion type reveals remarkable consistency of findings among dozens of researchers.

## NOTES

In their Discussion the authors note that not all of the highly hypnotizable subjects demonstrated the changes predicted, consistent with Hilgard's (1992) observation that individual differences in response remain even among high hypnotizables. Post-experimental inquiry revealed the sources of (non-predicted) response for these two people. "One, showing only a moderate ERP amplitude attenuation in the obstructive condition, noted she pictured a cardboard box in front of the computer monitor, but 'I pictured a rather small box that didn't block the entire screen!' Another showed an apparently contradictory response, a markedly diminished amplitude in the negative hallucination that called for deafness during the auditory stimuli. This participant reported the perception of complete obliteration of all sounds and, therefore, showed no surprise ERP effect. 'It was kind of scary when he (AB) said 'deaf' the second time. I couldn't hear anything at all. I was glad when he touched my shoulder and it was OK to hear again. I don't think I would do that again ... I mean do the hypnotic suggestion as much!'" (pp. 17-18).

Bargh, John A.; Chartrand, Tanya L. (1999). The unbearable automaticity of being. American Psychologist, 54 (7), 462-479.

What was noted by E. J. Langer (1978) remains true today: that much of contemporary psychological research is based on the assumption that people are consciously and systematically processing incoming information in order to construe and interpret their world and to plan and engage in courses of action. As did E.J. Langer, the authors question this assumption. First, they review evidence that the ability to exercise such conscious, intentional control is actually quite limited, so that most of moment-to-moment psychological life must occur through nonconscious means if it is to occur at all. The authors then describe the different possible mechanisms that produce automatic, environmental control over these various phenomena and review evidence establishing both the existence of these mechanisms as well as their consequences for judgments, emotions, and behavior. Three major forms of automatic self-regulation are identified: an automatic effect of perception on action, automatic goal pursuit, and a continual automatic evaluation of one's experience. From the accumulating evidence, the authors conclude that these various nonconscious mental systems perform the lion's share of the self-regulatory burden, beneficently keeping the individual grounded in his or her current environment.

1998

Chapman, C. Richard; Nakamura, Yoshio (1998). Hypnotic analgesia: A constructivist framework. International Journal of Clinical and Experimental Hypnosis, 46 (1), 6-27.

Hypnotic analgesia remains an enigma. Recent neuroscience studies demonstrate that widespread distributed processing occurs in the brains of individuals experiencing pain. Emerging research and theory on the mechanisms of consciousness, along with this evidence, suggest that a constructivist framework may

facilitate both pain research and the study of hypnosis. The authors propose that the brain constructs elements of pain experience (pain schemata) and embeds them in ongoing consciousness. The contents of immediate consciousness feed back to nonconscious, parallel distributed processes to help shape the character of future moments of consciousness. Hypnotic suggestion may interact with such processing through feedback mechanisms that prime associations and memories and thus shape the formation of future experience.

#### NOTES

The authors suggest that emerging paradigms for the study of consciousness may be useful in bridging research on hypnotic analgesia with advances in research on pain control. The constructivist framework emphasizes central processing of nociceptive signals, and consciousness as "an emergent property of a self-organizing process in a distributed neural network" (p. 14). The Dennett & Kinsbourne (1992) 'multiple drafts model' of consciousness and the authors' constructivist framework provide a way of understanding phantom limb pain, which classical models of pain cannot do. Pain is experienced as the brain blends schemata reflecting current stimuli, memories, associations formed by conditioning, emotions, and cognitions. "Hypnotic suggestions can engender temporally dominant schemata that influence ongoing consciousness construction of the subject" (p. 20). They suggest that "hypnotic analgesia depends heavily on the formation of suggestion-related schemata and subsequent priming effects, that somatosensory imagery is the key element in the contents consciousness [sic], and that the mechanisms behind hypnotic analgesia phenomena are largely related to the competition among schemata for a dominant position within the contents of consciousness" (p. 23). Jean Holroyd

Gibbons, Don (1998). Suggestion as an art form: Alternative paradigm for hypnosis?. [Paper] Presented at annual meeting of American Psychological Association, San Francisco. ([available online:] <ftp://members.aol.com/gibbonsdon/artform.txt>)

This paper proposes a change in the manner in which we think about suggestion-induced phenomena, moving from primary reliance upon a medical/counseling model to a concurrent view of suggestion as an art form and hypnosis as an artistic medium. the rationale for such an alternative paradigm is discussed, and a procedure for scripting suggestions within the new paradigm -- the Best Me technique -- is presented, along with a specific illustration of its application, possible implications for current clinical practice, and suggestions for transition to the new paradigm.

1996

Rosenbaum, Robert & Dyckman, John (1996). No self? No problem! Actualizing empty self in psychotherapy . In Hoyt , Michael F. (Ed.), Constructive therapies (2, pp. 238-274). New York NY: Guilford.

## NOTES

In this book chapter, Rosenbaum and Dyckman (1996) argue that self has no permanently fixed, defining, thing-like characteristics (p. 270). They thus dispute the classical notion--commensurate with the position of philosophical realism --that the self is a substance, with fixed qualities and measurable qualities. The authors refer to this classical self as a full self, contained inside the skin and delimited by its participation in linear time. Instead, they propose an empty self, not to be construed as a void, but as a fluid, connected, relational self that overflows the traditional boundaries of the skin and is open to greater possibilities for change. To support their view of an empty self, the authors include several case examples of working with hypnosis and strategic/narrative therapy with clients experiencing a variety of psychological and physical symptoms. The authors further contend that self is not unitary, but the product of multiple drafts (p. 248)[Editor note: See Dennett, 1991, in this database]. In the narrative-constructivist tradition, they argue, if we speak in terms of multiple contextual selves for us all...[then, people diagnosed with MPD/DID] are not so different from the rest of us (p. 249). The chapter draws from western & Buddhist philosophy, strategic/systemic and narrative therapies, Ericksonian hypnosis, and, cognitive science theories regarding memory, consciousness, embodiment, and language, to support their alternative view of, and treatment for, the self

## 1995

Pribram, Karl H. (1995). Brain in perception: From Kohler's fields to Gabor's quanta of information. In Proceeding of the 39th Congress of German Society for Psychology (pp. 53-69).

## NOTES

[The following material was taken from a paper provided by the author as a replacement for a presentation he made on the same topic at the Annual Meeting of the American Psychological Association, 1994, Los Angeles.]

Pribram presents the view that neuroelectric field theory (similar to theories proposed by Kohler and by Lashley earlier in this century) account for complexities observed in the relationship between awareness/perception and sensation. "Nerve impulse generation and transmission in neuronal circuits is but one of the important electrical characteristics of neural tissue. Another characteristic is the production of patterns of pre- and post-synaptic polarizations in axonal and dendritic arborizations. ... [which] are produced everywhere in the brain cortex when nerve impulses arrive at synapses as a result of the fact that the impulses become attenuated due to decreased fiber size resulting from the branching of axons" (p. 53). The polarizations develop a wave front.

Georg von Bekesy performed experiments on tactile perception that demonstrated the complex relationship between sensation and awareness. We often 'perceive' an object as external to us, even though the immediate specific neural stimulation is of receptors and from there activity is transmitted to the neurons of the brain. Thus we 'see' an object as external to us, even though the light reflected from that object

produces an image on our retina. The same kind of externalized projection occurs for hearing. Touch is ordinarily perceived as at the same location as the stimulation (i.e. in the body), except that the von Bekesy experiments demonstrated that touch could also be perceived at a distance, that is, outside the body, if conditions were appropriate.

In the von Bekesy experiments, a pair of vibrators were used to stimulate two fingers, with each vibrator actuated by the same series of clicks and with the delay of time between the clicks varied. "The interesting point in this experiment is that for the condition in which there is no time delay the vibrations are localized between the two fingers where no skin is present" (p. 55). When two vibrators are placed on the thighs, the experimental subject can, by moving the knees apart, experience the vibratory sensation localized in the open space between the knees! Such an externalization of tactile perception is observed in everyday life, as when in using a knife we seem to sense the edge of the knife in order to make the appropriate movements.

Following from von Bekesy's work, it seems that only some neural processes lead to awareness. "In fact, instrumental (often automatized) behavior and awareness are to a large extent opposed; the more efficient a performance, the less aware we become. ... for the neuroscientist, the question becomes: What kinds of neural activity allow awareness to be inversely related to automatized action?"

"Patterns of synaptodendritic polarizations and nerve impulses are two kinds of processes that function reciprocally. A simple hypothesis states that the more or less persistent designs of dendritic field polarization patterns are coordinate with awareness (Pribram, 1971, Chapter 6). This view carries the corollary that circuits of nerve impulses per se and the behavior they generate are unavailable to immediate awareness. Even the production of speech is 'unconscious' at the moment the words are spoken" (pp. 55-56).

Some additional information comes from the experimental work of Ben Libet (1966, 1994), in which direct stimulation of brain tissue in waking subjects yields reports of awareness (of a particular part of the body tingling or being in a certain position). However, the awareness occurs 0.5 to 5 seconds post-stimulus, indicating that "electrical stimulation must set up some state in the brain tissue, and only when that state has been attained does the patient become aware" (p. 56).

The evidence of electrical fields comes from using both high pass filters and low pass filters on the electrical activity generated by the brain and picked up on EEG. There are 'bursts' of spikes, and onset of the field effect precedes the initiation of spikes. "Just as depolarization of axon membranes is a necessary precursor of the generation of action potentials, so also is the local build up of synaptodendritic field potentials a precursor to the recruitment of action potentials in post synaptic neurons" (p. 57).

Maps of the receptive field of an axon can be developed (e.g. using Kuffler's procedure). However, stimulation outside of that receptive field can change that axon's response--a field effect "produced in a more extended field of potentials occurring in neighboring synaptodendritic fields" (p. 58). In this investigation, the relationship between local field potentials of the rat somatosensory system (whisker stimulation) is studied using the Kuffler procedure. Whiskers were stimulated by

rotating cylinders which varied in spacing of grooves and speed of rotation. The resulting variation in density of stimulation yielded a map or manifold of cortical bursts/spikes. Pribram's research fits the experimentally generated data to a theoretical model derived from signal processing theory, using "a rectangular window in the spatiotemporal domain to constrain the two dimensional sinusoidal signal" (p. 62). They noted that the manifolds obtained from somatosensory cortex recordings were similar to receptive field characteristics measured at the primary visual cortex, which "suggests that this process is ubiquitous in the cortical synaptodendritic network" (p. 63).

Referring to the Fourier theorem (that "the original pattern can be reconstituted, reconstructed, by performing the inverse transform" p. 65), the author notes that experimental data are more complex than would be predicted. The author suggests that it would be helpful to employ the Gabor uncertainty principle, in which Gabor (1946) described as a fundamental unit a 'quantum' of information. "Gabor became interested in describing a joint spacetime-spectral domain because he noted that there is a limit on the precision to which simultaneous measurement of spectral components and [space]time can be made. ... the Gabor relation describes the composition of a sensory channel, and the residual uncertainty defines the limits of channel processing span" (p. 65). The Gabor relationships are similar to those described in quantum physics by Heisenberg, so Gabor referred to a quantum of information, which he named a Logon.

The author describes his experimental results as exhibiting Gabor elementary functions, which "are composed in dendritic arborizations, receptive fields of the neurons from which we are recording. ... Each logon, i.e. each such receptive field module, is a channel. According to Gabor, the ensemble of such channels is a measure of the degrees of freedom, the number of distinguishable dimensions or features (e.g., spatial and temporal frequency, degrees of orientations, preferred direction, color). The minimum uncertainty relation expressed by Gabor elementary functions sets the limits on the information processing competence of each of these channels" (pp. 65-66).

In a Coda to this chapter, the author notes that there is a discrepancy between fields (composed of arrival and departure patterns of synapto-dendritic polarizations) and perceptual awareness which "occurs within spacetime coordinates." Discussion of the discrepancy may be found in Pribram and Carlton (1986). Holonomic brain theory in imaging and object perception. *Acta Psychologica*, 63, 175-210; and in Pribram (1991), Lecture 6 of *Brain and Perception*. Basically, there is top-down organization imposed by the cortical system on peripheral sensation/perception. "These various systems not only relate to one another in a hierarchical manner but that the higher order systems operate on lower order systems by interpenetrating. Thus, we ordinarily, immediately perceive named and categorized objects, not just sets of images (though we are capable of 'imaging' by suspending the higher order processes). There is abundant evidence of such top-down penetration in the visual, auditory and somatosensory neural systems" (p. 66).

1994

Epstein, Seymour (1994). Integration of the cognitive and the psychodynamic unconscious. American Psychologist, 49 (8), 709-724.

Cognitive-experiential self-theory integrates the cognitive and the psychodynamic unconscious by assuming the existence of two parallel, interacting modes of information processing: a rational system and an emotionally driven experiential system. Support for the theory is provided by the convergence of a wide variety of theoretical positions on two similar processing modes; by real-life phenomena--such as conflicts between the heart and the head; the appeal of concrete, imagistic, and narrative representations; superstitious thinking; and the ubiquity of religion throughout recorded history--and by laboratory research, including the prediction of new phenomena in heuristic reasoning.

1993

Kokoszka, Andrzej (1993). Occurrence of altered states of consciousness among students: Profoundly and superficially altered states in wakefulness. Imagination, Cognition and Personality, 12, 231-247.

In a questionnaire survey waking altered states of consciousness (ASC) are found to be common among 174 Polish students. The experience of Superficially Altered States of Consciousness (SASC) was reported by 96 percent of subjects and more than half of them had such experiences often. Whereas an experience of Profoundly Altered States of Consciousness (PASC) was confirmed by 75 percent and about one-third of them had them often. The comparison of the experiences accompanying the ASC indicates that SASC are characterized by disturbances in experiencing the reality and oneself combined with positive, pleasant feelings and with quietness. On the other hand, PASC are accompanied by experiences related to an absolute, universal, eternal, and existential or religious matters. PASC are accompanied by extremely strong positive emotions of happiness, total love, etc. and are experienced as more rational than SASC, and with significantly less feelings of cognitive disturbances than in SASC. The comparison of circumstances of the ASC occurrence indicates that SASC occur in usual and common states and situation of everyday life, whereas PASC mainly in the context of religion and nature. The congruence of these findings with an integrated model of the main states of consciousness suggests a natural tendency for a cyclical occurrence of ASC, or more precisely, the differentiated waking states of consciousness.

1993

Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively

experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

#### NOTES

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the subjective sense of altered state --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.

Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Bindler, Paul (1992, October). Hypnosis and Psychotherapy: The clinical utility of altered states of consciousness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

Author assesses state, especially attentional changes, with Multidimensional Consciousness Scale (receptivity, arousal, .... etc.)

Clinical management of anxiety is goal. Cites Nash as characterizing anxiety disorders with cognitive/affective characteristics similar to hypnotized state. Wickramasekera's model has people high in neuroticism and high in hypnotizable being hypersensitive to stress, with physiological hyperarousal. Lows have alexithymia, may be unresponsive to symbolic events but very responsive to concrete events; poor verbalization of alexithymics leads to somatization.

Author focuses on relaxation and anxiety reduction. Suggests that Crawford's attention model (highs better able to shift cognitive and attentional strategies) is useful.

Instructions facilitate focusing attention inward so external stimuli become irrelevant. Therapist helps patient focus attention on the link between cognitions and tension.

**Merikle, Philip M. (1992). Perception without awareness: Critical issues. American Psychologist, 47, 792-795.**

#### **NOTES**

**This is the introduction to a group of articles. "To a large extent, this entire controversy over perception without awareness has centered on the issue, What constitutes an adequate behavioral measure of conscious perceptual experience? Depending upon one's answer to this question, the evidence for perception without awareness is either overwhelming or nonexistent.**

**The distinction is much more significant and interesting if conscious and unconscious processes lead to qualitatively different consequences than if unconscious processes are simply quantitatively weaker versions of unconscious processes. Three different qualitative differences have been established: 1. Groeger (1984, 1988) has demonstrated that words are coded differently depending on whether they are perceived with or without awareness. 2. Stroop effect research showed that prediction based on stimulus redundancy only occurs when subjects consciously perceive the predictive stimuli (Cheesman & Merikle, 1986). The fact that the color word predicted the name of the color patch on 75% of the trials was only used by the subjects to facilitate naming of the color patches when the words were clearly visible. 3. Marcel (1980) showed that conscious awareness is necessary for the selection of a context-relevant interpretation of a stimulus.**

**The important findings are that performance differs qualitatively across the aware and nonaware conditions.**

**1991**

**Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.**

#### **NOTES**

**Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.**

**"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).**

**"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind**

is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

## NOTES

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co..

## NOTES

1:

NOTES: Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.

The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific

moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209).

Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action.

The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a 'distributed society of specialists that is equipped with a working memory, called a global workspace, whose contents can be broadcast to the system as a whole (p. 42)" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies

consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

Kunzendorf, Robert G.; Beltz, Susan McLaughlin; Tymowicz, Gina (1991-92). Self-awareness in autistic subjects and deeply hypnotized subjects: Dissociation of self-concept versus self-consciousness. Imagination, Cognition and Personality, 11, 129-141.

By refining past tests of self-awareness in mirrors, current testing demonstrates that autistic subjects' percepts are dissociated from self-concept, whereas hypnotized subjects' sensations are dissociated from self-consciousness. In the current test of self-concept, subjects could not directly see a line inside the box on their lap, but

subjects could see the line indirectly in a televised mirror image. When instructed to touch the line, autistic subjects reached towards the televised line, whereas nonautistic subjects reached towards the actual line occluded inside the box. This first result suggests that the autistic subject's visual percept of the televised line is dissociated from its spatial relationship to the subject's self-concept. In the current test of self-consciousness, subjects were told to use a televised mirror-image to move their hands together until touching, but were not told that they were actually seeing a pre-recorded tape of their hands struggling unsuccessfully to touch. When queried, hypnotized subjects denied that their tactually joined hands were touching, whereas nonhypnotized subjects confirmed that their hands were touching. This latter result suggests that the hypnotized subject's hand-touching sensations are dissociated from the immediate and incontrovertible self-consciousness that one is perceiving the hands touching (not imaging them touching).

Neill, W. Trammell (1991, August). Consciousness and the inhibitory control of cognition. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

#### NOTES

This review mentions an association between Tellegen's Absorption Scale and a cognitive inhibitory process called negative priming. Westberry and colleagues, including Anker and Neill, found that people high on the Absorption Scale show an extremely large negative priming effect.

Attention is usually attributed to facilitation (selectively processing stimuli that meet our needs) but might also be due to inhibition of competing stimuli. If, after stimulus S2 has been ignored, we now require a response to either S2 or a new stimulus, S3, according to the facilitation theory S2 should be processed as easily as S3; according to the inhibition theory, processing of the recently ignored stimulus may be hampered by the persistence of inhibition.

Dalrymple-Alford provided evidence of inhibition using a Stroop color naming task in which each printed word in a list named the ink color of the next word in the list. Dalrymple-Alford concluded that the response to each word had to be suppressed in order to name its ink color, thereby making it harder to make that same response to the next item. Neill replicated it: color naming was slower when the current color matched the previous distractor (e.g., YELLOW in green ink, after GREEN in red ink) than when the current and previous trial were unrelated (e.g., YELLOW in green ink, after BLUE in red ink).

Tipper, Weaver, Cameron, Brehaut, & Bastedo (1991) had subjects name a picture at fixation, ignoring another picture to the left or right, and Tipper (1985) had subjects ignore picture drawn in another color. If the ignored picture subsequently becomes the target, it is named more slowly than an unrelated target. A particularly interesting finding is that the inhibition generalizes to semantic associates (e.g. if a picture of a dog is ignored, a picture of a cat will then be named more slowly). Yee (1991) demonstrated the effect with ignored words. Tipper (1985) called the inhibitory effects "negative priming".

Neill used a task in which S is shown a string of five letters, and is instructed to judge the second and fourth letters as "same" (e.g., ABABA) or "different" (e.g., ABACA). Negative priming was shown by slower reaction time to target letters that matched the previous ignored distractors (in case below, ABABA):

ABABA - Reaction times are 779 for CACAC and 766 for CDCDC because the A appears in both ABABA and CACAC.

Negative priming does not appear to be perceptual, since it occurs between physically dissimilar stimuli, e.g. in the Stroop task ignoring a printed word inhibits responding to a color. And Tipper and Driver (1988) found negative priming between pictures and corresponding words. By default, the locus of inhibition appears to be at the level of a central cognitive representation. That is, it occurs at a level in which the word GREEN and the color green are related to the same abstract concept, but have not yet accessed an overt response.

However, in the letter-matching task, negative priming occurred only if the ignored distractor letter and subsequent target shared the same letter case. If the ignored distractor and subsequent target were in opposite case (e.g., ABABA, then cacac), positive priming was obtained instead. Because the letter-matching task could be performed on the basis of perceptual similarity, it appears that inhibition can be specific to the perceptual representation when attention is directed to that level of processing.

Individual differences in negative priming appear to be related to more global cognitive effectiveness. N.B. Stroop interference is greatest at age 7, decreasing to adolescence, then plateaus through adulthood (Comalli, Wapner & Werner, 1962). Children in second grade also show less negative priming than young adults in picture naming task (Tipper et al. 1989). (Same thing was found for the elderly, and it is associated with distractibility).

Negative priming research suggests the inhibition of irrelevant processing that is critical for effective functioning. Beech, Baylis & Claridge, 1989, and Beech & Claridge, 1987, studied schizophrenics and college students with schizotypal traits using negative priming task, where these appear to be associated with a failure to inhibit distracting information.

Broadbent et al's (1982) Cognitive Failures Questionnaire measures self-reported lapses of perception, memory, and motor function. Tipper and Baylis (1987) found that negative priming was negatively correlated with cognitive failures; i.e. cognitive failures are associated with less inhibition of distracting information.

Westberry, 1984; Westberry, Anker & Neill, in preparation - found that people high on the Absorption Scale show an extremely large negative priming effect, while the effect for "low absorbers" was negligible.

1990

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. International Journal of Psychosomatics, 37, 82-85

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilità musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and

the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

**Tinnin, L. (1990). Mental unity, altered states of consciousness, and dissociation. Dissociation, 3, 154-159.**

This model for understanding altered states of consciousness and dissociation is based on the hypothesis that normal consciousness depends on an illusion of mental unity generated by dynamic brain processes. When these processes are altered and the illusion of unity lost, the individual experiences an altered state in which normal consciousness is latent or "dissociated." Mental organizations formed during an altered state will also become dissociated when the altered state is terminated and mental unity returns. In some cases, recurrent altered states may lead to multiple dissociated mental systems or states. Therapeutic resolution of dissociation requires that the individual gain access to the memory, transcend the obligatory illusion of unity, and consciously avow the ego state formed during the traumatic altered state of consciousness.

**1989**

**Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.**

**ABSTRACT:** Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self-consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

**Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. Imagination, Cognition and Personality, 9 (4), 303-320.**

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low, low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a

function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

#### NOTES

This paper is based on the presentation at SCEH in Ashville, 1988.

Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

#### NOTES

This paper is based on a paper presented to Division 30, Psychological Hypnosis, at annual meeting of the American Psychological Association, Aug 1987.

1989

Van der Hart, O.; Friedman, B. (1989). A reader's guide to Pierre Janet on dissociation: A neglected intellectual heritage. Dissociation, 2 (1), 3-16.

A century ago there was a peak of interest in dissociation and dissociative disorders. Janet (1859-1947) was the most important scientific and clinical investigator of this period, whose work is reviewed in this article. The evolution of dissociation theory and its major principles are traced throughout his writings. His introduction of the term 'subconscious' and his concept of the existence of consciousness outside of personal awareness are explained. The validity and reliability of dissociation as the underlying phenomenon in a wide range of disorders is presented. It is proposed

that Janet's theory and methodology of psychological analysis and dynamic psychotherapy are cogent and relevant for today.

1986

Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.

## NOTES

Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.

Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical (primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).

With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.

Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses.

The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from thalamus; low level of awareness as in twilight sleep or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus reticular activating system influences; associated with increased inhibitory thalamic and septal-hippocampal impulses radiating upward to the cortex.

In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit.

The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory septal-hippocampal complex which generates theta-wave activity, thus accounting for the close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the

latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1 sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self-concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

"... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness

functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103). The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

1985

Stumpfe, Von Klaus-Dietrich (1985). Psychosomatic reactions of near-death experiences. A state of affective dissociation. Zeitschrift fur Psychosomatische Medizin, 31, 215-225.

The feelings of persons who had encountered life-threatening danger were analyzed and compared with the feelings of persons, who are in hypnosés or trained in autogenic training. The symptoms are widely alike. The result of the comparison is, that there exists a state of affective dissociation, which can be caused by conscious or unconscious actions.

1984

Malott, James M. (1984). Active-alert hypnosis: Replication and extension of previous research. Journal of Abnormal Psychology, 93 (2), 246-249.

#### NOTES

Compared levels of hypnotic responsiveness resulting from 4 induction procedures: (a) verbal active-alert induction alone, (b) bicycle pedaling alone, (c) verbal active-alert induction plus bicycle pedaling and (d) traditional relaxation induction. Ss were 48 undergraduates. Stanford Hypnotic Susceptibility Scale scores indicated that the verbal induction plus pedaling procedure was significantly more effective than either the verbal- or pedaling-alone procedures. There were no significant differences in scores produced by the verbal plus pedaling and traditional relaxation inductions. Findings are consistent with A. M. Ludwig's (1966) proposal that there exists a range of stimulation necessary for the maintenance of normal waking consciousness and that levels of stimulation above or below that range are conducive to the production of altered states of consciousness.

This study adds experimental controls to the research design used by Banyai for active alert induction.

1983

Baars, B. J. (1983). Conscious contents provide the nervous system with coherent, global information. In Davidson, Richard J.; Schwartz, Gary E.; Shapiro, David (Ed.), Consciousness and self regulation (3, ). New York: Plenum Press.

#### NOTES

We are conscious of some content when there exists an internal representation that is global, stable, and informative.

Author views nervous system as a distributed information. processing system, in which highly complex & efficient processing is performed by specialized processors in a relatively independent way. These processors may be 'data driven'--i.e. they

may decide by their own criteria what is worth processing..." p. 41 [See also Gazzaniga's (1985 Psychology Today article) idea that mind/brain consists of modules.]

p.44 gives references substantiating the above, e.g. Geschwind, Hilgard, La Berge, Shiffrin & Schneider.

p. 45 We are in habit of thinking hierarchically about nervous system rather than distributively.

p. 45 "Consciousness seems to be closely associated with a mechanism that permits interaction between specialized, dedicated processors" The 'global' data base' is like a TV station sending out information that can be processed or not by the viewer. It is not an executive, and in fact can sometimes be controlled by the processors. 'Consciousness ...[is] a certain operating mode of this medium, & consciousness can likewise be used by processors acting as executives, without itself being an executive "(p.49).

The global data base is a lingua franca, so that one sense modality can communicate with others. p. 51. [Synesthesia reported by high hypnotizables implicates this system--either the communicating tracks are greased between color and smell, or the name of the destination, in computer language, is lost, or equivalent.]

p. 52 Repression and the dynamic unconscious. explained in terms of controlled access to the global data base, with certain specialized processors given high priority.

Context, taken by itself, is unconscious; & input, taken by itself & in the absence of the appropriate context, is also unconscious. Only when both of these conditions exist- -when there is input that can be organized within a current context--are we conscious of some percept.

Contextual factors become conscious only when they are challenged.

Erickson, Milton H. (1980). Hypnotic investigation of psychodynamic processes. (3 ). New York: Irvington Publishers, Inc..

NOTES

1:

NOTES: This third volume of four has 2 sections (7 subsections) with chapters as follows. I. General and Historical Surveys of Hypnotism

1. A brief survey of hypnotism

2. Hypnosis: A general review

3. Hypnotism

4. The basis of hypnosis: Panel discussion on hypnosis II. Psychodynamic Processes: Hypnotic Approaches to the Unconscious Section 1: Amnesia

5. The investigation of a specific amnesia

6. Development of apparent unconsciousness during hypnotic reliving of a traumatic experience

7. Clinical and experimental observations on hypnotic amnesia: Introdution to an unpublished paper

8. The problem of amnesia in waking and hypnotic states

9. Varieties of hypnotic amnesia Section 2: Literalness

10. Literalness: An experimental study

11. Literalness and the use of trance in neurosis Section 3: Age Regression
12. Age regression: Two unpublished fragments of a student's study
13. Past weekday determination in hypnotic and waking states
14. On the possible occurrence of a dream in an eight-month-old infant
15. The successful treatment of a case of acute hysterical depression by a return under hypnosis to a critical phase of childhood Section 4: Automatic Writing and Drawing
16. The experimental demonstration of unconscious mentation by automatic writing
17. The use of automatic drawing in the interpretation and relief of a state of acute obsessional depression
18. The translation of the cryptic automatic writing of one hypnotic subject by another in a trancelike dissociated state Section 5: Mental Mechanisms
19. Experimental demonstrations of the psychopathology of everyday life
20. Demonstration of mental mechanisms by hypnosis
21. Unconscious mental activity in hypnosis--psychoanalytic implications
22. Negation or reversal of legal testimony Section 6: Dual Personality
23. The permanent relief of an obsessional phobia by means of communication with an unsuspected dual personality
24. The clinical discovery of a dual personality
25. Findings on the nature of the personality structures in two different dual personalities by means of projective and psychometric tests Section 7: Experimental Neuroses
26. A clinical note on a word-association test
27. A study of hypnotically induced complexes by means of the luria technique
28. A study of an experimental neurosis hypnotically induced in a case of ejaculatio praecox
29. The method employed to formulate a complex story for the induction of an experimental neurosis in hypnotic subject

Schuman, Marjorie (1980). The psychophysiological model of meditation and altered states of consciousness: A critical review. In Davidson, J. M.; Davidson, R. J. (Ed.), The psychobiology of consciousness (pp. 333-378). New York: Plenum Press.

Psychophysiological changes have been found to occur as correlates of meditation. Major emphasis has been placed on changes in alpha brainwave activity and on changes in alpha blocking response to sensory stimuli. Taken together, these changes in baseline EEG and electrocortical responsiveness to sensory stimulation have been interpreted to be evidence of a unique meditative state of consciousness. The literature on the psychophysiology of meditation, including EEG and autonomic changes, is reviewed with careful attention to different types of meditation practice and various physiological measures of arousal and attentional set. The phenomenology of meditative states and their relationship to trance states is also considered. It is concluded that EEG and autonomic data cannot be used to define states of consciousness; the state of consciousness must be known before the significance of physiological changes can be inferred.

1979

Barmark, Susanne M.; Gaunitz, Samuel C. B. (1979). Transcendental meditation and heterohypnosis as altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 27 (3), 227-239.

The effects of transcendental meditation and relaxation-heterohypnosis on subjective phenomena and physiological arousal were examined. One group of Ss, who were experienced meditators, participated in meditation, and a second group of Ss, who were highly susceptible to hypnosis but with little hypnotic experience, were exposed to hypnosis. A period of quiet sitting served as control for Ss in each group. Neither heterohypnosis nor transcendental meditation were identified as low-arousal states. They were assumed to be similar phenomenologically altered states of consciousness, mainly characterized by changes in the distribution of attention and in body image.

1979

Barrett, Deirdre (1979). The hypnotic dream: Its relation to nocturnal dreams and waking fantasies. Journal of Abnormal Psychology, 88 (5), 584-591.

A review of the literature in the area of hypnotic dreams suggests that physiological correlates of hypnotic dreams are better established than content characteristics. A study is also reported that examined the content of hypnotic dreams in relation to that of nocturnal dreams and daydreams from the same subjects. Subjects were 16 undergraduates divided into deep-trance and medium-trance groups. Deep trance subjects' hypnotic dreams were similar to their nocturnal dreams and different from daydreams on a wide variety of characteristics including length, emotional themes, characters, setting, and amount of distortion. Medium trance subjects' hypnotic dreams were found to fall between their nocturnal dreams and daydreams on most of these measures.

Bennett, Henry L.; Giannini, Jeffrey A.; Kline, Mark D. (1979, September). Consequences of hearing during general anesthesia. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

A double blind 2X2 study exposed 23 herniorrhaphy and cholecystectomy patients to either a 45 minute suggestion tape or to the actual sounds of the operation. Structured interviews conducted postoperatively assessed hypnotic susceptibility and regressed patients under hypnosis to operative events. Ten patients accurately recalled significant events from surgery but only under hypnosis. Recall was greater and more accurate in patients scoring high on the Stanford Clinical Hypnosis Scale. Fewest number of pain medications were given postoperatively to patients receiving the suggestion tape. Hernia patients showed better recall than gallbladder patients.

1977

**Brown, Daniel P.; Fromm, Erika (1977). Selected bibliography of readings in altered states of consciousness (ASC) in normal individuals. International Journal of Clinical and Experimental Hypnosis, 25, 388-391.**

The bibliography is divided into the following sections:

**I. General Works**

**II. Reference material on personality in relation to altered states**

**III. Social and cultural determinants of altered states**

**IV. Cognition, information-processing, and ego-functioning**

**V. Methodology in the study of altered states**

**VI. Differentiation of hyperaroused states**

**VII. Shamanistic states**

**VIII. Possession-trance**

**IX. Psychedelic states**

**X. The meditative states**

**XI. Personality differences and meditation**

**XII. Affective and cognitive change in meditation**

**XIII. Ordinary Buddhist meditation, concentration, and insight meditation**

**XIV. The variety of Buddhist meditation traditions**

**Davidson, R. J.; Goleman, D. J. (1977). The role of attention in meditation and hypnosis: A psychobiological perspective on transformations of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 291-308.**

**ABSTRACT:** A temporally based scheme for investigation of changes in consciousness, applicable to areas such as meditation and hypnosis, is proposed and is divided into 3 basic epochs: before -- predispositional variables that affect response to consciousness altering techniques; during -- the state effects of the particular technique; and after -- the trait effects of the practice. Research is surveyed which indicates the role of attentional processes during each of these 3 basic epochs in both meditation and hypnosis. Attentional flexibility is a predispositional variable affecting response to both meditation and hypnosis. The state effects of concentrative meditation involve alterations in stimulus set while the state effects of hypnosis may reflect primarily response set. The trait effects elicited by meditation depend critically on the psychobiological systems which are called into play. Evidence is discussed which suggests that concentrative meditation shares with relaxation an autonomic quiescence, but in addition enhances some attentional skills. A mindfulness technique involving the adoption of a particular attentional stance toward all objects of awareness appears to enhance cortical specificity, but a concentration technique does not. Some implications of attentional self-regulation are discussed.

**Fromm, Erika (1977). Altered states of consciousness and hypnosis: A discussion. International Journal of Clinical and Experimental Hypnosis, 25, 325-334.**

The author explains why it is important at this juncture in time to acquaint researchers and clinicians in the field of hypnosis with the current serious research

in altered states of consciousness, and vice versa. In a 1975 SCEH symposium, the author brought together both well-established and young researchers coming from orientations as widely differing as neurophysiology, cognitive theory, and psychoanalytic ego psychology. This discussion summarizes, critically evaluates, and attempts to integrate with each other the findings of meditative researchers, Davidson and Goleman, and Daniel Brown; the altered states of consciousness model-maker Roland Fischer; the hypnotherapist, Sacerdote; and the generalist in altered states of consciousness and hypnosis, Krippner. A short summary of the author's own new ego-psychological theory of hypnosis and 12 other altered states of consciousness is also presented.

Fromm, Erika (1977). An ego-psychological theory of altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 372-387.

In this paper a new ego-psychological theory is proposed for the understanding of altered states of consciousness. The dichotomies of primary and secondary process, ego activity and ego receptivity, and automatization and de-automatization of ego functions in daydreaming, in the inspirational phase of creativity, in hypnosis, in psychedelic states, and in meditation are discussed; so are the roles of fantasy, imagery, and various forms of attention.

#### NOTES

The author provides a table titled "Typology of Waking State and Several Altered States of Consciousness by Attention Mode." The states listed in the table are: Waking, normally alert, and concentrated; Waking, fascinated, entranced; Free association; Daydreaming; Dreaming; Psychedelic drugs; Hypnosis; Self-hypnosis; Biofeedback; Transcendental meditation; Concentrative meditation; Satipatthana [mindfulness of body, feelings, mind, and mental events]; Classical vipasyana [Clear intuitive insight into physical and mental phenomena as they arise and disappear, seeing them for what they actually are]. She summarizes, "In general, the present author strongly feels that the advantage of hypnotherapy over therapy in the waking state is that hypnosis allows the therapist to help patients work with more primary process thinking, more fantasy, more imagery, more ego receptivity than they would employ in the waking state" (p. 385). "What helps the therapy is not the depth itself; it is that in the hypnotic state there is greater mobility, a greater ability to dip into the unconscious and to bring the unconscious material back into the waking state of consciousness" (p. 385).

1975

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and

values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

Borderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1974

Galin, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanisms for at least some instances of repression and an anatomical locus for the unconscious mental contents.

1971

Kihlstrom, J. F.; Edmonston, W. E., Jr. (1971). Alterations in consciousness in neutral hypnosis: Distortions in semantic space. American Journal of Clinical Hypnosis, 13, 243-248.

30 highly hypnotizable Ss were equally divided into three groups, equated for age, sex and hypnotic susceptibility. A semantic differential scale was administered to each S in waking, individual sessions. An oral form of the same scale was administered during: (a) hypnosis (E), (b) waking -- post hypnosis (C1), and (c) waking -- no hypnosis (C2). All groups showed significant change between administrations of the scale; E showed more change than C1, and the latter more than C2. Ratings of "My Self" changed toward the negative pole in the evaluative factor. Results were interpreted as indicating a distortion in semantic space and an alteration in ego-state occurring spontaneously with hypnosis.

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

#### NOTES

The authors used High hypnotizables (SHSS>9) in this investigation.

1963

King, C. D. (1963). The states of human consciousness. New York, NY: University Books. (Reviewed in *American Journal of Clinical Hypnosis* 7, 1964, 96.)

#### NOTES

From the book review by Stanley Abrams, *AJCH*: [The book] "is more philosophical and mystical than scientific. ... [and describes] the four states of consciousness: sleep, waking, awakensness, and objective consciousness. ... For man to attain completeness and normalcy he must achieve the state of awakensness. According to the author, however, only a relatively few have approached this stage of consciousness and his description of it is quite vague. When one has reached awakensness he is able to understand and actually perceive the world in a novel and unique manner. ... The final stage of awareness, objective consciousness, is characterized as the experiencing of cosmic phenomena in the same fashion as external reality is understood in the awakened state. The author indicated that this

stage has not as yet been attained by man, but it does lie within his potential. ... The only treatment of hypnosis is the author's statement that the waking state is the same as the hypnotic state because suggestibility exists in both" (p. 96).

## CONTEXT

1998

Page, Roger A. (1998). Mental imagery, hypnotizability, differential item difficulty, and context effects. American Journal of Clinical Hypnosis, 41 (2), 162-167

This study attempted to determine the relationship of mental imagery to general hypnotizability and differential difficulty of susceptibility scale items, as well as the effect of context on these relationships. Undergraduates completed a mental imagery questionnaire in or out of a hypnotic context prior to being administered a group susceptibility scale. Most predicted correlations between sensory modalities on the imagery questionnaire scale item performance were small and nonsignificant. The relationship of imagery to hypnotizability was significant for an out-of-context condition, but not for an in-context condition. Reasons for the largely negative results are discussed.

1997

Council, James R. (1997). Context and consistency: The Canadian connection. International Journal of Clinical and Experimental Hypnosis, 45 (3), 204-211.

Issues related to context effects in hypnosis research are briefly reviewed. The contributions of Canadian hypnosis researchers to current theory and research on context effects are acknowledged. Bowers and colleagues at the University of Waterloo emphasized the scope and subtlety of contextual influences on correlates of hypnotic suggestibility, and they promoted the development of a consistency motivation theory of context effects. Spanos and colleagues at Carleton University generalized context effects within the domain of hypnosis, prompting extension of this work to general personality measurement. Implications of findings on consistency motivation for hypnosis research are discussed in terms of person-by-situation interactions. -- Journal Abstract

Ready, David J.; Bothwell, Robert K.; Brigham, John C. (1997). The effects of hypnosis, context reinstatement, and anxiety on eyewitness memory. International Journal of Clinical and Experimental Hypnosis, 45 (1), 55-68.

The effects of hypnosis, context reinstatement, and motivational instructions on accuracy of recall for factual information and facial recognition accuracy following a stressful event were assessed. None of the three techniques had a significant effect on factual memory or susceptibility to suggestion as assessed by true-false and multiple-choice tests. However, participants high in hypnotic susceptibility showed somewhat better memory on the true-false test, and hypnosis affected performance on the two photograph line-ups. In addition, hypnosis appeared to enhance facial

recognition accuracy for participants who were low in anxiety, but not for those high in anxiety. Finally, there was evidence of a curvilinear relationship between self-reported anxiety at time of retrieval and facial recognition accuracy. -- Journal Abstract

Aronoff, J.; Green, J. P.; Malinoski, P.; Zelikovsky, N.; Lynn, S. J. (1994, October). Hypnosis and autobiographical memories: The impact of contextual factors. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

We examined the individual differences in recall for early memories, in a college population, using the Autobiographical Memory Scale (AMS) along with other scales and with a hypnotizability scale (measured in same and different contexts). 75 male and 171 females subjects participated.

Presented as two separate experiments, so Ss would not make an explicit link between autobiographical memories and things measured in the second study.

Exper 1. Administered AMS which indicates we are interested in their memories of events, and not what they were later told about the events. First 5 birthdays, first day of school, etc. Rate the detail, vividness, and accuracy.

Exper 2. Administered Fantasy Proneness (Wilson & Barber), Cognition, Imagery Control Scale, Derogatis, SAC (Brier's symptoms of child abuse), and Dissociative Experiences Scale.

Final sample of 247 Ss.

Earliest memory was 3.8 years.

Ss ratings of details, vividness, and accuracy were highly correlated. These were negatively correlated with age of first memory.

#### 1994

Spanos, Nicholas P. (1994). Multiple identity enactments and multiple personality disorder: A sociocognitive perspective. Psychological Bulletin, 116, 143-165.

People who enact multiple identities behave as if they possess 2 or more selves, each with its own characteristic moods, memories, and behavioral repertoire. Under different names, this phenomenon occurs in many cultures; in North American culture, it is frequently labeled multiple personality disorder (MPD). This article reviews experimental, cross-cultural, historical, and clinical findings concerning multiplicity and examines the implications of these findings for an understanding of MPD. Multiplicity is viewed from a sociocognitive perspective, and it is concluded that MPD, like other forms of multiplicity, is socially constructed. It is context bounded, goal-directed, social behavior geared to the expectations of significant others, and its characteristics have changed over time to meet changing

#### 1993

Council, James R.; Grant, Debora L. (1993, October). Context effects: They're not just for hypnosis anymore. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Context effects in Absorption research are found in correlations, not in mean differences. Original paper has been replicated and yet results are not always significant. Now we are trying to generalize the effect to other areas: an individually administered measure will influence other measures made in the same session.

Other tests that correlate with hypnosis are studied with 2 x 2 design, enabling order effects and same vs separate contexts to be studied. Or two tests are administered at two points in time, with "bridges" between the two sessions (e.g. same experimenter, same consent forms, etc.) As one adds more and more bridging cues, the correlation of Absorption with other Tellegen MPQ subscales increases.

Same context assessment increases correlation between hypnotizability and 6-8 other scales; with childhood trauma scale when trauma scale is administered first; with beliefs in paranormal phenomena when the measure is related to an adjustment scale. The same inflation of correlations was found in Beck Depression scale research.

These results are of concern because we may have to re-do a lot of personality research that suggested correlation between personality test variables, as the correlations may be inflated by the effects of testing in the same context.

Frischholz, Edward J. (1993, October). The many roles of context in clinical and experimental hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

There are two potential sources of dissociation: 1. Person Effect - genetic factors, personality types 2. Situation Effect - situations like environmental causes, contextually dependent

Person Effects and Hypnotizability. Morgan (1973 Journal of Abnormal Psychology) Intraclass correlation determines heritability index: 62% of score is accounted for by genetic factors (though the twins were not reared apart, so family influences also were present). Piccione's research demonstrated long-term stability for hypnotizability scores; 25 years' test-retest  $r = .71$ ,  $N = 50$

Situational Effects and Hypnotizability. Norman Katz (1979) varied context before giving the Stanford Form C for a second time (sleep/trance induction, social learning induction, social learning relaxation induction). The latter two inductions showed significant gains of 3.33 and 2.87 on the scale, compared to .80.

Context effects must always be placed in perspective. When reanalyzing Katz with ANOVA, according to the recommendation of Cronbach for change score analysis, situation accounts for 17% of effect while person effect accounts for 49% (See Spiegel & Frischholz, 1992.)

Sivec, Harry; Lynn, Steven Jay (1993, October). Negative posthypnotic effects: The influence of prehypnotic experiences. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

1:

NOTES: Ss and Experimenters may mis-attribute negative experiential effects to hypnosis because of temporal contiguity. This study required Ss to complete the experiences scale before and after hypnosis and before and after a non-hypnotic control procedure. The PES is a 65 item scale and has a stable factor structure assessing pleasant, perceptual/kinesthetic, anger, and anxiety experiences.

49 Ss completed the test before and after the Harvard Group Scale, minus the word "hypnosis" in the induction, though it was presented as a study of hypnosis; 33 had the study presented as study of body awareness, and were to focus on body parts corresponding to the parts mentioned on the Harvard.

RESULTS. Ss in both groups reported more perceptual/kinesthetic effects after than before the experience. Research failed to find hypnosis was associated with unique effects that were negative. The single increase might be due to focusing on the body. The only difference between groups was that hypnosis Ss reported fewer anger experiences than those in the other group.

This data disconfirms the belief that hypnosis is associated with negative effects.

Spinhoven, Philip; Vanderlinden, Johan; ter-Kuile, Moniek M.; Linseen, A. Corry G. (1993). Assessment of hypnotic processes and responsiveness in a clinical context. International Journal of Clinical and Experimental Hypnosis, 41 (3), 210-224.

The present study was designed to investigate in a clinical situation whether differences in measured hypnotizability validly reflect differences in hypnotic processes and to what extent factors deemed extraneous to hypnosis -- such as resistance -- influence hypnotic responding. To answer this question, Dutch versions of relevant scales had to first be developed. The factorial validity and reliability of a Dutch translation of the Resistance Toward Hypnosis Scale (DRHS) and a shortened Dutch version of the Phenomenology of Consciousness Inventory (DPCI) were investigated in a sample of 205 psychiatric patients. The DRHS proved to be factorially valid and reliable, and two subscales, Trance and Reality Orientation, derived empirically from the DPCI showed good to satisfactory reliability. In a second study with a subsample of 99 psychiatric patients, hypnotizability as measured by the Stanford Hypnotic Clinical Scale for Adults was strongly and positively related to DPCI Trance scores and moderately and negatively related to DPCI Reality Orientation and DRHS Resistance scores. It is concluded that hypnotizability as measured in a clinical context under standard conditions is strongly related to hypnotic experiences over and above the moderate effects of resistance toward hypnosis and hypnotic suggestions. Standard hypnotizability assessments appear to be similar in their meaning in an experimental and clinical context.

Zivney, Olivia; Lynn, Steven Jay; Zelikovsky, Nataliya; Sivec, Harry; Marsden, Kim; Stewart, Kay; Valdez, Gail (1993, October). Hypnotizability modification

**training: Gains are not mediated by context.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Spanos' program to enhance hypnotizability was examined by Bates et al to determine whether improvement was due to context. They had a problem because they required Ss to sign up for five sessions, and their attempt to do a retest independently of the training sessions was therefore challenged. Also, Bates admitted that the rapport characteristic of Spanos' lab was not present.

This research replicated Bates, with improvement in the research design. The sessions were separated by having the hypnosis done in the medical school. None of the low demand group realized that they were being trained for improving hypnosis. 50% of the low demand group and same of the replication group scored as Highs on retest.

This failed to support Bates' contention that demands for compliance mediate training gains. Magnitude of gains was the same as reported earlier in the Carlton (Spanos lab) research. Trained Ss could not be distinguished from natural highs. Training related gains are not only robust but are generalizable to novel tasks. Trained Ss have a more internal locus of attribution, consistent with the educational approach.

Clinicians need to investigate this in a variety of clinical situations.

#### 1992

Kirsch, Irving (1992, August). **Cognitive-behavioral hypnotherapy.** [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The use of hypnosis to augment cognitive behavior therapy was described. Hypnotic inductions establish a context in which the effects of therapeutic interventions can be potentiated for clients with positive attitudes and expectancies toward it. Hypnosis can also provide a disinhibiting context for both clients and therapists, allowing them to behave in ways that are therapeutic, but that might seem awkward in other contexts. A meta-analysis of outcome studies in which the effects of a cognitive-behavioral treatment were compared to the effects of the same treatments supplemented by hypnosis resulted in a mean effect size of 0.87 standard deviations, indicating the average client receiving cognitive-behavioral hypnotherapy is better off at the end of it than more than 80 percent of clients who receive the same treatment in a nonhypnotic context. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Kvaal, Steven; Lynn, Steven Jay; Myers, Brian (1992, October). **The Gulf war: Effects on hypnotizability.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

We did a study that follows the line that volunteers may differ from nonvolunteers for hypnosis experiments (Authors cite 3 studies, including one with Hilgard as later author; Brodsky; Zamansky). Also, Ss who volunteer early in the quarter at the university are motivated for hypnosis; later volunteers want course credit. The former want to experience hypnosis.

Previously we did a study on authoritative vs permissive suggestions with Ss who volunteered early or late in the quarter; Ss were tested twice. For Ss who volunteered in first 2 weeks of the quarter, scores decreased across testing; for Ss volunteering late, scores remained stable across testing. This implies that if an experiment were conducted late in a quarter we would conclude that repeated testing has no effect; if done earlier, we would have concluded repeated testing decreases scores.

This result has been replicated. It is therefore important to run Ss across an entire quarter or year.

The present study differs from the foregoing study. It addresses the question: Do life events affect scores on the Harvard Scale? Do tension, uncertainty, etc. affect scores? Would they depress scores? Are scores reactive to environmental events?

On January 14 the U.S. issued an ultimative to Iraq; that very day we administered a tape recorded version of the Harvard Scale of Hypnotic Susceptibility, preceded by the Tellegen Absorption Scale. The hypnotizability tests were self-scored for involvement and involuntariness. Tension throughout the day escalated, culminating with bombing 2 hours before the hypnosis screening. The graduate student announced war had started and told Ss they could leave if they wanted. All 52 Ss stayed!

Control group was 58 Ss tested at same time of the quarter, one year before (10 days into the quarter).

Analysis was by a 3 x 2 ANOVA. There was no main effect for time of testing, sex, or interaction for any measures on hypnotizability, or subjective involvement.

The Tellegen Absorption scale showed a significant timing x sex interaction: males on outbreak of war scored lower than all other groups (15 vs 21 or more for all other groups). Tensions had no effect on subjective or objective scores of hypnotizability. Thus the males were affected on the Absorption Scale by outbreak of war.

The fact the Tellegen Scale was more reactive suggests hypnotizability may be more stable than Absorption. Absorption might have been depressed because males were more upset by images of military services.

Little research has been conducted to examine the possible positive effects on hypnotizability of positive events in real life.

Lyons, Larry C. (1992, October). Absorption and hypnotizability: Meta-analysis of studies to determine if contextual effects are important. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA

NOTES

Correlations between hypnotizability and Absorption range from .20 to .40; Council et al. suggest the correlation between these variables is a context effect (expectancy). In our review there was no statistically significant difference between correlations that were found in and out of context (.26 and .23, weighted means) in more than 40 studies with more than one correlation per study.

When Absorption was measured before hypnosis experience the  $r = .25$ ; after the hypnosis experience,  $r = .32$  (significantly different), which also was different from what context hypothesis would predict. Any context difference may be a function of length of time between the Absorption and hypnosis sessions.

Data does not support the context hypothesis. Measuring Absorption after hypnosis resulted in higher mean correlations with susceptibility. However, the magnitude of this relationship was small. Variation due to test reliability and small sample size are likely explanations of the differences in the magnitude of the correlations across studies. We also must consider scale reliability and sample error (samples less than 1000 have departures from the population correlation that are fairly large).

#### CONCLUSION

We should construct confidence intervals around observed correlations and look at the overlap; don't look only at the significance of the difference between correlations.

Author is in the process of conducting a mail survey to obtain unpublished results on context effect.

Nadon, Robert; Dywan, Jane; Adams, Barbara (1992, October). The social psychology of depth reports: Skirting the important data. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Radke & Spanos used a new 7-point scale that permitted Ss to say they passed an item but were not hypnotized, and only 25% (instead of 88% on usual 4-point scale) said that they were hypnotized.

Do we delude ourselves in thinking reports of hypnotic depth just reflect scale wording, or is something genuine being measured? Radke & Spanos found that breaking down Ss into low, medium, and high hypnotizable groups, the mediums are the ones who are affected by scale manipulations.

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Spanos, Nicholas P.; Simulates, Ann; de Faye, Barbara; Mondoux, Thomas J.; Gabora, Natalie J. (1992-93). A comparison of hypnotic and nonhypnotic treatments for smoking. Imagination, Cognition and Personality, 12, 23-43.

Three experiments administered variants of Spiegel's (1970) smoking cessation procedure to smokers in hypnotic and nonhypnotic treatments. Follow-up periods were from twelve to twenty-four weeks depending on the experiment. Complete abstinence was an infrequent outcome in all three experiments. Greater-than-control reductions in smoking for treated subjects were obtained in two of the experiments but, in both cases treatment and control subjects failed to differ significantly before the end of the follow-up period. Hypnotic and nonhypnotic treatments produced equivalent smoking reductions in all studies, and neither hypnotizability nor questionnaire assessments of motivation to quit correlated significantly with treatment outcome. Implications are discussed.

## NOTES

When the experimenters compared number of treatments they simply compared two sessions of Spiegel's one-session treatment with four sessions of it. The authors make the point that perhaps they should vary the four sessions.

"In all three of the present experiments the abstinence rates associated with the Spiegel treatment were very low. Our abstinence rates were similar to those reported in one earlier study [4 - Perry et al.], but substantially lower than those reported in three other studies [2, 22, 25]. The reasons for these discrepancies between studies remains unclear, but experiment 3 suggests that these discrepancies cannot be accounted for simply in terms of whether the subjects were drawn from a university or nonuniversity population, and experiment 2 suggests that the discrepancies are unrelated to the number of treatment sessions administered to subjects.

"The finding that hypnotic and nonhypnotic subjects in all three experiments attained equivalent reductions in smoking is consistent with other comparison studies in this area which indicate that hypnotic treatments are no more effective than various nonhypnotic procedures at inducing reductions in smoking [22, 25, 30]. More generally, these findings are consistent with comparison studies on a wide variety of clinical disorders (headache pain, warts, phobias, obesity) which indicate that hypnotic treatments are no more effective than nonhypnotic ones at producing therapeutic change (see [3] for a review).

"The failure to find significant correlations between smoking reduction and hypnotizability among treated subjects is also consistent with the findings of most studies in this area [3], but the reasons why significant correlations between these variables are found in some studies and not others remains unclear. Spanos [3] suggested that significant correlations between these variables are particularly likely when hypnotizability testing is integrated into the treatment protocol. Under these circumstances subjects are likely to form strong expectations about treatment success on the basis of their self-observed responses to the hypnotizability scale. Such expectations may, in turn, influence subjects' motivations to comply with the treatment regimen, the self-statements they make concerning their likelihood of quitting, etc. In all of the present experiments hypnotizability was assessed at the end of the follow-up period and, therefore, could not influence subjects' expectations of treatment success" (pp. 40-41).

Spinhoven, Philip; van Wijk, Jorrit (1992). Hypnotic age regression in an experimental and clinical context. American Journal of Clinical Hypnosis, 35, 40-46.

Investigated role of a clinical context in the experience of hypnotic age regression. 25 patients experienced hypnotic age regression in an experimental and clinical context in counterbalanced order. Patients obtained significantly lower scores for experimental age regression than for clinical age regression, in particular when the experimental assessment preceded the clinical assessment of age regression. Moreover, scores for clinical and experimental age regression were only significantly and positively correlated when the clinical assessment of age regression

preceded the experience assessment. These findings give a tentative indication that more patients are able to experience clinical age regression than can be predicted from their responses to an experimental suggestion for hypnotic age regression where almost no opportunities for patient contact or maximizing of hypnotic responsiveness are provided.

1991

Campbell, Laura; St. Jean, Richard (1991, August). Attentional processing and hypnotic time estimation. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

The tendency of subjects to substantially underestimate the duration of the hypnotic period is, by now, well-documented (St. Jean, 1989). Recent attempts to account for this phenomenon have focused on the attentional processing requirements of the hypnotic role and hypnotic task. St. Jean, McInnis, and Swainson (1990) presented a "busy-beaver" hypothesis which views the hypnotic subject as so occupied with the demands of task and role that little attention may be spared for the processing of unrelated stimuli. Consequently, when stimuli such as contextual changes, or other cues denoting the passage of time, are unattended the result is a reduction in subjective duration. St. Jean et al. (1990) reported a study in which the attentional demands of a listening task, presented in a hypnotic context, were varied by placing additional processing demands, in the form of a complex problem-solving task, on some subjects, but not on others. Subjects in the attentionally-demanding condition underestimated the duration of the listening period to a far greater degree than their passive listening counterparts. Estimates were not related to hypnotic susceptibility. St. Jean et al. (1990) did not employ a waking comparison condition. Such a comparison is important in determining whether the hypnotic role, or context, apart from the processing demands they usually impose, contribute to the underestimation effect. The present study provides such a comparison by presenting the same attentional manipulation in both a waking and a hypnotic context. The findings of the previous study were strongly corroborated; subjects in the attentional condition gave significantly shorter duration estimates than those who passively listened. The nature of the context, hypnotic or waking, did not, however, influence the magnitude of time estimates. These results, together with similar findings in the time-perception literature, appear to lend considerable support to the "busy-beaver" hypothesis. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

Nadon, R.; Hoyt, I. P.; Register, P. A.; Kihlstrom, J. F. (1991). Absorption and hypnotizability: Contextual effects re-examined. Journal of Personality and Social Psychology, 60, 144-153.

Two independent studies failed to find evidence consistent with Council, Kirsch, and Hafner (1986), who argued that the repeatedly observed correlations between Tellegen's (1981) Absorption Scale (TAS) and hypnosis measures were artifacts of testing context, and de Groot, Gwynn, and Spanos (1988), who claimed evidence for

a Gender x Context moderator effect. In the present studies, subjects completed the TAS and other personality questionnaires during an independent survey and later immediately prior to an assessment of hypnotizability. In Experiment 1 (N - 475), the effect of context on the relation between questionnaire scores and hypnotizability was weak and variable; in Experience 2 (N - 434), these weak effects were reversed. The results reaffirmed the construct validity of absorption as both a major dimension of personality and as a predictor of hypnotic responsiveness.

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

#### NOTES

There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model.... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

Sheehan, Peter W.; Statham, Dixie; Jamieson, Graham A. (1991). Pseudomemory effects over time in the hypnotic setting. Journal of Abnormal Psychology, 100 (1), 39-44.

Highly (n=36), moderately (n=26), and low (n=48) susceptible Ss were administered either hypnosis or waking instruction to examine the hypothesis that pseudomemory will occur for hypnotic Ss as long as 2 weeks after suggestions are given for accepting false events. Accuracy and confidence of memory were measured for all ss, and memory was examined for free recall, structured recall, and recognition. Results indicated persistence of pseudomemory for the 2-wk period for both highly and moderately susceptible ss. Data highlighted the multifaceted operation of skill, contextual, and state instruction factors, and a hypothesis that ambiguity of communication when suggestion is delivered plays a part in the maintenance of pseudomemory over time is offered for further testing.

Drake, Stephen D.; Nash, Michael R.; Cawood, Glenn N. (1990-91). Imaginative involvement and hypnotic susceptibility: A re-examination of the relationship. Imagination, Cognition and Personality, 10, 141-155.

Several researchers have reported that significant correlations between hypnotic susceptibility and absorption result from the reactive effects of administering scales immediately before measurement of hypnotizability. The present study was conducted to determine whether interview measures of imaginative involvement are similarly reactive. Three groups of 48, 43, and 43 Ss each were first administered 3 scales of absorption/imaginativeness. This was followed by administration of a hypnotizability scale. Ss in Group 1 who were administered the 3 scales immediately prior to hypnosis evidenced the usual significant positive correlation between each of the 3 scales and hypnotizability. Ss in Groups 2 and 3 were administered the 3 scales 24 to 36 hours prior to hypnosis. Group 2 Ss were informed that administration of these scales was part of a hypnosis experiment. Group 3 Ss were not aware that the scales were part of a hypnosis experiment. No significant correlation between hypnotizability and the 3 measures of imagination/absorption was evidenced for either Group 2 or Group 3. Our findings suggest that any relationship between these two constructs may be quite dependent on how and when the measures are administered.

1989

Malott, James M.; Bourg, Audrey L.; Crawford, Helen J. (1989). The effects of hypnosis upon cognitive responses to persuasive communication. International Journal of Clinical and Experimental Hypnosis, 37, 31-40.

Several writers have suggested that hypnotic responsiveness is directly related to the content of S's covert self-statements. To test this notion, low and high hypnotizable subjects in either hypnosis or waking conditions were exposed to a recorded message advocating that college seniors be required to pass a comprehensive exam in order to graduate. Following message presentation, subjects listed all of the thoughts which occurred to them while listening to the message; these thoughts were later coded as counterarguments, favorable thoughts, or neutral thoughts. Hypnotized subjects generated significantly fewer counterarguments and agreed more with the message than waking subjects. In addition, high hypnotizable subjects (in both waking and hypnosis conditions) produced significantly more favorable thoughts and agreed more with the message than low hypnotizability subjects. Results, therefore, provided a demonstration of the differential impact of context (induction) and trait (hypnotizability level) upon different cognitive phenomena. Implications for the occurrence of hypersuggestible behavior are discussed.

NOTES:

N = 48 (24 highs, 24 lows, blocked on sex and hypnotizability level, then randomly assigned to one of two conditions).

Hypnosis subjects generated significantly fewer counterarguments than waking subjects (12% vs 45%). Main effect for hypnotizability level was nonsignificant, as was the condition x hypnotizability interaction.

High hypnotizable subjects generated significantly more favorable thoughts than low hypnotizable subjects (28% vs 12%). The main effect for condition was nonsignificant, as was the condition x hypnotizability interaction.

Unexpectedly, hypnosis subjects produced a significantly greater number of neutral thoughts. The main effect for hypnotizability level did not reach significance, nor did the condition x hypnotizability interaction.

"Thus, as suggested by McConkey (1984), it may be the hypnotic context, rather than a hypnotic "state" which is responsible for reduced levels of counterarguing. ... the data indicate that an induction decreases counterarguing among high and low hypnotizable subjects alike; on the other hand, the incidence of favorable thoughts is related only to hypnotizability level and not to the hypnosis context. ... the present findings suggest that both context and trait play a role in the occurrence of hypnotic behavior, although each may do so by impacting upon different cognitive responses.

There appears to be a relationship between counterarguing and acceptance of the persuasive communication in the present study. First, there was a significant negative correlation between those two measures (collapsing across conditions), indicating that higher levels of counterarguing were associated with lower levels of communication acceptance. Second, subjects in the hypnosis condition who counterargued less than waking subjects, also indicated significantly higher levels of communication acceptance than waking subjects.

In a similar fashion, there appears to be a relationship between favorable thought production and communication acceptance. There was a significant positive correlation between the two measures, and high hypnotizable subjects who generated significantly more favorable thoughts than low hypnotizables, also produced higher scores on the attitude measure.

They attribute the greater number of neutral thoughts for hypnosis subjects to minor differences in the instructions (p. 38).

1989

Nash, Michael R.; Spinler, Dwayne (1989). Hypnosis and transference: A measure of archaic involvement. International Journal of Clinical and Experimental Hypnosis, 37, 129-144.

20 Likert-type items were derived directly from Shor's theoretical propositions concerning the occurrence of transference-like experiences among hypnotic Ss. In 3 separate experiments, this 20-item Archaic Involvement Measure (AIM) was administered to 452 Ss following termination of both group and individually administered hypnosis procedures. Results suggest that: (a) AIM is internally consistent, and is significantly correlated with hypnotizability; (b) among high hypnotizable Ss, AIM scores assess an important aspect of hypnotic experience which is relatively unrelated to behavioral response to hypnotic suggestions; (c) there is no change in AIM scores associated with the sex of the hypnotist or S; and (d) there are 3 clusters of AIM items; perceived power of the hypnotist, positive emotional bond to the hypnotist, and fear of negative appraisal. Possible validation and clinical research applications of AIM are presented, along with a plea for further empirical examination of the relational dimensions of hypnosis.

## NOTES

Relates these findings to 'countering' (Sheehan, P., *Countering preconceptions about hypnosis: An objective index of involvement with the hypnotist. Journal of Abnormal Psychology*, 1971, 78, 299-322). "Countering is the tendency of some highly hypnotizable Subjects to comply with the intent of the hypnotist, even when there are strong nonhypnotic influences (e.g., social influences, expectations derived from previous lectures, perceptual constraints) to perform otherwise. ... Sheehan and Dolby (1979) found that hypnotic Subjects' dreams about the hypnotist were different than nonhypnotic Subjects' dreams, by being more positive and more often containing themes of protection, care, and authority. Interestingly, these themes were especially evident in the dreams of hypnotic Subjects who countered" (p. 130). The several experiments in this study investigate reliability, concurrent validity, and factor structure of the AIM. In their discussion, Nash and Spinler make the following points. As is the case with hypnotizability, AIM scores may have a bimodal distribution, at least when administered in the same context as a hypnosis measure. It is possible that these two modes define qualitatively different kinds of involvement with the hypnotist. "For high hypnotizable Ss, behavioral response to hypnotic suggestions appeared unrelated to the extent of archaic involvement with the hypnotist across both Experiments 2 and 3. Considering only the overall correlation between AIM and hypnotic responsiveness, one might argue that both scales measure general behavioral compliance and conformity, and that this explains their degree of association. It may indeed be correct to associate AIM scores with an overall conformity to respond, but only among low hypnotizable Subjects. For high hypnotizable Subjects, behavioral compliance (task performance) was not associated with AIM scores. Just as Sheehan's (1971, 1980) 'countering' studies suggest, among high hypnotizable Ss there appears to be no clear-cut relationship between the ability to perform hypnotic tasks and the special, motivated commitment to the hypnotist evidenced in some Ss. The theory of Shor (1979) and the empirical work of Sheehan and Dolby (1979) strongly suggest that an intense involvement with the hypnotist (archaic involvement) is a distinctive feature of the hypnotizable S's experience. The present work corroborates Sheehan and Dolby's (1979) finding that, among high hypnotizable Ss, this involvement is not equivalent to overt response to the demands of standard test suggestions.

"Three findings further suggest that AIM scores assess an important aspect of the hypnotic S's experience which is relatively unrelated to behavioral task performance. First, AIM scores correlated significantly with a measure of subjective depth during hypnosis (Hypnotic Depth Inventory, Field, 1966). Second, the correlation between hypnotic depth and AIM scores was substantial for both low and high hypnotizable Ss. Thus, for high hypnotizable Ss, AIM scores were significantly correlated with hypnotic depth, even though they were unrelated to behavioral task performance. Finally, regression analysis suggested that AIM scores accounted for variance in hypnotic depth which was not explained by task performance scores. These findings, then, conform to Shor's proposition and Sheehan's (1971, 1980) later observations that archaic involvement with the hypnotist is a fundamental dimension of hypnotic experience which may not be

directly related to the extent of behavioral response to hypnotic suggestions (see Shor, 1979, p. 119).|

"It is of some interest that the mean AIM score for low hypnotizable Ss was roughly equivalent to that of control Ss who had listened to a lecture prior to AIM administration. Only Ss who were exposed to hypnosis and who were behaviorally responsive to hypnotic suggestions evidenced elevated AIM scores" (pp. 140).

**Ronnestad, Michael Helge (1989). Hypnosis and autonomy: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 37, 154-168.**

The study focused on autonomy as a moderator variable in the prediction of subjectively reported hypnotic depth. Ss in the experimental part of the study were 56 undergraduate psychology and education majors classified as either high or low in autonomy. Ss who were equated on capacity for absorption were individually administered 1 of 3 hypnotic inductions: an authoritarian induction, a permissive hetero- induction, or a self-hypnosis induction. The study had a double-blind design. The data suggest that situational manipulation has greater impact on low than on high autonomy Ss. Individual-difference variables such as absorption, have greater impact on hypnotic depth for high than for low autonomy Ss. The data indicate that the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. A factor-analytic inquiry of absorption confirmed the importance of affective/regressive capacity for hypnotic functioning for high autonomy Ss. The study supported the alternate-path perspective of hypnosis.

#### NOTES

There is very little research on autonomy and hypnosis. The authors cite studies showing only a modest relationship between hypnotizability and locus of control.

In this study, 176 students were assigned to the high autonomy group if they were in the upper 1/3 of two of 3 autonomy scales (Rotter's Locus of Control Scale, the Inner- Directedness Subscale of the Shostrom Personal Orientation Inventory, and the Autonomy subscale of Jackson's Personality Research Form) and not in the lower 1/3 of the third scale. Ss were designated as low autonomy if the obverse obtained. This procedure yielded 27 high and 29 low autonomy Ss.

Ss were hypnotized with one of three inductions: authoritarian with many motor items (Barber Suggestibility Scale), permissive with mostly imagery (Barber & Wilson's Creative Imagination Scale), or guided self-hypnosis with mostly imagery (taken from Fromm et al, 1981). After hypnosis, Ss rated their own hypnotic depth on a 1-10 scale, and their perception of E or the procedure as authoritarian and directive. Ss' attitude, expectations, motivation, and experienced effortlessness were measured. E rated Ss for pre-hypnosis rapport and post-hypnosis rapport.

The results indicated that there was no difference in hypnotizability level between high and low autonomy Ss. The correlation between effortlessness of experience and hypnotic depth was high for low autonomy Ss (.51) but not significant for high autonomy Ss (.12). In general the two groups were very similar in terms of mean scores on most variables. The differences appeared in the correlations between self-

reported hypnotic depth and the other variables. For low autonomy Ss correlations were not significant between depth and pre-hypnotic variables (rapport-pre, absorption, expectation) but for highs the same correlations were significant (rapport-pre .47, absorption .54, expectation .48).

But for post-hypnosis variables, low autonomy Ss had significant correlations between depth and the two variables measured from post-hypnosis interviews (perceived authoritarian/directiveness .40, effortlessness .51) and the highs did not have significant correlations. The multiple correlation between these variables and depth was  $R = .28$  for low autonomy Ss (with no contribution from rapport-pre) and  $R = .72$  for high autonomy Ss, with absorption contributing most. The more they perceived the induction as authoritarian or directive, the greater depth reported by low autonomy Ss. Although low and high absorption Ss did not differ on the Absorption Scale, absorption predicted hypnotic depth better for the highs.

The author divided the Absorption Scale into four rational factors: Affective/Regressive, Perceptual/Cognitive, Dissociative, and Mystical. Low and high autonomy Ss scored at approximately the same level on these categories, but correlations between these categories and depth for low and high autonomy Ss were somewhat different. (See Table.)

**Correlations between Categories of Absorption and Hypnotic Depth for Low and High Autonomy Ss**

Absorption Category	Low Autonomy Ss	High Autonomy Ss	All Ss
Affective/Regressive	.14	.56**	.33**
Perceptual/Cognitive	.25	.33*	.29*
Dissociative	.32*	.57**	.47**
"Mystical"	.07	.16	.11

In their discussion, the authors note that one might assume that high autonomy Ss would be less affected by variations in hypnosis procedures than low autonomy Ss. The differences found in depth scores for these two groups were supportive of this expectation. "Fluctuations in subjectively reported depth scores for low autonomy Ss only, clearly suggest autonomy to be a moderator variable" (p. 163).

Moreover, the results indicate "that high autonomy Ss in comparison to low autonomy Ss are more likely to express their inner dispositions, such as absorption and expectation, in the hypnotic setting. High autonomy Ss may be more reflective of and attuned to individual predisposing characteristics and less influenced by situational demands. ... the hypnotic behavior of high autonomy Ss is more likely to be self- congruent and less likely to be demand-congruent. Low autonomy Ss, however, are more likely to be demand congruent and less likely to be self-congruent. The latter finding was suggested both by the significant F ratio for low autonomy Ss across treatments, and also by the stronger relationship found for this group between depth and how authoritarian/directive they perceived the procedure to be" (p. 163).

[Paradoxically, among low autonomy Ss an authoritarian approach yields less depth but greater suggestibility (higher hypnotizability scores).] "The tendency for low autonomy Ss to have a higher behavioral score on the authoritarian procedure is consistent with Tellegen's (1979) assumption that there are two pervasive dimensions in current hypnotizability measures--a compliance dimension and a true hypnotic responsiveness dimension. According to Tellegen, motor items may be more saturated with compliance, while cognitive items may be more saturated with

true hypnotic responsiveness. The BSS has a motor emphasis, and the higher behavioral scores for the low autonomy group of Ss may be interpreted as an expression of compliance.

"In addition to the inner-directedness and self-congruence hypothesis of why autonomy may be a moderator variable, another possible explanation is related to accuracy of self-perception. The intercorrelational and multiple regression data showed repeatedly that a stronger relationship existed between prehypnotic variables and hypnotic depth for high autonomy than for low autonomy Ss. The relational capacity, as tapped by the rapport-pre variable, absorption, which may be conceptualized as a personality trait; and expectation, a cognitive variable, were all related to depth for high autonomy Ss. For low autonomy Ss, none of these variables were individually related to depth. Differences in Ss' accuracy of self-reporting may explain this. According to ego-psychology theory, highly individuated Ss, with clear self-other differentiation and congruence in self-perception, are better able to make accurate statements about themselves. The self-assessments of Ss with low differentiation capability may be less accurate and possibly more affected by demand characteristics and response set. In other words, their self-assessments have more error. The generally lower correlations for the low autonomy Ss may reflect this" (p. 164).

"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

Schuyler, Bradley A.; Coe, William C. (1989). More on volitional experiences and breaching posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 37, 320-331

Highly responsive hypnotic subjects, who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia, were compared with each other on four physiological measures (heart rate, electrodermal response, respiration rate, muscle tension) during posthypnotic recall. Two contextual conditions were employed: One was meant to create pressure to breach posthypnotic amnesia (lie detector instructions); the other, a relax condition, served as a control. The recall data confirmed earlier findings of Howard and Coe and showed that voluntary subjects under the lie detector condition recalled more than the other three samples that did not differ from each other. However, using another measure of voluntariness showed that both voluntary and involuntary subjects breached under lie detector conditions. Electrodermal response supported the subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis.

#### NOTES

The authors suggest that subjects observe themselves not remembering (i.e. not reporting memories) and conclude that they therefore could not remember. Such

subjects, they say, are deceiving themselves in so far as they could remember if they were to direct their attention to salient cues.

1988

Fourie, David P. ; Lifschitz, S. (1988). Not seeing the wood for the trees: Implications of susceptibility testing. American Journal of Clinical Hypnosis, 30, 166-177.

#### NOTES

The two studies used as examples are (1) Spanos, N. & Bertrand, L. D. (1985) E.M.G. biofeedback, attained relaxation and hypnotic susceptibility: Is there a relationship? Amer J. Clin Hypnosis, 27, 219-225; and (2) Van Gorp, W. G., Meyer, R. G., & Dunbar, K. D. (1985). The efficacy of direct versus indirect hypnotic induction techniques on reduction of experimental pain. Internat. J. Clin and Exper Hypnosis, 33, 319-328.

Hilgard, Ernest R. (1988). Response to contextual demands an insufficient account of hypnotic phenomena. [Comment/Discussion] .

#### NOTES

The author refers to one of his papers for a critique of the Spanos position that demand characteristics of the hypnotic situation account for hypnotic phenomena such as amnesia, analgesia, and "trance logic." The paper is Hilgard, E. R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.

Pavia, M.; Stanley, R. O. (1988). Effect of defining induction as hypnosis or relaxation. Australian Journal of Clinical and Experimental Hypnosis, 16, 11-21.

Previous studies have shown that the perceived definition of an induction may sometimes affect the subject's responses to the induction. These variations in the effect of induction definition may be due to interactions between a subject's motivations and expectations of the induction technique and the way the induction is defined. These authors explored this interaction with groups of clinical and student subjects. Differing definitions of induction as 'hypnosis' or 'relaxation' did not result in significant differences in response among either group, though subjects in neither group were found to have high expectations of motivation (sic).

1987

McCann, Terry; Sheehan, Peter W. (1987, October). Pseudomemory creation and confidence in the experimental hypnosis context. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

After watching a video-tape of a bank robbery incident, 34 out of 40 highly hypnotizable subjects displayed pseudomemory reports subsequent to the administration of false memory suggestions given after hypnotic induction

instructions. Incorporation of elements of pseudomemory into recall reports was accompanied by increased confidence ratings, but confidence ratings for those subjects displaying most pseudomemory distortion at recall fell appreciably when subjects were confronted with the reality constraints associated with recognition testing. Data imply that pseudomemories associated with hypnotic suggestion are not always accompanied by increased conviction or certitude, nor are they resistant to change in the face of contrary evidence. Data further indicate that subjects adapt both accuracy and confidence responses to the stimulus conditions of testing, implying that accuracy and confidence ratings may covary meaningfully.

Stam, Henderikus J.; Spanos, Nicholas P. (1987). Hypnotic analgesia, placebo analgesia, and ischemic pain: The effects of contextual variables. Journal of Abnormal Psychology, 96, 313-320.

**ABSTRACT:** Two experiments examined the relation between hypnotic and placebo analgesia using ischemic pain. The first experiment examined an artifact in a previously used ischemic-pain stimulus. Experiment 2 investigated the relation between hypnotic and placebo analgesia using a submaximum-effort tourniquet technique to produce ischemic pain. High- and low-susceptible subjects who received placebo analgesia followed on a subsequent trial by hypnotic analgesia showed significant increases in tolerance from placebo to hypnotic analgesia. When presented in the reverse order, however, placebo analgesia and hypnotic analgesia led to equivalent levels of tolerance in both high- and low-susceptible subjects. A similar pattern of findings emerged for Ss' magnitude estimates of pain, but it was not related to hypnotic susceptibility. These findings indicate that both hypnotic and placebo analgesia may be contextually dependent phenomena.

1986

Council, James R.; Kirsch, Irving; Hafner, L. P. (1986). Expectancy versus absorption in the prediction of hypnotic responding. Journal of Personality and Social Psychology, 50, 182-189.

The Absorption Scale was administered to subjects in the context of a hypnosis experiment and in a context unrelated to hypnosis. Expectancies of responding to hypnotic suggestions were assessed both before and after trance induction, but before administration of suggestions. Hypnotic depth was assessed by different methods before suggestions were given, and after hypnosis. Absorption was correlated with hypnotic responsivity and expectancy, but only when assessed in a hypnotic context. Completing the Absorption Scale in a hypnotic context appeared to affect responsiveness by altering expectancies. Only postinduction expectancies were predictive of response to suggestions. Results of path analysis suggest that trance inductions alter expectancies for responding to hypnotic suggestions and that these altered expectancies determine subsequent hypnotic behavior.

Laurence, Jean-Roch; Nadon, Robert (1986). Reports of hypnotic depth: Are they more than mere words?. International Journal of Clinical and Experimental Hypnosis, 34, 215-233.

The empirical work relating hypnotizability, the hypnotic situation, and the reports of hypnotic depth is reviewed and evaluated. Asking Ss to assess their hypnotic depth is a complex task involving the interaction of experiential, cognitive, and contextual variables. Accordingly, future experimental work should take into account this multidimensionality; phenomenological, situational, cognitive, and motivational factors implicated in verbal reports should be explored in terms of their respective relationships with both hypnotizability and self-ratings of hypnotic depth. More sophistication in the experimental inquiries of hypnotic depth is required in order to further our understanding of the cognitive and affective structures underlying the hypnotic experience.

#### NOTES

In past years, hypnotic susceptibility and hypnotic depth were regarded as the same thing, and depth was inferred from responses to test suggestions on hypnotizability scales (e.g. Davis & Husband, 1931; LeCron, 1953).

There has been little investigation of the relationship between Subjects' subjective experiences and reported "depth." Research suggests that "hypnotic depth reports are usually significantly higher for Ss who have undergone a hypnotic treatment than for those who have received task-motivation (Ham & Spanos, 1974; Spanos & Barber, 1968; Spanos, Stam, D'Eon, Pawlak, & Radtke-Bodorik, 1980); imagination-control; or relaxation-control instructions (Connors & Sheehan, 1978; Gilbert & Barber, 1972; Spanos & Barber, 1968; Spanos, Radtke-Bodorik, & Stam, 1980, Experiment 2)" (pp. 217-218). Others have found that changes in inward experiencing (e.g. feelings of unreality, a sense of disappearance of body parts) could not be attributed simply to sitting quietly with the eyes closed (Barber & Calverley, 1979). [A footnote on p. 218 indicates some studies didn't find this difference between a hypnosis group and a task-motivation control group.]

When Ss are asked to estimate subjective depth after having experienced hypnotizability test items, they are likely to infer depth from whether or not they passed the items (and indeed, early scales promoted that assumption). Reports of subjective depth taken before rather than after the test items still correlate with overall hypnotizability score, though not to as high a degree (E. R. Hilgard & Tart, 1966; Tart, 1970). Although usually depth estimates correlate with hypnotizability in the .50 to .75 range (Perry & Laurence, 1980), the correlations were obtained in the hypnotic context, and Ss may use their own behaviors as one determinant of their estimated depth.

From another line of study it is observed that Ss' subjective depth may be at variance with behavioral performance on hypnosis scales (Bowers, 1981). High hypnotizables judge their own depth from their performance on cognitive items (e.g. amnesia, hallucinations) while mediums and lows judge their own performance based on their responses to motor items and challenge items (Kihlstrom, 1981). In one experiment on amnesia, it appeared that Ss did not judge their own depth by how well they did on the amnesia task (Spanos, Stam, D'Eon, Pawlak, and Radtke-Bodorik, 1980). "M. T. Orne (1966, 1980) has emphasized that although it is necessary to operationalize S's responses to hypnotic suggestions, behavioral

concomitants are only valid if they accurately reflect subjective alterations in an individual's experience" (p. 221).

"The social-psychological approach (see Barber, 1969; Radtke & Spanos, 1981, 1982; Spanos, 1982; Wagstaff, 1981) rejects the notion of hypnotic depth as an indicator of a unique state. These authors argue that the reports of having been hypnotized reflect attributions made by Ss when confronted with a hypnotic context. ... Bem (1972) and Kelley (1972) have emphasized the idea that the more ambiguous an experience is, the more a person is likely to base his or her judgment primarily on available external information" (p. 222). In this case, defining the situation as involving "hypnosis" is one of the most potent predictors of Ss' reports of subjective experience (Spanos, Radtke- Bodorik, and Stam, 1980). Other variables that influence subjective depth estimates are the wording of the hypnotizability scale, expectancy, and information provided directly or indirectly. On the other hand, McCord (1961) found that his patients had widely disparate expectations for how they thought they would feel when hypnotized, so expectancy as a predictor would not necessarily determine specific experience.

Direct experimental work on predicting response to hypnosis test items from expectancies (Council, Kirsch, Vickery, & Carlson, 1983; Kirsch, Council, & Vickery, 1984) suggests that expectations may predict test response when people are given a cognitive skill type of induction, but not when given a 'typical trance' type of induction. Also, another study from that laboratory (Council & Kirsch, 1983) established that only when expectancies are assessed after an induction (but before the test items) do they effectively predict hypnotic behaviors. The present authors express the view that these results are difficult to account for on the basis of social psychology theories that weight heavily the role of expectancy in generating hypnotic response.

When Ss are permitted to use several different descriptors for their experience (being hypnotized, experiencing the effects, being absorbed, and responding to the suggestions), most Ss rated their own experiences as nonhypnotic (Radtke & Spanos, 1982). This was particularly true for medium hypnotizable Ss. Thus, unidimensional scales purporting to measure "depth" actually force Ss to interpret their multi-aspect experience in terms of the investigator's frame of reference, in this case "hypnotic depth." Nevertheless, the highly hypnotizable Ss were the least likely to be swayed from their self description of being "deep" when offered alternative ways of describing their experience. This is concordant with results reported earlier by Barber et al. (1968).

"The attribution literature may provide clues as to why most highly hypnotizability Ss retain their high ratings of experienced depth when confronted with situational manipulations. Self-perception theory strictly applies when Ss' experiences are ambiguous, forcing them to fall back on contextual factors to make self-appraisals. The relationship between expectancies, absorption, effect of scale wording, and hypnotizability scores suggest, however, that high hypnotizable Ss do not rely heavily on contextual factors when assessing their levels of hypnotic depth. Most of these Ss maintain their reports of altered experiences, even when situational determinants are changed (Harackiewicz, 1979; Kihlstrom, 1984; Lepper, Greene, & Nisbett, 1973). Thus, the hypnotizability by depth scale interaction found by

Radtke and Spanos (1981) may suggest that experiences reported by high hypnotizable S are not inherently ambiguous. Accordingly, self-perception theory may not apply to them" (pp.226-227).

In their Discussion, the authors state, "Several studies have attempted to relate personal, real-life events to the experience of hypnosis. A number of studies (e.g., As, 1963; Field, 1965; Shor et al., 1962; Wilson & Barber, 1982) have shown that absorption, tolerance of unusual experiences, automaticity, compulsion, and trust are related to the capacity to be hypnotized. Other studies (Bowers & Brenneman, 1981; Tellegen & Atkinson, 1974; Van Nuys, 1973) have shown that certain variants of attention are also related to hypnotizability. Extensive work by J. R. Hilgard (1970, 1979) has shown that patterns of personal development relate to hypnotizability in adult life. It appears then that hypnotizable individuals bring a host of experiences and abilities with them to the hypnotic context. It makes intuitive sense which is supported by the available empirical data, that a complex interaction among these experiences and abilities, the hypnotic context, and hypnotic responsiveness is implicated in Ss' assessments of their hypnotic depth. Studies are needed in which all of these potential determinants of hypnotic depth reports are taken into account. Only then will a clearer picture of their respective importance emerge" (p. 228).

Meagher, Christopher Roberts (1986). Suggestion and posthypnotic amnesia: Altered context or altered state? (Dissertation, University of Oregon). Dissertation Abstracts International, 47 (n1-B), 409-410. (Order No. DA 8605846)

"Posthypnotic amnesia has been investigated in the past and subsequently alluded to as either role enacted behavior or evidence for an altered state of consciousness. In order to gain further understanding of the circumstances which facilitate amnesic behavior, an experiment was carried out which was designed to vary the usual context in which recall and recognition memory are observed during posthypnotic amnesia. The suggestion for posthypnotic amnesia was altered from its usual form in that specific suggestions for recall amnesia and recognition amnesia replaced the usual general suggestion for overall memory impairment. Some Ss received the amnesia suggestion before presentation of the stimulus material rather than after stimulus presentation. In addition to the usual verbal stimuli, nonverbal stimuli were used. "A group of 44 highly hypnotizable, undergraduate Ss was divided into four treatment conditions. Three groups were hypnotized and given instructions to repeat a list of nine words taken from the Rey Auditory Verbal Learning Test, and to copy the nine figures of the Bender Gestalt Test. A fourth group performed these tasks in a normal waking state. One hypnotic group was given prestimulus suggestions for recall and recognition amnesia. Another was given poststimulus suggestions for recall and recognition amnesia, and the third hypnotic group received no amnesia suggestions. The dependent measures consisted of the scores on tests of recall and recognition of the stimulus words and figures. "A repeated measures multivariate analysis of variance revealed significant effects for hypnosis /suggestion condition, type of stimulus, and type of test. Further analysis determined that the two hypnotic groups given amnesia suggestions did not differ

from each other but did show significantly greater amnesia than did either the no suggestion hypnotic control group or the waking control group. Recognition performance was significantly better than was recall performance for all groups in both stimulus situations. Nonverbal recall was significantly better than verbal recall for the two control groups given no amnesia suggestion. There was no stimulus effect for any other group and testing condition. The results of this experiment are discussed in terms of theories of hypnosis and memory, contextual variables of the hypnotic situation, and previous germane research" (pp. 409-410).

**Register, Patricia A.; Kihlstrom, John F. (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34, 84-97.**

Measures of hypnotizability based on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) correlate only moderately with those based on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Ss (N = 148) scoring in the high range (10-12) on HGSHS:A were classified according to whether they scored in the "virtuoso" range (11-12) or not on a subsequent administration of SHSS:C. Significant group differences were found on items comprising the cognitive distortion subscale of HGSHS:A, whether assessed in terms of overt behavior or subjective impressions of success. The 2 groups also differed on global self-ratings of hypnotic depth and on those subscales of Field's Inventory Scale of Hypnotic Depth concerned with subjective feelings of loss of control, automaticity, transcendence of normal functioning, and fluctuating depth. Assessments of hypnotizability are enhanced when investigators consider subjective involvement as well as behavioral measures of hypnotic response. This is particularly important when the more dissociative aspects of hypnosis are under scrutiny.

#### NOTES

The correlation between Harvard Group and Stanford Scale scores is usually about  $r = .60$  (Bentler & Roberts, 1963; Coe, 1964; Evans & Schmeidler, 1966). This is much lower than one would expect ( $r = .82$ ), based on the tests' individual reliabilities (Evans & Schmeidler, 1966).

The authors developed a Table to show the cross-classification of Ss in terms of Harvard and SHSS:C. Only a minority (33%) of Ss scoring in the highest range of HGSHS:A also scored in the highest range on the SHSS:C (or 50% if cutting points are different).

The Absorption scale correlated  $r = .38$  ( $p < .001$ ) with the Harvard Scale, which fell to  $r = .31$  ( $p < .01$ ) when corrected for expansion of range. The correlation between Absorption and SHSS:C was  $.35$  ( $p < .001$ ).

The issue of predicting Stanford 'virtuosos' from Harvard 'virtuosos' was addressed. HGSHS:A predictor variables were used to determine which items determined whether or not one of the HGSHS:A 'virtuosos' (the 20% who scored 11-12) would also be a SHSS:C 'virtuoso.' It was found that 70% of the SHSS:C virtuosos, but only 53% of the nonvirtuosos, had reversible posthypnotic amnesia on the HGSHS:A. None of the ideomotor or challenge subscale items demonstrated this ability to predict group association. Although the 'virtuosos' differed from the

'nonvirtuosos' in self reported depth, none of the coding categories associated with the depth variable differentiated the groups; also, judges could not predict who would be a Stanford 'virtuoso' based on subjects' descriptions of depth following the Harvard scale administration.

The Experimenters also could not predict who among the Harvard 'virtuosos' would be classified as a Stanford 'virtuoso' based on either their Absorption Scale score or previous experience with hypnosis.

It was found that subjects' subjective experience of the suggestions for hallucinations, amnesia, and posthypnotic behavior (all considered to be cognitive alterations) were the most highly correlated with the subsequent total SHSS:C score. On the Field scale, which measures subjective experience, the most predictive items had to do with feelings of automaticity and loss of control (referred to as nonvoluntary behavior in other literature). Predicting SHSS:C score by 5 items (Harvard behavioral score, Harvard subjective score, Field total score, Tellegen Absorption total score, and self reported depth rating),  $r = .44$ . "The 5-element regression, employing only total scores, explained 17% ... of the variance of SHSS:C; thus, the feelings of subjective success accounted for the vast proportion (79%) of the explainable variance. For the 16 element regression, employing subscales derived from factor analysis of HGSHS:A and Inventory Scale of Hypnotic Depth, the cognitive subscale was dominant, accounting for 65.5% of explainable variance" (p. 92).

A discriminant function analysis employing the same five total score variables correctly classified 63.3% of the virtuosos.

In their Discussion, the authors suggest that investigators use subjective response as well as behavioral response when identifying hypnotic talent (virtuosos) for research. Particularly, the subjective experience of success seems to be important. Little is known, to date, about the determinants of that sense of success with hypnotic suggestions. "In part, they may relate to the 'classic suggestion effect' (K. S. Bowers, 1981; P. G. Bowers, 1982; Weitzenhoffer, 1974): the quasi-automatic, compulsory, involuntary quality which distinguishes hypnotic response from compliance with simple social requests. If so, then a direct assessment of perceived involuntariness might enhance the predictive validity of HGSHS:A even more. This is especially true for the perceptual-cognitive alterations which relate to Ss' capacity for dissociation" (p. 94).

The authors further recommend, "In those situations where HGSHS:A must stand alone for economic reasons, however, and especially where HGSHS:A is employed as a convenient preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

1985

Spanos, Nicholas P.; Weekes, John R.; Bertrand, Lorne D. (1985). Multiple personality: A social psychological perspective. Journal of Abnormal Psychology, 94, 362-376.

The part of an accused murderer remanded for pretrial psychiatric evaluation was role played by 48 college students. Role players were assigned to interview

treatments that varied in how extensively they cued for symptoms of multiple personality. The most explicit treatment (i.e., Bianchi treatment, n = 16) included a hypnotic interview that was used in diagnosing a suspect in the "Hillside strangler" rape- murder cases as suffering from multiple personality. A less explicit hypnotic treatment (n = 16) and a nonhypnotic treatment (n = 16) were administered to the remaining role players. Most subjects in the Bianchi treatment displayed the major signs of multiple personality (e.g., adoption of a different name, spontaneous posthypnotic amnesia). In a later session subjects who role played as multiple personalities performed very differently on psychological tests administered separately to each role-played identity. Those who failed to enact the multiple personality role performed similarly when tested twice. Findings are discussed in terms of a social psychological formulation that emphasizes the roles of active cognizing, contextual cueing, and social legitimization in the genesis of multiple personality.

Zamansky, Harold S.; Bartis, Scott P. (1985). The dissociation of an experience: The hidden observer observed. Journal of Abnormal Psychology, 94 (3), 243-248.

Addressed methodological weaknesses in previous studies of the hidden observer phenomenon presented by E. R. Hilgard (1977) using a modified procedure with 11 undergraduates highly susceptible to hypnosis. The critical modifications were that no prior practice in dissociation was given before the hidden observer was assessed, the notion of hidden information was introduced only after the stimulus was no longer present, and independently verifiable stimuli were employed. Despite this more rigorous procedure, a hidden observer response was still observed in more than 90% of Ss. This finding makes much less tenable interpretations that attribute the hidden observer effect solely to social expectancies and situational demands. It is concluded that it is possible for some hypnotized individuals to monitor the actual state of events while experiencing a variety of perceptual distortions.

1984

Spanos, Nicholas P.; Kennedy, Sharon; Gwynn, Maxwell I. (1984). The moderating effects of contextual variables on the relationship between hypnotic susceptibility and suggested analgesia. Journal of Abnormal Psychology, 93 (3), 285-294.

Assessed 75 undergraduates high, medium, or low on hypnotic susceptibility (the Carleton University Responsiveness to Suggestion Scale) on the cold pressor task before and after 1 of 3 instructional treatments. The treatments were (a) brief instructions to try to reduce pain, (b) the same analgesia instructions preceded by a hypnotic induction procedure, and (c) no hypnotic induction or instructions. In the hypnotic treatment, susceptibility correlated significantly with reductions in reported pain, and high-susceptible Ss reported significantly larger pain reductions than did control ss. In the instruction-alone treatment, there was no significant relationship between susceptibility and pain reduction, and Ss at all 3 susceptibility levels reduced reported pain significantly more than did controls and as much as did high-susceptible hypnotic Ss. Findings suggest that the correlation between

hypnotic susceptibility and hypnotic analgesia is moderated by Ss attitudes and expectancies concerning their own performance in situations defined as related to hypnosis

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology.

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

1982

Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)

Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and showed that voluntary and involuntary Ss did not differ in response to the contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).

Spanos, Nicholas P.; Bridgeman, M.; Stam, H. J.; Gwynn, M. I.; Saad, C. I. (1982-83). When seeing is not believing: The effects of contextual variables on the reports of hypnotic hallucinations. Imagination, Cognition and Personality, 2, 195-209.

When administered a hallucination suggestion most high susceptible hypnotic and task-motivated subjects reported that they "saw" the suggested object. When asked what they meant by "saw," however, almost all indicated that they had imagined the object but did not believe that it had actually been present. On the other hand, simulating subjects maintained that the suggested object had been "really there." Simulators were also more likely than non-simulators to provide "life-like" descriptions of the suggested object (e.g., solid rather than transparent, colored, highly vivid). These findings are consistent with the view that hypnotic hallucinations are context-generated imaginings. They also indicate that unique or unusual psychological processes like "trance logic" need not be posited to account for the descriptions of "hallucinatory" experiences proffered by hypnotic subjects.

#### NOTES

It was observed that hypnotized Ss reported more vivid (and longer sustained) imagery than task motivated Subjects. Hypnotized Ss did not differ from high susceptible simulators on vividness of imagery or how long they experienced the imagery, but did report shorter and less vivid imagery than simulators who were low hypnotizables.

Tellegen, Auke (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on 'Role of the feedback signal in electromyograph biofeedback: the relevance of attention' by Qualls and Sheehan. Journal of Experimental Psychology: General, 110, 217-226.

High and Low Absorption Ss differ in set rather than in capability for attending to external or internal stimuli, as Qualls and Sheehan suggest. Trait x Treatment interaction for Absorption illustrates concept of personality dispositions being inherently interactive functional units. Provides a content analysis of Absorption scale (subscales) and relates absorption to other constructs in psychology. "It is not the internal versus external focus per se that play a decisive role but the subject's experiential versus instrumental set. For example, with two treatment levels, one would expect to obtain an Absorption x Treatment interaction even if both treatment conditions required an external attentional focus, as long as they contrasted an experiential and an instrumental set" (pp 223-224).

Kihlstrom, John F.; Evans, Frederick J.; Orne, Emily C.; Orne, Martin T. (1980). Attempting to breach posthypnotic amnesia. Journal of Abnormal Psychology, 89 (5), 603-616.

Traditionally, posthypnotic amnesia has been construed as a subjectively compelling deficit in memory retrieval. Alternatively, it may represent a motivated failure to utilize appropriate retrieval cues, lack of effort in recall, active suppression of memory, or unwillingness to verbalize the critical material. In an effort to test the

alternative hypothesis of amnesia, 488 college students were presented with 4 kinds of instructions (using 4 modifications of the Harvard Group Scale of Hypnotizability, Form A) designed to overcome the effects of suggested posthypnotic amnesia. The instructions particularly affected Ss of low and moderate hypnotizability who failed the criterion for amnesia. For those of moderate and high hypnotizability who met the criterion for amnesia, however, explicit requests for temporal organization, exhortations to maximize recall, and demands for honesty in reporting produced no greater effect on memory than did a simple retest. Results place some boundaries on both the traditional and alternative views of posthypnotic amnesia and invite further exploration of both cognitive and contextual models of the phenomenon.

1980

Sheehan, Peter W. (1980). Factors influencing rapport in hypnosis. Journal of Abnormal Psychology, 89 (2), 263-281.

The phenomenon of countering expresses the tendency of some highly susceptible subjects to favor the intent of the hypnotist when placed in a conflict situation where social influences of another kind dictate an alternative response. The present research explored the parameters of this objective index of involvement with the hypnotist to investigate the special relevance of rapport processes to the hypnotic setting. Rapport was manipulated in five different experiments, varying either the warmth or genuineness of the hypnotist. It was predicted from transference theorizing that countering would decrease in the negative context and increase in the positive one. Results confirmed predictions for highly susceptible subjects tested in the former context but not the latter. In the negative setting, subjects were inhibited in their rate of countering, but maintained their previous level of response to the hypnotist when rapport was facilitated. Results highlighted the relevance of interpersonal processes to theorizing about hypnosis.

1979

Perry, Campbell; Gelfand, Robert; Marcovitch, Phillip (1979). The relevance of hypnotic susceptibility in the clinical context. Journal of Abnormal Psychology, 88 (5), 592-603.

Despite experimental evidence that hypnotic susceptibility is a relatively stable characteristic of the individual, and one that is very difficult to modify, clinical investigators tend to see susceptibility as irrelevant to therapeutic outcome. Such investigators view motivational and interpersonal variables as more essential to the therapeutic change. The evidence for the clinical relevance of hypnotizability is sparse and contradictory. Most existing studies stem from medical hypnosis and indicate that susceptibility plays an important role in the successful treatment of such conditions as clinical pain, warts, and asthma. Two studies are reported that seek to pursue a contrary finding reported by Perry and Mullen, who found that susceptibility was unrelated to the successful treatment of a socially learned behavior (cigarette smoking). Both studies confirmed the earlier finding of a lack of

relation. In Study 1, however, stepwise multiple regression analysis located three inventory items concerning the motivation of cigarette smokers. The combination of items was found to predict outcome for 67.39% of 46 clients treated either by hypnosis or by rapid smoking. The finding was replicated in Study 2, which utilized a combined hypnosis - rapid smoking technique and employed a different therapist. The outcome for 9 of the 13 quitters and 37 of the 62 nonquitters across the two studies could be predicted by the three motivational questionnaire variables.

Tellegen, Auke (1979). On measures and conceptions of hypnosis. American Journal of Clinical Hypnosis, 21 (2-3), 219-237.

In this paper a number of issues are discussed relating to the assessment of hypnotism. First, some questions concerning the function of standardization and the use of norms are considered. Next, a relatively neutral definition of hypnotic susceptibility is proposed as a context within which important variations in its assessment are subsequently discussed. These variations are grouped according to whether they concern context, content, internal structure or external relations. A final section considers the enterprise of hypnotic state assessment.

Coe, William C. (1978). The credibility of posthypnotic amnesia: A contextualist's view. International Journal of Clinical and Experimental Hypnosis, 26 (4), 218-245.

This paper attempts to demonstrate how the contextual view rather than the formist-mechanistic view may be more helpful in understanding posthypnotic amnesia. As a point of departure, the criterion for credible posthypnotic amnesia is defined as Ss' phenomenal experiences which are observed indirectly through their counterfactual statements expressed with a high degree of conviction. To make sense of such self-reports, concepts flowing from contextualism, the view of man as an active person in an everchanging series of contexts, are employed. Concepts such as plots, reinforcement contingencies, trust, belief systems, involvement, ambiguousness, and self-observation may be postulated in understanding how people come to believe in their own counterfactual reports and to convince others of their credibility. Recent research on source amnesia, disrupted retrieval, and breaching posthypnotic amnesia is also critically evaluated. The conclusion is reached that the data are not compelling and their interpretations have been overstated

Hearn, Greg (1978, November). Susceptibility and the process of social interaction in the hypnotic context. [Unpublished manuscript] (Submitted as a partial requirement for the B. S. degree with honours in psychology at the Univ of Queensland)

**ABSTRACT:** The hypothesis was tested that the process of social interaction between hypnotist and subject is dependent upon the susceptibility level of subjects. Using Interaction Process Analysis (Bales, 1950), the interaction patterns of 16 high susceptibles and 16 low susceptibles were analyzed. Susceptibility level had been pretested with the HGSHS:A. The hypnotist was then instructed on how to control for differences in the process of interaction which were isolated and the initial

hypnotic session was repeated on a new sample. This time the performance and interaction patterns of six high susceptibles and six low susceptibles were compared. Results suggested that trait differences give rise spontaneously to differences in the process of interaction and some combination of these effect the subjects final hypnotic performance. Hence it is argued that an interactionist framework would aid the understanding hypnotic responsivity.

**Kihlstrom, John F. (1978). Context and cognition in posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 26, 246-267.**

Coe's (1978) contextualist analysis of posthypnotic amnesia appears to be predicated no the mistaken assumption that the amnesic S actually remembers the critical material. This position leads Coe to place inappropriate emphasis on the social context in which amnesia takes place and to focus on the social-psychological processes that might lead Ss to say that they do not remember something, be believed by others, and even believe themselves. An alternative view is outlined which affirms the surface similarities between posthypnotic amnesia and other failures of memory. From this vantage point, the investigator seeks to understand the cognitive processes that produce subjectively compelling disruptions of memory retrieval, whether found in association with hypnosis or in other circumstances.

**Schwartz, W. (1978). Time and context during hypnotic involvement. International Journal of Clinical and Experimental Hypnosis, 26 (4), 307-316.**

A recent conceptualization of hypnosis suggests that hypnotized Ss should show a disruption in episodic memory which would reflect a diminished awareness of duration and sequence. Specifically, the predictions were that hypnotized Ss would exhibit less accurate estimates of duration, and less sequence in their recall of activities, than would nonhypnotized Ss. The empirical task consisted of giving Ss the Stanford Hypnotic Susceptibility Scaloe, Form C (Weitzenhoffer & Hilgard, 1962), either with the induction (hypnosis condition), or without the induction (control condition). Prior to the termination of the scale, Ss were asked to recall the activities they had performed and the time that had elapsed since they began the scale. Hypnotized Ss (N = 10) were significantly less sequential in their recall of activities, and less accurate in their estimations of the passage of time, than were nonhypnotized Ss (N = 10). These results suggest that persons who respond to hypnosis are less concerned with the context which the world provides for their actions than are nonhypnotized controls.

1978

**Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.**

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in

alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables. The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

Hoen, P. (1978). Effects of hypnotizability and visualizing ability on imagery mediated learning. International Journal of Clinical and Experimental Hypnosis, 26, 45-54.

The Ss selected for hypnotizability and visualizing ability were tested for their performance on an imagery-mediated, paired-associates task in which the stimulus materials were varied in imagery and concreteness. Imagery and concreteness showed significant main effects and an additive interaction facilitating learning. Neither hypnotizability nor visualizing ability showed main effects, thereby contradicting the conjecture that those 2 factors would facilitate imagery-mediated learning. However, high hypnotizable Ss learned more high imagery words than the low hypnotizables, and visualizing ability was shown to interact with word concreteness. It is concluded that the effects of hypnotizability and visualizing ability on verbal learning are, at least in part, a function of the content of the words to be learned.

1967

Blum, Gerald S. (1967). Experimental observations of the contextual nature of hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (4), 160-171.

EXPLORED THE DISTINCTIVE MENTAL CONTEXT OF HYPNOSIS WITH A WELL TRAINED MALE UNDERGRADUATE. 1ST, A CONTEXT EFFECT WAS DEMONSTRATED BY PRESENTING 2 SETS OF STIMULI ON A TRIAL, 1 UNDER THE HYPNOTIC CONDITION AND 1 UNDER THE WAKING, AND TESTING THEIR SUBSEQUENT SALIENCE IN HYPNOTIC OR WAKING REPORT STATES. ATTEMPTS WERE THEN MADE TO ISOLATE ELEMENTS OF THE HYPNOTIC CONTEXT-CLOSED EYES, LOWERED MENTAL AROUSAL, AND "BLANK MIND"-NONE OF WHICH PROVED TO BE SUFFICIENT IN ITSELF TO ACCOUNT FOR THE OBSERVED PHENOMENON. A GREATER DIFFICULTY OF SPONTANEOUS INFORMATION TRANSMISSION FROM HYPNOTIC TO WAKING CONDITION THAN VICE VERSA LED TO ADDITIONAL EXPERIMENTS IN

**WHICH PRIOR HYPNOTIC "PRIMING," IN THE ABSENCE OF SPECIFIC POSTHYPNOTIC SUGGESTION, HAD NO EFFECT ON RELATED WAKING TASKS. FINALLY, A THEORETICAL INTERPRETATION WAS PROPOSED TO EXPLAIN HOW INITIALLY WEAK HYPNOTIC INPUTS, REGISTERED WITHIN A HIGHLY DISTINCTIVE MENTAL CONTEXT, CAN ACQUIRE VIRTUALLY COMPLETE COGNITIVE DOMINANCE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.**

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

#### **CONVERSION / HYSTERIA**

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

#### **NOTES**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and

relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-be patient/client that he or she has something to offer that can help take away pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

Moene, Franny C.; Hoogduin, Kees A. L.; Van Dyck, Richard (1998). The inpatient treatment of patients suffering from (motor) conversion symptoms: A description of eight cases. International Journal of Clinical and Experimental Hypnosis, 46 (2), 171-190.

This article presents a preliminary study that used two controlled randomized trials to study the effect of hypnosis in the treatment of eight patients with (motor) conversion symptoms. Controlled research into the treatment of conversion symptoms is scarce and can often be criticized on methodological grounds. It would appear, however, that both the use of suggestive and behavioral therapeutic techniques and eclectic treatment programs yield good results in the treatment of conversion symptoms. The results of the study suggest that comprehensive clinical treatment including hypnosis has enough promise to be studied in clinical trials. In the interpretation of the results, special attention is given to primary diagnosis, duration of complaints, traumatic experiences in childhood, dissociative capacity, and hypnotizability.

Wickramasekera, Ian (1998). Secrets kept from the mind but not the body or behavior: the unsolved problems of identifying and treating somatization and psychophysiological disease. Advances in Mind-Body Medicine, 14, 18-132.

The identification and therapy of somatoform and psychophysiological disorders are major problems for medicine. This paper identifies three measurable risk factors (Wickramasekera 1979, 1988, 1993a, b, 1995) that are empirically associated with somatoform and psychophysiological disorders. These risk factors are high hypnotic ability, low hypnotic ability, and high Marlowe Crowne scores. Patients who are positive on one or more of these risk factors (all of which can constrict consciousness) have a high likelihood of having somatoform and psychophysiological disorders and should be studied with the additional risk factors proposed in the High Risk Model of Threat Perception (HRMTP). Treatment of patients should begin with the Trojan Horse Role Induction procedure (Wickramasekera 1988), which enables patients, who might otherwise resist psychological interpretations of their physical problems, to recognize that unconscious threat perception could be driving their somatic symptoms, an understanding that reduces their resistance to psychotherapy. A case study is

presented of a patient without identifiable pathophysiology or psychopathology to account for somatic symptoms that were largely resistant to standard medical therapy. The patient was positive for several of the psychosocial and psychophysiological risk factors of the HRMTP and after experiencing the Trojan Horse Role Induction showed improvement in somatic symptoms.

1996

Wickramasekera, Ian; Pope, Alan T.; Kolm, Paul (1996). On the interaction of hypnotizability and negative affect in chronic pain: Implications for the somatization of trauma. Journal of Nervous and Mental Disease, 184 (10), 628-635.

The high risk model of threat perception predicts that high hypnotizability is a risk factor for trauma-related somatization. It is hypothesized that high hypnotizability can increase experimentally induced threat or negative affect, as measured by skin conductance level, in a linear or dose-response manner. This hypothesized interaction of hypnotic ability and negative affect was found in a consecutive series of 118 adult patients with chronic pain symptoms. Larger increases in skin conductance levels during cognitive threat were significantly related to higher levels of hypnotizability. In addition, individuals with high hypnotizability retained higher skin conductance levels than individuals with low hypnotizability after stress. The clinical implications of the interaction of hypnotizability and negative affect during threat perception and delayed recovery from threat perception are discussed in terms of cognitive mechanisms in the etiology and therapy of trauma-related dissociative disorders.

1995

Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.

The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.

Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.

The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.

In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.

Freud presented his theory to his patients and then sought confirmation.

Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.

Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.

Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years.

1994

Frankel, Fred H. (1994, October). Working with the concept in a clinical setting. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

I have concerns about the construction of the Diagnostic and Statistical Manual (DSM) as a whole. It was initially a research document, but it has come to dominate clinical diagnostic practice, and worse, it governs what treatment third party payers will compensate.

Dissociative Identity Disorder (DID) to replace Multiple Personality Disorder (MPD) may well change the way the condition is viewed, and we may see fewer alters in each person.

I have difficulty understanding the precise nature of dissociation--especially with its powers to produce amnesia. The dissociative disorders are part of the legacy of hysteria; though some parts of hysteria are represented in other DSM categories. The influence of environmental factors and imagination were suspected when the diagnosis was hysteria; everyone knew the picture was complicated, and subject to contagion, etc. The DSM makes little attempt to take that into account in the section on Dissociative Disorder.

Questions we must address: 1. How voluntary is clinical dissociation? To what extent can we expect the patient to claim agency for it, e.g. if it is claimed that a crime was committed by an alter? 2. To what extent does the clinical manifestation

of dissociation overlap with absorption and attention? 3. How does morbid preoccupation with images differ from regression? How much is the patient the willing agent of that kind of behavior? 4. To what extent are flashbacks remembering or imaginings? 5. How do we control for contagion or imitation on the dissociative disorder inpatient units? 6. Could we be creating things to fit our theories? 7. Are other diagnoses being displaced here? The dissociative disorders being put on center stage may lead us to do disservice to the patient in dealing with their other life crisis. 8. If the shock of the trauma is associated with impaired perception, altered attention, and memory problems, how dependable are the reports that are ultimately retrieved--perhaps decades later? 9. What do we in truth understand by the word dissociation? Is it a psychological event with underlying physiology, or just a metaphor?

Psychiatry is subject to diseases rising and falling, e.g. the disappearance of hysteria itself.

**1992**

Vijselaar Joost; Van der Hart, Onno (1992). The first report of hypnotic treatment of traumatic grief: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 1-6.

In 1813 the Dutch physicians Wolthers, Hendriksz, De Waal, and Bakker reported the hypnotic treatment of a woman suffering from traumatic grief, in which the therapist had to deal directly with the patient's spontaneous reenactments of the circumstances surrounding the death. This report, summarized in the present article, has historical value, as it is probably the first known precursor of the uncovering hypnotic approach. The original authors' views on the case are discussed, and a modern view for understanding the patient's traumatic grief and its treatment is presented.

**1991**

Cardena, Etzel; Spiegel, David (1991, August). Dissociative reactions following the Bay Area earthquake. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

This study systematically evaluates the psychological reactions of a non-clinical population to the October 1989 Bay Area earthquake. Within a week of the earthquake we administered a checklist of anxiety and dissociative symptoms and conducted a follow-up study four months afterwards. In both instances, a representative sample of close to 100 graduate students from two different institutions in the Bay Area volunteered to participate in the study. Analyses of variance for time of testing show that during or shortly after the earthquake respondents experienced significantly greater number and frequency of time distortions, alterations in cognition, memory and somatic sensation, derealization, depersonalization and, to a lesser degree, anxiety symptoms and Schneiderian first-

rank symptoms. These results suggest that among non-clinical populations extreme distress significantly increases the prevalence not only of anxiety but of transient dissociative phenomena as well, a fact of considerable clinical and theoretical import particularly considering the lifetime prevalence of traumatic experiences among the general population. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

**1990**

Ross, Colin A.; Fast, E.; Anderson, G.; Auty, A.; Todd, J. (1990). Somatic symptoms in multiple sclerosis and MPD. Dissociation, 3, 102-106.

Fifty subjects with multiple sclerosis (MS) were compared to 50 subjects with multiple personality disorder (MPD). MS patients endorsed an average of 3.0 somatic symptoms on structured interview, and MPD subjects an average of 14.5. Somatic symptoms characteristic of neurological illness were trouble walking, paralysis, and muscle weakness, while those characteristic of psychiatric illness were genitourinary and gastrointestinal symptoms.

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

**NOTES**

This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, unhypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

**1989**

Bryant, Richard A.; McConkey, Kevin M. (1989). Visual conversion disorder: A case analysis of the influence of visual information. Journal of Abnormal Psychology, 98, 326-329.

**NOTES:**

Examined the influence of visual information on a decision task that was administered to an individual with monocular visual conversion disorder. Findings indicated that his performance was influenced by the visual information and by motivation instructions. The findings are discussed in terms of a model of hysterical

blindness that recognizes the interplay of cognitive and motivational processes" (p. 326).

Ross, Colin A.; Heber, S.; Norton, G. R.; Anderson, D.; Anderson, G.; Barchet, P. (1989). The Dissociative Disorders Interview Schedule: A structured interview. Dissociation, 2, 169-189.

The Dissociative Disorders Interview Schedule (DDIS), a structured interview, has been developed to make DSM-III diagnoses of the dissociative disorders, somatization disorder, major depressive episode, and borderline personality disorder. Additional items provide information about substance abuse, childhood physical and sexual abuse, and secondary features of multiple personality disorder. These items provide information useful in the differential diagnosis of dissociative disorders. The DDIS is published in this article. It has an overall interrater reliability of 0.68. For the Diagnosis of MPD it has a specificity and a sensitivity of 90%.

Wickramasekera, Ian (1989). Enabling the somatizing patient to exit the somatic closet: A high-risk model. Psychotherapy: Theory, Research and Practice, 26 (4), 530-544.

Problems in establishing a therapeutic alliance make somatizing patients poor candidates for psychotherapy. A logical analysis is presented of the conspiracy of silence between the somatizing patient, the medical doctor, and the health insurance industry regarding the psychosocial factors contributing to somatization. Alternatives are sought to repeated biomedical tests and therapies that are clinically unproductive and iatrogenic. Two psychophysiological pathways are proposed that are promising to reduce the distance between the medical doctors' and the psychologists' procedures. The new profile of illness has produced a paradigm shift with implications for an expansion of the definition of the word "physician".

1988

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

NOTES

From a review in British Journal of Experimental and Clinical Hypnosis, 7, 175-178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic

examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility. In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

**1985**

**Bliss, Eugene L.; Larson, Esther M. (1985). Sexual criminality and hypnotizability. Journal of Nervous and Mental Disease, 173, 522-526.**

Investigated 33 17-35 yr old sexual offenders, 18 of whom had been convicted of rape, 9 of pedophilia, and 6 of incest. Ss completed a questionnaire containing a list of 15 factors that might have contributed to their crime, a self-report containing 305 items that are symptoms characteristic of 11 major psychiatric syndromes, and the Stanford Hypnotic Susceptibility Scale. Controls for the self-report were 48 individuals taken from a church group, nurses, technicians, and graduate students. Controls for the hypnotizability scale were cigarette smokers who smoked 1 1/2 pack/day and S data taken from the literature. Results show that two-thirds of the Ss had histories of spontaneous self-hypnotic experiences (dissociations); 7 of these were DSM-III multiples and 6 were probable multiples. This group had very high hypnotizability scores. The other one-third without histories of spontaneous self-hypnosis had normal scores. It is concluded that spontaneous self-hypnosis contributed to the perpetration of the crimes in many of these cases, although other factors also directed the antisocial behaviors. (22 ref).

**Hoffman, William (1985). Hypnosis as a diagnostic tool. American Journal of Psychiatry, 142 (2), 272-273.**

Discusses the case of a 22-yr-old Swedish female who became withdrawn and depressed and developed suicidal ideation and paranoid and grandiose delusions. S was also disoriented to time and place and displayed poor memory, insight, and judgment. After a diagnosis of brief reactive psychosis, S was placed on a regimen of oral haloperidol (2 mg, 4 times/day), but she remained confused and disoriented. After induction into a trance state, S coherently recollected the events leading to hospitalization, after which medication was discontinued. It is suggested that trance induction be attempted before treatment in individuals with symptoms of hysterical psychosis.

Steingard, Sandra; Frankel, Fred H. (1985). Dissociation and psychotic symptoms. American Journal of Psychiatry, 142 (8), 953-5.

The literature on hysterical or brief reactive psychosis reflects great diversity both in clinical description and theoretical formulation. The authors describe the case of a 17-year-old girl who presented with a diagnosis of bipolar affective disorder, rapid cycling type, but who, in fact, was experiencing dissociative episodes manifested as psychotic states. The patient's successful treatment with hypnosis is described, along with the clinical and theoretical implications of the case.

Bliss, Eugene L. (1984). Hysteria and hypnosis. Journal of Nervous and Mental Disease, 172 (4), 203-206.

Studied 33 female patients with Briquet's syndrome to investigate the possibility that severe hysteria might be a spontaneous self-hypnotic disorder. Excellent hypnotic Ss were defined clinically as those who entered a trance rapidly, experienced lid closure and arm and elbow elevation, perceived hypnotic events with realism, could regress to early experiences, and usually had amnesic capabilities. Ss were administered the Stanford Hypnotic Susceptibility Scale, Form C. 17 of the 33 Ss were clinically tested for hypnotizability. 14 were found to be excellent hypnotic Ss, 2 were found to be good, and 1 was found to be a poor hypnotic S. 14 of the 33 Ss met the DSM-III criteria for multiple personalities. It is concluded that patients suffering from Briquet's syndrome are usually good or excellent hypnotic Ss with few exceptions, and many have multiple personalities. Evidence is also discussed that patients with major conversion symptoms are excellent hypnotic Ss. (39 ref).

Jensen, Peter S. (1984). Case report of conversion catatonia: Indication for hypnosis. American Journal of Psychotherapy, 38 (4), 566-570.

Describes the successful hypnotic treatment of a 25-yr-old Black male who displayed symptoms of suicidal ideation, insomnia, and feelings of depression alternating with emptiness and boredom that led to an acute catatonic reaction. S met DSM-III criteria for borderline personality disorder. It is contended that since conversion mechanisms may underlie some presentations of catatonia, hypnosis may assist clinicians in the differential diagnosis of acute catatonic conditions.

Suryani, L. K. (1984). Culture and mental disorder: The case of bebainan in Bali. In Culture, medicine and psychiatry. D. Reidel Publishing Company

#### NOTES

Bebainan is a form of dissociation which is culturally associated with Bali. Thought to be caused by sorcery, a bebainan attack lasts up to an hour and is manifested by confusion, crying, screaming, and shouting, with inability to control one's actions.

However, it seems most victims maintain awareness of their own behavior and are not amnesic for it afterwards.

In this study, the author interviewed 27 people, mostly female, most of whom experienced their first attack between 16-30 years of age. The author concluded that the attacks permitted release of feelings of frustration and anger without stigma. Author concluded it is not a form of psychosis, is not organic, and is not a neurosis.

Wilson, Ian (1984). Jesus--The evidence. London England: Weidenfeld and Nicolson.

#### NOTES

Miracles of Jesus are attributed to hypnosis, in a culture that had already experienced faith healers. Many of those healed had diseases that today might fall into the 'hysteria' or 'psychosomatic' categories (paralysis, lameness, fever, catalepsy, haemorrhage, skin disease, mental disorder), which diseases are frequently responsive to hypnosis. Further, Jesus' reputation preceded him, and the fact that his cure rate was low in his home town is evidence of both the veridicality of the written record (Mark 6: 1-6) and the expectancy factor. "The significance of this episode is that Jesus failed precisely where as a hypnotist we would most expect him to fail, among those who knew him best, those who had seen him grow up as an ordinary child. Largely responsible for any hypnotist's success are the awe and mystery with which he surrounds himself, and these essential factors would have been entirely lacking in Jesus' home town" (pp. 111-112). The author also assigns other miracles (his transfiguration into dazzling light before three disciples; turning water into wine) to hypnosis [which other writers might ascribe to suggestion].

1979

Spanos, Nicholas P.; Gottlieb, Jack (1979). Demonic possession, Mesmerism, and hysteria: A social psychological perspective on their historical interrelations. Journal of Abnormal Psychology, 88 (5), 527-546.

Provides a social psychological interpretation of the interrelations among demonic possession, mesmerism, and hysteria. It is argued that the reciprocal role relationship of mesmerist and magnetized S in the 18th and 19th centuries involved the secularization of the role relation that had existed between exorcist and demonically possessed. The commonalities between these 2 sets of social roles are delineated, some of the variables leading an individual to learn and enact the possessed role are outlined, and several lines of historical evidence pertaining to the influence of the exorcist-demoniac relationship on the mesmeric relationship are outlined. The influence of the possessed role in shaping the role of the hysterical patient is also discussed. The use of hysteria as a modern explanatory concept in histories of possession and mesmerism, however, is criticized. (198 ref).

1978

Nichols, Michael P.; Bierenbaum, Howard (1978). Success of cathartic therapy as a function of patient variables. Journal of Clinical Psychology, 34 (3), 726-8.

Treated sample of 42 patients with cathartic psychotherapy and evaluated differential effectiveness on types of patients. Patients without mental disorders experienced more emotional catharsis than all others, and those with obsessive compulsive personality disorders improved more than all others as a result of emotive treatment. Contrary to popular notions, neither women nor hysterics experienced more catharsis or improved more in cathartic therapy. Although women and hysterics may cry more easily in daily life, obsessives are apparently more able to maintain focus on unhappy experiences and are therefore able to express more emotion in cathartic therapy. Furthermore, it seems that cathartic treatment is beneficial by disrupting long-standing defenses against emotional experience, rather than by releasing stored-up affects.

1972

Cedercreutz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.

In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

#### NOTES

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

Arluck, Edward Wiltcher (1964). Hypnoanalysis, a case study. New York: Random House.

## NOTES

Details transcripts (90 pages) and comments of a 28 session hypnoanalysis (Jungian) of a World War II soldier with traumatic war neurosis in a military setting shortly after the end of the war, for a conversion reaction with onset just prior to return to the States. Author cautions he found this amount of success in only about 15 of more than 70 individually treated cases. Emphasizes giving suggestions to dream about his condition/problem and utilizing dream interpretation. 53 references.

1964

Moskowitz, Arnold E. (1964). A clinical and experimental approach to the evaluation and treatment of a conversion reaction with hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (4), 218-227.

A combination of hypnotherapeutic techniques within a clinical and experimental context provided a method of understanding, evaluating, and predicting the course of a conversion reaction. During waking and hypnotic conditions, 5 trials of dynamometer presses were obtained from a patient having primary symptoms of paralysis of his left arm. Difference scores between the left and right hands during waking and hypnotic conditions were evaluated. Findings were: (a) At the beginning of treatment, significant differences were found between the waking and hypnotic conditions (b) The largest differences between the waking and hypnotic conditions occurred during the early stages of treatment, while the smallest differences occurred on the final day of treatment. (c) With a complete remission of the patient's symptoms, no significant differences between the waking and hypnotic conditions were found. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

## NOTES

Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

**"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).**

**1962**

**Moss, C. Scott; Thompson, M. M.; Nolte, J. (1962). An additional study in hysteria: The case of Alice M.. International Journal of Clinical and Experimental Hypnosis, 10, 54-74. (Abstracted in Index Medicus, 62, 1425)**

**Detailed account of the psychotherapy of one female hysteric--a treatment failure--is the stimulant for discussion of the genetics and dynamics of this nosology. Hypnosis revealed the experimental basis for the symptoms and associated adjustment difficulties. The dynamics bear a remarkable resemblance to those advanced by Freud, though issue is taken with several psychoanalytic concepts. The discussion deals largely with the phenomenology of the female hysteric. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Levendula, Dezso (1961). Two case presentations: Treatment of central pain with reconstruction of the body-image -- hypnoanalysis of a travel phobia. International Journal of Clinical and Experimental Hypnosis, 9, 283-289.**

#### **NOTES**

**Uses analogy of phantom limb (hallucinated pain which is a central pain) with a multiple sclerosis patient who had "excruciating" pain between her thighs despite paralysis from waist down due to multiple sclerosis. She valued her sex life though she couldn't feel sexual response, and felt that she "didn't have any legs" and her husband "had to carry her."**

**In giving her history the patient noted an increasing numbness and weakness in her legs five years earlier. At that time she also entered menopause and developed severe vaginitis. She became depressed when she became increasingly unable control her excretory functions. As the pain in the genital region increased, her ability to feel pleasant vaginal sensations diminished. Ultimately the pain was continually present.**

**The therapist attributed her problem to a faulty body image because she "denied the existence of her legs which were actually physically present, although, she could neither feel, nor see, nor move them" (p. 285). Secondly, it was most necessary for her to hold on to the myth [sic], that her vagina existed, because it made her feel wanted and needed by her husband. She was unconsciously afraid that by giving up her vagina she would lose the most important bond between herself and her husband" (p. 285).**

The therapist speculated that "the pain, which was the last sensation perceived before the total sensory loss occurred, was fixated centrally. This "pain-image" served to maintain the pretense, unconsciously of course, that there was still feeling in the vagina even though it was only pain and not pleasure. The pain permitted her to avoid facing reality, just as in the case of an amputee who develops the fantasy of a phantom limb, because he cannot readjust his pre-existing body-image to the acceptance of mutilation" (p. 285). He offered the patient "the rather simple explanation... that because she really did not feel where her lower body ended or began, the pain served her need to know where the body halves were separated. If she could learn to imagine and to accept herself as a full, whole person, the pain probably would leave her. This theory seemed very logical and acceptable to the patient" (p. 285).

"Hypnosis was extensively utilized in the following sessions to regress the patient toward her youth. She went again for long walks with her boyfriend, now her husband. It was fun to re-experience the feeling of walking in her father's apple orchard and stretch up for a red apple. Autohypnosis was taught and [he] told her to exercise "walking" while hypnotized twice daily" (p. 285-286). He also tapped on the soles of her feet repeatedly, until she could localize the vibrations. "She finally learned that she did have legs and also that other sensations besides pain could originate below the waist.... Gradually with the acceptance of her "wholeness and tallness" the pain became less and less. She was able to "forget" the pain for a longer period of time. ... Occasionally she does call. She tells [the therapist] that in a stressful situation, such as moving into a new house and not knowing where things are, the pain comes back temporarily, but it is much less and after [they] talk an hour she is relieved" (p. 287). The patient had a total of 20 visits.

The author describes a second case, which is not described in these notes.

1959

Hodge, James R. (1959). The management of dissociative reactions with hypnosis. International Journal of Clinical and Experimental Hypnosis, 7 (4), 217-221. (Abstracted in Psychological Abstracts 61:920)

A case report is given of an unusual type of dissociative reaction, and treatment by a variety of hypnotic techniques is described. A distinction is made between the emergency and long term aspects of treatment by hypnosis, and emphasis is laid upon understanding the symptom and avoiding a too rapid challenge of the symptom. Special mention is made of the technique of predicting the future of the symptom" (p. 221).

"The patient was a 19 year old white Marine who became subject to hysterical seizures in which he acted the part of his own dog which had died several years before. The attacks occurred at irregular intervals; but when the patient was first seen they were occurring about twice weekly. During these seizures, which came on without warning, the patient would get down on all fours, bark and growl like a dog, attack ward personnel, paw at the floor, and respond to simple commands like those given to a dog such as 'Down, boy' or 'Play dead'. He would become motorically hyperactive and sometimes pound his head against the floor or walls. The really

dangerous act which he performed, however, was to attempt to gouge out his own eyes with his hands; and for this reason cuff restraints had to be applied during each attack. There were no methods, until hypnosis was tried, which could control or terminate these attacks, which usually lasted from 30 to 60 minutes" (p. 217).

**Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.**

## **NOTES**

**On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.**

**Note: Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.**

**"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal, there is also a functional dissociation of the two signal systems and within the second signal system. 2. The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new cortical dynamic structures under the verbal influences of the hypnotist, these structures representing the physiological basis for effectuating the suggested actions and states.**

**"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).**

**"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.**

**"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that**

in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.

"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).

"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after awakening. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions. During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

1957

Schneck, Jerome M. (1957). An unusual conversion reaction during the induction of hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (1), 39-40. (Abstracted in Psychological Abstracts 58: 1711)

NOTES

"A 27-63a4-old patient in psychiatric hypnotherapy had effectively entered a hypnotic state on initial induction with a two-stage hand levitation technique (2). At

her second induction she started to enter a hypnotic state, yet her eyes did not close. She attempted voluntary closure unsuccessfully and then extricated herself from the procedure" (p. 39). The author opined that the interpersonal relationship of hypnosis was in this case affected by concerns about seeing or observing, or about being observed. He cites another case reported in the literature.

Schneck, Jerome M. (1957). Hypnoanalytic observations on the psychopathology of fainting. Journal of Clinical and Experimental Hypnosis, 5 (4), 167-171. (Abstracted in Psychological Abstracts 62: 3 II 67S)

## NOTES

### Summary

Varieties of fainting have been described as hysterical syncope, vasodepressor syncope, and carotid sinus reactions, among others. Fainting has been linked in general with personality problems, emotional instability, and immaturity. It has been called a mechanism for blocking of ego functions in its role of primitive defense against overwhelming stimuli. The present paper gives in greater detail the specific dynamics in a patient with fainting episodes. A crucial event incorporating major dynamic ingredients was an operative procedure in childhood. The psychological impact of this trauma was revived during a spontaneous hypnotic regression. The personality matrix significant for this patient in relation to the fainting episodes consisted of passive, masochistic submission to a dominant, highly influential mother whose pressure was felt by the patient as pervasive and stifling. Circumstances associated psychologically with this feeling apparently triggered the fainting reactions. As he matured through the years and cast off increasingly this type of maternal influence, the tendency toward fainting reactions diminished" (p. 170).

Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)

## NOTES

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whom restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

1954

Malmö, Robert B.; Boag, Thomas J.; Raginsky, Bernard B. (1954). Electromyographic study of hypnotic deafness. Journal of Clinical and Experimental Hypnosis, 2 (4), 305-317.

#### Summary and Conclusions.

The main purpose of the present study was to investigate the question of similarities and differences between hysterical deafness, previously studied, and hypnotically induced deafness. The study was designed to repeat the objective physiological tests previously carried out with a case of 'total hysterical deafness.' There was also the more general aim of securing objective data to enrich our general understanding of hypnosis.

"Similarities between hysteria and hypnosis which we observed may be listed as follows: (a) Significantly reduced motor reaction (exclusive of blink) to strong auditory stimulation in the deaf state. (b) Complete hearing loss in the hysteric and in one of the hypnotic subjects, even with strong auditory stimulation (i.e., denial of any auditory sensation). (c) With elicitation of strong startle reaction to the first stimulus in the deaf state, much smaller reaction to the next stimulus than would have been predicted on the basis of habituation. (d) Suggestion of substitution of somesthetic for auditory sensations in all subjects (although this was much less definite in the hypnotic subjects than the hysteric).

"The most outstanding dissimilarity lay in the absence of emotional reaction when 'hypnotic defense against sound' was broken through, in contrast to marked affective reaction in the hysterical subject under these conditions.

"The question of inhibitory mechanisms in hysteria and hypnosis was discussed" (pp. 316-317).

## COPING

2001

Yapko, Michael (2001). Treating depression with hypnosis: Integrating cognitive-behavioral and strategic approaches. New York NY: Brunner-Routledge.

#### NOTES

(From the cover) Focuses on structuring and delivering of hypnotic interventions

for major depression, with a substantial use of concepts and techniques from cognitive-behavioral and strategic approaches as a foundation. Current research on depression is used to emphasize the still growing knowledge of depression. Hypnosis has shown itself to be effective in not only reducing symptoms, but in teaching the skills (such as rational thinking, effective problem-solving and coping strategies, and positive relationship skills) that can prevent recurrences. (PsycINFO Database Record (c) 2002 APA, all rights reserved).

Received the Arthur Shapiro Award for best book published in 2001, from the Society for Clinical and Experimental Hypnosis.

**2000**

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

**1998**

Alden, Phyllis; Heap, Michael (1998). Hypnotic pain control: Some theoretical and practical issues. International Journal of Clinical and Experimental Hypnosis, 46 (1), 62-76.

Pain management programs assist patients to use their behavioral and cognitive skills for the purpose of rendering their experience of pain as more tolerable in some way. Hypnotic procedures may be included in this perspective. Thus, hypnosis may be best conceived as a set of skills to be deployed by the individual rather than as a state. The authors contend that such an emphasis is more compatible with the approaches of some pain management practitioners who have been generally slow to acknowledge the value of hypnosis and to incorporate hypnosis in their range of treatment skills. In this article, the authors present a minimal and atheoretical definition of hypnosis, and they list the basic properties of hypnosis that may be used in the treatment of pain. For a number of reasons, it is suggested that undertaking hypnosis as though the individual were indeed being placed into a special trance state may in some cases promote an effective outcome. However, it should be acknowledged that there may be instances when the relevant skills may be more effectively engaged at the expense of a strict special trance state by targeting the specific skills that are to be used for therapeutic benefit.

Barber, Joseph (1998). The mysterious persistence of hypnotic analgesia. International Journal of Clinical and Experimental Hypnosis, 46 (1), 28-43.

Hypnotic treatment of pain has a long history and, among hypnotic phenomena, pain relief is a relatively commonplace focus for intervention, yet we lack a conceptual explanation for this treatment. Hilgard's neodissociation theory accounts for the phenomenon of acute hypnotic analgesia, but not of persistent pain relief. Perhaps the enduring effect of hypnotic treatment can be explained at either of two levels: a neurophysiological model or a learning model. This explanation leads to the further question: How does hypnotic treatment of recurring pain achieve enduring relief? Clinical experience suggests a two-component model. First, the clinician communicates specific ideas that strengthen the patient's ability to derive therapeutic support and to develop a sense of openness to the unexplored possibilities for pain relief within the security of a nurturing therapeutic relationship. Second, the clinician employs posthypnotic suggestions that capitalize on the patient's particular pain experiences, which simultaneously ameliorate the pain experience, and which, in small, repetitive increments, tend to maintain persistent pain relief over increasing periods of time.

#### NOTES

Author's Summary: "When a patient who suffers from recurring pain is treated with hypnotic methods and then reports substantial relief over time, what is significant is that the relief is so long-lasting, and that it endures through the patient's various daily activities. Although I believe that the initial alteration of consciousness via the hypnotic experience greatly facilitates subsequent analgesia, it is not necessary to believe, nor is it even plausible, that subsequent analgesia is

accomplished through re-creation of the hypnotic condition. Rather, it appears that the patient is able to generalize from these initial experiences to achieve this analgesia independent of a hypnotic intervention.

"Laboratory research and clinical experience suggest that the persistence of hypnotic analgesia is a function of learning, the therapeutic relationship that fosters that learning, and the neurophysiological changes that subserve that learning. The patient's understanding of the meaning and purpose of the clinician's suggestions is a primary determiner of their efficacy" (pp. 39-40).

Capafons, A. (1998). Rapid self-hypnosis: A suggestion method for self-control. Psychotema, 10 (3), 571-581.

A structured self-hypnosis method -rapid self-hypnosis- is described. This method has been created from a cognitive-behavioral perspective, and has received empirical validation. Some clinical applications of rapid self-hypnosis are shown from a coping skills and self-control orientation. From this perspective, the use of the method in everyday activities are emphasized. Clients can use suggestions while keeping their eyes open and being active. Mention of altered states of consciousness, trance or esoteric ideas is absolutely avoided.

Easterlin, Barbara L.; Cardena, Etzel (1998-99). Cognitive and emotional differences between short- and long-term Vipassana meditators. Imagination, Cognition and Personality, 18 (1), 69-81.

This study compared perceived stress and cognitive and emotional differences between two groups of Buddhist mindfulness [Vipassana] meditators. Nineteen beginning and twenty-four advanced meditators carried electronic pagers for five days and responded to daily random signals by completing an Experience Sampling form (ESF) containing items related to the dependent variables. As compared with beginners, advanced practitioners reported greater self-awareness, positive mood, and acceptance. Greater stress lowered mood and self-acceptance in both groups, but the deleterious effect of stress on acceptance was more marked for the beginners. These findings validate in a naturalistic setting some of the effects described in traditional Buddhist texts on mindfulness.

#### NOTES

"Meditation can be defined as the deliberate deployment of mental attention to obtain a particular patterning of consciousness. The aim of such control may be the stabilization of the stream of thought, greater relaxation, the attainment of an altered state, or the development of insights into the nature of mind [12]. Mindfulness meditation has sometimes been contrasted with concentration meditation as one of two main forms of meditation practice [13, 14]. The usual distinction is that mindfulness involves opening awareness to all contents and processes of mind, whereas concentrative forms of meditation involve shutting out all stimuli extraneous to a single object of attention" (p. 70). Long-term meditators averaged 103 months and 85 days of retreat training. They did not differ from

short-term meditators on measures of absorption, neuroticism, trait anxiety, or cognitive style; however they evidenced greater self-awareness and acceptance. The short-term meditators actually had more than a year of meditation experience so that differences between groups are not likely to be due to self-selection. The authors conclude that "meditation brings about sustainable changes in people's lives, above and beyond relaxation. ... [and] that greater conscious awareness through mindfulness techniques such as Vipassana meditation, increases acceptance, positive mood, and the ability to dispassionately observe one's mental states. These results have implications for clinical issues such as pain management and psychotherapy, in which acceptance and awareness are necessary ingredients for therapeutic change" (p. 78). JH

Weisenberg, Matisyohu (1998). Cognitive aspects of pain and pain control. International Journal of Clinical and Experimental Hypnosis, 46 (1), 44-61.

The cognitive and cognitive-behavioral approaches have been shown to be very effective in controlling pain and its sequelae both in the laboratory and in the clinical setting. As used in most research and treatment, cognitive approaches are concerned with the way the person perceives, interprets, and relates to his or her pain rather than with the elimination of the pain per se. This article reviews some of the origins of cognitive theory and pain theory, as well as examples of the techniques used and the research support for the approach. Special emphasis is given to self-efficacy, perceived control, and stress inoculation therapy. There is also discussion of some of the limitations of the cognitive approach. The overall conclusion is that the cognitive approach is a powerful and effective one for pain control despite its limitations.

1996

Amigs, S.; Capafons, A. (1996). Emotional self-regulation therapy for treating primary dysmenorrhea and premenstrual distress.. In Lynn, S. J.; Kirsch, I.; Rhue, J. W. (Ed.), Casebook of clinical hypnosis. (pp. 153-171). Washington, D.C.: American Psychological Association.

A case study on dysmenorrhea and premenstrual distress is presented, using emotional self-regulation therapy. Authors show a step by step approach in how to treat this kind of problem, using suggestions in an awake, alert state. Follow-up data are included.

Kessler, Rodger; Dane, Joseph R. (1996). Psychological and hypnotic preparation for anesthesia and surgery: An individual differences perspective. International Journal of Clinical and Experimental Hypnosis, 44 (3), 189-207.

Multiple reviews indicate that psychological preparation for surgery can provide psychological, physiological, and economic benefit to the patient. Research demonstrating that hypnosis adds to this benefit is both limited and encouraging. The content and status of this literature, however, are confusing, with little coherent

theoretical basis to account for the contradictions and inconsistencies across multiple studies whose methodologies often limit generalization. A model is presented regarding pertinent individual differences that include patient coping styles, prior medical experiences, and hypnotic ability, as well as differences in types of coping demanded by different surgical procedures. This model (a) helps explain some of the confusion, (b) offers a theoretical focus for patient assessment as well as development and selection of preparation strategies, and (c) clarifies future research goals.

**1994**

Wickramasekera, Ian (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. American Journal of Clinical Hypnosis, 37, 22-33.

The electrodermal response to cognitive threat of un hypnotized female patients with somatic symptoms and high on both hypnotic ability and neuroticism (H-H) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (M-L). On verbal report the H-H and the M-L groups did not differ, but they were significantly different on a measure of self-deception (L scale) or repression. The above findings are consistent with predictions from the High Risk Model of Threat Perception (HRMTP), which states that people in the H-H group are both chronically and acutely more reactive to threat than the people in the M-L group. This finding may have important theoretical, clinical, and financial implications for the diagnosis, therapy, and prevention of somatization disorders seen in primary medical care.

**1993**

Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.

This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.

Kessler, Roger S. (1993, October). Suggestion and hypnosis in anesthesiology and surgery: A simple and complicated analysis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

Cites three reviews: Blankenfield; Rogers & Reich; and Mumford. These reviews leave us with several questions: - What does the addition of hypnosis add? - What is importance of hypnotic ability? - What techniques are most effective? - How useful are standardized tailored interventions? - What are psychological, physiological, and biochemical markers?

We lack a general theoretical framework (see H. Bennett), and there are a broad variety of pre-surgical interventions, which may influence different aspects of functioning.

Evans & Richardson found no differences between people with and without preparatory interventions. Bonke & colleagues found no differences in length of hospitalization for people with and without preparatory interventions (except for people 55 and over). Relaxation training for surgery finds mixed results.

Blankenfield obtained negative findings in cardiac surgery. His recent IJCEH article reports those negative results.

What does presurgical intervention influence? - Psychological dimensions - Biochemical & physiological dimensions - Time/cost dimensions

Correspondence across these dimensions has not been consistently demonstrated, e.g. there is a lack of correlation between cortisol (physiological dimension) and anxiety (psychological dimension).

Why are there conflicting findings? 1. Possibly patient's coping style is responded to inappropriately, e.g. people who deny vs those who sensitize seem to require different interventions. Must assess the patient's idiosyncratic coping style. 2. Four studies suggest hypnotic ability may be a factor in recovery.

a. Disbrow, Bennett, & Owings (1993)

b. Rondi et al. (high hypnotizables use less morphine via Patient Controlled Analgesia)

c. Greenleaf et al. (hypnotizability predicts recovery independently)

d. Rapkin, Straubing, & Holroyd (high hypnotizables had less blood loss during surgery) 3. Is hypnosis per se necessary?

Comparative evaluation of strategies has been ignored. Enqist found hypnosis had a greater effect than non-hypnotic treatment in blood loss. Another study of bone marrow transplant patients found the hypnosis treatment superior.

When it comes to clinical interventions, we need to assess the patient's historic and current beliefs, their experience with medical procedures, their coping style, and then form a brief tailored intervention.

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her

to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.

1992

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

## NOTES

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

Wickramasekera, Ian (1992, August). Hypnotic ability as a risk factor for psychopathology and pathophysiology. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC

Eighty-three patients with psychophysiological disorders seen prior to therapy were tested on the seven risk factors of the High Risk Model. Thirty-two percent of these patients were high on hypnotic ability, and hypnotic ability was unrelated to all of the other six risk factors. Mean social support and coping skills were significantly below the norm. Mean catastrophizing, negative affect (neuroticism), major life change and minor hassles were significantly above the norm. There are positive and significant correlations between hassles, negative affect and catastrophizing. There are also positive and significant correlations between coping skills and number and level of satisfaction with social support. There are negative and significant correlations between coping skills, catastrophizing, negative affect and hassles. There are also negative and significant correlations between satisfaction with social support, catastrophizing, and hassles. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

1991

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, 59 (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

1990

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

## NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.])

**"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).**

**"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.**

**"The finding that blunters experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely) related to blunting. Since blunters are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunters experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.**

**Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.**

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

1989

Soskis, D. A.; Orne, E. C.; Orne, M. T.; Dinges, D. F. (1989). Self-hypnosis and meditation for stress management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 285-289.

In a 6-month follow-up study, telephone interviews were conducted with 31 male executives who were taught either a self-hypnosis or meditation exercise as part of a stress-management program. Use of and problems with the 2 exercises were similar, with the percentage of Ss using the techniques falling over 6 months from 90% to 42%. The exercises were used primarily for physical relaxation, refreshing mental interludes, aiding sleep onset, and stress-reduction. Problems with the exercises chiefly involved difficulty in scheduling even brief uninterrupted practice times and discomfort with the techniques. The incorporation of these issues into the clinical teaching of self-hypnosis may be useful.

1989

Goldmann, Les; Ogg, T. W.; Levey, A. B. (1988). Hypnosis and daycase anaesthesia. A study to reduce preoperative anxiety and intraoperative anesthesia requirements. Anesthesia, 43, 466-469.

52 female patients having gynecological surgery as day cases received either a short preoperative hypnotic induction or a brief discussion of equal length. Hypnotized patients who underwent vaginal termination of pregnancy required significantly less methohexitone for induction of anesthesia and were significantly more relaxed as judged by their visual analogue scores for anxiety. Less than half the patients were satisfied with their knowledge about the operative procedure even after discussions with the surgeon and anesthetist. A significant correlation was found between anxiety and perceived knowledge of procedures. Results suggest that preoperative hypnosis can provide a quick and effective way to reduce preoperative patient anxiety and anesthetic requirements for gynecological daycase surgery.

1988

Gudjonsson, Gisli (1988). Interrogative suggestibility: Its relationship with assertiveness, social-evaluative anxiety, state anxiety and method of coping. British Journal of Clinical Psychology, 27 (2), 159-166.

Investigated in 30 adults some of the theoretical components related to individual differences thought by the present author and R. Clark (1986) to mediate interrogative suggestibility as measured by a scale developed by the present author (1984). The variables studied were assertiveness, social-evaluative anxiety, state anxiety, and the coping methods generated and implemented during interrogation. Low assertiveness and high evaluative anxiety correlated moderately with suggestibility, but no significant correlations emerged for social avoidance and distress. State anxiety correlated significantly with suggestibility, particularly after negative feedback had been administered. Coping methods (active-cognitive/behavioral vs. avoidance) significantly predicted suggestibility scores. The findings give strong support to the present author's theoretical model

1987

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. Journal of Personality and Social Psychology, 53, 563-571.

#### NOTES

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception

Chaves, John; Brown, Jude (1987). Spontaneous cognitive strategies for the control of clinical pain and stress. Journal of Behavioral Medicine, 10 (3), 263-276.

The spontaneous cognitive strategies employed by 75 patients undergoing dental extractions or mandibular block injections were elicited using a structured interview. Interest focused on the relationship between these strategies and several personality variables, including state and trait anxiety, locus of control, and absorption. In addition, the effect of strategy utilization on perceived pain and stress was assessed. Forty-four percent of the patients employed cognitive strategies designed to minimize pain and stress, while 37% catastrophized, engaging in cognitive activity which exaggerated the fearful aspects of their experience. Only 19% of the patients denied any cognitive activity during the clinical procedure, and many of these used noncognitive coping strategies. Discriminant analysis revealed that situational anxiety was associated with the use of cognitive coping strategies. Catastrophizing was associated with increasing age, past dental stress, and higher

levels of stress vulnerability (high trait anxiety and external locus of control). Copers reported less stress than catastrophizers but not less pain.

Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

1986

Rogers, Malcolm; Reich, Peter (1986). Psychological intervention with surgical patients: Evaluation outcome. Advances in Psychosomatic Medicine, 15, 23-50.

#### NOTES

The Notes are a direct quotation of the authors' Conclusions. "There is well documented evidence that psychological and behavioral preparation prior to surgery can effect post-operative recovery. In almost all instances, except when patients are characterized by avoidance or denial defenses predominantly, the outcome results have been positive. The effect of interventions have been most consistently positive in reducing length of hospitalization and post-operative pain, but a variety of other improvements in affect and physiologic stability have been shown. As others such as Auerbach have pointed out [76], in all but a handful of studies different intervention approaches have been combined, making it impossible to sort out the specific effects of information, psychotherapeutic relationship, relaxation training, or suggestion given either with or without hypnosis. Indeed it is not only likely that each has had an effect, but there may also be synergistic effects.

"More recent investigations have begun to include measurements of personality differences between patients so that the nature of the intervention can be more specific and appropriate to the individual's coping style.

"The reduction in length of hospitalization alone (clearly shown to result from pre-operative psychologic preparation) argues forcefully on a cost benefit basis for the inclusions of careful pre-operative preparation. The reduction in pain is also of major importance, and may well reduce future avoidance behavior or post-

traumatic disorders, although these latter potential outcomes have not been investigated. It should be kept in mind that there are also a number of studies which have failed to demonstrate the efficacy of psychological intervention on these outcome measures. Moreover, it is extremely difficult in studies of this nature to control adequately for the subtle effects on behavior of experimenter and subject expectation.

"A few points can be made about future strategies in this field. The evidence accumulated to date suggests that all patients undergoing surgery or certain difficult procedures be given the option of pre-operative psychological preparation. The preparation should emphasize what the patient will experience and when, and how to cope with it, i.e., how to move, or breathe, or relax. Rapidly evolving audiovisual capabilities and hospital televisions connected by cable to health education channels will routinely offer such preparation in the future. Patients could choose or not choose to watch (thereby protecting mechanisms of denial).

"Finally, future studies should focus on outcome measures uniquely important to a particular operation and also on longer term rehabilitation outcome measures. An example of the former might be post-operative sexual functioning after prostatectomy. A study by Zokar et al. [77] has shown that the likelihood of this post-operative function is correlated with not only the level of pre-operative anxiety and general 'life satisfaction', but also whether the patient received a pre-operative explanation of what to expect from the surgery" (pp. 45-46).

Wickramasakera, Ian (1986). A model of people at high risk to develop chronic stress-related somatic symptoms: Some predictions. Professional Psychology: Research and Practice, 17, 437-447.

Certain measurable high-risk factors that predispose people to develop functionally based somatic disorders are identified. These risk factors compose a multidimensional model that encompasses variables involved in the predisposition, the precipitation, and the buffering of stress-related symptoms. These high-risk factors are (a) high or low hypnotic ability, (b) habitual catastrophizing cognitions and pessimistic belief systems, (c) autonomic lability or neuroticism, (d) multiple major life changes or multiple minor hassles over a short period of time, and (e) a deficit in support systems or coping skills or both.

1985

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

Spanos, Nicholas P.; Ollerhead, Virginia Gail; Gwynn, Maxwell I. (1985-86). The effects of three instructional treatments on pain magnitude and pain tolerance: Implications for theories of hypnotic analgesia. Imagination, Cognition and Personality, 5, 321-337.

Between baseline and posttesting on the cold pressor test, subjects were assigned to four treatments: a) hypnotic analgesia, b) brief instructions to "Do whatever you can to reduce pain," c) stress inoculation, and d) no instruction control. Participants in the three instructional treatments showed significantly greater baseline to posttest decrements in pain magnitude and significantly greater increments in pain tolerance than controls. However, the instructional treatments did not differ significantly from one another in these regards. Pretested hypnotic susceptibility correlated significantly with degree of pain reduction in the hypnotic analgesia treatment but not in the "Do whatever" or stress inoculation treatments. Theoretical implications are discussed.

1984

D'Eon, Joyce Lillian (1984). Response to pressure pain as moderated by hypnotic susceptibility, type of suggestion strategy, and choice (Dissertation, Concordia University, Canada). Dissertation Abstracts International, 45 (n4-B), 1313-1314.

The present study examined the relationship between hypnotic susceptibility and ability to control pain, by comparing high and low susceptible subjects' response to pressure pain when these subjects employed either an imagery or a distraction pain attenuating strategy. The effect of providing subjects with a choice of which strategy to employ was investigated. In addition, the subjects' imagery ability and the types of cognitive strategies they engaged in were assessed. Subjects who scored either 9 or above or 4 and below on the Harvard Group Scale of Hypnotic Susceptibility: Form A, were asked to participate in a pain study. All 84 subjects first received a baseline trial on a modified version of the Forgione-Barber Strain Gauge Pain Stimulator, within susceptibility levels. Subjects who were able to keep their finger in the apparatus for 60 seconds were randomly assigned to a Choice, a No Choice, or a Control condition. The 36 high and low susceptible subjects in the Choice condition were given the option of using either an imagery suggestion strategy or a low distraction strategy on the second trial. The 32 high and low susceptible subjects in the No Choice condition were told about both strategies but were assigned randomly to either the imagery or the distraction strategy group. The 16 subjects in the Control group did not receive a strategy. Both pain intensity and pain tolerance were measured. Results indicated that an equivalent number of high and low susceptible subjects, given a choice of strategy, chose the imagery and distraction strategies. There were no differences in either pain intensity or pain tolerance between high and low susceptible subjects in the Choice conditions. The Choice condition subjects exhibited significant pain reductions from the first to the second trial. No Choice and Control subjects did not reduce pain significantly. In addition, high and low susceptible subjects who chose the imagery strategy did not have higher imagery scores than those subjects who chose the distraction strategy.

Subjects in the No Choice condition used fewer coping strategies than subjects in the Choice condition, on the second trial. The implication of these results and directions for future research are discussed" (p. ).

1983

Harris, Gina M.; Johnson, Suzanne Bennett (1983). Coping imagery and relaxation instructions in a covert modeling treatment for test anxiety. Behavior Therapy, 14, 144-157.

The present study compared the efficacy of instructing test anxious subjects to use personalized coping imagery based on nonacademic experiences of competence with coping imagery based on academic experiences of competence. The effect of relaxation was also examined and the relationship of imagery elaborateness and content to treatment effectiveness was assessed. Sixty-three subjects were randomly assigned to one of four treatments or a waiting list control group. Test anxiety as measured by a self-report instrument significantly decreased in all treatment groups. Improvement in grade point average occurred for all treatment groups except for academic coping imagery without relaxation which was also the least efficient treatment. The waiting list control group significantly deteriorated in academic performance. Relaxation training did not appear to enhance treatment effectiveness or influence the elaborateness or content of the imagery used. Test anxiety scenes elicited highly response-oriented images by all subjects. However, the stimulus/response content of the subjects' images was not influenced by treatment outcome. In contrast, successful treatment was primarily associated with reduction in negative coping imagery descriptions, although an increase in positive coping statements cured as well.

Myles, (1983, April). Cognition, hypnotic susceptibility, and laboratory induced pain (Dissertation, University of Waterloo). Dissertation Abstracts International, 43 (10), 3360-B.

Individuals' experiences of pain, and responses to pain treatments vary greatly. This study attempted to relate two areas of research concerned with this variation: (a) cognitions and pain (thoughts, images, etc.), in particular, catastrophizing versus coping; and (b) hypnotic susceptibility and analgesia. "Subjects were preselected for high or low hypnotic susceptibility. Susceptibility assessment was divorced from the laboratory study to minimize the potential bias of expectancies concerning hypnosis. High hypnotic susceptibility was expected to potentiate therapeutic effects of hypnotic-like treatment that did not involve a hypnotic induction. "Ten high and ten low-susceptible subjects were assigned to each of three groups: (a) a cognitive treatment, encouraging subjects to reduce spontaneous catastrophizing and increase self-generated coping cognitions; (b) a dissociative imagery treatment, encouraging subjects to engage in self-generated engrossing images; (c) an attention- placebo manipulation. "Pre and post-treatment assessments involved tolerance and pain-report measures during the cold-pressor task, and interview and questionnaire information concerning cognitions. "No treatment effects were evident on measures

of pain. Cognitive data indicated less catastrophizing and more coping during the post-treatment stressor across all groups. Subjects in the dissociative imagery group did report more imagery during the post-treatment assessment than subjects in the other groups, but this increased use of imagery was not associated with a decrease in pain. "Interview and questionnaire data supported prior reports that catastrophizing is related to increased pain. Low catastrophizing was associated with a high sense of control, high use of a variety of coping strategies, and lower pain reports. These relationships were altered following treatment, however, leading to a caution in generalizing about such variables. "High susceptibility did not potentiate therapeutic effects for either experimental treatment. Nor was susceptibility related in any other consistent way to pain, although high susceptibility was associated with more extensive use of post-treatment imagery. "Methodological inconsistencies and problems in laboratory pain research were discussed, and suggestions made for future work in the area" (p. 3360).

1981

Spanos, Nicholas P.; Brown, Jude M.; Jones, Bill; Horner, Donna (1981). Cognitive activity and suggestions for analgesia in the reduction of reported pain. Journal of Abnormal Psychology, 90, 554-556.

Assessed 38 undergraduates' pain magnitude and pain tolerance for arm immersion in ice water during a baseline and posttest session. Before the posttest, half the Ss received an analgesia suggestion. On the basis of their written testimony, Ss were classified as having either predominately coped (e.g., imagined event inconsistent with pain or made positive self-statements) or predominantly exaggerated (e.g., worried about and exaggerated the noxious aspects of the situation) during each immersion. On both immersions, copers reported less pain and exhibited higher pain tolerance than exaggerators. Moreover, the suggestion was associated with reductions in reported pain only when it transformed baseline exaggerators into posttest copers.

Wilson, John F. (1981). Behavioral preparation for surgery: Benefit or harm?. Journal of Behavioral Medicine, 4, 79-102.

Elective surgery patients were prepared for surgery with training in muscle relaxation or with information about sensations they would experience. Relaxation reduced hospital stay, pain, and medication for pain and increased strength, energy, and postoperative epinephrine levels. Information reduced hospital stay. Personality variables (denial, fear, aggressiveness) were associated with recovery and influenced patients' responses to preparation. Less frightened patients benefitted more from relaxation than did very frightened patients. Nonaggressive patients reacted to information with decreased hospital stay along with increased pain, medication, and epinephrine. Aggressive patients responded to information with decreased hospital stay along with decreased pain, medication, and epinephrine. Patients using denial were not harmed by preparation. A catharsis/moderation model is proposed to explain how information benefits patients. An active coping model is proposed to

explain the benefits of relaxation. This study suggests that behavioral preparation benefits even frightened, aggressive, or denying elective surgical patients.

Worthington, Everett L.; Shumate, Michael (1981). Imagery and verbal counseling methods in stress inoculation training for pain control. Journal of Counseling Psychology, 28 (1), 1-6.

Investigated 3 elements of stress inoculation training, a therapeutic package for helping clients control anxiety, anger or pain. 96 undergraduate females were tested twice for ice water tolerance. In a 3 design, the independent variables were the presence or absence of (a) pleasant imagery, (b) a conceptualization of pain as a multistage process, and (c) planned, explicit self-instructions. A multivariate analysis of covariance using the (transformed) pretest tolerance rating and 2 self-ratings of pain. Imagery users (Is) controlled their pain better than nonimagery users (NIs). There was a significant interaction of Imagery and Conceptualization. NIs had longer tolerance and less self-reported pain at withdrawal when they heard no conceptualization. The Is did not derive additional benefit from hearing the conceptualization. Self-instruction did not affect pain control. Results suggest that pleasant imagery effectively relieves pain and may account for much of the effectiveness of stress inoculation training. (23 ref)

1979

Beers, Thomas M.; Karoly, Paul (1979). Cognitive strategies, expectancy, and coping style in the control of pain. Journal of Consulting and Clinical Psychology, 47, 179-180.

Measures of tolerance, self-reported pain threshold, and overall discomfort of cold-pressor pain were obtained from 114 male subjects in a pretest-training-posttest experiment. Training consisted of brief practice in one of four cognitive strategies: rational thinking, compatible imagery, incompatible imagery, and task-irrelevant cognition. Analyses of covariance indicated (a) that cognitive-imaginal strategies facilitated endurance of pain and raised self-reported threshold, (b) that rational thinking and compatible imagery were generally the most effective treatments, (c) that expectancy alone was not a significant pain-attenuating factor, (d) that treatments did not affect discomfort ratings, and (e) that individual differences in imaginal ability and coping style did not correlate with changes in any of the dependent measures.

Spanos, Nicholas P.; Radtke-Bodorik, H. Lorraine; Ferguson, John D.; Jones, Bill (1979). The effects of hypnotic susceptibility, suggestions for analgesia, and the utilization of cognitive strategies on the reduction of pain. Journal of Abnormal Psychology, 88, 282-292.

Subjects previously stratified in terms of hypnotic susceptibility had an arm immersed in ice water for a 60-sec pretest and, afterward, were assigned to one of four treatments: (a) hypnosis plus analgesia suggestion, (b) hypnosis alone, (c) suggestion alone, or (d) no hypnosis - no suggestion. Next, the subjects were retested

in ice water and then interviewed about their experiences during the retest. High susceptibles reported the use of more cognitive strategies during the retest and showed greater pretest-to-retest pain magnitude reductions than did low susceptibles. Similar effects occurred for subjects given, as opposed to not given, a suggestion. The hypnosis variable, however, failed to affect either strategy use or pain magnitude. Strategy use facilitated pain reduction only for subjects who did not worry about, and did not exaggerate, the unpleasantness of the situation (i.e., noncatastrophizers). The very few subjects who showed dramatic pretest- to-retest reductions in pain magnitude (50% reduction or more) were all high-susceptible noncatastrophizers who used one or more cognitive strategies.

**Turk, Dennis C.; Meichenbaum, Donald H.; Berman, William H. (1979). Application of biofeedback for the regulation of pain: A critical review. Psychological Bulletin, 86 (6), 1322-1338.**

The biofeedback literature for the regulation of pain is reviewed and found wanting on both conceptual and methodological grounds. In particular, studies on the use of biofeedback for the treatment of tension and migraine headaches and chronic pain indicate that biofeedback was not found to be superior to less expensive, less instrument- oriented treatments such as relaxation and coping skills training. The relative absence of needed control comparisons was noted, and the need for caution in promoting biofeedback was stressed. Suggestions for future research are offered.

**1978**

**Shipley, R. H.; Butt, J. H.; Horowitz, B.; Farbray, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.**

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

**1977**

**Gatchel, Robert J.; Hatch, John P.; Watson, Paur J.; Smith, Dan; Gaas, Elizabeth (1977). Comparative effectiveness of voluntary heart rate control and muscular**

relaxation as active coping skills for reducing speech anxiety. Journal of Consulting and Clinical Psychology, 1093-1100.

The present study investigated whether heart rate biofeedback training is as effective as muscular relaxation training in reducing speech anxiety. Also, a combined muscle relaxation/biofeedback treatment group was included in this study. All treatment groups were compared to a false-biofeedback placebo control group. This investigation also assessed whether the degree of autonomic nervous system awareness significantly influences the treatment process. Ten speech-anxious subjects, half of whom scored high on the Autonomic Perception Questionnaire (APQ) and half of whom scored low on the APQ, were assigned to each group. Results indicated that all four groups demonstrated a decrease in self-reported anxiety. Assessment of physiological measures (heart rate and skin conductance) indicated that the three treatment groups were associated with less physiological responding during the posttreatment assessment of anxiety, relative to the false-biofeedback group. Moreover, among the three treatment groups, the combined relaxation/biofeedback group demonstrated the lowest level of responding. The degree of autonomic awareness was not found to be related to therapeutic improvement.

1976

Gardner, Gail G. (1976). Hypnosis and mastery: Clinical contributions and directions for research. International Journal of Clinical and Experimental Hypnosis, 24 (3), 202-214.

This paper explores the concept of mastery in relation to hypnotherapy by pulling together clinical observations and suggesting directions for research. It is suggested that a sense of mastery may enhance the effectiveness of hypnosis, either by facilitating induction, or by strengthening hypnotherapeutic suggestions, or by maintaining hypnotherapeutic gains. Moreover, the question is raised as to whether hypnotherapy, as compared with other psychotherapeutic approaches, better facilitates the development of a sense of mastery.

Gatchel, Robert J.; Proctor, Janet D. (1976). Effectiveness of voluntary heart rate control in reducing speech anxiety. Journal of Consulting and Clinical Psychology, 381-389.

The effects of learned control of heart rate deceleration and therapeutic expectancy set in reducing speech anxiety were investigated in a factorial design employing 36 speech-anxious subjects. Heart rate control training and no heart rate control training were each paired with high-therapeutic-expectancy and neutral-expectancy instructions, in order to assess the individual and combined effects of the two factors. Results demonstrated that learning to control heart rate deceleration led to a significant reduction in self-report, physiological (heart rate and skin conductance level), and overt signs of anxiety, relative to the no-heart-rate control condition. High-therapeutic-expectancy instructions also contributed to a reduction

in self-reported anxiety. These results demonstrate that learned heart rate control is an effective therapeutic technique for reducing anxiety.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

1969

Frankenthal, Kate (1969). Autohypnosis and other aids for survival in situations of extreme stress. International Journal of Clinical and Experimental Hypnosis, 17, 153-159

Presents case histories where strong autosuggestion was utilized to survive in situations of extreme stress by dissociating unbearable realities. The difference between hypnosis and depersonalization is discussed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## CREATIVITY/ART

2002

Manmiller, Jessica L.; Kumar, V. K.; Pekala, Ronald J. (2002). Hypnotizability, creative capacity, creativity styles, absorption and phenomenological experience. [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.

The study investigated relationships between creative capacity, styles of creativity, hypnotizability, and absorption. Participants were 429 students enrolled in Introduction to Psychology classes. Students first completed questionnaires pertaining to creative capacity, creativity styles, and absorption (Tellegen's Absorption Scale). They were subsequently hypnotized using the Harvard Group Scale of Hypnotic Susceptibility and completed the Phenomenology of Consciousness Inventory. The pattern of results suggests that creative capacity is

more closely related to absorption than hypnotizability. The support for P. G. Bowers' assertion that effortless experiencing while engaged in creative tasks and hypnotic tasks is a process that is common to both high creative and high hypnotizable subjects was weak. Hypnotizability was more strongly and negatively correlated with volitional control for suggestions experienced during hypnosis, than both absorption and creative capacity. Creativity styles of belief in unconscious processes, use of techniques, final product orientation (intrinsic/extrinsic) motivation, environmental control and behavioral self-regulation, and supersition were negatively correlated with volitional control (feeling of effortlessness experiencing) during hypnosis, but the correlations were small in magnitude" (Bulletin of Division 30, Psychological Hypnosis, Fall, 2002, Vol. 11, No. 3, P. 14).

2001

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. (([available online:] <http://www.iuniverse.com/bookstore/marketplace>))

#### NOTES

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

2000

Gibbons, Don (2000). Applied hypnosis and hyperempiria. New York NY: Plenum Press. ([available online:] <http://www.iuniverse.com/bookstore>)

#### NOTES

The book features both traditional hypnotic procedures and hyperempiric inductions based on suggestions of increased awareness, mind expansion, and increased alertness and sensitivity. It contains sections on the use of suggestion as an instrument of personal growth in areas such as improving study skills, taking examinations, achievement motivation, artistic expression, emotional enrichment, aesthetic appreciation and enjoyment, interpersonal effectiveness, musical performance, problem solving, public speaking, salesmanship, sports performance, theatrical performance, and writing ability.

1996

Wallace, Benjamin; Allen, Philip A.; Propper, Ruth E. (1996). Hypnotic susceptibility, imaging ability, and anagram-solving activity. International Journal of Clinical and Experimental Hypnosis, 44 (4), 324-337.

Anagram-solving activity was examined as a function of hypnotic susceptibility level and imaging ability. In Experiment 1, anagrams that were composed of sets of

letters that formed actual words (word anagrams), but when unscrambled formed other words, were compared to sets of letters that formed nonwords (nonsense anagrams). Word anagrams required more time to solve than nonsense anagrams. Also, fewer word anagrams were correctly solved compared to nonsense anagrams. Those individuals judged both high in hypnotic susceptibility and vivid in imaging ability demonstrated the best performance. In Experiment 2, anagrams that when unscrambled formed high-imagery words were compared to those that formed low-imagery words. High-imagery-word anagrams were solved more quickly and correctly than low-imagery-word anagrams. Such activity was best demonstrated by individuals who were judged to be both high in hypnotic susceptibility and vivid in imaging ability. These results are discussed in terms of strategies for solving anagrams and the individual differences that appear to be associated with using such strategies. -- Journal Abstract

1992

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

#### NOTES

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric

suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

**1991**

Crowson, J. Jeffrey, Jr.; Conroy Aileen M.; Chester, Traci D. (1991). Hypnotizability as related to visually induced affective reactivity: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39 (3), 140-144.

Numerous studies have explored the relationship between hypnotizability and individual differences in imaginative involvement and creativity. Most have assessed imaginative or affective involvement by involving Ss in a variety of imaging tasks. Unlike these earlier studies, however, the present study made no attempt to actively involve Ss in the film viewing task. Rather, individuals assessed as high, medium, or low in hypnotizability were exposed to either a violent film, a neutral film, or no film. Results provided tentative evidence to indicate that the level of negative affect reported was significantly greater for highly hypnotizable Ss. Results were discussed in terms of the limitations of the present study and implications for future studies.

**1990**

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. International Journal of Psychosomatics, 37, 82-85.

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilita musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

Freeman, William B., Jr.; Kessler, Marc; Vigne, Jeffery (1990). Random number generation, absorption, and hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 10-16.

Graham and Evans (1977) found that a measure of random number generation (RNG) was related to hypnotizability. In 2 studies, the relationship between hypnotizability and Graham and Evans' RNG (1977) index was examined. In Study 1 Evans' (1981) measures of controlled and automatic absorption were also evaluated. In Study 1 no relationship was found between the measures of absorption or RNG and hypnotizability. Since Study 1 was carried out primarily to evaluate methods for modifying hypnotizability, Study 2 was designed to evaluate RNG measure directly. Study 2 found no consistent relationship between RNG and hypnotizability, or between RNG and measures of the experience of hypnotic depth and nonvolition.

1989

Zamore, Neal; Barrett, Deirdre (1989). Hypnotic susceptibility and dream characteristics. Psychiatry Journal of the University of Ottawa, 14 (4).

This study examined the relationship of hypnotic susceptibility to a variety of dream characteristics and types of dream content. A Dream Questionnaire was constructed synthesizing Gibson's dream inventory and Hilgard's theoretical conceptions of hypnosis. Several dream dimensions correlated significantly with hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory. For Ss as a whole, the strongest correlates were the frequency of dreams which they believed to be precognitive and out-of-body dreams. Ability to dream on a chosen topic also correlated significantly with hypnotic susceptibility for both genders. For females only, there was a negative correlation of hypnotizability to flying dreams. Absorption correlated positively with dream recall, ability to dream on a chosen topic, reports of conflict resolution in dreams, creative ideas occurring in dreams, amount of color in dreams, pleasantness of dreams, bizarreness of dreams, flying dreams, and precognitive dreams.

1988

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the

screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

1987

Lynn, Steven Jay; Rhue, Judith W. (1987). Hypnosis, imagination, and fantasy. Journal of Mental Imagery, 11, 101-112.

Considers three questions pertaining to the relationship between hypnotic responsiveness and imaginative processes: Are subjects' nonhypnotic imaginative involvements related to hypnotic susceptibility? Do some fantasy prone subjects share a unique constellation of personality attributes and experiences, including an ability to respond to hypnotic suggestions? What are the childhood developmental antecedents of persons who score at the extremes of hypnotic ability and measures of fantasy and imagination? Reviews literature.

1886

Cole, Ronald William (1986, February). Posthypnotic suggestion and the production of creative imagination imagery (Dissertation, Mississippi State University). Dissertation Abstracts International, 47 (8), 2953-A.

This investigation assessed the effect of posthypnotic suggestions in facilitating creativity in persons highly susceptible to hypnosis. Fifty college-age subjects from educational psychology and psychology classes at Mississippi State University who scored 9 or above on the Harvard Group Scale of Hypnotic Susceptibility were used. Groups of 10 subjects were randomly assigned to one of five conditions: a) hypnosis/creative learning set instructions b) relaxation/creativity learning set instructions c) hypnosis only d) relaxation only e) posttest only "Subjects in the hypnosis/creative learning set instructions group received 25 min. of hypnosis and creativity instruction. The relaxation/creative learning set instructions group received 25 min. of relaxation and creativity instructions. The hypnosis-only group received 25 min. of hypnosis and then completed mazes. The relaxation-only group received 25 min. of relaxation and then completed mazes. And lastly, the control group received the posttest only. All groups were given the Torrance Test of Creative Thinking (TTCT), Verbal and Figural Forms A, 1 week after receiving their treatment conditions. The results indicated that the combination of hypnosis

and creativity instructions produced significantly higher mean scores on the Verbal Form A -- fluency, flexibility, and originality subtests, and Figural Form A elaboration subtest, and lend support to the contention that posthypnotic suggestions can increase creativity (as measured by the TTCT) in high susceptible subjects. The components of both hypnosis and creativity instruction had to be present to increase creative performance. There was a tendency for relaxation combined with creativity instructions to show decreases in creativity scores. "The hypnotic state was seen as necessary for the unconscious acceptance of creativity instructions (low volitional control), while the relaxed state produced conscious contamination of suggestions for creativity (high volitional control). It was postulated that it was the difference in volitional control which produced the positive responses to posthypnotic suggestions to be more creative in the group receiving hypnosis and creativity instructions" (p. 2953).

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

1985

Ashton, M.A.; McDonald, R.D. (1985). Effects of hypnosis on verbal and non-verbal creativity. International Journal of Clinical and Experimental Hypnosis, 33 (1), 15-26.

60 female volunteers, 30 hypnotizable and 30 un hypnotizable, screened on 2 measures of hypnotizability, were assigned to a hypnosis, simulation, or waking motivated treatment condition to assess whether hypnosis has a differentially enhancing effect upon verbal and non-verbal creativity test performance. Verbal and figural components of the Torrance Tests of Creative Thinking (Torrance, 1974) and the Sounds and Images Test (Cunnington & Torrance, 1965) were the principal dependent variables. Postexperimental measures of absorption and effortless experiencing were also obtained. A 2 x 3 independent groups ANOVA did not sustain the prediction of an interaction effect between S hypnotizability and the presence of hypnosis on 3 composite measures of verbal and nonverbal creativity.

Although there was an absence of treatment effects, hypnotizable Ss consistently achieved higher scores on the Torrance scoring categories, and their performance was statistically superior on a composite index of overall creativity. Absorption and effortless experiencing measures were also significantly higher for hypnotizable Ss than for un hypnotizable Ss.

Kerry Buhk; Rhue, Judith; Henry, Stephanie; Lynn, Steven Jay (1985, November). Fantasy proneness: Are their word associations richer?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

**NOTES:**

Experimenters screened 7000 students to get 6 samples of fantasy prone Ss (top 2.4% on Wilson and Barber's ICMI). They found less association between fantasy proneness and hypnotizability than did Wilson and Barber.

They had fantasizers hallucinate a second cup next to a first styrofoam cup. Results were that 87% of High fantasizers, < 50% Medium fantasizers, < 25% Low fantasizers could do it, but they didn't describe seeing the hallucinated cup "as real as real" as Wilson and Barber said they did.

Experimenters were concerned about context effects (expectancy) because the Creativity and Fantasy Proneness tests were run proximal in time, so they separated in time the administration of Fantasy Prone and Creativity tests and also looked at word associations.

23 High and 20 Low fantasy prone students selected by ICMI, which was administered to Subjects 18 mos before the creativity study. At the time of the creativity study, Ss were informed they were randomly picked. There were two 90' sessions, counterbalanced.

Sessions: 1. Hallucinate image of R.A. and of styrofoam cup. Other tests were administered for intelligence and personality: Shipley-Hartford, MMPI, Crowne-Marlowe, etc. 2. Creativity tests (Revised Art Scale, Hilgard's Alternate Uses; story production which was scored on detail, imagery and fantasy and on imagery nouns.) Results of this study which was independent of context (i.e. the tests being correlated were administered independently of each other, separated by time). 1. Fantasizers were more creative than low fantasizers on both Creativity Scales. 2. Fantasizers show more divergent thinking on Hilgard Alternate Uses test, but relationship between fantasy proneness and creativity were not strong,  $r = .30$ . 3. Fantasizers and non fantasizers did not differ on the story measures! This diverges from Wilson and Barber's results. Fantasizers may have more vivid images, but storytelling does not capture that.

1984

Kearns, John S.; Zamansky, Harold S. (1984). Synthetic versus analytic imaging ability as correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 32, 41-50.

It was hypothesized that synthetic imaging ability, but not analytic imaging ability, is positively related to hypnotizability. The correlation of scores on a paired-associates task, used as a measure of synthetic imaging ability, with scores on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), indicated a statistically nonsignificant trend in the predicted direction. 2 measures of analytic imaging ability, as well as Sheehan's (1967) revision of the Betts (1909) Questionnaire Upon Mental Imagery, a measure of vividness of imagery, did not correlate significantly with SHSS:C. The results are discussed in terms of their relation to studies of creativity and goal-directed fantasy.

## NOTES

The authors review the literature on imagery and hypnotizability and propose that an important variable in hypnosis is an ability to expand imaginatively upon a given verbal input (synthetic imaging ability), akin to Spanos' (1971) concept of goal-directed fantasy. They cite studies relating creativity ("essentially a synthetic process") to hypnotizability, and predict that skill in solving spatial relations problems (analytic imaging ability) is not correlated with hypnotizability because it involves "accurately scanning visual images and converging on solutions to specific problems," (p. 42) rather than creative fantasy characteristic of hypnotic behavior. Forty Subjects had two sessions each: imagery tests in #1 and SHSS:C in #2. Imagery tests included, in this order: 1. Paired Associates (Paivio, 1972; a test of synthetic imaging), in which paired words are learned and later recalled; Experimental Ss were to learn them by combining them into an image, while Control Ss were to simply try to learn them. The nouns differed in imagery strength (potential for stimulating images). 2. Nonsense Forms (a test of analytic imaging), in which Subjects trace with their fingers an irregularly shaped Masonite form, blindfolded, and then choose one of 5 drawings that best matches the form. 3. Cube Visualization (a test of analytic imaging), in which Ss imagine a 2" wooden cube painted red on all faces, that had been sawed into 1" cubes; they are to say how many of the smaller cubes would be red on 3 faces, 2 faces, one face, and none of the faces. 4. Betts QMI.

The Paired Associates (PA) scores were a ratio of high imagery words recalled to low imagery words recalled, intended to reflect the impact of imagery availability on memory. There was a trend for hypnotizability to correlate with PA ratio scores, regardless of whether intermediate or low imagery nouns were used as baseline ( $\rho = .37$  and  $.34$ ,  $p < .10$ ) in the experimental group ("Use imagery to learn."), a trend that was not found in the control group (no imagery instructions). Neither measure of analytic imaging ability (Nonsense Forms, Cube test) correlated with hypnotizability.

In their Discussion, the authors write, "The common factor in successful performance of both imagery-mediated paired associates learning tasks and hypnotic suggestions appears to be the ability to expand imaginatively upon a given verbal input" (p. 47). They cite the literature relating hypnotizable and creative performance (p. 47). "The present findings with the Nonsense Forms Test and the Cube Visualization Test, both of which failed to correlate significantly with SHSS:C, support the hypothesis that hypnotizability is not related to analytic, spatial-

imagining skills" (p. 47). "The nonsignificant correlation between Betts QMI and SHSS:C adds to the growing body of inconsistent findings observed with Betts QMI" (p. 47).

"Given the complex nature of hypnotic susceptibility and of imagery (Monteiro et al., 1980), it is perhaps not surprising that studies attempting to relate the two variables directly frequently yield only modest relationships. Very likely, the inclusion of appropriate mediating variables would serve to clarify and, in particular instances, augment the relationships observed between hypnotic responsiveness and imaging ability. One such variable may be the capacity to become fully involved in everyday nonhypnotic experiences, commonly called absorption. This variable has been shown in numerous studies to be related to hypnotizability (e.g. Tellegen & Atkinson, 1974), as well as to creativity and vividness of imagery (P. Bowers, 1978, 1979; Monteiro et al., 1980). Even more relevant to the present study is the possible interaction between level of hypnotic susceptibility and the relationship between synthetic imaging ability and SHSS:C scores. It may be, for example, that the contribution of synthetic imaging ability becomes more critical in eliciting hypnotic behavior from Ss who are only moderately susceptible to hypnosis. Such an analysis was not possible in the present experiment, since the number of high, medium, and low susceptible Ss was approximately equal, and, therefore, the number of Ss at each level was insufficient for an adequate subgroup analysis. Clearly, however, future studies of the role of imaginal skills in hypnotic responsivity must move in directions such as these" (p. 48).

1982

Crawford, Helen J. (1982). Cognitive processing during hypnosis; much unfinished business. Research Communications in Psychology, Psychiatry and Behavior, 7, 169-179.

Studies of cognitive processing during hypnosis per se are reviewed suggesting that hypnotically responsive individuals not only experience subjective changes during hypnosis that are seen as often being discontinuous from their normal consciousness but also may exhibit measurable cognitive changes. Evidence (ego functioning changes, enhanced creativity, enhanced imagery processing, etc.) is presented to support the hypothesis that hypnosis may involve a shift in cognitive functioning away from a verbal, detail-oriented strategy towards a more imaginal, non-analytic, holistic- oriented strategy. Limitations of present research and potentially valuable research areas are discussed.

NOTES

The author reviews evidence for cognitive changes during hypnosis--evident especially in high hypnotizables but also to some degree in moderate hypnotizables. She concludes that there may be changes in ego functioning, imagery functioning, creativity, and strategy preferences and that high hypnotizables are more flexible in cognitive processing . "The question remains whether or not there are accompanying objectively measurable cognitive changes during hypnosis" (p. 170).

**"In normal waking consciousness, the hypnotically responsive individual is typically found to be more involved in nonhypnotic imaginative activities and experiences (Hilgard, 1979; Tellegen & Atkinson, 1974), more able to image things (for review, see Sheehan, 1979) and daydream vividly and positively (Crawford, 1982), more able to perceive gestalt closure figures (Crawford, 1981), more able to divert attentional process (e.g., Karlin, 1979), and more creative on certain tasks (e.g., P. Bowers, 1979). Experiential reports indicate that it is these very cognitive processes, amongst others, which are perceived to be enhanced or changed during the hypnotic state" (p. 170).**

**"Levin and Harrison (1976) found that hypnosis ego changes occurred most in those individuals who also demonstrated good capacity for adaptive regression in the waking state" (p. 171).**

**"Dave (1979) compared hypnotically induced dreams with rational-cognitive treatment as to their effects on creative problem solving of the problems or projects. 'Conditional support' was given to the significantly stronger effect form the hypnotically induced dreams" (p. 172).**

**There are many investigations of the effect of hypnosis on imagery, with a number of methodological problems. "Self-reports can be criticized on the grounds that they are easily subject to demand characteristics, subject expectations, and social desirability influences. Coe et al. (1980) found order of condition influenced their findings, while Crawford (1979) found that imagery rating scales suffered from a low ceiling effect among high imagers" (pp. 172-173).**

**"Surprisingly, while the field of cognitive psychology has devoted extensive attention to the study of the enhancing effects of imagery upon memory, few of their paradigms have been applied to the study of hypnotic processing of information. Germaine to the field of hypnosis are three operational approaches to the investigation of imagery: (a) the manipulation of the availability of imagery as a coding device, such as varying the degree to which stimuli may evoke imagery, (b) the manipulation of the processing strategy in cognitive performance, such as asking subjects to use imagery in the mediation of stimuli information, and (c) the comparing of information processing strategies and performance in subjects who are low and high in imagery ability (Paivio, 1971)" (p. 173).**

**"Several studies (Nomura, Crawford, & Slater, 1981; Walker, Garrett, & Wallace, 1976; Wallace, 1978) found that a very few high hypnotizables can successfully produce eidetic imagery, using nonfakable stereograms, during hypnosis even though they cannot during waking. Spanos, Ansari, & Stam (1979) were unable to replicate these findings. It was only self-reported childhood eidetikers who exhibited eidetic imagery during hypnosis, and then only a few. This research suggests that hypnosis permits certain individuals to access the "lost" ability to image eidetically, possibly through a shift in cognitive strategies" (p. 174).**

**"An underlying emphasis of this paper is the need for hypnotic investigators to integrate findings from cognitive psychology into their research, as well as apply the many new approaches to understanding brain functioning which are now being developed, in their search for a better understanding of what occurs during hypnosis" (p. 176).**

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1981

Hilgard, Ernest R.; Sheehan, Peter W.; Monteiro, K. P.; Macdonald, Hugh (1981). Factorial structure of the Creative Imagination Scale as a measure of hypnotic responsiveness: An international comparative study. International Journal of Clinical and Experimental Hypnosis, 29, 66-76.

The factor structure of the Creative Imagination Scale (CIS) of Wilson and Barber (1978) was investigated in two studies by correlating scores on it with scores on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the Absorption scale of Tellegen and Atkinson (1974), and Sheehan's (1967) revision of Betts' (1909) imagery scale. One of the studies was conducted at the University of Queensland in Australia (N = 237), the other at Stanford University in California (N = 92). The major finding, consistent in both investigations, was that two factors accounted for the major portion of the variance, one factor designated as a Hypnotic Performance factor, the other designated as an Absorption/Imagination factor. The CIS was weighted highly on both factors, the data bearing on earlier claims that CIS represents a single-factor scale.

1978

Bowers, Patricia G. (1978). Hypnotizability, creativity and the role of effortless experiencing. International Journal of Clinical and Experimental Hypnosis, 26, 184-202.

Creative people and highly hypnotizable people describe their experience of finding creative solutions or responding to hypnotic suggestions as "effortless." It is suggested that receptiveness to subconscious work accounts for the experience of effortlessness in both tasks. An experiment using 32 high and low hypnotizable men and women was designed to explore the hypothesis that the aptitude for such effortless experiencing accounts for the relationship found between creativity and hypnotizability.

Analyses of variance indicate highly significant effects of level of hypnotizability on composite scores reflecting effortless experiencing of several tasks and creativity. Intercorrelations of these indices are about .60. As predicted, effortless experiencing accounts for much of the relationship between high versus low hypnotizability and composite creativity. The role of imagery vividness and of absorption in both hypnotizability and creativity were also explored.

**Sanders, Shirley (1978). Creative problem-solving and psychotherapy. International Journal of Clinical and Experimental Hypnosis, 26, 15-21.**

The techniques described comprise a creative problem-solving approach to short-term individual psychotherapy which appears effective in conjunction with hypnosis. The techniques include describing and visualizing the client's problem, imagining alternative reactions, dreaming about new solutions, and trying the solutions in real life. The method is illustrated by 2 clinical examples. The discussion focuses on a comparison of the techniques used with individuals versus with small groups, the fostering of regression in the service of the ego, and the redirection of attention from the physically out of control to the recognition of the possibility of obtaining control. This shift of attention fosters active coping on the part of the client.

**1977**

**Krippner, Stanley (1977). Research in creativity and psychedelic drugs. International Journal of Clinical and Experimental Hypnosis, 25, 274-308.**

The influence of psychedelic drug experience upon various aspects of the creative process has been studied by very few researchers over the years. Although no conclusive statements can be made, it appears possible that these substances may be associated with original ideation and imagery, especially in the case of professional artists. There is no evidence that LSD-type drugs can evoke creativity on the part of individuals who are not known to be talented before drug ingestion. Creativity involves transforming fantasy into reality; the study of psychedelic experience, hypnotic experience, and other alterations in consciousness may help science to understand this process.

**1976**

**Gur, R. C.; Reyher, J. (1976). Enhancement of creativity via free-imagery and hypnosis. American Journal of Clinical Hypnosis, 18, 237-249.**

Thirty-six male, highly susceptible subjects, divided into hypnosis, simulation and waking groups, were given the Torrance Test of Creativity with modified instructions requiring them to wait passively for visual images in response to the test stimuli. Twelve waking subjects received the same test under standard instructions. The hypnotized group scored higher than all control groups on over-all creativity and on Figural creativity, but not on Verbal creativity. The results seem to support the application of the ego-analytic concept of 'adaptive regression' to both hypnosis and creativity. They also seem to confirm the association found between hypnosis and the activation of the non-verbal cerebral hemisphere.

**Raikov, V. L. (1976). The possibility of creativity in the active stage of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 258-268.**

Creative capacity was studied by means of suggestions given to Ss under the condition of active hypnosis. In deep hypnosis it was suggested to S that he was a

famous person with a specific talent. In a series of experiments Ss performed under active hypnosis such tasks as drawing, playing musical instruments, and playing chess. The results illustrated that creative processes can be facilitated in Ss capable of deep hypnosis and there is a carry-over of the creative achievements from hypnosis to the waking state. Low hypnotic Ss and control groups did not show improvements in the tasks. A particular significant increase in creativity was observed when Ss capable of deep hypnosis performed several successive creative tasks while hypnotized. The theoretical and experimental definitions of several new approaches to active hypnosis are also discussed.

1968

Bowers, Kenneth S. (1968). Hypnosis and creativity: A preliminary investigation. International Journal of Clinical and Experimental Hypnosis, 16, 38-52.

24 HIGHLY SELECTED, HYPNOTICALLY TRAINED COLLEGE STUDENTS WERE CAST INTO HYPNOTIC AND HYPNOSIS SIMULATING GROUPS AND GIVEN SUGGESTIONS TO BEHAVE CREATIVELY ON THE CONSEQUENCES TEST OF ORIGINALITY. NO DIFFERENCES BETWEEN THE 2 GROUPS APPEARED. THEY DID APPEAR, HOWEVER, ON A CONCEPT FORMATION TASK AS A FUNCTION OF TASK-INVOLVEMENT INSTRUCTIONS, IRRESPECTIVE OF WHETHER SS WERE HYPNOTIZED OR SIMULATING HYPNOSIS. MOREOVER, AWARENESS OF RESPONSE REINFORCEMENT CONTINGENCIES WAS STRONGLY INFLUENCED BY THE INVOLVING SUGGESTIONS. THE NEGATIVE FINDINGS ON THE CREATIVITY TEST WERE ATTRIBUTED TO THE EXCELLENT PERFORMANCE OF THE SIMULATOR SS. IT IS SUGGESTED THAT PERHAPS SUSCEPTIBILITY PER SE INTERACTS WITH ROLE PLAYING INSTRUCTIONS IN GENERATING MORE REGRESSIVE MODES OF THINKING. (SPANISH + GERMAN ABSTRACTS) (2 P. REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Bowers, Margaretta K. (1966). Experimental study of the creative process by means of hypnoanalytic associations to a painting done in occupational therapy: The magic ring of Walter Positive. International Journal of Clinical and Experimental Hypnosis, 14 (1), 1-21.

Drawings, executed in free association to an uninteresting painting, were secured through the technique of mirror gazing in hypnotic trance. They provided an unexpectedly rich source of the life history, traumatic experiences, and hopes and expectations of recovery in a patient who was with all other techniques, both conscious and hypnotic, most unproductive. The drawings also demonstrate the dynamic development of the life history and the integrative process by which the patient expects to make and actually has made his recovery. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

**Moss, C. Scott; Stachowiak, J. G. (1963). The ability of hypnotic subjects to interpret symbols. Journal of Projective Techniques, 27, 92-97.**

**15 college students participated in the investigation, having been selected as hypnotizable on the basis of the Friedlander-Sarbin Scale of Hypnotic Suggestibility. 3 test items--a fairy tale, a brief Rorschach protocol, and a dream--were used to evaluate the ability of the Ss to interpret the meaning of symbolic productions. Each S was used as his own control, since the test items were first presented in the waking and then in the hypnotic state. The results did not demonstrate that hypnosis can facilitate the latent capacity of the Ss for the understanding of symbolic language. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1962**

**Raginsky, Bernard B. (1962). Sensory hypnoplasty with case illustration. International Journal of Clinical and Experimental Hypnosis, 10, 205-219. (In Index Medicus 63: March, S-543)**

**Sensory hypnoplasty is a technique in hypnoanalysis in which the hypnotized patient models clay to which various sensory stimuli (e.g., temperature, texture, color, smell) have been added to stimulate basic primitive memories, associations, sensations, and conflicts. This allows the patient to give plastic expression to repressed and suppressed material which is then followed by verbalization of the conflicts. The therapeutic process is reputed to be greatly accelerated. This technique has been used in the successful treatment of diverse pathological conditions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Webster, Raymond B. (1962). The effects of hypnosis on performance on the H-T-P and MPS. International Journal of Clinical and Experimental Hypnosis, 10 (3), 151-153.**

**Impressionistic analysis supported the view that hypnosis Ss provide richer protocols in the House-Tree-Person projective technique than in the waking state. A quantitative analysis of subtest and total scores on the Minnesota Personality Scale in the 2 states was insignificant. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Raginsky, Bernard B. (1961). The sensory use of plasticine in hypnoanalysis (sensory hypnoplasty). International Journal of Clinical and Experimental Hypnosis, 9 (4), 233-247. (Abstracted in Psychological Abstracts, 62: 4 II 33R)**

**Modelling with plasticine under hypnosis (hypnoplasty) allows the patient to give plastic expression to suppressed or repressed material. The author claims that this approach finds the patient quite unprepared to use his usual defenses, resulting in a**

very rapid and remarkable ventilation of unconscious material. Several clinical cases demonstrating the use of sensory hypnoplasy are presented. From *Psyc Abstracts* 36:04:4II33R. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## CULTURE

2003

Sapp, Marty; Hitchcock, Kim (2003). Creative imagination, absorption, and dissociation with African American college students. *Sleep and Hypnosis*, 5 (2), 95-104.

The purpose of this study was to assess creative imagination, absorption, and dissociation with African American college students. Two hundred thirty-six undergraduate African American students ranging between the ages of 18 to 22 participated in this study. Students were assigned to the following experimental manipulation: (a) Creative Imagination Scale (CIS), a cognitive-behavioral measure of hypnotizability; and (b) Dissociative Experiences Scale (DES), General Dissociation Scale (GDS), and Tellegen Absorption Scale (TAS) embedded within the CIS. Results indicated that dissociation and absorption were affected by the CIS. Finally, this sample was compared with the European American sample obtained by Barber and Wilson (1978) and Wilson and Barber (1978), and clearly the two samples differed on creative imagination,  $t(405)=7.00, p<.005$ . The African American sample had a significantly lower mean CIS score than the European American sample.

Sapp, Marty; Hitchcock, Kim (2003, March). Measuring dissociation and hypnotizability with African American college students: A new dissociation scale-The General Dissociation Scale. *Australian Journal of Clinical Hypnosis*, 24 (1), 23-34.

Two hundred and two undergraduate African American college students participated in this study. Students completed the Harvard Group Scale of Hypnotic Susceptibility, Form A: (HGSHS:A), the Dissociative Experiences Scale (DES), General Dissociation Scale (GDS) and the Inner Subjective Experiences scoring for the HGSHS:A, a measure of nonvolitional hypnotic responding. The GDS produced items had a reliability of .87 and it correlated .505,  $p<.01$ , with the DES. The items of HGSHS:A behavioral scoring method produced a reliability index of .29 with African American college students. Clearly, the Inner Subjective Experiences method for scoring the HGSHS:A is more appropriate for African American college students than the behaviorally scored items of the HGSHS:A, and the items of this scale had a reliability of .88. And the GDS produced items that were reliable for African American college students and European American students. Finally, this study provided confidence intervals for the reliability of items that measured hypnotizability, dissociation and nonvolitional responding.

**2002**

**Green, Joseph P.; Rasekhy, Rouhangiz; Johnson, Lissa; Bernhardt, Sarah E. (2002). Cultural views, attitudes, and beliefs about hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.**

**The present investigation surveyed attitudes and beliefs about hypnosis across four samples of students attending university at the University of New South Wales, Australia; Dortman University, Germany; The Ohio State University, United States; and Shaheed Behesti University of Medical Sciences, Iran. A total of 280 undergraduate students, ranging in age from 18 to 25 years old, completed three different questionnaires assessing their opinions and beliefs about hypnosis. Our findings show that myths and misconceptions about hypnosis abound and that such beliefs are not culture specific" (Bulletin of Division 30, Psychological Hypnosis, Fall 2002, Vol. 11, No. 3, p. 14).**

**1999**

**Rodriguez Sanchez, Rodriguez Rodriguez, Santana Mariqo, Piqueras Hernandez, Alvarez Ramirez (1999). Current tendencies and future directions of hypnosis in Cuba. Newsletter of the Erickson Foundation, Vol 2, 6.**

**Reviews the history of hypnosis in Cuba and the main tendencies and trends. There were no influences from Ericksonian hypnosis till recently when the first group of Ericksonians came to teach for the first time in Manzanillo, Granma Medicine University. The main approach is still the so called traditional hypnosis in which there is a development mainly in surgery and in some medical conditions. There are some strong places: Santiago de Cuba, where HipnoSantiago Hypnosis Workshop is held regularly, Manzanillo, where there is a Hypnosis Research group with publications in the country and abroad and experience in teaching hypnosis. The Hypnosis Society is located in Habana. The group from Manzanillo is working in a Clinic Project with such themes as hypnoanesthesia in major surgery, models of groups learning under hypnosis, and some other therapies.**

#### **NOTES**

**List of Manzanillo's Research group main papers:**

**Learning under very deep hypnosis. In Neurology Magazine, Spain**

**Current tendencies of Hypnosis in Cuba. In Newsletter of Erickson Foundation USA**

**Breaking hypnosis myths. Communication at the University Forum.**

**Main Philosophical, Physiological and Methodological Problems in Hypnosis Research. In University Forum**

**States of consciousness and hypnosis. In Multimed Magazine, Cuba.**

**Memory tests and hypnosis. Psychology Thesis.**

**Autonomic System and Hypnosis. Psychology Thesis (Master degree)**

**Hypnosis as the only anaesthetic procedure in major surgery. (Thesis)**

**1998**

Court, John (1998). Not the state, but the territory. Australian Journal of Clinical and Experimental Hypnosis, 26 (2), 104-112.

With the current growth of interest in spirituality, the interface between hypnosis and religious practices takes on new significance. Cautions have traditionally been expressed about the hypnotic state, with fears about control and willpower. While developments in the ethical use of hypnosis make such concerns less pressing, there remain significant paradigm issues which are being explored in the literature. These include pursuit of the age-old question, "Who are the legitimate healers in a society?" The territory of the church and the territory of the clinic are not entirely separate, so issues arise regarding the relative authority of practitioners to intervene in people's lives, and what such interventions should look like. Many Christians who might benefit from hypnosis have been warned to be totally against it. Evidence will be brought forward to challenge this and make it safer to look to therapeutic hypnosis without compromising beliefs.

1997

Jana, Hrishikesh (1997). The development of hypnosis in India. [Unpublished manuscript]

#### NOTES

Yoga (specially Meditative Yoga or Savasana) and Transcendental Meditation are integral parts of the cultural heritage of Indians. These and the state of hypnosis possess some of the characteristics in common and all these have been grouped under the heading 'Altered States of Consciousness' by the modern psycho-physiological and biological researchers. Hindu saints used to clothe sparsely even in the midst of extreme environmental conditions and the lying down of some yogis on the nail-bed are examples of their super-human tolerance to cold, pain, etc." (p. 2). Author cites the pioneering work of Dr. James Esdaile using hypnosis for surgical anaesthesia at Hooghly Hospital (1845-1850). Despite India's culture and the record of Dr. Esdaile, hypnosis often was regarded with suspicion in India. In the early and mid-20th century, physicians (e.g. Dr. N.V. Mody, an obstetrician) had difficulty having their work accepted, but since the early 1970s Dr. Jana and others have contributed to a renaissance in the use of medical, dental, and psychological hypnosis. This paper chronicles the history of hypnosis in the late 20th century in India.

1996

Cardena, Etzel (1996). "Just floating on the sky:" A comparison of hypnotic and shamanic phenomena. In Quekelberghe, R. V.; Eigner, D. (Ed.), Yearbook of cross-cultural medicine and psychotherapy 1994 (pp. 85-98).

Despite the vastly different cultural contexts of hypnosis and shamanism, a comparison of the phenomenology of the two is warranted. The author proposes that the two types of very hypnotizable individuals, one exhibiting vivid imagery and the other showing diminished memory and

control, corresponds to the classical distinction between soul journey and spirit possession. Other cognitive traits, developmental histories and alternate experiences of hypnotic virtuosos and shamans imply other similarities. The resemblance between hypnotic and shamanic phenomenology strongly suggests a universal disposition that is independent of culture. Western culture should acknowledge, respect and study the potentials and risks of this ability.

Desmangles, Leslie G.; Cardena, Etzel (1996). Yearbook of Cross-Cultural Medicine and Psychotherapy, 1994. Berlin: Verlag fur Wissenschaft und Bildung. (Theme Issue: Trance, possession, healing rituals, and psychotherapy)

In this paper, we analyze trance possession in its cross-cultural, psychological and religious contexts, and describe its role specifically within Haitian Vodou and society. In contrast with the earlier analysis of spirit possession as a form of psychopathology, more recent scholarships (sic) has emphasized its import as a common and meaningful religious practice. Vodou is a syncretic religion that, for historical reasons, fused African traditions with Catholicism. In Haiti, the possessed individual plays a liminal function that bridges the sacred and the secular, and temporarily transcends the limitations imposed provided by social or economic status.

#### NOTES

The article lists the following as Contents. 1. Possession in context 2. Possession and psychotherapy 3. Vodou and Haiti 4. Vodou rituals (A brief history - The many faces of the Lwas) 5. Deutsche Zusammenfassung 6. Literature

Zachariae, Robert; Sommerlund, Bo; Molay, Francine (1996). Danish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 44 (2), 140-152.

Norms for a Danish adaptation of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) are presented. Four samples tested from 1988 to 1991 (n = 166, n = 54, n = 95, and n = 61) were pooled, resulting in an aggregate sample of 376 participants. The normative data were generally congruent with earlier normative studies with regard to score distribution, item difficulty levels, and reliability. Studies using the Danish adaptation of the HGSHS:A as a screening instrument have shown the predictive value of the instrument in a Danish context. Data for a comparable American sample of volunteers (n = 170) tested by the same hypnotist were included in the analysis. A comparison revealed a marked difference for the posthypnotic suggestion item, hinting that cultural differences between the Danish and American samples with regard to expectancies and attitudes toward hypnosis may play a role. Further studies comparing attitudes toward hypnosis across different cultural contexts are needed to clarify this issue. - Journal Abstract

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

#### 1994

Cardena, Etzel (1994, October). Dissociative trance disorder, amnesia, and fugue: New proposals. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Dissociative trance disorder was proposed but not accepted for the newest revision of the Diagnostic and Statistical Manual; it is being considered for DSM IV. It is needed because the current dissociative diagnoses don't cover many of the patients. People are using the NOS characterization for those patients. Trance is a frequent type of pathology in other cultures. [Notes were not recorded for most of this paper.]

Cardena, Etzel (1994, August). Spirit possession in Haiti. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

NOTES: THREE DIMENSIONS OF POSSESSION: 1. Shift from one identity into another (e.g. substituting the everyday identity for that of a spirit) 2. Transitional (you are not having one type of identity substituted for another); involves a transition between states of consciousness (e.g. confusion, dizziness) 3. Transcendent possession - you have a human identity that is not quite there, but another identity has not taken over, like the oracle.

He disagrees with Eliade and Roger Walsh who imply that shamanism is a higher form than possession because possession is "out of control."

Flight of mind - you are able to remember and bring back the information, mostly visual/imaginal.

vs Possession - involves an embodied alteration of consciousness and, frequently, amnesia.

For further information, consult Cardena, E. (1989). The varieties of possession experience. Association for the Anthropological Study of Consciousness Quarterly, 5 (2- 3), 1-17.

Spanos, Nicholas P. (1994). Multiple identity enactments and multiple personality disorder: A sociocognitive perspective. Psychological Bulletin, 116, 143-165.

People who enact multiple identities behave as if they possess 2 or more selves, each with its own characteristic moods, memories, and behavioral repertoire. Under different names, this phenomenon occurs in many cultures; in North American culture, it is frequently labeled multiple personality disorder (MPD). This article reviews experimental, cross-cultural, historical, and clinical findings concerning multiplicity and examines the implications of these findings for an understanding of MPD. Multiplicity is viewed from a sociocognitive perspective, and it is concluded that MPD, like other forms of multiplicity, is socially constructed. It is context bounded, goal-directed, social behavior geared to the expectations of significant others, and its characteristics have changed over time to meet changing expectations.

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimate the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

1993

Cardena, Etzel (1993, October). Trance and possession as dissociative disorders: How exotic are they?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES: Joke: "What happened to the possessed patient who didn't pay his exorcist?" Answer: "He got repossessed."

Began with a quotation of Lagerkvist's book describing possession of a Sybil in Greek temple. Possession is part of religious experience worldwide, that he is not discussing here.

The revised diagnostic manual, ICD-10, has included "dissociative trance disorders." To diagnose this one must have either trance (narrowing awareness or focusing and stereotyped movements, behaviors) or possession trance (replacement of sense of personal identity by a new identity, with stereotyped culturally-determined behaviors or movements that are experienced as being controlled by the

possessing agent), \*and\* full or partial amnesia for the event. Cardena emphasizes it doesn't need to be full amnesia.

To be diagnosed as dissociative trance disorder, the trance or possession state observed cannot be a normal part of a broadly accepted cultural or religious practice, and it must produce distress or maladjustment.

These are the most common type of dissociative disorders in non-Western cultures, e.g. 90% in India. So this diagnosis in India is not "atypical." "Non-Western" applies to 80% of the World and 1/3 of the USA population. DSM is trying to expand cultural relevance.

Also, even in the Western culture Allison and others have published cases of dissociative trance disorder, and others have described trance disorders:

Spiegel & Spiegel's Grade 5 personality is vulnerable to dissociative disorder. Hartman's chronic nightmare patients have "boundary thinness" (i.e. they are not clear if they are awake or asleep, lack separation from themselves and others). Lynn & Rhue's fantasy prone individuals, 22% of people, are vulnerable to maladjustment.

Cardena's recommended change in diagnosis of dissociation is critiqued in Transcultural Psychiatric Research Review (1992). Criticisms of the new diagnosis, published in that journal, are: 1. Culture-bound syndromes cut across Western diagnostic boundaries. 2. The diagnosis may be insensitive to the cultural context in which phenomena occur (e.g. distress may lead a person to participate in a cult of affliction) and it may require anthropological sophistication of diagnosticians or consultation with someone who has that knowledge. 2a. It may disregard considerations such as who has the power to "authorize" the phenomenon, under what circumstances, etc. [That would be true with any diagnosis however.] 3. Dissociative Trance Disorder may assume greater within and across-culture uniformity for the conditions than is warranted. 4. It may give validity to metaphysical explanations for spirit possession. [But in psychiatry we often use terms that don't take into consideration validating metaphysical explanations, e.g. "phantom limb" pain. 5. The medical model that underlies DSM is inappropriate for ontological considerations on the nature of the self. [But those with this diagnosis give us some understanding, not what the ultimate nature of the self and consciousness are. Diagnoses are pragmatic ways of dealing with problems.]

At the present time, the diagnosis of Dissociative Trance Disorder is included in the Appendix of DSM-IV.

For further elaboration of this material, see Cardena, E. (1992). Trance and possession as dissociative disorders. *Transcultural Psychiatric Research Review*, 29, 283- 297.

1992

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. *Stress Medicine*, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the

sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

**1991**

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

#### **NOTES**

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

**Daglish, Mark R. C.; Wright, Peter (1991). Opinions about hypnosis among medical and psychology students. Contemporary Hypnosis, 8, 51-55.**

A survey was undertaken of opinions about hypnosis among first year medical and psychology students at the University of Edinburgh. Data are presented on the effects of self-estimated hypnotizability and sex, on opinions about hypnosis. The results are compared with those from similar studies conducted in Australia and the USA. Overall, the surveyed population showed a similar level of knowledge about hypnosis to that found among the general public.

**Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.**

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on

suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

**1990**

**Downs, John M.; Dahmer, Sharon K.; Battle, Allen O. (1990). Multiple personality disorder in India. American Journal of Psychiatry, 147 (9), 1260.**

**Comments on the article by Adityanjee et al (see PA, Vol 77:12344) on multiple personality vs possession syndrome in India. The history of the trends of these disorders is presented, and the differences between multiple personality and possession are described. The only fundamental difference between the 2 disorders may be in the voluntary type.**

**1987**

**Dobkin de Rios, Marlene; Friedmann, Joyce K. (1987). Hypnotherapy with Hispanic burn patients. International Journal of Clinical and Experimental Hypnosis, 35 (2), 87-94.**

**This paper examines a culturally sensitive hypnotherapeutic intervention for Hispanic burn patients who suffer symptoms of the post-traumatic stress disorder and discusses the outcome of 27 patients seen by the authors (a medical anthropologist and a clinical psychologist), over a 3.5-year period. Given the difficulties of recent monolingual, Mexican migrants in responding to psychological interventions that are not culturally sensitive, the hypnotherapeutic interventions and procedurs developed by the authors provide a plan for systematic desensitization and cultural concordance to make rehabilitation of Hispanic burn patients more effective.**

**1986**

**Spanos, Nicholas P.; Cross, Wendi P.; Lepage, Mark; Cristine, Marjorie (1986). Glossolalia as learned behavior: An experimental demonstration. Journal of Abnormal Psychology, 95, 21-23.**

**60 Ss listened to a 60-s sample of glossolalia (defined to them as pseudolanguage) and then attempted to produce glossolalia on a 30-s baseline trial. Afterward, half of the Ss received two training sessions that included audio- and videotaped samples of glossolalia interspersed with opportunities to practice glossolalia. Also, live modeling of glossolalia, direct instruction, and encouragement were provided by an experimenter. Both the trained subjects and untreated controls attempted to produce glossolalia on a 30-s posttest trial. About 20% of subjects exhibited fluent glossolalia on the baseline trial, and training significantly enhanced fluency. Seventy percent of trained subjects spoke fluent glossolalia on the posttest. Our findings are**

more consistent with social learning than with altered state conceptions of glossolalia.

Burnham, John C. (1984, October/1986). The fragmenting of the soul: Intellectual prerequisites for ideas of dissociation in the United States. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 63-84). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

#### NOTES

Reductionism was a relentless pursuit of the idea that knowledge of components led to knowledge of causes. In this context, I propose to show how, in the psychological-medical realm, the initial concept was the soul, and the final intellectual product was dissociative phenomena" p. 64.

1984

Suryani, L. K. (1984). Culture and mental disorder: The case of bebainan in Bali. In Culture, medicine and psychiatry. D. Reidel Publishing Company.

#### NOTES

Bebainan is a form of dissociation which is culturally associated with Bali. Thought to be caused by sorcery, a bebainan attack lasts up to an hour and is manifested by confusion, crying, screaming, and shouting, with inability to control one's actions. However, it seems most victims maintain awareness of their own behavior and are not amnesic for it afterwards.

In this study, the author interviewed 27 people, mostly female, most of whom experienced their first attack between 16-30 years of age. The author concluded that the attacks permitted release of feelings of frustration and anger without stigma. Author concluded it is not a form of psychosis, is not organic, and is not a neurosis.

Wilson, Ian (1984). Jesus--The evidence. London England: Weidenfeld and Nicolson.

#### NOTES

Miracles of Jesus are attributed to hypnosis, in a culture that had already experienced faith healers. Many of those healed had diseases that today might fall into the 'hysteria' or 'psychosomatic' categories (paralysis, lameness, fever, catalepsy, haemorrhage, skin disease, mental disorder), which diseases are frequently responsive to hypnosis. Further, Jesus' reputation preceded him, and the fact that his cure rate was low in his home town is evidence of both the veridicality of the written record (Mark 6: 1-6) and the expectancy factor. "The significance of this episode is that Jesus failed precisely where as a hypnotist we would most expect him to fail, among those who knew him best, those who had seen him grow up as an ordinary child. Largely responsible for any hypnotist's success are the awe and mystery with which he surrounds himself, and these essential factors would have

been entirely lacking in Jesus' home town" (pp. 111-112). The author also assigns other miracles (his transfiguration into dazzling light before three disciples; turning water into wine) to hypnosis [which other writers might ascribe to suggestion].

1982

Hong, G. K.; Skiba, A. H.; Yepes, E.; O'Brien, R. M. (1982). Effects of ethnicity of hypnotist and subject on hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 30 (1), 23-31.

The effect of ethnic similarity of hypnotist and hypnotic S on hypnotic susceptibility was examined in a 2-part study. The first part of the study compared the performance of Anglo versus Chinese hypnotists on Anglo versus Chinese Ss. In the second half of the study, Anglo and Hispanic Ss and hypnotists were compared using the same Anglo hypnotist-S control group. In total, 112 volunteers were administered the Stanford Hypnotic Susceptibility Scale, Form A, of A. M. Weitzenhoffer and Hilgard (1959), with 16 Ss (8 males and 8 females) in each condition. A 2 x 2 ANOVA was performed on the data for each part of the study. Ethnic similarity of hypnotist and S was found not to enhance hypnotic susceptibility. The implications of these results are discussed in relation to the assumed superiority of homoethnicity in psychotherapy.

Larbig, W.; Elbert, T.; Lutzenberger W.; Rockstroh, B.; Schnerr, G.; Birbaumer, N. (1982). EEG and slow brain potentials during anticipation and control of painful stimulation. Electroencephalography and Clinical Neurophysiology, 53, 298-309.

Cerebral responses in anticipation of painful stimulation and while coping with it were investigated in a 'fakir' and 12 male volunteers. Experiment 1 consisted of 3 periods of 40 trials each. During period 1, subjects heard one of two acoustic warning stimuli of 6 sec duration signaling that either an aversive noise or a neutral tone would be presented at S1 offset. During period 2, subjects were asked to use any technique for coping with pain that they had ever found to be successful. During period 3, the neutral S2 was presented simultaneously with a weak electric shock and the aversive noise was presented simultaneously with a strong, painful shock, again under pain coping instructions. EEG activity within the theta band increased in anticipation of aversive events. Theta peak was most prominent in the fakir's EEG. A negative slow potential shift during the S1-S2 interval was generally more pronounced in anticipation of the aversive events than the neutral ones, even though no overt motor response was required. Negativity tended to increase across the three periods, opposite to the usually observed diminution. In Experiment 2, all subjects self-administered 21 strong shock-noise presentations. The fakir again showed more theta power and more pronounced EEG negativity after stimulus delivery compared with control subjects. Contrary to the controls, self-administration of shocks evoked a larger skin conductance response in the fakir than warned external application.

NOTES

A published case study by Pelletier (1977) reported EEG theta enhancement during pain control states, which were maintained by EEG feedback of alpha and theta bands. That author concluded that EEG theta was necessary for the control of pain psychologically.

The authors of this article measured slow brain potentials (SBPs) and vertical eye movements (VEMs). Principal components analysis of the EEG wave forms found three components: theta (4-5.6 c/sec), alpha band (9-10 c/sec) and high frequencies (above 14.4 c/sec) plus harmonics loading in frequencies of 3.2-4.5 c/sec, 7.5-9, and above 15 c/sec.

Alpha "decreased over periods in the parietal record and was virtually absent in the fakir's EEG during period 3" (p. 301). The fakir had a lot of non-sinusoidal, especially square wave, activity.

"Very pronounced negativity was recorded preceding the aversive S2, greater than under neutral stimulus conditions .... This difference was most pronounced at the vertex ... The late negativity increased over periods in control subjects ... especially in anticipation of the aversive S2 ... . This contrasts with the usually observed decrease of SBP components over trials. As is shown in Figure 2, the PCA [principal components analysis] yielded two components for the 2.0 sec S2 interval, a positive deflection, which can be assigned to the P300 complex (here not reported), and a negative deflection, labeled post- imperative negative variation. ... This negative component increased over periods, being more pronounced in response to the aversive stimulation ... with increasing differentiation over period ..." (p. 302-303).

The fakir undertook an elaborate self hypnosis or trance induction to achieve analgesia that he had previously demonstrated in the laboratory (thrusting 4 unsterilized metal spikes into his abdomen, tongue, and neck without bleeding). This included "long- continued fixation on a point above the eye-brows. Blank facial expression, staring eyes, and a very low rate of eye-blinks indicated a trance-like state (periods without eye-blinks more than 30 min)" (p. 299). During the experiment itself, the fakir showed few ocular movements during the second and third periods. He also demonstrated large skin conductance responses, recorded from the second phalanges of the index and middle fingers of the left hand, to the aversive S1.

Experiment 2 was designed to emulate the self-administered aversive stimulation that the fakir routinely undertook, by having the volunteer Ss hold a switch that they pressed twice/minute, giving themselves a mild shock and an aversive noise. (These were the same aversive stimuli as were used in Experiment 1.) There were 21 self-paced button presses.

Three additional measures were taken: 1. Bereitschaftspotential (BP) - the mean negative shift during the 0.3 sec interval prior to the motor response of pressing the switch 2. Postimperative component (PINV) - the mean negative shift 0.9 to 1.9 sec after stimulus onset, i.e. elicited by closing the microswitch 3. Skin conductance response (SCR) - maximum change in skin conductance level during five second interval after the motor response of pressing the switch.

The fakir, but not the control Ss, showed a pronounced precentral PINV on each single trial of Experiment 2. He also showed pronounced SCRs (indicating autonomic arousal), which was even greater than the SCRs of control Ss. His

subjective pain rating was 1 in Experiment 1 (compared with 6.4 for controls) but 8 during Experiment 2 (compared with 5.7 for controls), on a scale of 1 to 10 maximum. Thus the fakir's pain increased from Experiment 1 to 2, while for many volunteer Ss it decreased 2 or 3 points. When interviewed, he said that "intention and motor commands prevented the fakir from getting into 'trance' satisfactorily. Consequently, he reported to have experienced the aversive stimuli as more painful than in experiment 1. Thus it might be that the observed PINV indicates the noncontingency between the demand for coping and the failure to cope or the discrepancy between expected control and presently experienced control" (p. 307). In their Discussion, the authors speculate that control of pain such as can be achieved by the fakir may involve dissociation of higher (possibly thalamic and cortical) and lower (reticular formation) arousal structures. Their observation of slow brain potentials (theta) recorded in anticipation of painful or aversive stimuli is in agreement with earlier published studies. However their observation of increasing negativity in anticipation of aversive stimuli is in contrast to previous research findings, in which diminution of negativity is generally observed. Both the fakir and subjects showed a post-stimulus negative shift in response to the S2; this has been "observed in normal subjects under conditions of change from controllable to uncontrollable aversive stimuli... and/or from obvious response-consequence contingencies to unpredictable control over the S2... PINVs were associated with an unexpected change in contingency or the inability to resolve ambiguity. Since a relationship was found between PINV amplitude and subjective ratings or experienced aversiveness of the painful stimulation, it may be speculated that obvious failure in coping with pain (i.e. more experienced pain) together with the requirement to cope (induced by instructions and experimental setting, giving rise to increased expectancy for control), produced a PINV (and probably feelings of uncontrollability together with a state of reactance and frustration) in the present experiments. In accordance with this point of view, it is of particular interest that only the fakir showed a more pronounced PINV in experiment 2, in which subjects delivered the painful stimuli to themselves. A postexperimental interview revealed that intention and motor commands prevented the fakir from getting into 'trance' satisfactorily" (p. 307).

Stam, Henderikus J.; Spanos, Nicholas P. (1982). The Asclepian dream healings and hypnosis: A critique. International Journal of Clinical and Experimental Hypnosis, 30 (1), 9-22.

The present paper critically evaluates the popular contention that the dream healings which occurred in antiquity at the Asclepian temples resulted from the unwitting use of hypnosis. This contention is found wanting and it is argued instead that these reported healings can be understood better by considering them in their cultural context.

1980

Fromm, Erika (1980). Values in hypnotherapy. Psychotherapy: Theory, Research and Practice, 17 (4), 425-430.

Hypnosis is an altered state of consciousness characterized by a regression in the service of the ego along with increased access to the unconscious. This makes it possible to achieve lasting therapeutic results faster in hypnosis than in the waking state. Hypnosis is also a state of decreased vigilance, a vulnerability that involves dangers if a patient is in the hands of a poorly trained, incompetent, or unscrupulous therapist. In general, the same human and moral values that guide responsible therapists with patients in the ordinary waking state must guide them with patients in hypnosis, only more so. Contemporary permissive hypnotherapists do not superimpose their own wills or personalities onto patients but provide support, help patients face the frightening parts of the unconscious, and thus aid them in coping with conflicts and gaining full autonomy and freedom from fear. (11 ref).

Prince, Raymond (1980). Variations in psychotherapeutic procedures. In Triandis, Harry C.; Draguns, Juris G. (Ed.), Psychopathology (6, pp. 291-349). Boston: Allyn & Bacon.

#### NOTES:

Prince points out that indigenous practitioners often capitalize on the organism's endogenous healing mechanisms which develop spontaneously when the individual is distressed. "healers around the world have learned to manipulate and build upon these endogenous mechanisms in a variety of ways to bring about resolution of life's problems and alleviation of suffering" (p. 292). Prince is referring here to altered states of consciousness such as dreams, trance states, dissociations, and mystical experiences of various sorts which are cultivated and elaborated by indigenous healers for therapeutic purposes. In general, Western type practitioners have denigrated these procedures...." (from Ann. Rev. of Psychol., 1982, pp 243-244).

1979

Sheehan, Peter W.; McConkey, Kevin M. (1979). Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27, 294-304.

Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) are presented and results relating to score distributions, item difficulty level, reliability, and validity are considered for 3 distinct samples of Australian students. Data are compared with both the original norms (Shor & E. Orne, 1963) and additional American (Coe, 1964) normative data. Results indicated that, in the Australian context, HGSHS:A functions as a reliable, effective predictor of hypnotic susceptibility. The psychometric properties of the scale were uniform across all of the different samples and reference groups that were considered. The accuracy of the scale appears to be most obviously limited when it is employed as a sole predictor of Ss' special aptitude for hypnosis.

1977

Brown, Daniel P.; Fromm, Erika (1977). Selected bibliography of readings in altered states of consciousness (ASC) in normal individuals. International Journal of Clinical and Experimental Hypnosis, 25, 388-391.

**ABSTRACT:** The bibliography is divided into the following sections:

**I. General Works**

**II. Reference material on personality in relation to altered states**

**III. Social and cultural determinants of altered states**

**IV. Cognition, information-processing, and ego-functioning**

**V. Methodology in the study of altered states**

**VI. Differentiation of hyperaroused states**

**VII. Shamanistic states**

**VIII. Possession-trance**

**IX. Psychedelic states**

**X. The meditative states**

**XI. Personality differences and meditation**

**XII. Affective and cognitive change in meditation**

**XIII. Ordinary Buddhist meditation, concentration, and insight meditation**

**XIV. The variety of Buddhist meditation traditions**

**1977**

Sacerdote, Paul (1977). Application of hypnotically elicited mystical states to the treatment of physical and emotional pain. International Journal of Clinical and Experimental Hypnosis, 25, 309-324.

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

**1972**

Sacerdote, Paul (1972). The nature of the hypnotherapeutic process. American Journal of Clinical Hypnosis, 15 (1), 1-11.

The author presents several clinical cases where hypnosis was successfully utilized. Through detailed description of what takes place during sessions it is shown how various approaches are adapted to the intellectual, cultural, emotional and hypnotic capabilities of the patient and to the progress of therapy. The author analyzes what

takes place during and after hypnotic intervention and draws some conclusions about the nature of the hypnotherapeutic process which, he feels, is essentially a convergence of the patient's and therapist's conscious and subconscious expectations and goals. The importance of the therapeutic ego of the doctor is brought into proper focus. One of the clinical cases illustrates how the therapist can convert a therapeutic relationship that may appear sterile or even hostile into a productive one by utilizing the patient's responses, while avoiding stubborn insistence upon expectations of preconceived hypnotic responses. It is suggested that the hypnotherapeutic model may present, in clearer focus, what takes place in other psychotherapeutic exchanges which do not utilize hypnosis.

1967

Meares, Ainsley (1967). The space between. International Journal of Clinical and Experimental Hypnosis, 15 (4), 156-159.

IN JAPANESE ART, THE CONCEPT OF "THE SPACE BETWEEN" REFERS TO THE WAY IN WHICH THE DIFFERENT ELEMENTS OF A WORK OF ART ARE RELATED TO EACH OTHER. THE MEANING OF CLOSENESS AND DISTANCE BECOMES IMPORTANT. THERE IS SIGNIFICANCE IN ABSENCE AS WELL AS IN PRESENCE. HYPNOSIS MAY BECOME A WORK OF ART WHOSE FULFILLMENT IS ACHIEVED ONLY BY DETAILED ATTENTION TO "THE SPACE BETWEEN." (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Van der Walde, P. H. (1967). Trance states and ego psychology. International Journal of Clinical and Experimental Hypnosis, 15 (3), 95-105.

ABSTRACT: ANALYZES THE BASIC CHARACTERISTICS OF HYPNOSIS, WHICH COMPRISE INDIVIDUAL, INTERPERSONAL, AND CULTURAL VARIABLES. THESE ELEMENTS ARE UTILIZED IN A TRANSCULTURAL COMPARISON TO DEMONSTRATE THAT TRANCE PHENOMENA ARE GOAL-ORIENTED BEHAVIORS WHICH ARE EXPRESSED BY INDIVIDUALS WITHIN A GIVEN CULTURE BY METHODS WHICH ARE CULTURALLY SANCTIONED FOR ACHIEVING THOSE ENDS. THE DIFFERENCES BETWEEN TRANCE STATES CAN BE UNDERSTOOD TO REPRESENT CULTURAL VARIANTS OF SIMILAR PSYCHOLOGICAL MECHANISMS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Devereux, G. (1966). Cultural factors in hypnosis and suggestion: An examination of some primitive data. International Journal of Clinical and Experimental Hypnosis, 14, 273-291. (Abstracted in American Journal of Clinical Hypnosis, 1967, 4, 294)

SOCIOCULTURAL FACTORS, USUALLY RELATED TO SUPERNATURALISTIC ATTITUDES AND PRACTICES, GREATLY ENHANCE THE HYPNOTIZABILITY OF THE PRIMITIVE BY INCREASING THE PRESTIGE ("POWER") OF THE HYPNOTIST, WHO IS USUALLY A

**MAGICIAN. AN ANALYSIS OF PRIMITIVE CULTURAL DATA MAY SHED NEW LIGHT UPON PSYCHOLOGICAL PHENOMENA IN OUR OWN SOCIETY. (SPANISH + FRENCH SUMMARIES) (27 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1965**

**Pedersen, Darhl M.; Cooper, Leslie M. (1965). Some personality correlates of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (3), 193-203.**

The present research was directed principally toward determining the relationship of a number of personality variables to hypnotic susceptibility. The personality variables utilized were selected to cover the personality domain as broadly as possible. Hypnotic susceptibility was measured by the Stanford Hypnotic Susceptibility Scale, Form A. A correlational analysis was completed for 30 Ss. This included (a) the correlations between each of the personality variables and hypnotic susceptibility and (b) the intercorrelations among all of the personality measures. It was found that the following variables correlated with hypnotic susceptibility at the 5% level of confidence: age (-.37), year in college (-.36), and missionary service (.37). Social class rating of father's occupation correlated significantly at the 1% level of confidence (.54). (29 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Ravenscroft, Kent, Jr. (1965). Voodoo possession: A natural experiment in hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 157-183.**

This paper attempts to present Haitian Vodun possession in a form allowing comparison with familiar clinical and experimental hypnotic phenomena. (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

**Ludwig, Arnold M. (1963). Hypnosis in fiction. International Journal of Clinical and Experimental Hypnosis, 11, 71-80.**

Some common conceptions of hypnosis found in selected literary works are presented. Many supranormal powers are attributed to hypnosis. The hypnotist is generally viewed as an evil, demonic agent and the S as a naive, but good, hapless victim. The hypnotist is almost inevitably punished for possessing these extraordinary powers. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

**Bowers, Margaretta K. (1961). Hypnotic aspects of Haitian voodoo. International Journal of Clinical and Experimental Hypnosis, 9, 269-282.**

The voodoo ritual is analyzed within the framework of hypnosis and hypnotically induced secondary personalities. The author contends that "If the hypnotic nature

of voodoo and similar religious rites were better understood the problem of discarding the evil and nurturing the good in the cultural life of people would be facilitated." From *Psyc Abstracts* 36:04:4II69B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Bowers, Margaretta K.; Glasner, Samuel (1958). Auto-hypnotic aspects of the Jewish cabbalistic concept of Kavanah. *Journal of Clinical and Experimental Hypnosis*, 6 (1), 50-70.

## NOTES

The authors present material quoted from numerous Jewish mystics to support the position that many achieved self hypnosis or trance states in the course of their spiritual, especially prayer, practices. "Kavanah" means concentration in the Talmud; "the entire hope of efficacy of ritual or of prayer is wholly dependent on the person's achieving a proper state of concentration and devotion, which is Kavanah" (p. 51). Ecstasy is one aspect of Kavanah and was induced in one way through "concentration upon the magical and mystical properties of the Hebrew letters, arranging and rearranging the letters" (p. 51) in such manner as to produce a trance. Sometimes dissociation occurred ("suddenly I saw the shape of my self standing before me and myself disengaged from me and I was forced to stop writing!" [p. 64]).

Sometimes a particular way of breathing, a particular position of the body, or fasting were used to promote trance development. Imagery and fantasy were also used, in a way resembling the work of Erickson, Kline, and Young; imagery of light and light sources was especially prevalent, reminding one of the candle flame induction technique.

"... it would appear that one of the ambitious purposes of the ecstatic Kavanah was to produce prophets" (p. 61). Some medieval prophets would describe a person's past and predict his future like the modern Edgar Cayce. "The auto-hypnotic state of ecstasy represented by Kavanah was also used for the deliberate induction of states of hysterical dissociation so that the 'prophet' would be able to see his self on the opposite side of the room" (p. 63). But the practice of the mystic ecstatic Kavanah was "generally discouraged or reserved for the elite at best" (p. 65).

"... however, in the medieval Christian world ignorance of the unconscious mental processes was so profound that it made it extremely difficult for wise and prudent religious leaders to cope with the religious excitement and delusionary revelations which broke out periodically. That the Jews were not entirely immune from such excesses at this time is shown by Dr. Scholem's [Major Trends in Jewish Mysticism, 1941] report that:

'In the writings of Eleazar of Worms .... one also finds the oldest extant recipes for creating the Golem -- a mixture of letter magic and practices obviously aimed at producing ecstatic states of consciousness. It would appear as though in the original conception the Golem came to life only while the ecstasy of his creator lasted. The creation of the Golem was, as it were, a particularly sublime experience felt by the mystic who became absorbed in the mysteries of the alphabetic combinations

described in the "Book of Creation." It was only later that the popular legend attributed to the Golem an existence outside the ecstatic consciousness, and in later centuries a whole group of legends sprang up around such Golem figures and their creators" (pp. 64-65).

Concentration was apparently used to avoid pain during torture of martyrdom and death. According to Scholem, the mystic Abraham ben Eliezer Halevi of Jerusalem recommended "to concentrate, in the hour of their last ordeal, on the Great Name of God; to imagine its radiant letters between their eyes and to fix all their attention on it. Whoever will do that, will not feel the burning flames or the tortures to which he will be subjected" (p. 66).

"We have demonstrated, therefore, that the Jewish mystics of former times, from the Biblical period through the Rabbinic period, on through the Middle Ages and almost up to the present day, used autohypnosis as a deliberate technique for the production of religious ecstasy and as a means for obtaining deeper religious insights or revelations. Both the methods by which they induced the autohypnotic trance, or Kavanah, and the ways in which they utilized it parallel some of the modern methods of hypnotic induction and of the utilization of the hypnotic trance" (p. 67-68).

"... hypnosis might well prove itself an important tool for an organized program of research into religious phenomena. Thus, for instance, hypnotic research could possibly provide us with an operational understanding of prayer and its effects. This might further lead to the development of more sophisticated and more effective techniques of prayer for use by scientifically-minded religionists. And it might even lead to the type of direct religious experience reported by religious geniuses of former days, but unfortunately lost to modern man" (p. 68).

Note: The second author is a rabbi.

## NOTES

Author's Conclusions: "In the light of the results, the following conclusions would appear to be justified:

1. Prestige suggestion can effect changes in an individual's response to an attitudes test.
2. Repeated prestige suggestion produces no more marked effect than does a single suggestion in changing social attitudes. However, the results seem to be more lasting with repeated suggestion.
3. Repeated hypnotic suggestion is considerably more effective than repeated waking suggestion in modifying social attitudes. But waking suggestion also seems to have some effect.
4. The effects of both hypnotic and waking suggestion vary greatly with different individuals.
5. The effect of repeated prestige suggestion in changing social attitudes apparently does not follow the pattern of the usual learning curve.
6. The changes noted seem to represent changes in basic attitude, and not merely changes in the response to a particular test" (P. 74).

The attitudes involved nationality preferences ("Negro, Turk, Hindu, or Chinamen" p. 71). The prestige suggestion, given in light hypnosis, was "The results on the test I

gave you were rather disappointing. Most people think that we in the South are deeply prejudiced against the colored races. But that is a mis-understanding of our position. Certainly we University people have no actual dislike of Negroes, Chinamen, or Hindus. And it is our hope, in giving this test, to demonstrate our true attitude, which is far more tolerant than most people give us credit for. I am therefore going to give you the test again. I want you, of course, to give your honest preferences. But where you find a choice difficult, give the 'underdog' the benefit of the doubt. Do you understand? Give the 'underdog' the benefit of the doubt!" (p. 72).

## D RESEARCH

### DEAFNESS

1995

Matthews, William J.; Isenberg, Gail L. (1995). A comparison of the hypnotic experience between signing deaf and hearing participants. International Journal of Clinical and Experimental Hypnosis, 43 (4), 375-385.

This study compared the hypnotic responsiveness of 17 hearing and 34 deaf individuals, all of whom received visual induction and hypnotic suggestions via some form of signing. The comparison between deaf and hearing participants was analyzed on five dependent measures: (a) the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C); (b) participants' individual item performance; (c) overall trance depth; (d) a rapport scale; and (e) a resistance scale measuring attitudes of participants toward the hypnotist. Although all participants showed at least a moderate level of hypnotic responsiveness, the data did not indicate a significant main effect between deaf and hearing participants on any of the dependent measures. However, there was a tendency ( $p < .08$ ) for hearing participants to show a greater hypnotic responsiveness than deaf participants. Additionally, there was a significant difference between all the signing participants combined when compared to the norming population on three items of the SHSS:C. Clinical and theoretical implications of these data are discussed.

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when

assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

1992

Matthews, William J.; Isenberg, Gail L. (1992). Hypnotic inductions with deaf and hearing subjects - an initial comparison: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 7-11.

17 volunteer deaf Ss were compared with 18 volunteer hearing Ss on the Stanford Hypnotic Clinical Scale (SHCS) of Morgan and J. R. Hilgard (1975), and the Indirect Suggestion Scale (ISS) of Matthews and Mosher (1985) in a 2 x 2 ANOVA design. 5 dependent measures: (a) objective scale score; (b) self-report scale score; (c) S rapport with the hypnotist; (d) S resistance to the hypnotist; and (e) overall subjective rating of trance experience were employed to measure any differences between the 2 groups. For SHCS behavioral items, the two-way ANOVA failed to reveal any significant main effect or interaction differences between either group (deaf/hearing) or method of induction (direct/indirect). There was a significant main effect for deaf/hearing groups in level of resistance to the hypnotist. Deaf Ss reported feeling more resistant to the hypnotist than did hearing Ss. This may be due to the mode of communication or the fact that the hypnotist was hearing. Implications and limitations of the study are discussed.

1992

Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias

scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

1987

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern-masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and

phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

**Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials**

**Response Category S Group N Related Unrelated Total**

**Hypnotized 9 7.22 10.78 18**

**(40.13%) (59.88%) (100%)**

**Simulating 15 12.13 5.87 18**

**(67.43%) (32.61%) (100%)**

**Baseline 19 8.79 9.21 18 Controls (48.82%) (51.17%) (100%)**

**Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials**

**Related Responses S Group Phonetic Semantic Hypnotized 1.78 5.44**

**(9.89%) (30.24%) Simulating 7.07 5.07**

**(39.27%) (28.16%) Baseline 4.21 4.58 Controls (23.38%) (25.44%)**

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.)

In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the

hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

**1981**

Gravitz, Melvin A. (1981). Non-verbal hypnotic techniques in a centrally deaf brain-damaged patient. International Journal of Clinical and Experimental Hypnosis, 29, 110-116.

Non-verbal techniques across several sensory dimensions were utilized with a brain-damaged centrally deaf 36-year-old female patient who had been referred for hypnotherapeutic relaxation. These included optical fixation on the therapist's hand with gradual thumb and fore-finger closure, vibratory stimuli, light shoulder pressures, arm stroking, manually facilitated air currents, and reinforcing homework assignments. With hypnotherapy, the patient's physical and emotional behavior was reported by her to have improved to a significant degree.

**1979**

Watkins, John G.; Watkins, Helen H. (1979-80). Ego states and hidden observers. Journal of Altered States of Consciousness, 5 (1), 3-17

Hilgard and Hilgard discovered that subjects who had been rendered hypnotically deaf, or whose hand had been anesthetized under hypnosis, were hearing and sensing the pain at levels below the threshold of normal awareness. They described this phenomena as a cognitive structural state and termed it "the hidden observer." Federn theorized that the ego is subdivided into segments (organized patterns of

behavior and experience) which are semi-autonomous in normal individuals, and which are manifested as completely separate entities (multiple personalities) when the internal boundaries between such parts are rigid and impermeable. He termed these entities "ego states." When activated under hypnosis each ego state experiences its self as subject (I) and the other states as objects (he, she, or it). We have discovered in hypnoanalytic therapy that these ego states act like "covert" multiple personalities, and that clashes between them often create anxiety and psychosomatic symptoms. Ego-state therapy thus becomes a kind of family or group therapy aimed at resolving conflicts between the various ego states which constitute "a family of self" within a single individual. Two studies are reported here to investigate the possibility that Hilgard's "hidden observers" are the same phenomena as these "ego states." The data derived appear to support such a hypothesis. Consideration is given to the possible influence of suggestion and operator variables.

1968

Scheibe, Karl E.; Gray, Arne L.; Kleim, C. Stephen (1968). Hypnotically induced deafness and delayed auditory feedback: A comparison of real and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 16, 158-164.

PRELIMINARY RESEARCH INDICATES THAT HYPNOTICALLY INDUCED DEAFNESS MAY REDUCE THE SPEECH INHIBITING EFFECTS OF DELAYED AUDITORY FEEDBACK (DAF). REAL AND SIMULATING HYPNOTIC SS WERE COMPARED WITH RESPECT TO THE IMPROVEMENT IN SPEECH CONSEQUENT TO THE SUGGESTION OF DEAFNESS. RESULTS INDICATE VERY SIMILAR IMPROVEMENTS OF DAF SPEECH FOR BOTH GROUPS. AN INCIDENTAL FINDING IS THAT REAL SS HAD LONGER SIMPLE READING TIMES UNDER HYPNOSIS THAN DID SIMULATING SS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Kramer, E.; Tucker, G. R. (1967). Hypnotically suggested deafness and delayed auditory feedback. International Journal of Clinical and Experimental Hypnosis, 37-43

A PILOT STUDY INVESTIGATED HYPNOTICALLY INDUCED DEAFNESS USING DELAYED AUDITORY FEEDBACK (DAF). THE FOLLOWING TENTATIVE CONCLUSIONS ARE OFFERED: (1) INSTRUCTIONS TO PRETEND DEAFNESS DID DECREASE THE NUMBER OF SPEECH ERRORS PRODUCED IN THE DAF SITUATION WITH SOME SS, ALTHOUGH THE RESULTS WERE BY NO MEANS THOSE OF COMPLETE DEAFNESS; (2) HYPNOTICALLY INDUCED DEAFNESS ALSO PRODUCED A REDUCTION IN THE NUMBER OF ERRORS CAUSED BY DAF, THOUGH HERE, TOO, THE RESULTS DID NOT APPROACH THOSE OF COMPLETE DEAFNESS; AND (3) ADDITIONAL TRAINING OR EXPERIENCE IN HYPNOSIS SEEMED TO

**PRODUCE AN INCREASED ABILITY OF HYPNOTICALLY SUGGESTED DEAFNESS TO REDUCE SPEECH ERRORS UNDER THESE CONDITIONS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1966**

**Martorano, J. T.; Oestreicher, C. (1966). Hypnosis of the deaf mentally ill: A clinical study. American Journal of Psychiatry, 123, 605-606.**

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

**1954**

**Kline, Milton V.; Guze, Henry; Haggerty, Arthur D. (1954). An experimental study of the nature of hypnotic deafness: Effects of delayed speech feedback. Journal of Clinical and Experimental Hypnosis, 2 (2), 145-156.**

The research subject was a 29 year old college student who was given delayed speech feedback in both the waking state and deeply hypnotized with suggestions of deafness. (Clinically, during hypnotic deafness he lacked the startle reflex in response to auditory stimuli and lost a conditioned response based on auditory stimulus.) Following the experimental procedures, the authors concluded:

"1. Delayed feed-back in the state of hypnotically induced deafness produces distinct impairment in speech performance. This impairment involves loss of motility, increased errors in enunciation and increasing impairment in proportion to increasing difficulty of vocabulary.

2. The speech impairment found in hypnotically induced deafness is very significantly less than the impairment found in waking feed-back performance.

3. The pattern of speech performance in hypnotic deafness shows a pattern very similar to that of non feed-back with respect to constancy of performance and the linear relationship between performance efficiency and difficulty of verbal stimuli.

4. Waking feed-back performance is significantly more variable and erratic than the non feed-back or hypnotic deafness series.

5. Hypnotic deafness does not appear to follow the same neurophysiological pattern as organic deafness with regard to auditory feed-back.

6. Hypnotic deafness does alter certain behavioral [sic] responses to audition and appears to alter the character and nature of hearing.

7. Hypnotically induced deafness would appear to represent a valid alteration of hearing function but not a state akin to organic deafness.

8. Hypnosis appears to be capable of altering feed-back mechanism of an auditory nature" (p. 155).

Malmo, Robert B.; Boag, Thomas J.; Raginsky, Bernard B. (1954). Electromyographic study of hypnotic deafness. Journal of Clinical and Experimental Hypnosis, 2 (4), 305-317.

"Summary and Conclusions. The main purpose of the present study was to investigate the question of similarities and differences between hysterical deafness, previously studied, and hypnotically induced deafness. The study was designed to repeat the objective physiological tests previously carried out with a case of 'total hysterical deafness.' There was also the more general aim of securing objective data to enrich our general understanding of hypnosis.

"Similarities between hysteria and hypnosis which we observed may be listed as follows: (a) Significantly reduced motor reaction (exclusive of blink) to strong auditory stimulation in the deaf state. (b) Complete hearing loss in the hysteric and in one of the hypnotic subjects, even with strong auditory stimulation (i.e., denial of any auditory sensation). (c) With elicitation of strong startle reaction to the first stimulus in the deaf state, much smaller reaction to the next stimulus than would have been predicted on the basis of habituation. (d) Suggestion of substitution of somesthetic for auditory sensations in all subjects (although this was much less definite in the hypnotic subjects than the hysteric).

"The most outstanding dissimilarity lay in the absence of emotional reaction when 'hypnotic defense against sound' was broken through, in contrast to marked affective reaction in the hysterical subject under these conditions.

"The question of inhibitory mechanisms in hysteria and hypnosis was discussed" (pp. 316-317).

## DECEPTION

2002

Gravitz, Melvin (2002). Hypnosis as a counter-measure against the polygraph test of deception.. Polygraph Journal, 31, 293-297.

This article presents a bibliography of experimental and applied studies for reference by those interested in the use of hypnosis as a counter-measure in the "lie detector" test.

Stern, Clara; Stern, William (1999). Recollection, testimony, and lying in early childhood. Washington, DC: American Psychological Association. (First published in 1909, in German.)

"This book, previously unavailable to American readers, describes a seminal study by William and Clara Stern, first published in Germany in 1909, documenting their own children's abilities to recollect, recount, testify, and distinguish truth from falsehood" (from publisher statement). Contents: Recognition as the basis of recall; The chronological development of recall and testimonial ability; False testimony-- Mistaken recollections, pseudo-lies, and lies; Recognition; Correct recollection; Purposive recall; Mistaken recollections; Experimental studies of testimony in early childhood; The falsification of testimony through fantasy; Pseudo-lies and lies; Educating young children to report on their experiences; The origins of lying and its prevention; The capability of small children as witnesses in legal proceedings.

1988

Perugini, Eve Marie; Kirsch, Irving; Allen, Sarah T.; Coldwell, Eleanor; Meredith, Janelle M.; Montgomery, Guy H.; Sheehan, Julia (1998). Surreptitious observation of responses to hypnotically suggested hallucinations: A test of the compliance hypothesis. International Journal of Clinical and Experimental Hypnosis, 46 (2), 191-203.

Suggestions for arm levitation and for visual, auditory, tactile, and taste hallucinations were administered twice via audiotape to a group of high suggestible students and low suggestible simulators. During one of the administrations, participants were led to believe they were alone, but their behavior was surreptitiously recorded on videotape and observed on a video monitor. During the other administration, they were observed openly by an experimenter who had not been informed about group assignment. When unaware that they were being observed, simulators were significantly less responsive to suggestion and engaged in substantially more role-inappropriate behavior. In contrast, the responsiveness of nonsimulating students was not affected by the presence of an experimenter, and they exhibited little role-inappropriate behavior even when alone. These data indicate that the responses of suggestible individuals reflect internally generated changes in experience and are not due to simple intentional compliance (i.e., faking).

1995

Zamansky, Harold S.; Ruehle, Beth L. (1995). Making hypnosis happen: The involuntariness of the hypnotic experience. International Journal of Clinical and Experimental Hypnosis, 43 (4), 386-398

The authors tested the hypothesis that hypnotized individuals do not truly experience their responses to suggestions as occurring involuntarily, but instead absorb themselves in imagery that is congruent with the suggestions while avoiding critical thoughts, or even simply comply with suggestions without genuinely experiencing their responses as nonvolitional. Participants were instructed to engage in thoughts and imagery that conflicted with the suggestions given, were urged to pay attention to their behavior, and were questioned regarding the perceived involuntariness of their responses. Simultaneously, electrodermal skin conductance responses provided a measure of the truthfulness of their reports. It was found that responses to all hypnotic suggestions were reported as being involuntary, in spite of the conflicting imagery and increased saliency, and that these reports were truthful. These findings provide disconfirming evidence for the sociocognitive theories of hypnosis.

1994

Kennedy, James; Coe, William C. (1994). Nonverbal signs of deception during posthypnotic amnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 42 (1), 13-19.

The question of hypnotic subjects complying with instructions, perhaps even purposely deceiving the hypnotist or deceiving themselves, has arisen from the state-nonstate (skeptical-credulous) theoretical controversy. However, experimental testing of competing hypotheses has been difficult. The current report offers methodological procedures that may prove useful. Subjects who were given posthypnotic amnesia instructions were tested on free recall and implicit recall of a 20-word list. To detect the possibility of deception, videotapes of real subjects and simulating subjects during and after posthypnotic amnesia were rated for nonverbal signs of deception, signs taken from the works of Ekman, Ekman and Friesen, and Zuckerman et al. Preliminary results were gathered on a small pilot sample, and recommendations for procedural improvements are proposed.

Spiegel, David; Schefflin, Alan W. (1994). Dissociated or fabricated? Psychiatric aspects of repressed memory in criminal and civil cases. International Journal of Clinical and Experimental Hypnosis, 42 (4), 411-432.

During the last decade, clinicians, courts, and researchers have been faced with exceedingly difficult questions involving the crossroads where memory, traumatic memory, dissociation, repression, childhood sexual abuse, and suggestion all meet. In one criminal case, repressed memories served as the basis for a conviction of murder. In approximately 50 civil cases, courts have ruled on the issue of whether repressed memory for childhood sexual abuse may form the basis of a suit against the alleged perpetrators. Rulings that have upheld such use underscore the importance of the reliability of memory retrieval techniques. Hypnosis and other methodologies employed in psychotherapy may be beneficial in working through memories of trauma, but they may also distort memories or alter a subject's evaluation of their veracity. Because of the reconstructive nature of memory,

caution must be taken to treat each case on its own merits and avoid global statements essentially proclaiming either that repressed memory is always right or that it is always wrong.

**1992**

Bates, Brad L. (1992). The effect of demands for honesty on the efficacy of the Carleton Skills-Training Program. International Journal of Clinical and Experimental Hypnosis, 40 (2), 88-102.

30 low hypnotizable Ss were administered the Carleton Skills-Training (CST) program. Prior to testing, 15 Ss were administered honesty instructions (Bowers, 1967) in an effort to encourage responses that were consistent with subjective experiences and to dissuade Ss from performing in a manner intended to please E. Posttraining hypnotizability scores for Ss given honesty instructions were consistently smaller than those for 15 Ss who did not receive these instructions, implying that scores for the latter group exaggerate the extent to which hypnotic experiences are altered by the CST program. The pattern of results supports the view that demand characteristics contribute to the efficacy of the CST program, and that improvements in actual hypnotic talent are more limited than Spanos' original work implies.

**1991**

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1991, August). Is the hypnotized subject lying?. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco

To determine whether or not hypnotized subjects misrepresent or lie about their hypnotic experiences, electrodermal skin conductance responses were measured while groups of deeply hypnotized subjects and simulators responded to questions about their experiences to a series of suggestion. 89% of the responses of the hypnotic subjects met the criteria for truthfulness, while 65% of the responses of the simulators indicated deception. Differences between "reals" and simulators were highly significant. The relevance of the results for the nature and theory of hypnosis is discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

**1963**

Bentler, P. M.; Hilgard, Ernest R. (1963). A comparison of group and individual induction of hypnosis with self-scoring and observer-scoring. International Journal of Clinical and Experimental Hypnosis, 11, 49-54. (Abstracted in Index Medicus, 63, June, S-1599)

45 volunteer Ss were hypnotized in small groups and were subsequently hypnotized in individual sessions. In both sessions observer- and self-scores were recorded for all suggestions of the Harvard Group Scale adaptation of the Stanford Hypnotic Susceptibility Scale. The correlation between observer- and self-scores indicated

that hypnotic susceptibility in the 2 sessions was very similar. Group self-scores were also found to predict quite accurately objective hypnotist scores of the subsequent individual session. A 2nd sample of 34 nonvolunteer male Ss were hypnotized individually following Form A of the Stanford scale. Self-scoring was found to be remarkably similar to observer ratings, and the results of group administration very comparable to those of individual administration of hypnotic susceptibility tests. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## DEFENSE

1998

Wickramasekera, Ian (1998). Secrets kept from the mind but not the body or behavior: the unsolved problems of identifying and treating somatization and psychophysiological disease. Advances in Mind-Body Medicine, 14, 18-132.

The identification and therapy of somatoform and psychophysiological disorders are major problems for medicine. This paper identifies three measurable risk factors (Wickramasekera 1979, 1988, 1993a, b, 1995) that are empirically associated with somatoform and psychophysiological disorders. These risk factors are high hypnotic ability, low hypnotic ability, and high Marlowe Crowne scores. Patients who are positive on one or more of these risk factors (all of which can constrict consciousness) have a high likelihood of having somatoform and psychophysiological disorders and should be studied with the additional risk factors proposed in the High Risk Model of Threat Perception (HRMTP). Treatment of patients should begin with the Trojan Horse Role Induction procedure (Wickramasekera 1988), which enables patients, who might otherwise resist psychological interpretations of their physical problems, to recognize that unconscious threat perception could be driving their somatic symptoms, an understanding that reduces their resistance to psychotherapy. A case study is presented of a patient without identifiable pathophysiology or psychopathology to account for somatic symptoms that were largely resistant to standard medical therapy. The patient was positive for several of the psychosocial and psychophysiological risk factors of the HRMTP and after experiencing the Trojan Horse Role Induction showed improvement in somatic symptoms.

1994

Wickramasekera, Ian (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. American Journal of Clinical Hypnosis, 37, 22-33.

The electrodermal response to cognitive threat of un hypnotized female patients with somatic symptoms and high on both hypnotic ability and neuroticism (H-H) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (M-L). On verbal report the H-H and the M-L groups did not differ, but they were significantly different on a measure of self-deception (L scale) or repression. The above findings

are consistent with predictions from the High Risk Model of Threat Perception (HRMTP), which states that people in the H-H group are both chronically and acutely more reactive to threat than the people in the M-L group. This finding may have important theoretical, clinical, and financial implications for the diagnosis, therapy, and prevention of somatization disorders seen in primary medical care.

**1991**

**Dixon, Norman F.; Henley, Susan H. (1991). Unconscious perception: Possible implications of data from academic research for clinical practice. Journal of Nervous and Mental Disease, 179 (5), 243-252.**

Evidence for the reality of unconscious perception and perceptual defense suggests that the experimental paradigms used to investigate these phenomena might play a role in the understanding and treatment of mental disorders. The literature on applying subliminal stimulation to problems of diagnosis and therapy indicates that data support the view that the meaning of external stimuli of which the recipient is unaware may be responded to and determine emotional responses, lexical decisions, overt behavior, and subjective experience. Data confirm the reality of psychopathology as a substrate of emotionally colored, stored information with a potential for producing somatic symptoms and disorders of thinking, affect, and behavior. To the extent that psychopathology is screened from conscious scrutiny and thus impervious to supraliminal information, it may be accessed and ameliorated by drive-related stimuli of which the S is not aware.

**1988**

**Young, W. C. (1988). Psychodynamics and dissociation: All that switches is not split. Dissociation, 1, 33-38**

Contrasts the roles of splitting and dissociation in multiple personality disorder. It is proposed that dissociation is a unique defensive process that serves to protect the patient from the overwhelming effects of severe trauma and that multiple personality disorder need not call upon splitting as its central defensive process. Fantasies of restitution may be incorporated into the dissociative defense. Psychological, physiological, and behavioral models all are of use, making it likely that ultimately dissociation will be understood along multiple lines of study.

**1981**

**Wilson, John F. (1981). Behavioral preparation for surgery: Benefit or harm?. Journal of Behavioral Medicine, 4, 79-102.**

Elective surgery patients were prepared for surgery with training in muscle relaxation or with information about sensations they would experience. Relaxation reduced hospital stay, pain, and medication for pain and increased strength, energy, and postoperative epinephrine levels. Information reduced hospital stay. Personality variables (denial, fear, aggressiveness) were associated with recovery and influenced patients' responses to preparation. Less frightened patients benefitted more from

relaxation than did very frightened patients. Nonaggressive patients reacted to information with decreased hospital stay along with increased pain, medication, and epinephrine. Aggressive patients responded to information with decreased hospital stay along with decreased pain, medication, and epinephrine. Patients using denial were not harmed by preparation. A catharsis/moderation model is proposed to explain how information benefits patients. An active coping model is proposed to explain the benefits of relaxation. This study suggests that behavioral preparation benefits even frightened, aggressive, or denying elective surgical patients.

1974

Galin, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanisms for at least some instances of repression and an anatomical locus for the unconscious mental contents.

1966

Stross, L. (1966). Impulse-defense implications in a case of amnesia. International Journal of Clinical and Experimental Hypnosis, 2, 89-103.

An 18-yr-old girl with a delinquent history leading to several suicide attempts and a fugue is described as she was observed during shifting phases of her amnesic syndrome. Using the case study as a research tool, it is suggested that alteration of ego state might be an archaic, primitive means of defense against relatively unneutralized, intense drives. More speculative are the propositions, generated from this case, that the ego could employ different defensive means with regard to libidinal and aggressive drives and that alteration of ego state might be a specific defense against aggression. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Bowers, Patricia G. (1965). Effect of hypnosis and suggestions of reduced defensiveness on creativity test performance (Dissertation). Dissertation Abstracts, 26, 2864-2865.

1954

Rosen, Harold; Erickson, Milton H. (1954). The hypnotic and hypnotherapeutic investigation and determination of symptom-function. Journal of Clinical and Experimental Hypnosis, 2 (3), 201-219. (Abstracted in Psychological Abstracts, 55: 7017)

1. Symptoms and even syndromes may subserve the repetitive enactment of traumatic events; may reproduce, instead, specific life situations; may satisfy repressed erotic and aggressive impulses; or may at one and the same time constitute defenses against, and punishment for, underlying instinctual drives. They may mask underlying schizophrenic reactions, or hold suicidal depressions in check. They may serve these and other functions concurrently, or none, or any specific one or combination of them.

2. With selected patients under hypnosis, symptom-function may be determined rapidly and in a therapeutic setting. Various techniques can be utilized. Attacks may be precipitated and then blocked, either by direct hypnotic suggestion or by regressing the patient to a period pre-dating the onset of his disease, so that substitutive motor or other activity will be precipitated in a form accessible to therapeutic investigation; attacks may be precipitated in slow motion, so that individual components can be therapeutically investigated in detail; dissociated states may be induced; dream acting-out may be suggested; or symptoms may be suggested away while emotions back of symptoms are concurrently intensified, so that, again, underlying dynamic material will immediately become accessible for therapy. Still other techniques may be utilized.

3. If treatment, as well as evaluation, be through these techniques, and if treatment be successful, it may be that the analogy of a log jam will be of value. The jam can usually be broken by pulling out one or two key logs. The rest then start falling into place -- and the whole log jam disappears. This may be what happens, although to a limited extent, during therapy of this type.

4. Various of these techniques have been illustrated throughout this paper. Case histories however, have at times been distorted in order to maintain the anonymity of the patients involved" (pp. 218-219).

## DELUSION

1994

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article

examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimate the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

1988

Barrett, D. (1988). Trance-related pseudocyesis in a male. International Journal of Clinical and Experimental Hypnosis, 36 (4), 256-261

Pseudocyesis has been linked in previous literature to trance phenomena. The present paper presents a case in which pseudocyesis was accidentally induced by hypnotic suggestion, continued by an autohypnotic process, and reversed by informal suggestion. This case has important implications for the role autohypnosis may play in maintaining the phenomenon and for the usefulness of hypnotic techniques in reversing the symptoms.

1966

Andreasen, A. G.; Singer G. (1966). Hypnosis and hypnotizability: Delusion or simulation?. International Journal of Clinical and Experimental Hypnosis, 14 (3), 257-267.

Because Sutcliffe (see 36:4) showed that hypnotic suggestions are not comparable in sensory content with real stimuli, the postulated difference between "pseudoperception" and "simulation" as indexed by reported subjective experiences of hypnotic Ss was tested. From 215 undergraduates, 30 high-susceptibility (HS) and 30 low-susceptibility (LS) Ss made kinesthetic and visual judgments of horizontality. A significant response, not attributable to simulation, was found only for the HS-hypnosis induction group; the effect was not attributable individually to susceptibility, hypnosis induction, or motivation. It is concluded that hypnosis, defined by this significant interaction effect between high susceptibility and hypnosis induction can be interpreted as a pseudoperceptual response to suggestion. (Spanish & German summaries) (28 ref.) (PsycINFO)

Wagner, Frederik F. (1966). The delusion of hypnotic influence and the hypnotic state. International Journal of Clinical and Experimental Hypnosis, 14 (1), 22-29.

Several case studies are discussed briefly, illustrating the main aspects of delusions of hypnotic influence and how the delusional system differs from the hypnotic state. It is a symptom of (usually paranoid) schizophrenia, often appearing among the earliest symptoms in the course of the illness. These feelings usually arise when the patient experiences a weakening of ego functions, or a breakthrough of libidinous or aggressive impulses. While there is a tendency to rationalize aspects of hypnotic

behavior, delusions of hypnotic influence are deeply rooted in the dynamics of the patient's psychopathology. They usually remain as a permanent symptom, and prognosis is poor. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

Gindes, Bernard C. (1963). Delusional production under hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 1-10.

Hypnosis creates a situation for the development of fantasies which carry over into waking life as delusions. The patient, susceptible to common impressions of hypnosis, may use the opportunity to indulge ordinarily inhibited impulses. The therapist should be alert to the jeopardy of his involvement in such delusions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Pulver, Sydney E. (1963). Delusions following hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 11-22.

Delusions occurring after hypnosis in the nonpsychotic patient are usually a result of the interplay of 3 factors. (a) the development of rapid, tense, transference reactions in hypnosis; (b) the presence of major defects in the patient's character structure; and (c) the occurrence of countertransference reactions on the part of the hypnotist which touch on a specific area of conflict within the patient. The presence of a chaperon or the use of tape recorders are not satisfactory preventive measures. Rather, the physician using hypnosis should focus upon: (a) preliminary psychological evaluation and selection of patients free from disposition to delusion formation, (b) identification of transference reactions and a willingness to discuss with patients, (c) awareness of his own emotional responses to the patient. Basic courses in psychiatry are recommended. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1962**

Sutcliffe, J. P.; Jones, J. (1962). Personal identity, multiple personality, and hypnosis. International Journal of Clinical and Experimental Hypnosis, 10, 231-269. (Abstracted in Index Medicus, 63, Mar., S -543)

The concept of multiple personality is critically examined in the light of its historical development. Various conceptions of multiple personality are considered: as a diagnostic fashion, as a product of shaping in therapy, as a product of hypnotic suggestion, as simulation, and as an extension of characteristics found in "normal" personalities. These considerations lead to the conclusion that the significant alterations of personality characterizing the syndromes are loss of self-reference memories, and confusions and delusions about particular identity in time and place. The parallels in multiple personality and hypnotic phenomena lead to the heuristic hypothesis that degrees of proneness to multiple personality are predictive of degrees of hypnotizability. (76 item bibliogr.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Sutcliffe, J. P. (1961). 'Credulous' and 'Skeptical' views of hypnotic phenomena: Experiments on anesthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189-200.

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From Psyc Abstracts 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## DENTISTRY

1994

Bloom Peter (1994, October). Training boundaries that enhance responsible therapy: Using hypnosis creatively in one's own discipline. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Presented three cases that he elected not to treat, to illustrate the principle that we should only treat cases we would be professionally trained to treat without hypnosis. (1) a hemorrhoidectomy patient, where he elected not to do hypnosis because he is not trained specifically in anesthesiology and didn't know how to do anesthesia procedures; (2) conversion hysteria in 12 year old girl, because he isn't trained in child psychiatry and doesn't know child development; (3) to confirm the supposed existence of unidentified flying objects, or UFOs (when a woman tried to get him to hypnotize her so the "truth" would emerge). We must free ourselves from treatment of patients who retreat from reality, when we can't find commonality in goals.

Stewart, James (1994). Hypnotherapy with dental patients. [Lecture] UCLA Hypnosis Seminar.

Dr. James Stewart is both a dentist and a clinical psychologist.] Among dental patients, 15% of patients are anxious; 75% of those patients could associate that fear to early childhood experiences, and showed signs of post traumatic stress disorder (PTSD) but only when they have to go for dental treatment. Those 75% respond well to hypnosis (respond quickly, short-term; it is even great to do the therapy in the dental chair, e.g., relieving trauma in trance).

**It is important to diagnose PTSD because treatment will be different if the patient has an anxiety disorder. The disorders are not "simple phobias" because the trauma does not meet the criterion of "silly and unreasonable."**

**In hypnosis I routinely use the suggestion, "find a safe place," and may tell them they can go through a videotape or a filing cabinet to find a safe place. If the patient cannot remember a safe place, it is diagnostic of serious problems, more than dental anxiety. The exploration, verbalization of a safe place enhances rapport. A dentist should not accept a referral for hypnosis when the dental work has to be done next week; better to use sedation, and schedule hypnosis Rx later.**

**For anxiety or pain, do not try to relax it away; better to go where it is, define it (size, density, etc.) How does it feel? Can you put your finger on it? Like vapor? Soft, like steel?**

**PTSD. During World War I they called it malingering and gave shock (not ECT). During World War II the psychoanalytic view was that PTSD was pre-Oedipal. Viet Nam used phenothiazines for "delayed stress reactions." Almost all the variance in the number and severity of symptoms can be explained by the length of time the patients were in battle. During World War II, they did a lot of age regressions under sodium pentathol (a "catharsis") which was often very successful, but there was no theoretical understanding. After that the patient got psychoanalysis.**

**These days in doing desensitization for phobias I do not bother with developing a hierarchy [of feared situations] and I let the patient go through the anxiety more often. Also, one can have the patient walk away from the scene until they subjectively feel far enough away not to feel anxiety.**

**Wormnes, Bjorn (1994, October). Hypnosis in integrated treatment of dental fear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**Research reports from different countries estimate the proportion of adult dental phobic patients to be between 5% to 10%. It represents a large health problem. Helping patients to continue regular treatment by their local dentist and experience it as tolerable is the main treatment goal in our program. The main treatment method is a flexible and integrated exposure training. The psychotherapist works in cotherapy with the dentist. Using hypnosis in the dental chair is of great help, and patients are normally found to be very susceptible and easily hypnotized. Hypnosis helps the patient to experience increased tolerance of treatment and also to perform better than expected in the treatment situation.**

**1993**

**LaGrone, Randy G. (1993). Hypnobeavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. American Journal of Clinical Hypnosis, 36, 132-136.**

A 10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnbehavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress.

1991

Clarke, J. H.; Reynolds, P. J. (1991). Suggestive hypnotherapy for nocturnal bruxism: A pilot study. American Journal of Clinical Hypnosis, 33, 248-253.

Although one can find many case reports of hypnotherapy for bruxism, there is a paucity of scientific research on the subject. This study describes the use of suggestive hypnotherapy and looks at its effectiveness in treating bruxism. Eight subjects who reported bruxism with symptoms such as muscle pain and complaints of bruxing noise from sleep partners were accepted into the study. An objective baseline of the bruxing was established using a portable electromyogram (EMG) detector attached over the masseter muscle during sleep. Hypnotherapy was then employed. Both self-reports and posttreatment EMG recordings were used to evaluate the hypnotherapy. Long-term effects were evaluated by self-reports only. The bruxers showed a significant decrease in EMG activity; they also experienced less facial pain and their partners reported less bruxing noise immediately following treatment and after 4 to 36 months.

1991

Somer, Eli (1991). Hypnotherapy in the treatment of the chronic nocturnal use of a dental splint prescribed for bruxism. International Journal of Clinical and Experimental Hypnosis, 39, 145-154

A behavioral medicine case is described in which the patient was treated with a combined approach involving both hypnoanalytic and hypnbehavioral techniques. A 55-year-old man with bruxism was referred after 10 years of craniomandibular treatment because of his dependency on a dental splint prescribed for nocturnal use. A projective hypnoanalytic exploration helped to uncover and consequently resolve an earlier conflict that had been reactivated in the patient's work situation and which had become a constant source of mental and muscular tension. The hypnoanalytic exploration was followed by a cognitive-behavioral hypnotic intervention that was tape-recorded and prescribed for bedtime practice. Pre- and posttherapy psychological, physiological, and self-report measurements corroborated the patient's sense of well being that came with his newly found ability to sleep without the dental splint. The importance of considering multiple etiological factors in the treatment of such psychosomatic disorders as bruxism is discussed.

1989

Joubert, P. H.; Van Os, B. E. (1989). The effect of hypnosis, placebo, paracetamol, and naloxone on the response to dental pulp stimulation. Current Therapeutic Research - Clinical and Experimental, 46, 774-781.

Healthy volunteers with varying degrees of hypnotic susceptibility, as measured by the Stanford Clinical Hypnotic Scale [sic] (SCHS), participated in a trial to evaluate analgesia induced by an indirect hypnotic technique, rapid induction analgesia (RIA). RIA produced increases in the pain threshold, as measured by dental pulp stimulation, in nine of ten subjects. The magnitude of the response was unrelated to SCHS scores. Neither placebo nor paracetamol capsules affected pain threshold measured by this technique. The effect of RIA on pain threshold was not reversed by naloxone, mitigating the possible involvement of endorphins in this phenomenon.

Rapid Induction Analgesia, developed by Joseph Barber, was employed in this study of pain that was generated with dental pulp stimulation. RIA involves an induction followed by several kinds of suggestion, e.g. "Nothing is going to be done to you and you are free to respond and to experience what is acceptable to you. ... You have the ability to notice things. ... The way things are noticed might change. ... Memory is changeable and you may choose to remember or forget things. ... The comfortable feelings you are experiencing can be experienced easily and quickly again and again. ...To the latter was coupled the idea that this could happen again if the hypnotist put his hand on the subject's arm" (p. 776).

The lowest electrical current that produces slight discomfort was used as the measure of pain threshold.. RIA produced increases in pain threshold for 9 of 10 Ss. The 10th Subject was not used in the rest of the experiment, and one other Subject withdrew due to scheduling problems. The remaining 8 Ss experienced the following sequence of events in the experiment: --Rest 15 minutes --Pain threshold measure -- Two 500-mg capsules of paracetamol or two of placebo --Wait 2 hours; then pain threshold measure --RIA (10 minutes); aroused from hypnosis; pain threshold measure with E's hand on arm --Insert IV; give 8 mg naloxone or 0.9% saline --Pain threshold measure with E's hand on arm

The four possible combinations (placebo-saline, placebo-naloxone, paracetamol-saline, and paracetamol-naloxone) were administered to each S on four occasions, in randomized order, with at least one week in between visits.

Whereas pain threshold was elevated by RIA above both the first ( $p < .025$ ) and the second ( $p < .05$ ) baselines, neither placebo nor paracetamol (like Tylenol) raised the threshold. Naloxone did not reverse the RIA effect of elevated threshold; in fact, there was a tendency for RIA pain threshold to increase even more after injections of either Naloxone or saline.

The Experimenters noted that the baselines apparently changed over time. They were significantly lower than the RIA threshold during visits 1 and 2, but during visits 3 and 4 the baselines seemed to approach RIA values.

In their Discussion, the authors wrote, "This study appears to have raised more questions than it answered. There is no doubt that RIA, as used in this study, produced a significant shift in pain threshold as assessed by means of dental pulp stimulation. The fact that we were unable to detect an effect with paracetamol or placebo [N.B. which were given before the hypnosis procedures] means either that we were not really measuring something that was relevant to clinical pain or that the measurements were not sensitive enough for the detection of placebo effects or the analgesic effects of paracetamol.

"It furthermore appears that the success of RIA does not depend on the hypnotic susceptibility of the subjects. This is contrary to the findings of Van Gorb [sic] et al but agrees with the studies of Barber and Fricton and Roth.

"The temporal effects are also quite interesting. Firstly, it appears that the RIA was potentiated by the injection of either saline or naloxone. This could have been a placebo manifestation of the intravenous injection, but this appears unlikely in terms of the prior explanation given to the subjects. Subjects were told that the injections were to see whether the analgesic effects of RIA, if present, could be reversed. At no time was it suggested that the injections could have an analgesic effect. Another explanation might be that RIA is potentiated by repetition and that the second employment of the technique is more effective than the first. The other temporal effect seen was the tendency for baseline values to increase at later visits (Figure 4). This might mean progressive relaxation of the subject as he/she became more accustomed to the experimental situation with each subsequent visit or that the RIA state induced at the initial visits became associated with the experimental situation and that the posthypnotic suggestion became operative without the cue of the hypnotist's hand on the subject's arm. It does, however, appear that the maximum RIA effect was reached at the first visit and remained constant throughout.

"From our findings several conclusions may be made. Firstly, that RIA appears to be an effective method for producing analgesia in the majority of subjects and does not appear to depend on hypnotic susceptibility. Secondly, endorphins do not appear to be involved in the analgesia produced by this method. Thirdly, dental pulp stimulation using a standard apparatus commonly used in dental practice does not appear to be appropriate for demonstrating placebo effects or for assessing analgesic efficacy of simple analgesics. Pain thresholds determined in this way would therefore not be of use in clinical pharmacology in comparing different simple analgesics. Finally, trial designs should take the temporal shift in baseline values into consideration" pp 779-780.

## DEPRESSION

2001

Hensel, Carolyn; Sapp, Marty; Farrell, Walter; Hitchcock, Kim (2001). A Survey of members of ASCH, SCEH, and Division 30, and if they reported using hypnosis to treat depression. Sleep and Hypnosis, 3 (4), 152-166.

A telephone survey was conducted with randomly selected members of the American Society of Clinical Hypnosis (ASCH), the Society of Clinical and Experimental Hypnosis (SCEH), and the Psychological Hypnosis Division of the American Psychological Association (Division 30). The purpose of this study was to explore the extent to which hypnosis society members reported using hypnosis to treat major depression. A 3-group MANOVA did not find any differences among the groups, and all members reported using hypnosis to treat depression.

Yapko, Michael (2001). Hypnosis in treating symptoms and risk factors of major depression. American Journal of Clinical Hypnosis, 44 (2), 97-108.

This article summarizes aspects of effective psychotherapy for major depression and describes how hypnosis can further enhance therapeutic effectiveness. Hypnosis is helpful in reducing common symptoms of major depression such as agitation and rumination and thereby may decrease a client's sense of helplessness and hopelessness. Hypnosis is also effective in facilitating the learning of new skills, a core component of empirically supported treatments for major depression. The acquisition of such skills has also been shown to not only reduce depression, but also the likelihood of relapses, thus simultaneously addressing the issues of risk factors and prevention.

Yapko, Michael (2001, October). Hypnotic intervention for ambiguity as a depressive risk factor. American Journal of Clinical Hypnosis, Vol. 44 (No. 2), 109-118.

In the face of ambiguous life events, depressed individuals are more likely to make negative and depressing interpretations than nondepressed individuals. Fundamental to the success of cognitive-behavioral treatments, one of the most empirically supported treatments for depression is teaching the client to recognize and self-correct so-called cognitive distortions. To facilitate that learning process, clients can learn to better recognize and tolerate ambiguity inherent in many situations, and thereby diminish the drive to form subjective interpretations (either negative or positive) when more objective evidence is unavailable. This article describes ambiguity as a risk factor for depression and details a strategy employing hypnosis for teaching the skills of both recognizing and tolerating ambiguity.

Yapko, Michael (2001). Treating depression with hypnosis: Integrating cognitive-behavioral and strategic approaches. New York NY: Brunner-Routledge.

## NOTES

(From the cover) Focuses on structuring and delivering of hypnotic interventions for major depression, with a substantial use of concepts and techniques from

cognitive-behavioral and strategic approaches as a foundation. Current research on depression is used to emphasize the still growing knowledge of depression. Hypnosis has shown itself to be effective in not only reducing symptoms, but in teaching the skills (such as rational thinking, effective problem-solving and coping strategies, and positive relationship skills) that can prevent recurrences. (PsycINFO Database Record (c) 2002 APA, all rights reserved).

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

#### **NOTES**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1995**

**Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.**

## NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

Wickramasekera, Ian (1995, November). Hypnotic ability, skin conductance, and chronic pain. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

T. X. Barber's book in 1969 states that hypnotizability is unrelated to psychopathology. Hilgard's book states that hypnotic ability and negative reactivity are unrelated. However clinicians working with somatization-type symptoms (headache, irritable bowel disease) may observe a surplus of people very high or low in hypnotic ability. How do we account for the discrepancy between clinic and lab?

Is this a context effect, since I only see people who are sick? It turns out that the low hypnotizable patients present mainly in primary care, medicine and surgery. The highs present with psychophysiological problems.

The author posits that when hypnotic ability and negative affectivity coincide, they lead to physical disease. (He uses "negative affectivity" for what used to be called Neuroticism.) Negative affect is not simply verbal report; one must also consider autonomic physiology as part of it (cf.. Dan Weinberger's research).

Highs are at risk for illness because: 1. They can amplify or attenuate signals of threat. 2. They demonstrate surplus pattern recognition (see meaning in randomly distributed events). 3. They have surplus empathy (poor boundaries).

Lows are at risk because: 1. They deny or attenuate the role of cognitive and emotional events on somatic symptoms. 2. They demonstrate rigidity in information processing; they are locked into critical, sequential, analytical information processing.

Under low stress (mental math), Lows and Highs do not differ on Subjective Units of Distress (SUDS) for mental arithmetic; for high stress (more difficult math) there is a large difference between groups.

High, Medium, and Low hypnotizable Ss with chronic pain and no observable pathology (TMJ, back pain, etc.) were measured on skin conductance (EDR): there were no differences during baseline, but differences emerged during a stress condition. We did not find this kind of difference using muscle tension! Patients were not on medications. GSR is a purely sympathetic nervous system measure, unlike heart rate that also has parasympathetic input. There is almost a dose-response relationship between hypnotizability and reactivity with GSR under stress conditions.

**High Hypnotizable and High Negative Emotion Subjects: EDR 12.5 SUDS 63.5 Lie Scale (Marlowe Crowne)**

**Moderate Hypnotizable and Low Negative Emotion Subjects: EDR 3.77 (p.<.01) SUDS 66.5 (n.s.) Lie Scale 20.7 (p.0001).**

Thus, you could not see a difference in these two groups from their verbal report, their MMPI, or an interview. Their distress is out of mind [but not out of body].

We also studied Body Mass Index (weight related to height), which correlates highly with adiposity (Garrow, 1983). We used High Hypnotizable - High Neuroticism Subjects, compared to Medium Hypnotizable - Low Neuroticism Subjects. H-H BMI = 34.6 M-L BMI = 24.1 (significantly different, though preliminary results).

If you just use a correlation you won't see this result. You have to consider both hypnotizability and negative emotion together.

**COMMENTS FROM THE AUDIENCE:**

Question re Marlowe Crowne as a measure of defense.

Wickramasekera's answer: I believe it is orthogonal to hypnotizability and both are pathways to pathology. I look at both the Marlowe Crowne and Neuroticism.

Auke Tellegen: In Weinberger's research you need to see an interaction between test variables. I think you should view them independently, not assume an interaction.

**1994**

**Wickramasekera, Ian (1994, October). On the coincidence of two orthogonal risk factors for psychophysiological regulation and dysregulation: implications for somatization. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**NOTES**

People low or high in hypnotizability are at risk. Our article in the upcoming issue of the Journal of Nervous and Mental Disease will present this information. High hypnotizable people have either somatic symptoms or psychological symptoms; lows show primarily somatic symptoms. We found that 38% of highs and 28% of lows show somatic symptoms. The lows won't usually be found in a Mental Health Center; they are staying in primary care medical services.

**Hypnotic ability and insomnia.**

Insomnia was defined by EEG in 3 sleep studies (latency to stage 1 onset of EEG), and patients were screened to omit those with pathophysiology. We measured hypnotizability, finding 50% high on Harvard Scale, 40% low, with a small percent in the middle. [Thus the distribution is bi-modal.]

Neuroticism and insomnia (Wickram, Ware & Saxon, 1992). Neuroticism is the "negative affect" variable. Most people high on negative affect are high hypnotizables. Charcot was right [about high hypnotizables being neurotic] but he didn't have a measure of neuroticism. We are measuring negative affect.

**PREDICTIONS**

Low hypnotizables will show only or mainly somatic symptoms and be found in primary medical care or surgical settings. Highs will show a mix of somatic and psychological and somatic symptoms.

Most lows wouldn't sit still for the Harvard Scale, so we used the Absorption scale. We gave the Absorption scale to non-organic chest pain patients. Most had low scores on Absorption, followed by those with moderate scores, and fewest were highs on Absorption: 50% low, 36% moderate, 13% low.

Absorption scores in morbidly obese (350# or more) candidates for bypass surgery were: 55% are low on Absorption, 5% are high on Absorption.

People high on hypnotizability and on negative affectivity have greater risk for illness. See results of our research in *American Journal of Clinical Hypnosis*, a recent issue. These people are more psychophysiologicaly reactive, in heart rate, electrodermal reactivity, etc.

**1992**

Vijselaar Joost; Van der Hart, Onno (1992). The first report of hypnotic treatment of traumatic grief: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, 40 (1), 1-6.

In 1813 the Dutch physicians Wolthers, Hendriksz, De Waal, and Bakker reported the hypnotic treatment of a woman suffering from traumatic grief, in which the therapist had to deal directly with the patient's spontaneous reenactments of the circumstances surrounding the death. This report, summarized in the present article, has historical value, as it is probably the first known precursor of the uncovering hypnotic approach. The original authors' views on the case are discussed, and a modern view for understanding the patient's traumatic grief and its treatment is presented.

**1991**

Cochrane, Gordon J. (1991). Client-therapist collaboration in the preparation of hypnosis interventions: Case illustrations. *American Journal of Clinical Hypnosis*, 33, 254-262.

Therapists can use hypnosis in a variety of situations to help clients utilize their own resources effectively. In both heterohypnosis and tape-assisted self-hypnosis, the respectful collaboration of therapist and client in the development of specific intervention strategies can be effective. I have described four cases to illustrate the collaborative aspect of heterohypnosis in a surgical setting and tape-assisted self-hypnosis for anxiety, tinnitus, and situational depression. In each case the clients were willing and able participants.

NOTES: "Hypnotic interventions as adjunctive therapeutic modalities for a variety of surgical procedures have been well documented (Frankel, 1987; Gravitz, 1988; Nathan, Morris, Goebel, & Blass, 1987). The availability, relative safety, dependability, and ease of use have made chemical agents the anesthetic of choice in the majority of surgical situations, but hypnosis, either alone or in conjunction with chemical agents, can have a number of advantages for some patients (Udolf, 1987, p. 248). Some patients who have extreme preoperative pain and anxiety can learn to use self-hypnosis (Frankel, 1987); others may use hypnosis when experiencing

postoperative nausea and other uncomfortable side effects of chemical anesthetics. Some may fear death under general anesthesia or react to a previous trauma arising from general anesthesia and the operating room procedures in general (Udolf, 1987, p. 250) and therefore choose hypnotic strategies. In the following case illustration the patient feared general anesthesia because of a previous negative postoperative experience" (p. 255).

While collaboratively planned hypnosis often empowers the patient, contributing to a sense of personal control and well being, some patients are not able to participate in that manner. Cochrane cites patients who are severely depressed or "who struggle with narcissism and other severe pathologies" (p. 260). He notes that audiotapes are useful for supplementing in-session therapy, contributing to skill development, attitude change, and a sense of self-worth. He cites Eisen and Fromm (1983) as indicating that self hypnosis is also useful for clients "who struggle with issues of control and intimacy" (p. 260).

Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

Witz, Marylou; Kahn, Stephen (1991). Hypnosis and the treatment of Huntington's Disease. American Journal of Clinical Hypnosis, 34, 79-90.

Describes two cases treated with a wide variety of hypnotic interventions. One was treated for 9 years and the other for 10 sessions. Hypnotic techniques and daily self-hypnosis appeared to ameliorate both physical and psychological difficulties, thereby enhancing the quality of life that remained for the patients. They noted that the increased sense of control that both patients experienced seemed to undercut the cycle of physical symptoms exacerbating psychological symptoms and these in turn increasing physical symptoms. The sense of control over physical symptoms clearly reduced anxiety and depression over the inevitable course of the disease, thereby facilitating tension reduction and overall adjustment to the disease. This reduced stress level may have in turn affected the disease itself. What is unmistakable is that the quality of life was greatly enhanced.

1990

Harmon, Teresa M.; Hynan, Michael T.; Tyre, Timothy E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. Journal of Consulting and Clinical Psychology, 58, 525-530.

Studied the benefits of hypnotic analgesia as an adjunct to childbirth in 60 nulliparous women. Subjects were divided into high- and low-susceptibility groups before receiving six sessions of childbirth education and skill mastery using an ischemic pain task. Half of the subjects in each group received a hypnotic induction at the beginning of each session; the remaining control subjects received relaxation and breathing exercises typically used in childbirth education. Both hypnotic subjects and highly susceptible subjects reported reduced pain. Hypnotically prepared births had shorter Stage 1 labors, less medication, higher Apgar scores, and more frequent spontaneous deliveries than control subjects' births. Highly susceptible, hypnotically treated women had lower depression scores after birth than women in the other three groups. The authors believe that repeated skill mastery facilitated the effectiveness of hypnosis in the study.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

Martin, Maryanne (1990). On the induction of mood. Clinical Psychology Review, 10, 669-697.

## NOTES

Increasing interest in the relation between emotion and cognition has led to the development of a range of laboratory methods for inducing temporary mood states. Sixteen such techniques are reviewed and compared on a range of factors including success rate, the possibility of demand effects, the intensity of the induced mood, and the range of different moods that can be induced. Three different cognitive models (self- schema theory, semantic network theory, and fragmentation theory) which have been successfully used to describe long-term mood states, such as clinical depression, are elaborated to describe the process of temporary mood induction. Finally, the use of mood induction is contrasted with alternative methods (such as the study of patients suffering from depression) for investigating emotion.

Rokke, Paul D.; Carter, Alice S.; Rehm, Lynn P. (1990). Comparative credibility of current treatments for depression. Psychotherapy, 27, 235-242.

Current treatments of depression were evaluated for credibility. Interpersonal, communication, self-control, cognitive, social skills, and relaxation placebo therapies were rated significantly more credible and efficacious than psychodynamic and

activity-change therapies, which were rated significantly more credible than biological (drug) therapy. Implications were addressed.

1989

Ross, Colin A.; Heber, S.; Norton, G. R.; Anderson, D.; Anderson, G.; Barchet, P. (1989). The Dissociative Disorders Interview Schedule: A structured interview. Dissociation, 2, 169-189.

The Dissociative Disorders Interview Schedule (DDIS), a structured interview, has been developed to make DSM-III diagnoses of the dissociative disorders, somatization disorder, major depressive episode, and borderline personality disorder. Additional items provide information about substance abuse, childhood physical and sexual abuse, and secondary features of multiple personality disorder. These items provide information useful in the differential diagnosis of dissociative disorders. The DDIS is published in this article. It has an overall interrater reliability of 0.68. For the Diagnosis of MPD it has a specificity and a sensitivity of 90%.

Spinhoven, Philip; Linssen, A. Corry (1989). Education and self-hypnosis in the management of low back pain: A component analysis. British Journal of Clinical Psychology, 28, 145-153.

Conducted a component analysis of a group program for chronic low back pain patients. 45 patients (aged 31-68 years) participated in the pain control course (PCC), consisting of education about pain and a training in self-hypnosis. A pain diary was used as a measure of pain intensity, up-time, and use of pain medication. Psychoneuroticism and depression were assessed using the Symptom Checklist-90 (SCL- 90) scores. No evidence was found for a differential efficacy of education or self-hypnosis on pain diary and SCL-90 scores. Subjects showed significant changes on all measures except reported pain intensity. It is suggested that the PCC is a noninvasive, inexpensive means of treatment that could be used to teach even more severely disabled low back pain patients to cope more adequately with their pain problem.

Van der Does, A. J.; Van Dyck, R. (1989). Does hypnosis contribute to the care of burn patients? Review of the evidence. General Hospital Psychiatry, 11, 119-124.

In burn treatment, hypnosis has been used for alleviation of pain, prevention and treatment of anxiety and depression, and acceleration of wound healing. Successful application of hypnosis decreases the extensive medication needed. Furthermore, it provides a tool to patients with which they may experience more control in situations that are often experienced as overwhelming. Notwithstanding these important applications and the very positive terms with which the results of studies are generally described, hypnosis has mostly been neglected as a tool to help burn patients. This article reviews the clinical and experimental evidence of the usefulness of hypnosis in the management of burns. Pain reduction and crisis intervention are

promising applications. However, due to a lack of systematic and controlled research, more specific conclusions are precluded. In the controversial area of wound healing, claims for the effectiveness of hypnosis have been made on the basis of slim evidence and inconclusive studies. This hypothesis needs to be addressed in controlled experiments. In summary, systematic investigations are needed to confirm and supplement available clinical evidence. Recommendations for future research are given.

**1988**

**Robins, Clive J. (1988). Development of experimental mood induction procedures for testing personality-event interaction models of depression. Journal of Clinical Psychology, 44 (6), 958-963.**

Developed 2 mood induction procedures for use in testing personality- event interaction hypotheses with regard to the onset of depressed mood of clinical depression. In these inductions, Ss listened to audiotapes depicting either a series of social rejections or achievement failures and were instructed to imagine themselves as the main character. Both tapes were found to produce a strong increase in reported depressed affect in 119 normal undergraduates. These effects were large in comparison to those elicited by commonly used mood induction procedures. Women reported greater mood shifts than men in response to both tapes. It is concluded that the present procedures have the advantage of content specificity, which permits test of personality-event interaction hypotheses.

**Spiegel, David; Hunt, Thurman; Dondershine, Harvey E. (1988). Dissociation and hypnotizability in posttraumatic stress disorder. American Journal of Psychiatry, 145 (3), 301-305.**

The authors compared the hypnotizability of 65 Vietnam veteran patients with posttraumatic stress disorder (PTSD) to that of a normal control group and four patient samples using the Hypnotic Induction Profile. The patients with PTSD had significantly higher hypnotizability scores than patients with diagnoses of schizophrenia (N=23); major depression, bipolar disorder-depressed, and dysthymic disorder (N=56); and generalized anxiety disorder (N=18) and the control sample (N=83). This finding supports the hypothesis that dissociative phenomena are mobilized as defenses both during and after traumatic experiences. The literature suggests that spontaneous dissociation, imagery, and hypnotizability are important components of PTSD symptoms.(Am J Psychiatry 1988; 145:301-305)

**1985**

**Silverman, Lloyd H. (1985). Research on psychoanalytic psychodynamic propositions. Clinical Psychology Review, 5 (3), 247-257.**

Discusses a research program in which the present author has been involved that deals with the subliminal psychodynamic activation method. In this method, verbal

and/or pictorial stimuli, some of which contain content related to unconscious wishes, fears, and fantasies and other of which are (relatively) neutral, are presented to Ss at 4-msec exposures. A variety of psychoanalytically based hypotheses have been tested on various clinical and nonclinical populations. Two major findings have emerged: (a) a number of clinical groups (e.g., schizophrenics, depressives, stutterers) have shown intensifications of their symptoms after the subliminal exposure of stimuli designed to stir up particular unconscious conflicts; and (b) various clinical and nonclinical groups have manifested enhanced adaptive behavior after the subliminal exposure of the message "Mommy and I are one," conceived as activating unconscious symbiotic fantasies.

**1979**

De L. Horne, David J.; Baillie, Jennifer (1979). Imagery differences between anxious and depressed patients. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 55-61). Amsterdam: Elsevier/North-Holland Biomedical Press.

#### NOTES

"In conclusion, the topic of this study is as yet a very new area of research. No other studies were found which specifically tested the difference between anxious and depressed people in imagery and hypnotic susceptibility. There were a number of limitations to the present study, which further studies could avoid. Larger samples could be used, and such variables as age, educational level and anxiety should be more carefully controlled. The type of depression, whether agitated or retarded, should be assessed, and level of arousal to the imagined scene measured more accurately, with for example, other physiological measures than the E.M.G. It would be preferable to test depressed people while they are not on medication. Though the effects of antidepressant drugs on imagery were not actually documented, it would seem very likely that significant effects could exist on the ability to image; these obviously warrant investigation" (p. 61).

**1977**

Novaco, Raymond W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. Journal of Consulting and Clinical Psychology, 45 (4), 600-8.

Clinical interventions for anger disorders have been scarcely addressed in both theory and research in psychotherapy. The continued development of a cognitive behavior therapy approach to anger management is presented along with the results of its application to a hospitalized depressive with severe anger problems. The treatment approach follows a procedure called "stress inoculation," which consists of three basic stages: cognitive preparation, skill acquisition and rehearsal, and application practice. The relationship between anger and depression is discussed.

**1975**

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

Berderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1972

Hodge, James R. (1972). Hypnosis as a deterrent to suicide. American Journal of Clinical Hypnosis, 15 (1), 20-24.

A method that has been found successful in temporarily deterring suicide attempts is to give the post-hypnotic suggestion that the patient will not be able to carry out an actual suicide attempt until he has discussed it with the psychiatrist, in advance of the attempt, and in the psychiatrist's office, and further, that the patient will agree to enter a trance at any time the psychiatrist insists, even though the patient may not wish to do so. The rationale for this approach is that, (a) A temporary deterrent is often all that is necessary to prevent a given suicide attempt, (b) Hypnosis can have only a temporary deterring effect on suicide, (c) A direct and permanent confrontation that he can never commit suicide would be bound to fail and would not promote therapy of the personality, and (d) It gives the patient an alternative to suicide.

1968

Chambers, Helen (1968). Oral eroticism revealed by hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 151-157.

A CASE STUDY OF THE OUTPATIENT TREATMENT OF A SEVERELY DEPRESSED WOMAN. THE CASE WAS COMPLICATED BY THE S'S REFUSING USUAL ANTIDEPRESSANT TREATMENTS. COMMUNICATION WAS DIFFICULT BUT WAS FINALLY ACHIEVED BY THE USE OF ETHER AT ALTERNATE INTERVIEWS. WITHDRAWAL OF ETHER WAS THEN USED TO CREATE A SITUATION OF DEPRIVATION TO AROUSE IN THE TRANSFERENCE ATTITUDE THE FEELINGS PRODUCED BY THE EARLY TRAUMA. THE S'S COMPULSION TO EAT RAW POTATOES WAS STUDIED WHILE SHE WAS DEEPLY HYPNOTIZED. PSYCHOANALYTIC THEORIES THAT PLACE THE ORIGIN OF DEPRESSION AT THE TIME WHEN THE ORAL PHASE IS PRIMARY WERE CONFIRMED. THE S REFUSED ANY OTHER ANTIDEPRESSANT TREATMENT. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database

## DEPTH

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge

and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1997

Weitzenhoffer, Andre M. (1997). Hypnotic susceptibility: A personal and historical note regarding the development and naming of the Stanford Scales. International Journal of Clinical and Experimental Hypnosis, 45 (2), 126-143.

Certain misleading, if not inaccurate, allegations that have been made regarding the foundations of the Stanford scales are corrected. No special meaning was intended when the scales were designated susceptibility scales. A retrospective examination, however, indicates that grounds existed for making certain differentiations. SHSS:C and RSPS:I and RSPS:II should more appropriately have been designated as suggestibility and depth scales. On the other hand, whereas SHSS:A and SHSS:B also assess depth of hypnosis, they include a feature that permits using the obtained depth as a measure of hypnotic capacity and a predictor of future hypnotic performance. The possibility of using the same measure, suggestibility, to assess hypnotic responsiveness in dissimilar contexts may have been partially responsible for the confusing variety of labels that have been attached to what in the past has appeared to many to be one and the same thing. Further confusion more recently has been introduced by researchers and clinicians who have used the term depth, previously and conventionally attached to assessments based on observed overt responses, in reference to now certain subjectively based assessments.

1995

Matthews, William J.; Isenberg, Gail L. (1995). A comparison of the hypnotic experience between signing deaf and hearing participants. International Journal of Clinical and Experimental Hypnosis, 43 (4), 375-385.

This study compared the hypnotic responsiveness of 17 hearing and 34 deaf individuals, all of whom received visual induction and hypnotic suggestions via some form of signing. The comparison between deaf and hearing participants was analyzed on five dependent measures: (a) the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C); (b) participants' individual item performance; (c) overall trance depth; (d) a rapport scale; and (e) a resistance scale measuring attitudes of participants toward the hypnotist. Although all participants showed at least a moderate level of hypnotic responsiveness, the data did not indicate a significant main effect between deaf and hearing participants on any of the dependent measures. However, there was a tendency ( $p < .08$ ) for hearing participants to show a greater hypnotic responsiveness than deaf participants. Additionally, there was a significant difference between all the signing participants combined when compared to the norming population on three items of the SHSS:C. Clinical and theoretical implications of these data are discussed.

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

1994

Grant, Carolyn (1994). The Computer-Assisted Hypnosis Scale: Standardization and norming of a computer-administered measure of hypnotic ability (Dissertation). Dissertation Abstracts International, 54 (10/B), 5387.

"In a counterbalanced, within-subjects, repeated measures design, 130 subjects were administered both the Computerized Assisted Hypnosis Scale (CAHS) and the Stanford Hypnotic Susceptibility Scale, Form C (Stanford Hypnotic Susceptibility Scale: C). For each hypnotic procedure responsiveness was assessed along three dimensions: behavioral (CAHS, Stanford Hypnotic Susceptibility Scale: C), subjective depth (Field Depth Inventory), and relational involvement (Archaic Involvement Measure). Subjects also completed a Stanford Hypnotic Susceptibility Scale: C self scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the Stanford Hypnotic Susceptibility Scale: C across the three dimensions assessed. Results are discussed in terms of the theory and practice of clinical assessment, noting directions for future research" (p. 5387).

Wagstaff, Graham F.; Royce, C. (1994). Hypnosis and the treatment of nail biting: A preliminary trial. Contemporary Hypnosis, 11, 9-13.

A clinical trial was conducted examining the relative efficacy of therapeutic suggestions preceded by and without a hypnotic induction in the treatment of nail biting in 17 students. Outcomes showed a hypnotic induction added significantly to therapeutic benefits and was the only condition that resulted in symptom improvement. Results from only one session showed that 7 of 11 hypnosis subjects stopped nail biting compared to only 1 of 6 control subjects. Reports of "believed in efficacy" predicted treatment success better than ratings of motivation, hypnotic induction per se, or scores on the Creative Imagination Scale. However, within the group receiving hypnotic induction, hypnotic- depth scores significantly correlated with treatment success, suggesting that state factors such as dissociation might be involved.

The hypnotized Ss were given the T. X. Barber (1969) induction, a request for their depth estimate on a scale of 0-10, and then a set of suggestions to discourage nail biting. The suggestions were of four types: (1) to have a positive attitude, that nail biting is a habit that can be broken and that stopping will enhance attractiveness and self esteem; e.g., 'With just a little self control you will stop biting your nails and feel better about yourself.' (2) to stop the habit; e.g. to say to themselves, 'I will not bite my nails today/tomorrow,' five times each morning and at night, and whenever the temptation arose. (3) to improve feelings of self-efficacy; e.g., 'If you ever feel the urge to bite your nails tell yourself that you want to break the habit and that you are perfectly capable of doing so. You are not weak.' (4) that the results would be outstanding; e.g. 'After only ten days or so ... you will have no desire to bite your nails, indeed the very thought of doing so will repulse you.'

Control subjects received the same instructions, without a hypnotic induction; the procedure was labeled a 'positive attitude for self discipline' technique.

Judges rated improvement without being aware of the Ss' self-report on whether they had stopped biting their nails. Judges' ratings correlated  $r = .94$  with Ss' statements about whether they had stopped the habit. Improvement scores also correlated significantly with belief the treatment would be effective ( $r = .60$ ) and Creative Imagination Scale scores ( $r = .53$ ), but not with motivation. The hypnosis group had significantly higher belief scores than the control group. Within the hypnosis group itself, hypnotic depth was the only variable to correlate significantly with improvement.

The Discussion stated, "However, taken together, the findings indicate that hypnotic induction added significantly to the therapeutic benefits of suggestions for the cessation of nail biting, and that Johnson and Barber's (1978) concept of 'believed-in efficacy' was more important in accounting for therapeutic success than motivation (at least as measured here), hypnotic induction per se, or the subject's proclivity for imaginative involvement. Nevertheless, belief still accounted for less than 40% of the variance in improvement. This may have been due to measurement error or insensitivity in the measures. Alternatively, or additionally, other factors may have been influential. For example, if CIS scores are considered to be indirect measures of hypnotic susceptibility, then belief was more influential than hypnotic susceptibility; however, from a hypnotic state theory perspective, the significant correlation between hypnotic depth (LSS scores) and improvement within the

hypnosis group might suggest that some further feature of the 'hypnotic state' could still have been at work, such as a dissociative process (Hilgard, 1986). On the other hand, from a non-state perspective, perhaps subjects receiving hypnotic induction and reporting high depth scores might have felt more obliged to respond to the demand characteristics of the study, and tried harder to please the experimenter (Wagstaff, 1981); the general motivation questions used here could have been insensitive to such an effect" (p. 12).

Bergman, B. . (1993). Major surgery under hypnosis. Hypnos, 20 (1), 6-9.

1993

Diamond, Michael J. (1993). A question of filling in the gaps: A master class commentary. [Comment/Discussion] .

This is a response to a clinical vignette described as follows: "'Judy,' a professional writer, asked me to use hypnosis to help her 'fill in the gaps' in her knowledge of certain periods in her youth. As she was so keen, getting her into trance was relatively easy. I asked a few questions and she answered in a slurred voice. Then, after a few minutes, she said that she wasn't hypnotized. 'Not to worry, Judy, I'll bring you out' was my reply. With that, a flood of memories, absolutely unstoppable for approximately 4 minutes, came pouring forth. Thereafter, I asked questions relating to an earlier period in her life. Again came the statement that she wasn't hypnotized, and I replied as before. With that, a second flood of unstoppable experiences poured forth. later, on coming out of trance, she was able to recall all she'd spoken about while in trance and often punctuated her recollections with 'I didn't know that they punished me at y by locking me in the cupboard under the stairs!'" (p. 261).

Szabo, Csaba (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. International Journal of Clinical and Experimental Hypnosis, 41, 225-233.

The effect of two hypnotic induction styles on subjective experience was measured in an experiment in which 44 subjects participated in both traditional direct hypnosis, induced by the Stanford Hypnotic susceptibility Scale, Form A, and indirect hypnosis (presented in counterbalanced order), followed by 4 minutes of rest before dehypnosis. The depth of hypnosis was measured retrospectively by a subjective scale, and the structure of experiences was measured by the Phenomenology of Consciousness Inventory. Subjects were subsequently administered the Stanford Hypnotic Susceptibility Scale, Form B, so that awareness of their hypnotizability would not affect their subjective depth reports. No differences were found in a comparison of subjects' structure of experiences in direct and indirect hypnosis. In addition, low and medium hypnotizable subjects reported indirect hypnosis as deeper. This may reflect the possibility that while hypnotized different mechanisms come into play for subjects high in hypnotizability compared to those who are less hypnotizable.

1992

Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014.

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

Page, Roger A.; Handley, George W. (1992). Effects of 'deepening' techniques on hypnotic depth and responding. International Journal of Clinical and Experimental Hypnosis, 40, 157-168

The present study attempted to assess the effectiveness of commonly used deepening techniques and of surreptitiously provided stimulation on hypnotizability scores, in-hypnosis depth reports, retrospective realness ratings, and the Field Inventory of Hypnotic Depth (Field, 1965). High, medium, and low hypnotizables were assigned in equal numbers to 1 of 3 groups, each containing 54 Subjects. Controls were compared to Subjects receiving 2 deepening techniques or 2 suggestions for positive and negative hallucinations that were surreptitiously enhanced. Of the 4 dependent measures employed, the only significant different between groups related to a change in depth reports for the manipulation items themselves, leading to the conclusion that the effect of the techniques was at best minimal and transient. Some methodological and conceptual issues are also discussed.

Bates, Brad L.; Kraft, Patricia M. (1991). The nature of hypnotic performance following administration of the Carleton Skills Training Program. International Journal of Clinical and Experimental Hypnosis, 39, 227-242.

30 low hypnotizability Ss were administered the Carleton Skills Training (CST) program, while 8 were assigned to a practice group. Prior to treatment, an attempt was made to facilitate training by altering the ecological conditions of the laboratory. All Ss were tested immediately after treatment, and trained Ss were retested after 5-7 months. Immediate training gains were large and were comparable in magnitude to those routinely found at Carleton University. In

addition, (a) trained Ss responded comparably whether screened once or twice, (b) practice alone did not enhance hypnotic performance, and (c) natural high hypnotizability Ss obtained significant larger Field Inventory of Hypnotic Depth (Field, 1965) scores than created high hypnotizables. Follow-up scores fell between scores posted at screening and immediately after training. Current findings are interpreted in the context of existing evidence concerning the CST program.

"Results from these two investigations (include Bates et al., 1988) challenge the claim that lasting changes have occurred in the ability of most trained Ss to experience hypnosis. With regard to the present findings, it is reasonable to wonder whether scores would have been even lower had follow-up data been gathered a few months later. In the only other published study to address the problem of maintenance, Spanos, W. P. Cross, Menary, and Smith (1988) found that after at least 9 months, trained Ss outscored low hypnotizability Ss who had never received training. Unfortunately, these investigators do not report comparisons between trained Ss' follow-up scores and either original screening or immediate posttest scores. The authors do report, however, that 20% of trained Ss obtained high scores at follow-up. Given that at least 50%, and as high as 80%, of Ss routinely score in the high range immediately after receiving the CST program at Carleton University, a follow-up figure of 20% implies that with time, the hypnotic performance of most trained Ss began to return to baseline levels.

"With regard to the subjective experience of trained Ss.... These results confirm previous findings by Bates & Brigham (1990) which indicated that the hypnotic experiences of CST graduates - even those who are the most responsive to the modification program - may not be comparable in all respects to those of untrained, high hypnotizable individuals" (pp. 237-238).

"The present study altered the context in which training occurred by increasing the salience of the laboratory; adding, repainting, carpeting, and redecorating experimental rooms; requiring Es to dress professionally; and temporarily attributing the CST program to Washington State University. When demand characteristics were arranged in this manner, training gains were of the same magnitude as those found at Carleton University and were much larger than those found in all prior replication studies. The apparent importance of contextual factors is underscored by findings reported by Bates et al. (1988), who manipulated demand characteristics in a systematic fashion and observed that Ss' responses to the CST program are moderated by the context in which training occurs. Given the important role that ecological variables have generally played in hypnosis research, it should come as no surprise that factors like these would affect attempts to modify hypnotic performance" (p. 238).

1991

Berrigan, Lee P.; Kurtz, Richard M.; Stabile, Joseph P.; Strube, Michael J. (1991). Durability of 'posthypnotic suggestions' as a function of type of suggestion and trance depth. International Journal of Clinical and Experimental Hypnosis, 39, 24-38.

3 types of 'posthypnotic suggestion,' based upon factor analytic studies, were administered to high hypnotizability Ss (reals) and to low hypnotizable Ss instructed to simulate hypnosis (simulators) (N = 12 high and 6 low hypnotizable Ss per suggestion). The 'posthypnotic suggestions' consisted of instructions given to Ss following a hypnotic induction that, when the posthypnotic cue was later given, they would re-enter the hypnotic state and perform a certain task at that time. Ss were then tested 6 times for durability of 'posthypnotic response' during an 8-week period. Responses to the 'suggestions' were rated by research assistants (objective scores) and by Ss themselves (subjective scores). There was a significant Trials x Type of 'Suggestion' interaction for both types of scores for the reals but not for the simulators, indicating different rates of decline with time for the different 'suggestions' for the hypnotic Ss. Depth of reported hypnotic trance during the assessment sessions was found to be strongly related to performance of the 'posthypnotic suggestion' for both real and simulating Ss.

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids).

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

## Discussion

The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will

swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

**Kleinhauz, Moris (1991). Prolonged hypnosis with individualized therapy. International Journal of Clinical and Experimental Hypnosis, 39 (2), 82-92.**

A therapeutic approach is presented which involves the use of prolonged hypnosis for the treatment of diverse medical and/or psychological conditions, including intractable pain. This approach may be indicated either as a complementary tool used in conjunction with other treatment approaches or as the only method of intervention. The technique is based on achieving a prolonged hypnotic response, during which hypno- relaxation serves as the foundation for the delivery of an individualized therapeutic plan which includes self-hypnosis, suggestive procedures, metaphors, and constructive imagery techniques. In debilitated patients, medical supervision and nursing care are essential, and hospitalization is recommended if necessary. Theoretical assumptions underlying this approach are presented, and clinical implications are discussed. The method is illustrated through case presentations.

The general procedure involves: 1. A flexible plan concerning the duration of treatment: days, weeks, or longer. 2. Information is given to the patient, the family and the medical staff if in hospital. Emphasize that while the patient may be in a 'twilight-like' state, most of the time he/she is able to fulfill his or her basic physiological needs, (drinking, eating, taking care of personal cleanliness, etc.). 3. The method of hypnotic induction is individualized. 4. The patient is trained in self-hypnosis, and for using signals for induction and dehypnotization either for self hypnosis or for the hypnotist to use. Thus if there is a physiological or emotional need for self-hypnosis the patient can do it. Suggestions and training are given and reinforced concerning the patient's capability to fulfill his/her basic physiological needs. 5. The family and/or the medical staff are instructed and trained in induction and dehypnotization, until the patient responds to them satisfactorily. 6. At this stage, therapeutic suggestions aimed at ego-boosting and a change of attitudes and meanings towards the symptom and symptom removal/amelioration/substitution are added. 7. Metaphoric constructive imagery is introduced when indicated. 8. If required, other hypnotic phenomena are elicited and used (e.g. dissociation, time distortion, age regression, rehearsal, hypno/analgesia, change of muscular tonus, displacement of emotions, abreaction, etc.). 9. An audio cassette which contains the wording of the therapeutic intervention is used with some patients. 10. The family and/or the medical staff are instructed to supervise the patient properly and to avoid potential complications. 11. Termination of prolonged hypnosis with individualized therapy is gradual to permit appropriate re-orientation towards reality. 12. Treatment is evaluated and a posttreatment plan is outlined.

They provide case reports and discuss precautions. All the cases reported were treated while the patients were hospitalized for their physical condition (although in Case 3, prolonged hypnosis with individualized therapy was also continued at home after the patient's discharge from the hospital), and the patients were monitored by the medical staff. In very debilitated patients, special care should be taken to avoid potential complications arising from their passivity, mainly the development of decubitus ulcer and of aspiration/choking while drinking or eating. Although precaution is taken routinely with these patients, these measures should be emphasized while the patient is in a state of prolonged hypno-relaxation.

1989

Jupp, J. J.; Collins, J. K.; Walker, W. L. (1989). Relationships between behavioural responsiveness to hypnotic suggestions and estimates of hypnotic depth following 11 sequential instances of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 17, 93-98.

Behavioral responsiveness to suggestions was assessed in an initial hypnosis session, and hypnotic depth was assessed in this session, followed by 10 weekly standardized hypnotic experiences. Correlations were calculated between behavioral responsiveness, initial and subsequent depth estimates, and between successive trance depth estimates. Levels of trance depth estimates were found to increase through weeks 1 to 11. Significant positive correlations were found between behavioral responsiveness scores and trance depth estimates to the fourth week but not beyond. Significant positive relations were found between successive estimates of trance depth except for the correlation between estimates for the fourth and fifth weeks. These results are discussed in terms of the estimates of trance depth being attributions from self-observations of behavioral responsiveness to hypnotic suggestions.

Kahn, Stephen P.; Fromm, Erika; Lombard, Lisa S.; Sossi, Michael (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. International Journal of Clinical and Experimental Hypnosis, 37, 290-304.

Studied multidimensional nature of self-hypnotic depth in 22 high hypnotizables who volunteered for self hypnosis research. On personality scales, they were distinguished from the population at large by: strong theoretical orientation, high level of curiosity, disregard for opinions of others, and high Mf scale on the MMPI. Used the Stanford Profile Scale, SHSS:C and HGSHS:A, which measure the entire range of phenomena ordinarily used in experimental studies of hypnosis, including ideomotor phenomena, hypnotic fantasy and dreams, hypermnasias and age regressions, analgesias, negative and positive hallucinations, amnesias, posthypnotic phenomena, and cognitive and affective distortions. They asked Subjects to experience self hypnosis for 60 minutes/day for 4 weeks. Journals were coded for imagery production by scoring for both reality-oriented and primary process imagery. Subject had been taught to monitor their hypnotic depth using a slightly

revised version of the Extended North Carolina Scale (ENCS) of Tart (1979). Previously, ENCS has been used only with hetero-hypnotic Subjects. The self-reports of depth using ENCS correlated highly with hypnotizability as measured by the Revised Stanford Profile Scale of Hypnotic Susceptibility... and with imagery production. Results demonstrate that ENCS scores are also a valid indicator of self-hypnotic depth among highly hypnotizable Subjects. Furthermore, they indicate that both hetero- hypnotizability and imagery production are related to self-hypnotic depth, but that the association between imagery and hypnotizability is due to their individual relationships to self-hypnotic depth.

**Kumar, V. K.; Pekala, Ronald J. (1989). Variations in phenomenological experience as a function of hypnosis and hypnotic susceptibility: A replication. British Journal of Experimental and Clinical Hypnosis, 6, 17-22.**

Phenomenological experiences associated with a baseline (eyes closed/open) condition and an hypnotic induction were compared across individuals of differing hypnotic susceptibility. The results indicated individuals of differing hypnotic susceptibility reported different intensities of phenomenological experience during the baseline condition. The induction further augmented intensity differences for low, medium and high susceptible subjects, but more so for high than for low subjects. These results replicate earlier research, are not inconsistent with trait and situational interpretations of hypnotic susceptibility and highlight the importance of the interaction between these factors on the resulting hypnotic experience reported by the subject.

**Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.**

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGSHS:A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47- item scale designed to demonstrate the existence of five factors of the hypnotic experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General Depth, was also derived to provide a summary measure of

the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

Radtke, H. Lorraine (1989). Hypnotic depth as social artifact. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 64-77). Buffalo, NY: Prometheus Books.

Zamore, Neal; Barrett, Deirdre (1989). Hypnotic susceptibility and dream characteristics. Psychiatry Journal of the University of Ottawa, 14 (4).

This study examined the relationship of hypnotic susceptibility to a variety of dream characteristics and types of dream content. A Dream Questionnaire was constructed synthesizing Gibson's dream inventory and Hilgard's theoretical conceptions of hypnosis. Several dream dimensions correlated significantly with hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory. For Ss as a whole, the strongest correlates were the frequency of dreams which they believed to be precognitive and out-of-body dreams. Ability to dream on a chosen topic also correlated significantly with hypnotic susceptibility for both genders. For females only, there was a negative correlation of hypnotizability to flying dreams. Absorption correlated positively with dream recall, ability to dream on a chosen topic, reports of conflict resolution in dreams, creative ideas occurring in dreams, amount of color in dreams, pleasantness of dreams, bizarreness of dreams, flying dreams, and precognitive dreams.

Cardena, Etzel (1988, November). The phenomenology of quiescent and physically active deep hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Twelve highly susceptible undergraduate students participated in three conditions (lying down on a bed, pedaling a stationary bicycle at a comfortable rate, and having a motor do the pedaling at an approximately constant, comfortable rate) in deep hypnosis and non-hypnosis conditions. They were asked for their expectations about deep hypnotic experience, exposed to a number of traditional hypnotic phenomena before the deep hypnosis and comparison sessions, and given the opportunity to explore their own ways of inducing and deepening their state.

Even without cues or suggestions, participants gave comparable reports of their experiences at light, medium and deep hypnosis. The first one consisted mostly of relaxation and other changes in body sensations. Medium hypnosis was characterized by having complex imaginal experiences. Very deep hypnosis involved experiences of light, emptiness, and other phenomena associated with spiritual experiences.

1988

McCue, Peter A.; McCue, Elspeth C. (1988). Literalness: An unsuggested (spontaneous) item of hypnotic behavior? A brief communication. International Journal of Clinical and Experimental Hypnosis, 36, 192-197.

Milton Erickson claimed that the large majority of hypnotized individuals respond in a peculiarly literal way to questions/requests such as, "Would you mind telling me your name?" and he viewed this behavior as a manifestation of the 'hypnotic state.' In the present study, numerous Ss were exposed to hypnotic induction procedures and tested for literalness. Since it is possible that Erickson obtained literal responses by inadvertent cueing, some of these Ss were asked questions in a 'distorted' manner that was thought likely to elicit literal responses. A minority of the latter Ss gave literal responses, but with Ss who were asked questions in a normal manner, no clear-cut literal responses of the type described by Erickson were noted.

1986

Laurence, Jean-Roch; Nadon, Robert (1986). Reports of hypnotic depth: Are they more than mere words?. International Journal of Clinical and Experimental Hypnosis, 34, 215-233.

The empirical work relating hypnotizability, the hypnotic situation, and the reports of hypnotic depth is reviewed and evaluated. Asking Ss to assess their hypnotic depth is a complex task involving the interaction of experiential, cognitive, and contextual variables. Accordingly, future experimental work should take into account this multidimensionality; phenomenological, situational, cognitive, and motivational factors implicated in verbal reports should be explored in terms of their respective relationships with both hypnotizability and self-ratings of hypnotic depth. More sophistication in the experimental inquiries of hypnotic depth is required in order to further our understanding of the cognitive and affective structures underlying the hypnotic experience.

In past years, hypnotic susceptibility and hypnotic depth were regarded as the same thing, and depth was inferred from responses to test suggestions on hypnotizability scales (e.g. Davis & Husband, 1931; LeCron, 1953).

There has been little investigation of the relationship between Subjects' subjective experiences and reported "depth." Research suggests that "hypnotic depth reports are usually significantly higher for Ss who have undergone a hypnotic treatment than for those who have received task-motivation (Ham & Spanos, 1974; Spanos & Barber, 1968; Spanos, Stam, D'Eon, Pawlak, & Radtke-Bodorik, 1980); imagination-control; or relaxation-control instructions (Connors & Sheehan, 1978; Gilbert & Barber, 1972; Spanos & Barber, 1968; Spanos, Radtke-Bodorik, & Stam, 1980, Experiment 2)" (pp. 217-218). Others have found that changes in inward experiencing (e.g. feelings of unreality, a sense of disappearance of body parts) could not be attributed simply to sitting quietly with the eyes closed (Barber & Calverley, 1979). [A footnote on p. 218 indicates some studies didn't find this difference between a hypnosis group and a task-motivation control group.]

When Ss are asked to estimate subjective depth after having experienced hypnotizability test items, they are likely to infer depth from whether or not they passed the items (and indeed, early scales promoted that assumption). Reports of subjective depth taken before rather than after the test items still correlate with overall hypnotizability score, though not to as high a degree (E. R. Hilgard & Tart, 1966; Tart, 1970). Although usually depth estimates correlate with hypnotizability in the .50 to .75 range (Perry & Laurence, 1980), the correlations were obtained in the hypnotic context, and Ss may use their own behaviors as one determinant of their estimated depth.

From another line of study it is observed that Ss' subjective depth may be at variance with behavioral performance on hypnosis scales (Bowers, 1981). High hypnotizables judge their own depth from their performance on cognitive items (e.g. amnesia, hallucinations) while mediums and lows judge their own performance based on their responses to motor items and challenge items (Kihlstrom, 1981). In one experiment on amnesia, it appeared that Ss did not judge their own depth by how well they did on the amnesia task (Spanos, Stam, D'Eon, Pawlak, and Radtke-Bodorik, 1980). "M. T. Orne (1966, 1980) has emphasized that although it is necessary to operationalize S's responses to hypnotic suggestions, behavioral concomitants are only valid if they accurately reflect subjective alterations in an individual's experience" (p. 221).

"The social-psychological approach (see Barber, 1969; Radtke & Spanos, 1981, 1982; Spanos, 1982; Wagstaff, 1981) rejects the notion of hypnotic depth as an indicator of a unique state. These authors argue that the reports of having been hypnotized reflect attributions made by Ss when confronted with a hypnotic context. ... Bem (1972) and Kelley (1972) have emphasized the idea that the more ambiguous an experience is, the more a person is likely to base his or her judgment primarily on available external information" (p. 222). In this case, defining the situation as involving "hypnosis" is one of the most potent predictors of Ss' reports of subjective experience (Spanos, Radtke- Bodorik, and Stam, 1980). Other variables that influence subjective depth estimates are the wording of the hypnotizability scale, expectancy, and information provided directly or indirectly. On the other hand, McCord (1961) found that his patients had widely disparate expectations for how they thought they would feel when hypnotized, so expectancy as a predictor would not necessarily determine specific experience.

Direct experimental work on predicting response to hypnosis test items from expectancies (Council, Kirsch, Vickery, & Carlson, 1983; Kirsch, Council, & Vickery, 1984) suggests that expectations may predict test response when people are given a cognitive skill type of induction, but not when given a 'typical trance' type of induction. Also, another study from that laboratory (Council & Kirsch, 1983) established that only when expectancies are assessed after an induction (but before the test items) do they effectively predict hypnotic behaviors. The present authors express the view that these results are difficult to account for on the basis of social psychology theories that weight heavily the role of expectancy in generating hypnotic response.

When Ss are permitted to use several different descriptors for their experience (being hypnotized, experiencing the effects, being absorbed, and responding to the

suggestions), most Ss rated their own experiences as nonhypnotic (Radtke & Spanos, 1982). This was particularly true for medium hypnotizable Ss. Thus, unidimensional scales purporting to measure "depth" actually force Ss to interpret their multi-aspect experience in terms of the investigator's frame of reference, in this case "hypnotic depth." Nevertheless, the highly hypnotizable Ss were the least likely to be swayed from their self description of being "deep" when offered alternative ways of describing their experience. This is concordant with results reported earlier by Barber et al. (1968).

"The attribution literature may provide clues as to why most highly hypnotizability Ss retain their high ratings of experienced depth when confronted with situational manipulations. Self-perception theory strictly applies when Ss' experiences are ambiguous, forcing them to fall back on contextual factors to make self-appraisals. The relationship between expectancies, absorption, effect of scale wording, and hypnotizability scores suggest, however, that high hypnotizable Ss do not rely heavily on contextual factors when assessing their levels of hypnotic depth. Most of these Ss maintain their reports of altered experiences, even when situational determinants are changed (Harackiewicz, 1979; Kihlstrom, 1984; Lepper, Greene, & Nisbett, 1973). Thus, the hypnotizability by depth scale interaction found by Radtke and Spanos (1981) may suggest that experiences reported by high hypnotizable S are not inherently ambiguous. Accordingly, self-perception theory may not apply to them" (pp.226-227).

In their Discussion, the authors state, "Several studies have attempted to relate personal, real-life events to the experience of hypnosis. A number of studies (e.g., As, 1963; Field, 1965; Shor et al., 1962; Wilson & Barber, 1982) have shown that absorption, tolerance of unusual experiences, automaticity, compulsion, and trust are related to the capacity to be hypnotized. Other studies (Bowers & Breneman, 1981; Tellegen & Atkinson, 1974; Van Nuys, 1973) have shown that certain variants of attention are also related to hypnotizability. Extensive work by J. R. Hilgard (1970, 1979) has shown that patterns of personal development relate to hypnotizability in adult life. It appears then that hypnotizable individuals bring a host of experiences and abilities with them to the hypnotic context. It makes intuitive sense which is supported by the available empirical data, that a complex interaction among these experiences and abilities, the hypnotic context, and hypnotic responsiveness is implicated in Ss' assessments of their hypnotic depth. Studies are needed in which all of these potential determinants of hypnotic depth reports are taken into account. Only then will a clearer picture of their respective importance emerge" (p. 228).

1986

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic

responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

**Register, Patricia A.; Kihlstrom, John F. (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34, 84-97**

Measures of hypnotizability based on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) correlate only moderately with those based on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Ss (N = 148) scoring in the high range (10-12) on HGSHS:A were classified according to whether they scored in the "virtuoso" range (11-12) or not on a subsequent administration of SHSS:C. Significant group differences were found on items comprising the cognitive distortion subscale of HGSHS:A, whether assessed in terms of overt behavior or subjective impressions of success. The 2 groups also differed on global self-ratings of hypnotic depth and on those subscales of Field's Inventory Scale of Hypnotic Depth concerned with subjective feelings of loss of control, automaticity, transcendence of normal functioning, and fluctuating depth. Assessments of hypnotizability are enhanced when investigators consider subjective involvement as well as behavioral measures of hypnotic response. This is particularly important when the more dissociative aspects of hypnosis are under scrutiny.

The correlation between Harvard Group and Stanford Scale scores is usually about  $r = .60$  (Bentler & Roberts, 1963; Coe, 1964; Evans & Schmeidler, 1966). This is much lower than one would expect ( $r = .82$ ), based on the tests' individual reliabilities (Evans & Schmeidler, 1966).

The authors developed a Table to show the cross-classification of Ss in terms of Harvard and SHSS:C. Only a minority (33%) of Ss scoring in the highest range of HGSHS:A also scored in the highest range on the SHSS:C (or 50% if cutting points are different).

The Absorption scale correlated  $r = .38$  ( $p < .001$ ) with the Harvard Scale, which fell to  $r = .31$  ( $p < .01$ ) when corrected for expansion of range. The correlation between Absorption and SHSS:C was  $.35$  ( $p < .001$ ).

The issue of predicting Stanford 'virtuosos' from Harvard 'virtuosos' was addressed. HGSHS:A predictor variables were used to determine which items determined whether or not one of the HGSHS:A 'virtuosos' (the 20% who scored 11-12) would also be a SHSS:C 'virtuoso.' It was found that 70% of the SHSS:C virtuosos, but only 53% of the nonvirtuosos, had reversible posthypnotic amnesia on the HGSHS:A. None of the ideomotor or challenge subscale items demonstrated this ability to predict group association. Although the 'virtuosos' differed from the 'nonvirtuosos' in self reported depth, none of the coding categories associated with the depth variable differentiated the groups; also, judges could not predict who would be a Stanford 'virtuoso' based on subjects' descriptions of depth following the Harvard scale administration.

The Experimenters also could not predict who among the Harvard 'virtuosos' would be classified as a Stanford 'virtuoso' based on either their Absorption Scale score or previous experience with hypnosis.

It was found that subjects' subjective experience of the suggestions for hallucinations, amnesia, and posthypnotic behavior (all considered to be cognitive alterations) were the most highly correlated with the subsequent total SHSS:C score. On the Field scale, which measures subjective experience, the most predictive items had to do with feelings of automaticity and loss of control (referred to as nonvoluntary behavior in other literature). Predicting SHSS:C score by 5 items (Harvard behavioral score, Harvard subjective score, Field total score, Tellegen Absorption total score, and self reported depth rating),  $r = .44$ . "The 5-element regression, employing only total scores, explained 17% ... of the variance of SHSS:C; thus, the feelings of subjective success accounted for the vast proportion (79%) of the explainable variance. For the 16 element regression, employing subscales derived from factor analysis of HGSHS:A and Inventory Scale of Hypnotic Depth, the cognitive subscale was dominant, accounting for 65.5% of explainable variance" (p. 92).

A discriminant function analysis employing the same five total score variables correctly classified 63.3% of the virtuosos.

In their Discussion, the authors suggest that investigators use subjective response as well as behavioral response when identifying hypnotic talent (virtuosos) for research. Particularly, the subjective experience of success seems to be important. Little is known, to date, about the determinants of that sense of success with hypnotic suggestions. "In part, they may relate to the 'classic suggestion effect' (K.

S. Bowers, 1981; P. G. Bowers, 1982; Weitzenhoffer, 1974): the quasi-automatic, compulsory, involuntary quality which distinguishes hypnotic response from compliance with simple social requests. If so, then a direct assessment of perceived involuntariness might enhance the predictive validity of HGSHS:A even more. This is especially true for the perceptual-cognitive alterations which relate to Ss' capacity for dissociation" (p. 94).

The authors further recommend, "In those situations where HGSHS:A must stand alone for economic reasons, however, and especially where HGSHS:A is employed as a convenient preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

Woolson, Donald A. (1986). An experimental comparison of direct and Ericksonian hypnotic induction procedures and the relationship to secondary suggestibility. American Journal of Clinical Hypnosis, 29 (1), 23-28.

Recent studies reporting the disparate effects of direct and indirect suggestion upon hypnotized subjects have indicated that standardized, direct hypnotic susceptibility tests may not accurately predict the suggestibility of subjects exposed to an indirectly worded, albeit similar, test. Historically, primary suggestibility correlates highly with hypnotizability, while secondary suggestibility does not and has been reported to be a subject's response to indirect suggestion. In this study 56 volunteers for self-hypnosis training were first tested for secondary/indirect suggestibility, then each singly received either a direct standardized [sic] induction or an Ericksonian (indirect) version. While susceptibility scores between groups were close, a greater number of the Ericksonian group subjects were rated as medium or highly susceptible. This occurred regardless of their type of suggestibility. Also, the Ericksonian group subjects appeared to be less aware of their depth of trance, as judged by a comparison of their susceptibility scores and their self-report depth scores. - Journal Abstract

1985

Jupp, James J.; Collins, John K. (1985). Hypnotic responsiveness and depth in a clinical population. Australian Journal of Clinical and Experimental Hypnosis, 13 (1), 37-47.

Two samples of clinical subjects estimated depth during procedures which allowed their estimates to be related to aspects of responsiveness. In Sample 1, subjects estimated depth after they scored their responsiveness and tested their post-hypnotic recall. In Sample 2 subjects estimated depth before they had completed these tasks. Results suggested that subjects use the range of available information in making depth estimates and that they may be more influenced by the more obvious ideomotor challenge performances than by the cognitive distortion responses, aspects of amnesia, or impressions of involuntariness.

Jupp, J. J.; Collins, J. K.; McCabe, M. P. (1985). Estimates of hypnotizability: Standard group scale versus subjective impression in clinical populations. International Journal of Clinical and Experimental Hypnosis, 33 (2), 140-149.

: The relationship between hypnotic responsiveness as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) and global depth estimates derived from an 11-point scale were explored in 2 clinical samples. In one case, depth estimates were made just before, and in the other, immediately following the patients' focus on aspects of hypnotic responsiveness. The responsiveness-depth relationship was moderate and consistent across both samples, a finding which in itself is consonant with previous findings employing experimental Ss. When HGSHS:A performance and depth estimates were less proximate, the relationship between them remained significant but was substantially reduced in magnitude. Data suggest that low hypnotizable Ss increase their estimates of depth, and that higher hypnotizable Ss retain relatively stable estimates with increased exposure to hypnosis in a clinical context.

1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsivity. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsivity generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

Fourie, David P. (1983). Width of the hypnotic relationship: An interactional view of hypnotic susceptibility and hypnotic depth. Australian Journal of Clinical and Experimental Hypnosis, 11 (1), 1-14.

Efforts have been reported in the hypnosis literature to correlate measurements of hypnotic susceptibility with measurements of hypnotic depth. Not only have the

findings not been consistent, but recently the whole issue of hypnotic susceptibility and depth and their measurement has become controversial, as evidenced by Weitzenhoffer's (1980) and Hilgard's (1981) statements. This paper offers a different perspective on the issue and introduces the concept of the width of the hypnotic relationship as a useful indication of the degree of hypnotic involvement. The width of the hypnotic (paradoxical) relationship refers to the scope of the relationship within which certain involuntary behaviors can occur. The larger the number of such behaviors that are possible within the bounds of the paradoxical relationship, the wider that relationship shall be considered to be. This is an investigation of the relationship between the width of the relationship and the depth of hypnosis experienced. The SHSS: A, as a measurement of the width of the relationship, was applied to 18 volunteer female subjects. A 10-point self-report scale was applied before and after a procedure to widen the relationship. The correlations between the SHSS: A scores and both sets of self-report scores were positive and significant, as expected. The widening procedure had a definite deepening effect, but it seemed possible that this effect was not uniform.

Sacerdote, Paul (1982). A non-statistical dissertation about hypnotizability scales and clinical goals: Comparison with individualized induction and deepening procedures. International Journal of Clinical and Experimental Hypnosis, 30 (4), 354-376.

Researchers and theoreticians in the field of hypnosis have insisted for some time that reports of clinical applications of hypnosis should include the patients' classification based on their responses to standardized hypnotizability scales. Accordingly, clinical scales (Barber & Wilson, 1978/79; Cooper & London, 1979; J.R. Hilgard & E.R. Hilgard, 1979; Morgan & J.R. Hilgard, 1979; Wilson & Barber, 1978) have been developed or adapted from pre-existing standardized scales. For the same purpose, the Hypnotic Induction Profile (HIP) of Spiegel (1978), which claims reliability in classifying patients according to hypnotizability and psychopathology, has been developed and utilized.

Additionally, tailored scales which include specific qualitative items have been proposed (E.R. Hilgard, Crawford, P. Bowers, & Kihlstrom, 1979). According to a few clinical investigators (Frankel, Apfel, Kelly, Benson, Quinn, Newmark, & Malmaud, 1979) no disadvantage does ensue from routinely subjecting patients to hypnotizability scales. The positive results are: accumulation of reliable information about the validity of hypnotic intervention in various clinical conditions; differentiation between results of hypnosis and results of psychotherapy; and also a determination of whether hypnotizability is a fixed talent or whether it can be improved with training. With the individual patient the use of hypnotizability scales would rapidly indicate if his score will be high enough for certain specific applications and in general to determine whether therapy with hypnosis should even be attempted. The present author recognizes the rationale for the use of scales in the therapeutic realm, especially if the results are to be reported. The present author notes, however, that the generally accepted hypnotizability scales give disproportionate weight to some categories of hypnotic responses, but they are not

comprehensive enough to tap all the possible capabilities of individual patients. Standardized scales of hypnotizability rely almost entirely upon written or spoken instructions and therefore miss the opportunities of nonverbal communication. Also, most hypnotizability scales implicitly seem only to recognize hypnosis obtained by progressive relaxation as "the typical hypnosis." Some examples are presented to clarify how the use of standardized scales or of HIP (Spiegel, 1978) would wrongly classify a considerable minority of patients as nonhypnotizable or poorly hypnotizable, thus depriving them of potential therapeutic benefits.

1981

Sacerdote, Paul (1981). Teaching self-hypnosis to adults. International Journal of Clinical and Experimental Hypnosis, 29, 282-299.

The author presents operational definitions of self-hypnosis and examines the differences and similarities between hetero- and self-hypnosis in relation to the methods used and the hypnotizer's attitudes. It is argued that, with the exception of spontaneously occurring trances, there is no "pure" self-hypnosis. Most clinicians teach self-hypnosis through hetero-hypnosis, in part by direct or indirect posthypnotic suggestion. Some subjects never completely reach and maintain the same depth in self-hypnosis achieved in hetero-hypnosis, contrary to Ruch's (1975) conclusions. According to the present author, self-hypnosis taught through hetero-hypnotic experiences is effective as a method for physical and emotional tranquilization in nearly all subjects. Dynamically meaningful and physically effective self-hypnosis, however, is only learned by subjects who have been successful with deep hetero-hypnotic trances which included somnambulistic experiences. Effective deepening methods likely to stimulate psychodynamic creativity during hetero-hypnosis and subsequently during self-hypnotic trances are described. Some of the difficulties encountered by subjects during self-hypnosis are discussed: incomplete dissociative experiences; anxieties about self-control; doubts about the reality of the self-hypnotic state; and the possibility that negative attitudes, habits, and expectations may act countertherapeutically as posthypnotic suggestions. When successful, self-hypnosis permits prolongation and extension of effective therapy. Self-hypnotic teaching can be administered with different modalities in individual and in group settings. Clinicians can make useful contributions both to the therapeutic use of self-hypnosis and to a clearer theoretical understanding of self-hypnotic phenomena.

1980

Perry, Campbell; Laurence, Jean-Roch (1980). Hypnotic depth and hypnotic susceptibility: A replicated finding. International Journal of Clinical and Experimental Hypnosis, 28 (3), 272-280.

A sample of 398 Ss was tested in groups of from 8 to 20 people on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962). Retrospective depth reports for each of the 12 HGSHS:A items were taken in order to extend Tart's findings (1970, 1972) on susceptibility and depth. The Ss were

tested over 2 successive years in samples of  $N = 220$  and  $N = 178$ . Since results were almost identical for each year (thus constituting a replication), the data were pooled for this report.

A remarkable consistency in patterns of subjective depth across the 12 items of HGSHS:A was found, particularly noticeable in Items 7, 8, 9, and 10 for 4 susceptibility groups (high, high-medium, low-medium and low-susceptible Ss) which appeared to reflect differential item difficulties. In addition, all correlations between reported depth and HGSHS:A total scores were high and statistically significant. While the findings are in general accord with those of Tart (1970, 1972), further research is required in order to determine the underlying basis of depth reports, and the degree to which experimental reports of susceptibility and clinical reports of depth reflect similar experiential aspects of hypnosis.

**1979**

Spanos, Nicholas P.; Steggles, Shawn; Radtke-Bodorik, H. Lorraine; Rivers, Stephen

M. (1979). Nonanalytic attending, hypnotic susceptibility, and psychological well-being in trained meditators and nonmeditators. Journal of Abnormal Psychology, **88** (1), 85-87.

Four groups of trained meditators differing in amount of meditation practice and a group of nonmeditators attended nonanalytically to a mantra in two meditation sessions. Subjects signaled intrusions into their attending, and were also assessed on several person variables. The four trained meditator groups differed from one another only in terms of self-esteem. When combined into a single group, meditators signaled fewer intrusions and reported "deeper" levels of meditating than nonmeditators. However, meditators and nonmeditators did not differ on hypnotic susceptibility, absorption, or indices of psychopathology.

Tart, Charles T. (1979). Measuring the depth of an altered state of consciousness, with particular reference to self-report scales of hypnotic depth. In Fromm, Erika; Shor,

**1978**

Schwartz, W. (1978). Time and context during hypnotic involvement. International Journal of Clinical and Experimental Hypnosis, **26** (4), 307-316.

A recent conceptualization of hypnosis suggests that hypnotized Ss should show a disruption in episodic memory which would reflect a diminished awareness of duration and sequence. Specifically, the predictions were that hypnotized Ss would exhibit less accurate estimates of duration, and less sequence in their recall of activities, than would nonhypnotized Ss. The empirical task consisted of giving Ss the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962), either with the induction (hypnosis condition), or without the induction (control condition). Prior to the termination of the scale, Ss were asked to recall the activities they had performed and the time that had elapsed since they began the scale. Hypnotized Ss ( $N = 10$ ) were significantly less sequential in their recall of

activities, and less accurate in their estimations of the passage of time, than were nonhypnotized Ss (N = 10). These results suggest that persons who respond to hypnosis are less concerned with the context which the world provides for their actions than are nonhypnotized controls.

1970

Shor, Ronald E. (1970). The three-factor theory of hypnosis as applied to the book-reading fantasy and to the concept of suggestion. International Journal of Clinical and Experimental Hypnosis, 18, 89-98.

Maintained that many of the conflicting viewpoints in theories of hypnosis parallel the descriptive complexity of the phenomena. A 3-factor theory of hypnosis is surveyed in which hypnotic depth is conceived as a complex of 3 separate but complementary processes or dimensions. The theory is used to illuminate the book-reading fantasy and the concept of suggestion. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Silin, L.F. (1970). [Objective evaluation of the depth of hypnotic sleep]. Kazanskii Meditsinskii Zhurnal, 6, 39.

Tart, Charles T. (1970). Self-report scales of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 18, 105-235.

35 male undergraduates scaled their depth of hypnosis on a 10-point scale after each suggestibility test item on the Stanford Hypnotic Susceptibility Scale, Form C. These self-reports were highly correlated with measures of hypnotic behavior and experience. Instructions to report depth immediately and without thinking produced reports which correlated somewhat better with the other measures than instructions to consciously make a best estimate. This self-report scale promises to be highly useful in studies of hypnosis. (Spanish & German summaries) (22 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Brown, H. Alan; Krasner, Leonard (1969). The role of subject expectancies in hypnosis. International Journal of Clinical and Experimental Hypnosis, 17 (3), 180-188.

Investigated the influence of S's expectancies and "early data returns" on the depth of hypnosis with 40 female undergraduates shown 1 of 2 videotapes of "a hypnotic session conducted with a previous S." 1 tape created the set that becoming deeply hypnotized was very probable while the other created the set that it was very improbable. Ss were then hypnotized and administered a series of "depth tests" in such a way that the probability of passing the initial items was very high for 1/2 of the Ss and very low for the other 1/2. It was hypothesized that (a) "early data" congruent with S's expectancies should yield subsequent behavior in keeping with the expectancies, and (b) "early data" incongruent with S expectancies should lead to behavior consistent with the early data. Results support the 1st part of the

hypothesis only. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1969

Field, Peter B.; Palmer, R. (1969). Factor analysis: Hypnosis inventory. International Journal of Clinical and Experimental Hypnosis, 17, 50-61

An inventory scale of hypnotic depth and the Stanford Hypnotic Susceptibility Scale, Form A were factor analyzed, based on a sample of 223 college students. Both measures yielded a general factor of hypnotic depth. Rotation yielded inventory factors of unawareness, drowsiness, enthusiasm, subjective conviction, and Stanford factors of challenge and ideomotor-posthypnotic suggestibility. Results of an earlier study describing development of the hypnosis inventory were successfully cross-validated. (Spanish & German summaries) (19 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Weitzenhoffer, Andre M. (1969). Eye-blink rate and hypnosis: Preliminary findings. Perceptual and Motor Skills, 28, 671-676.

Tests the validity and reliability of certain features of the outer appearance of hypnotized individuals which have long been popularly and clinically considered good indices of "hypnosis." The present report focuses on eye-blink rate. 19 Ss were administered a slight modification of the Stanford Scale of Hypnotic Susceptibility, Form A. Samples of their blink rates were obtained prior to the induction of hypnosis and some time after the induction of hypnosis procedure had been terminated, but before the dehypnotization procedures began. The results support the popular and clinical belief that hypnotic-like behavior is accompanied by a decrement in blink rate to the extent that Ss scoring 6 or more points on the Stanford Scale showed a marked and statistically significant mean reduction in blink rate of over 60% following the induction procedure and some testing of their suggestibility. In contrast, Ss scoring 5 or less and presumably not hypnotized but merely suggestible to non-suggestible, did not show a statistically significant decrement. As a possible index of "hypnosis," such a decrease in rate was found to have a test-retest reliability of .86. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Blum, Gerald S. (1967). Experimental observations of the contextual nature of hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (4), 160-171.

EXPLORED THE DISTINCTIVE MENTAL CONTEXT OF HYPNOSIS WITH A WELL TRAINED MALE UNDERGRADUATE. 1ST, A CONTEXT EFFECT WAS DEMONSTRATED BY PRESENTING 2 SETS OF STIMULI ON A TRIAL, 1 UNDER THE HYPNOTIC CONDITION AND 1 UNDER THE WAKING, AND TESTING THEIR SUBSEQUENT SALIENCE IN HYPNOTIC OR WAKING

REPORT STATES. ATTEMPTS WERE THEN MADE TO ISOLATE ELEMENTS OF THE HYPNOTIC CONTEXT-CLOSED EYES, LOWERED MENTAL AROUSAL, AND "BLANK MIND"-NONE OF WHICH PROVED TO BE SUFFICIENT IN ITSELF TO ACCOUNT FOR THE OBSERVED PHENOMENON. A GREATER DIFFICULTY OF SPONTANEOUS INFORMATION TRANSMISSION FROM HYPNOTIC TO WAKING CONDITION THAN VICE VERSA LED TO ADDITIONAL EXPERIMENTS IN WHICH PRIOR HYPNOTIC "PRIMING," IN THE ABSENCE OF SPECIFIC POSTHYPNOTIC SUGGESTION, HAD NO EFFECT ON RELATED WAKING TASKS. FINALLY, A THEORETICAL INTERPRETATION WAS PROPOSED TO EXPLAIN HOW INITIALLY WEAK HYPNOTIC INPUTS, REGISTERED WITHIN A HIGHLY DISTINCTIVE MENTAL CONTEXT, CAN ACQUIRE VIRTUALLY COMPLETE COGNITIVE DOMINANCE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Roper, P. (1966). The use of hypnosis in the treatment of exhibitionism. Canadian Medical Association Journal, 94, 72-77. (Abstracted in American Journal of Clinical Hypnosis, 1966, 9, p. 83)

The use of hypnosis in the treatment of exhibitionism is described in three patients in whom the condition has been present for more than five years. In each patient there was no subsequent recurrence of the exhibitionism once therapeutic suggestions had been made in a deep hypnotic trance, the follow-up period being respectively five years, four and a half years, and one year. The method of treatment and the results are discussed in terms of the concepts of behaviour therapy. It is concluded that with certain patients suffering from exhibitionism the use of hypnosis may well be one of the best methods of treatment, but considerable care should be exercised to exclude those patients with an underlying psychosis, mental defect or psychopathic condition. It is also noted that the efficacy of the treatment would appear to depend on achieving a satisfactory depth of hypnotic trance. If this is not reached, the results are less likely to be successful. (Author's abstract, from AJCH pp. 83-84).

1965

Field, Peter B. (1965). An inventory scale of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 13, 238-249. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 86)

An inventory of 300 items describing subjective experiences during hypnosis was administered to 102 students after they had wakened from hypnosis. The 38 items that correlated best with a standard measure of hypnotic susceptibility are proposed as an inventory measure of hypnotic depth. Items dealing with absorption and unawareness, automaticity and compulsion, and discontinuity from normal experience correlated best with the criterion, while items dealing with conscious motivation to enter hypnosis, feelings of surface compliance with suggestions, and

unusual bodily sensations showed generally weaker relationships to the hypnotizability criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Hammer, A. G.; Arkins, W. J. (1964). The role of photic stimulation in the induction of hypnotic trance. International Journal of Clinical and Experimental Hypnosis, 12, 81-87.

The relative effectiveness of the ordinary verbal method of trance induction is compared with 2 forms of induction utilizing mechanical photic stimulation, and with methods combining the personal and mechanical features. The criterion of trance adopted was the compulsive carrying out of a difficult suggestion. Results show that mechanical procedures alone are ineffective. On the other hand, the addition of a particular sort of photic driving probably improves trance induction, which suggests that induction is a complex matter involving both social interactions and relatively nonmeaningful impacts on the brain. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

O'Connell, D. N. (1964). An experimental comparison of hypnotic depth measured by self-ratings and by an objective scale. International Journal of Clinical and Experimental Hypnosis, 12, 34-46.

The behavioral items of an individually-administered test of hypnotic susceptibility were scored by the Ss themselves (N = 88) and by E. Susceptibility scores derived from these self-ratings and observer-ratings were in excellent agreement ( $r = .90$ ) and did not differ significantly in distribution. Marked item scoring biases were found as a function of hypnotizability: poor hypnotic Ss tending to underevaluate their performance and good ones to overevaluate it. Moderate correlations were found between magnitude estimates made by Ss of their subjective hypnotic depth and both observer-rating ( $r = .55$ ) and self-rating ( $r = .54$ ) susceptibility scores. The interrelation and potential usefulness of these types of scoring procedures are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Tart, Charles T. (1963). Hypnotic depth and basal skin resistance. International Journal of Clinical and Experimental Hypnosis, 11, 81-92.

This investigation studied the relationship between a self-report scale for measuring the depth of the hypnotic state and basal skin resistance (BSR). The self-report scale accurately predicted the occurrence of hypnotic dreaming and amnesia, traditional criteria for medium and deep hypnotic states. BSR showed a high, positive correlation with the self-report depth scale. The data suggest that both the self-report scale and BSR may be useful measures for detecting changes in hypnotic depth. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

**Shor, Ronald E. (1962). Three dimensions of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 10, 23-28.**

**The writer extends his earlier presentation of a dual-factor theory of hypnosis to include archaic involvement. Although interactions occur among these factors, the depth of each may vary independently. The theory is properly seen as a synthesis and elaboration of many prior theories of hypnosis. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Weitzenhoffer, Andre M. (1962). The significance of hypnotic depth in therapy. International Journal of Clinical and Experimental Hypnosis, 10 (2), 75-78.**

**It is a common assumption that hypnosis has a quality of degree. While clinicians often state that success is unrelated to depth, the author maintains that depth determines the techniques one can successfully use in hypnotherapy. At the same time he believes that hypnotic behavior is multidimensional and that the major determinant of hypnotherapeutic success is the therapist's ability to establish a meaningful interpersonal relationship. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Hatfield, Elaine C. (1961). The validity of the LeCron method of evaluating hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 9, 215-221.**

**The purpose of this study was to check the relationship between estimations made by the LeCron measure of hypnotic depth and scores secured by the same S on the Stanford Hypnotic Susceptibility Scale. The correlations between the two measures were low, though significant. The mean of estimates requested from the Ss' "unconscious" correlated .84 with those made by the "conscious," suggesting that the 2 judgments may not be independent. From Psyc Abstracts 36:04:4II15H. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1959**

**Bowers, Margaretta K. (1959). Friend or traitor? Hypnosis in the service of religion. International Journal of Clinical and Experimental Hypnosis, 7 (4), 205-215.**

**Hypnosis may potentiate religious experiences like prayer and worship, where hypnosis meets the world of inner reality. In the first to fourth centuries, Jewish mystics alluded to depth of mind in religious experience, but the idea of oneness with God "cannot be accepted as a healthy psychological concept" (p. 207).**

**"We have the possibility of understanding prayer and worship as an intrapsychic phenomenon, as a communication with one's total being. Once the premise of the indwellingness of God can be accepted as a psychological [sic] entity, then we can understand prayer as being a total response of the psychic life of the individual in order that he can understand the feelings of wholeness, self-confidence, and self-**

esteem in himself, and further, how this can be aided by hypnotic techniques" (p. 207).

The author interprets the 13th Century mystic's words, 'the divine will, dresses or cloaks itself in the will of the devout,' as similar to hypnosis, in which a state "may occur where the patient loses his awareness of the separateness of himself and the hypnotist so that the hypnotist's voice may be felt as his own voice" (p. 208). This is all right as long as awareness of separateness is re-established when the person comes out of the hypnotic or religious experience.

The religious mystic also may use autohypnosis "to achieve a greater experiencing of God and a heightened religious experience. Such a state likewise produces an ecstasy. Such ecstasy is sometimes present in religious conversion experiences as well. This ecstasy is healthy if the separateness and integrity of God and Man are kept separate" (p. 209). The author describes a phenomenon in which a priest who leads a deeply devotional religious service may feel a loss of a sense of self afterward, complaining of great fatigue and inability or unwillingness to relate to people. The same post-devotional emptiness and depression sometimes occurs among parishioners.

A psychoanalytically oriented case study of misdirected religious belief, amplified by religious service induced trance, is presented.

Cheek, David B. (1959). Use of rebellion against coercion as mechanism for hypnotic trance deepening. International Journal of Clinical and Experimental Hypnosis, 7 (4), 223-227

Observation that student subjects often go into a deeper level of hypnosis after suggestions have been given for ending the session has led the writer to explore the reactions of subjects to this phenomenon and to set up a simple experiment using ideomotor responses in ten gynecological patients who needed hypnosis for therapy. In each of the ten patients there was a deepening of the trance after the suggestion to awaken had been given. It was the opinion of the subjects that they deepened the trance in rebellion against the direction for terminating a pleasant experience" (p. 227).

1958

Sears, Alden B.; Talcott, Martha M. (1958). Hypnotic induction by use of non-meaningful languages: A pilot study. Journal of Clinical and Experimental Hypnosis, 6 (3), 136-138.

In order to explore the question of whether hypnosis is due to suggestion, rhythm, monotony, etc. a spiral disk focus induction was delivered to 46 college students in 3 different languages (Bohemian, Japanese, and Spanish) by female native speakers. The students were asked to rate which part was "most relaxing." Language sequence was counterbalanced.

Fourteen students went into light trance; in a later induction they were found to be hypnotizable -- 13 to a medium trance level (higher number than would be expected based on results with students who had not listened to the tapes). However the

authors did not know which aspect of the preparatory 3-language period to which to attribute the better response.

1957

Marenina, A. I. (1957). [Effect of inhibition of stimuli on changes of cerebral potentials in various stages of hypnosis]. [Translation] Institut Fiziologii Imeni I. P. Pavlova, 6, 330-334

"Summary. In an experiment situation, subjects who previously resisted all attempts at hypnosis with other operators, went into hypnosis on the first attempt with the experimenter. There was, without doubt, present the motive to overcome previous failures. However at this time the subjects went into hypnosis when they were told that they would be accomplishing the state through their own efforts. Furthermore we must not overlook the following as written by Kline (5). 'Individuals not successfully hypnotized by a particular person on the first attempt may be successfully hypnotized by the same person later on. Alternatively, individuals not hypnotized by one person may, even immediately afterwards, be successfully hypnotized by a second hypnotist'" (pp. 80-81).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the induction of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 5 (2), 82-98.

The hypnotic state has four attributes: "an effect of emotional stabiliztion, a retrogression to an infantile psychological functioning, suggestibility, and transmissibility of the hypnotic relationship" (p. 82). "SUGGESTIBILITY is a special motivation to accept, incorporate within one's self, and execute direct or implicit propositions, which is equivalent to the motivation of a child to accept, assimilate and carry out the propositions of its parents" (p. 84). The authors propose that verbal and non-verbal suggestions are incorporated during the course of education, lasting years and thus becoming in effect post-hypnotic suggestions. "The person will have in the future a \_special responsiveness,\_ that may be more or less pronounced according to the circumstances, \_for those data\_ (coming from books, movies, conversations, etc.) \_which agree with his emotionally-incorporated post-hypnotic suggestions\_" (p. 85). If while in an auto-hypnotic condition he comes in contact with someone "who appears to be the embodiment of the convictions or prejudices that on being stimulated started the process of emotional activation that led to the development of the hypnotic state, \_there may be a transformation of the auto-hypnotic condition into an interpersonal hypnotic relationship\_" (p. 86).

According to the authors, this theory can explain post-hypnotic (negative) sequellae. It also accomodates explantions of both Natural or Direct Orientation inductions and Indirect Orientation inductons, and explains phenomena such as patients entering hypnosis rather automatically while awaiting the appearance of Mesmer in his waiting room.

"To conclude, we will stress that the psychological mechanism of hypnotic induction is exactly \_the same\_ in everyday life and in the experimental environment. The apparent differences like [sic] in the \_behavior\_ of the subject in the hypnotic state,

and are due to the motivation that arises from the circumstances and to the convictions, capacities, psychological maturity, and degree of retrogression of the individual" (p. 96).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the nature of hypnotic phenomena. Journal of Clinical and Experimental Hypnosis, 5 (2), 67-76.

The authors write about the place of the hypnotic state in general psychology: "the study of the psychological mechanisms that make the appearance of the phenomenon possible, which need not be different from the normal and current psychological mechanisms in everyday life\_" (p. 67). They classify hypnotic phenomena into three groups:

"I. Phenomena which are a function of the state of psychological retrogression (hypnotic depth), appearing in spontaneously [sic] or when proposed by the operator.

II. Phenomena which appear without any specific suggestion, as a side issue of other suggestions, capable of originating emotional states in the subject.

III. Phenomena which are independent of all suggestion, being a constituent part of the hypnotic state itself, in its 'positive' or 'negative' forms" (p. 68).

Using this framework, the authors describe several aspects of hypnosis: catalepsy, anesthesia, retrogression, the taking of a role, negativism and resistance, visceral changes, emotional stabilization, psychotherapeutic benefits (indirect). They observe that direct suggestions are often not necessary for therapeutic benefit, and give as an example the tendency for less bleeding when dentists suggest that patients will not feel less pain.

"For the elucidation of this point, the authors carried out an experiment in a dental clinic, taking six easily hypnotizable subjects in whom dental extractions were to be performed. They were given only the suggestions that they would feel the doctor working, but not experience pain ... that they would pay no attention to it ... or even if they felt a little pain, this would not trouble them and they would bear it perfectly ... Nothing was said about the loss of blood. As a result, in all the cases the loss of blood was slight, practically insignificant, though technically difficult extractions of roots were included" (p. 74).

"The explanation of hypnotic phenomena as natural and normal consequences of the hypnotic emotional state, and of the state of psychological retrogression, eliminates the supposed mysterious powers of suggestion. Suggestion is thus relegated to the modest role of a litmus paper which reveals the psychological functioning of the individual in an experimental environment. On the other hand, in everyday-life hypnosis, in the principal hypnotic relationships of parents with their children, of teachers with their pupils, etc. (11), suggestibility plays an important role in education or re-education" (p. 75).

1956

Bigelow, Newton; Cameron, G. H.; Koroljow, S. A. (1956). Two cases of deep hypnotic sleep investigated by the strain gauge plethysmograph. Journal of Clinical and Experimental Hypnosis, 4 (4), 160-164.

Two subjects, studied by means of a strain gauge plethysmograph, have shown greater changes in the peripheral pulse and the finger volume during deep hypnosis than they did immediately before or after. In the absence of external stimuli, the presence and the degree of such changes reflect the activity of the autonomic nervous system. This result suggests that in hypnosis the inhibiting tendency of the cortex on the autonomic nervous system is reduced or nullified" (p. 164).

Dittborn, Julio M. (1956). Toward a semeiology of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (1), 30-36.

19 subjects were chosen among two hundred that in the year the experiment took place (1954) were to be 20 years old. 11 of these subjects qualified themselves as good swayers, whereas the 8 others were considered somehow refractory to the postural swaying test.

"All 19 went under a standard hypnotic induction: the operator employed the same words in all cases, and requested from all the execution of the same acts.

"Several involuntary signs of standard induction are described, which reveal that the subject has attained a convenient degree of muscular relaxation after appropriate suggestions.

"Fatigue is apparently an important source of spontaneous amnesia in good swayers.

"In the analyzed cases no involuntary sign has been detected, that could reveal us whether the inducted subject will or not present spontaneous post-hypnotic amnesia" (p. 36).

Solovey, Galina; Milechnin, Anatol (1956). Concerning a theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 4, 37-45.

"The essential attributes of the hypnotic condition may be understood to derive from three sources:

- 1) The hypnotic emotional state per se
- 2) The resultant motivation of the 'subject' to comply with the desires of the 'operator' (reinstating a child-like responsiveness).
- 3) The RETROGRESSION to an earlier form of psychological functioning that takes place under a hypnotic state of growing intensity" (p. 43).

"Although the retrogressive process is a general response to emotions and probably exists in some toxic states as well, it has a remarkable feature in the hypnotic state: THE COALESCENCE OF MOTIVATION AND RETROGRESSION, which exists in hypnotized people, permits a peculiar manipulation of the retrogressed condition. The peculiar responsiveness of the subject may be tested and molded by means of propositions which act as suggestions. In this manner, the so-called HYPNOTIC PHENOMENA are elicited" (p. 44).

1953

LeCron, Leslie M. (1953). A method of measuring the depth of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (2), 4-7.

**Author's Summary - No satisfactory method of ascertaining quickly and accurately the depth of hypnotic trance has heretofore been available. By providing the hypnotized subject with a yardstick of measurement, a reply to the question "how deep are you?" may be obtained from the subconscious mind of the subject himself. This is expressed verbally in percentages of from 1 to 100, with percentage values arbitrarily assigned by the operator to different stages of trance. Indications from testing 30 subjects are that their replies are valid, possibly to an astounding degree of accuracy. (p. 6)**

## **DESENSITIZATION**

**1988**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

### **NOTES**

**"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.**

**The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."**

**1996**

**DeBenedittis, Giuseppe De (1996). Hypnosis and spasmodic torticollis -- report of four cases: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (4), 292-306.**

**Dystonia and particularly spasmodic torticollis are neuromuscular disorders that are extremely resistant to most therapies (physical, medical, or surgical). Torticollis is a unilateral spasm of the neck muscles, particularly of the sternocleidomastoid, that produces violent, tonic turning of the head to one side. The etiology remains uncertain, although the role of psychogenic factors has been emphasized. This article reviews the literature and reports four cases of spasmodic torticollis treated successfully with hypnosis. In all four cases, psychogenic causes were involved. Postural hypnosis (i.e., hypnosis in the standing position) was employed to counteract and minimize muscle spasms due to postural reflexes. A hypnobehavioral approach was adopted along with hypnotic strategies that included hierarchical desensitization, sensory-imaging conditioning, ego-boosting suggestions, and hypnosis-facilitated differential muscle retraining. In two cases, a combined hypnosis and electromyographic-biofeedback approach was used to equilibrate and retrain affected neck muscles. Although the hypnotherapeutic process took several months to induce and stabilize significant changes, outcome results were good to excellent in all cases, with marked reduction of the torticollis and the hypertrophy of the neck muscles as well as a reduced interference of symptoms in daily living. -- Journal Abstract**

**1994**

**Stanton, Harry E. (1994). Self-hypnosis: One path to reduced test anxiety. Contemporary Hypnosis, 11, 14-18.**

**Describes a self-hypnosis technique and its efficacy in reducing test anxiety. Forty high school students were matched on sex and anxiety scores and randomly allocated to an experimental group (receiving two 50-minute sessions, a week apart, to learn the self-hypnosis technique), and a control group (receiving two 50-minute sessions focused on ways of reducing test anxiety). Students were retested after the two sessions, and 6 months later. Results showed a significant reduction in anxiety scores only for the hypnosis group, which was maintained at 6-month follow-up.**

**1992**

**Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.**

**The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD.**

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Yapko, Michael D. (1992). Editor's Viewpoint. Milton H. Erickson Foundation Newsletter, 12 (3), 2.

#### NOTES

A controversial issue is heating up, and therapists are beginning to feel the heat. The issue involves the common practice of helping clients recover apparently repressed memories of early childhood sexual trauma.

"In the second edition of my hypnosis textbook, Trancework (1990, Brunner/Mazel), I included a special section on the possibility of hypnotically implanting false memories---vivid memories of things that never actually happened that the client comes to believe as true recollections. I pointed out the risks of suggestive procedures and urged caution in suggesting memories of any sort, whether a formal hypnotic induction took place or not.

"Early this year a non-profit foundation was formed in Philadelphia called the False Memory Syndrome Foundation which serves as a clearing house for relevant information, and even publishes a newsletter. It also provides support to families broken apart by these problems. If you are interested in the complex issues regarding suggestion and memory, you can contact the FMS Foundation at 3508 Market Street, Suite 128, Philadelphia, PA 19104, telephone (215) 387-1865. David Calof's group also publishes Treating Abuse Today. They, too, are cognizant of the relevant issues. Their address is 2722 Eastlake Avenue East, Seattle, WA 98012, telephone (206) 329-9101" (p. 2).

#### 1991

Wolpe, Joseph; Abrams, Janet (1991). Post-traumatic stress disorder overcome by eye-movement desensitization: A case report. Journal of Behavior Therapy and Experimental Psychiatry, 39-43.

Post-traumatic stress disorder is an exceptionally stressful syndrome that has been extremely difficult to treat. The prognosis was recently dramatically improved by the introduction of eye-movement desensitization. This paper reports, in substantial detail, a case that was precipitated by a rape 10 years earlier, describing its manifestations and various unsuccessful attempts to treat it: followed by a detailed exposition of the eventual, completely successful treatment by eye-movement desensitization.

**1989**

Abelson, James L.; Curtis, George C. (1989). Cardiac and neuroendocrine responses to exposure therapy in height phobics: Desynchrony within the 'physiological response system'. Behaviour Research and Therapy, 27 (5), 561-567.

Monitored subjective, behavioral, cardiovascular and neuroendocrine responses in 2 men (aged 19 and 34 yrs) with height phobias over a full course of exposure therapy and at 6 and 8 month follow-up. Both Ss showed rising cortisol responses and stable, nonextinguishing norepinephrine responses to height exposure over the course of treatment, while improvement occurred in subjective and behavioral response systems. They had differing heart rate responses. Despite desynchrony among anxiety response systems and within the physiological system at treatment conclusion, Ss had successful outcomes with general measures of change (phobia rating scales, the Fear Survey Schedule, and the SCL-90) showing substantial improvement for both Ss. These outcomes were preserved at follow-up.

Van den Bergh, Omer; Eelen, Paul; Baeyens, Frank (1989). Brief exposure to fear stimuli: Imagery ability as a condition of fear enhancement and fear decrease. Behavior Therapy, 20, 563-572.

Examined fear enhancement and fear decrease during brief exposure to fear stimuli. 140 good and poor imagery Subjects (aged 14-18 years) with medium fear levels toward spiders were exposed to a live spider, either by looking at it or by thinking of an invisible, but present spider during either 60, 180, or 360 sec. Control Subjects were given a distraction task. Subjective fear and behavioral approach were measured. Brief exposure hindered fear decrease compared to the control condition. Good imagers showed more fear decrease and were less affected by the mode of exposure. Fear enhancement occurred only in poor imagers at the longer exposure duration (360 sec) during thinking. In that condition, good imagers showed their greatest fear decrease.

**1988**

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, 31, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year study of 50 thermally injured patients with greater than 45% total body surface

second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

#### NOTES

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

1987

Dobkin de Rios, Marlene; Friedmann, Joyce K. (1987). Hypnotherapy with Hispanic burn patients. International Journal of Clinical and Experimental Hypnosis, 35 (2), 87-94.

This paper examines a culturally sensitive hypnotherapeutic intervention for Hispanic burn patients who suffer symptoms of the post-traumatic stress disorder and discusses the outcome of 27 patients seen by the authors (a medical anthropologist and a clinical psychologist), over a 3.5-year period. Given the difficulties of recent monolingual, Mexican migrants in responding to psychological interventions that are not culturally sensitive, the hypnotherapeutic interventions and procedures developed by the authors provide a plan for systematic desensitization and cultural concordance to make rehabilitation of Hispanic burn patients more effective.

**1984**

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

**1983**

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

**1982**

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

## NOTES

Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...

"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).

The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.

"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance

of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).

"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).

Systematic desensitization and hypnosis were used in a client with long-standing penetration phobia. Glass test tubes were used in dilation exercises and masturbation instead of more expensive metal catheters. The client was able to have intercourse and adequate sexual adjustment.

O'Brien, Richard M.; Cooley, Lewis E.; Ciotti, Joseph; Henninger, Kathleen M. (1981). Augmentation of systematic desensitization of snake phobia through posthypnotic dream suggestion. American Journal of Clinical Hypnosis, 23, 231-238.

Nine snake phobics who had scored above eight on the SHSS (Form A) were given four desensitization sessions and five sessions in which a pleasant posthypnotic dream of the phobic object was suggested. These subjects were significantly superior to a desensitization-only control group on a behavioral avoidance test. Seven of the nine hypnosis subjects were able to touch a real snake. The two subjects who did not touch the snake reported dreams in which the snake was either absent or threatening. Although conclusions are limited by differential attention and susceptibility, the technique seems promising.

1980

Powell, Douglas H. (1980). Helping habitual smokers using flooding and hypnotic desensitization techniques: A brief communication. International Journal of Clinical and Experimental Hypnosis, 28 (3), 192-196.

A subgroup of individuals who were helped to stop smoking by hypnosis or other means returned to consuming a few cigarettes a day. A flooding and hypnotic desensitization technique assisted 4 of 7 individuals who resumed smoking in becoming and remaining abstinent for a 6- to 9-month follow-up period.

1978

Dyckman, John M.; Cowan, Philip A. (1978). Imaging vividness and the outcome of in vivo and imagined scene desensitization. Journal of Consulting and Clinical Psychology, 46 (5), 1155-1156.

This study reexamined the role of imaging vividness in desensitization success. Scores on the Betts Questionnaire on Mental Imagery were used to divide 48 snake-phobic subjects into high, medium, and low vivid groups, who were assigned to imagined scene or in vivo desensitization treatments. Imaging vividness was assessed at scheduled points during therapy. Significant decreases in behavioral and self-reported fear were observed after both treatments, though in vivo desensitization produced significantly greater fear reduction. In therapy imaging vividness scores were significantly correlated with therapeutic success and were superior to pretherapy ratings as predictors of outcome.

Shipley, R. H.; Butt, J. H.; Horowitz, B.; Farbray, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables.

The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

1977

Ascher, L. M. (1977). The role of hypnosis in behavior therapy. In Edmonston, William E., Jr. (Ed.), Conceptual and investigative approaches to hypnosis and hypnotic phenomena (296, ). New York: New York Academy of Sciences.

#### NOTES

He does not differentiate physical and mental relaxation (Davidson & Schwartz). Insists that hypnosis treatment not include desensitization operations.

"Two studies (Gibbins et al., and Woody and Schaube) presented data that seemed to indicate that desensitization plus a hypnotic induction procedure resulted in greater fear reduction than desensitization alone. However, an analysis of the procedures employed suggests that the conclusion may be unwarranted, or at least premature. Both studies confound the hypnotic induction with added elaboration of desensitization scenes, as well as additional direct fear-reduction suggestions. In addition, Gibbons et al. further confounded their study by placing good hypnosis subjects into the hypnotic-induction group as opposed to the desensitization or control groups. Barber has pointed out that the type of method that Gibbins et al. employed in subject assignment, as opposed to random assignment, results in the inability to control for such things as previous experience, the relationship of the subject with the experimenter, and the differential effects of these factors on the subject's attitudes, expectancies, and motivation" (p. 256).

"Finally, some individuals writing from the context of hypnotherapy, have suggested that the effects of specific imaginal behavioral techniques may be due to the possible existence of hypnosis or the trance state unwittingly incorporated into these behavioral procedures. The difficulties of such a position have been addressed by Barber, Cautela, Johnston and Donaghue, Spanos, Spanos, et al., Spanos and Barber, and Weitzenhoffer, among others. The following, as a group, have pointed out the difficulties inherent in the position that certain procedures, not otherwise associated with hypnosis, may nevertheless result in the production of a 'trance state' in susceptible subjects (Barber, Chaves, and Spanos) have delineated the differences between hypnosis and various behavioral procedures (Cautela, Spanos et al., and Spanos and Barber); and have presented strong arguments for suggesting that the effectiveness of hypnotherapeutic techniques are due to the inclusion of components of desensitization in the procedure rather than to the induction of a 'trance'" (pp. 257-258).

1977

Avila, Donald; Nummela, Renate (1977). Transcendental meditation: A psychological interpretation. Journal of Clinical Psychology, 33 (3), 842-844.

The authors suggest that Transcendental Meditation offers a great deal of promise for use in helping relationships. They also suggest that the technique might receive wider acceptance if it could be explained in other than a purely philosophical or

mystical way. For that reason, in their article they offer a psychological interpretation of the TM process.

Snyder, Arden L.; Deffenbacher, Jerry L. (1977). Comparison of relaxation as self-control and systematic desensitization in the treatment of test anxiety. Journal of Consulting and Clinical Psychology, 45 (6), 1202-1203.

Relaxation as self-control and desensitization were compared to a wait-list control in the reduction of test and other anxieties. Neither active treatment differed significantly from the other, but they did differ significantly from the control treatment on several variables. Subjects in both treatments reported less debilitating test anxiety, whereas desensitization subjects showed greater facilitating test anxiety. Under stressful conditions, treated subjects were less worried and anxious, found the situation less aversive, and perceived themselves and their abilities more favorably than controls. Significant reductions in nontargeted anxieties also were found, suggesting transfer of anxiety-management skills to areas other than test anxiety,

1976

Hemme, Robert; Boor, Myron (1976). Role of expectancy set in the systematic desensitization of speech anxiety: An extension of prior research. Journal of Clinical Psychology, 32 (2), 398-404.

#### SUMMARY

The influence of expectancy set with regard to therapy outcome on the effectiveness of systematic desensitization (SD) for reducing public speaking anxiety was investigated. The 7 Ss given a high expectancy set for favorable therapy outcome were informed about psychological research that indicates that SD is effective to reduce public speaking fears. SD was administered with the standard instructions to the 11 Ss given a neutral expectancy set. This expectancy manipulation did not require deception and perhaps could be used with actual SD therapy clients. As in previous research by Woy and Efran, the expectancy set manipulation significantly modified Ss' self-report of subjective perceptions of anxiety from pretreatment to posttreatment speeches, but did not affect overt behavioral or physiological indices of anxiety. Since subjective perceptions of anxiety responses are psychologically significant behaviors, these data suggest the importance of conveying a high expectation of improvement to SD and perhaps also to other types of therapy clients. SD sessions administered to small groups of clients on consecutive days, as in this study, appeared to be as effective to reduce speech anxiety as SD sessions administered to each client individually at 1-week intervals, as in the Woy and Efran study" (pp. 403-404).

1975

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiologic, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

1974

Russell, Elbert W. (1974). The power of behavior control: A critique of behavior modification methods. Journal of Clinical Psychology, 30 (2), 111-136.

#### NOTES

In summarizing the effectiveness of behavior therapy the author states, "At this point there does not appear to be sufficient evidence to demonstrate that all of the effectiveness of various types of behavior therapy is produced by non-specific, especially placebo, effects. In fact, it is more probable that many of these techniques will be found to have elements that are not due to non-specific effects and, as such, they will be the treatment of choice for certain limited problems, such as aversive therapy for autistic children or training of the mentally retarded. Nevertheless, concerning the central issue in this monograph, it is increasingly apparent that a very large proportion of the 'power' of behavior methods is due to non-specific, suggestion or placebo effects.

"As such, this 'power' is neither behavioristic, new, nor particularly threatening. It is not new since it has been known to medicine for many decades. As Shapiro states, 'the history of both physiologic and psychologic treatment is largely the history of the placebo effect; those who forget it are destined to repeat it'. In support of the age of this problem, Shapiro also quotes from the compiler of the remedies of the Paris Pharmacologia, a century ago, 'What pledge can be afforded that the boasted remedies of the present-day will not, like their predecessors, fall into disrepute, and in their turn serve only as a humiliating memorial to the credulity and infatuation of the physicians who recommended and prescribed them'" (p. 120-121).

"The large amount of suggestion or placebo effect in behavior therapy does raise at least two vital problems. The first problem involves the ethics of using suggestion or a placebo. Is it ethical to give the patient a false or questionable explanation for the source of the effectiveness of behavior procedures? Such an explanation would be that they are based on proven scientific behavior principles when major people in the field do not believe this and evidence is mounting that the primary source of effect is suggestion. Secondly, what will be the effect on the attitude of the general

public toward professional psychology when they realize that the effectiveness of psychological behavior therapy methods is primarily a matter of suggestion? Will they not consider it a modern patent medicine? The damage that could be done to the prestige of psychology might take decades to repair. JH

Wickramasekera, Ian (1974). Heart rate feedback and the management of cardiac neurosis. Journal of Abnormal Psychology, 83 (5), 578-580.

This article describes the treatment of a chronic case of cardiac neurosis which had failed to respond to several prior medical and psychological interventions. Significant and durable symptomatic response appeared to be correlated with the application of a combination of procedures including heart rate feedback, patient-administered desensitization, and therapist-administered flooding.

1973

Brown, H. Alan (1973). Role of expectancy manipulation in systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (3), 405-411.

Expectancy, relaxation, and hierarchy content were manipulated in a 2X2 factorial design with two additional control groups. It was hypothesized that a major portion of therapeutic change following desensitization could be accounted for by the subjects' responses to positive feedback inherent in the paradigm. Spider-phobic subjects saw either photographs of spiders or blank slides that they believed to be tachistoscopically presented pictures of spiders. In the factorial part of the design, half of the subjects believed their progress through the hierarchy to be contingent on autonomic responses; the others believed rate of progress to be random. Findings did not support the hypothesis that expectancy was the only factor in desensitization, but they did serve to clarify the role of expectancy vis-a-vis the counterconditioning elements typically discussed in the literature.

McReynolds, William T.; Barnes, AllanR.; Brooks, Samuel; Rehagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

Tori, Christopher; Worell, Leonard (1973). Reduction of human avoidant behavior: A comparison of counterconditioning, expectancy, and cognitive information approaches. Journal of Consulting and Clinical Psychology, 41 (2), 269-278.

This study was designed to compare the fear-reducing efficacy of procedures based on three major theories that have been proposed to account for the success of systematic desensitization therapy: (a) cognitive information storage and retrieval, (b) cognitive expectancy, and (c) counterconditioning. Predictions were confirmed in that the outcome measures of the high-expectancy placebo group and the two cognitive-coping groups were significantly superior to those of the counterconditioning and no-treatment groups. Thus, this experiment supports the supposition that changes in human avoidant behavior may be attributed to demand and expectancy variables rather than the conditioning of "antagonistic responses" as has been previously suggested.

Gibbons, Don E. (1971). Directed-experience hypnosis: A one-year follow-up investigation. American Journal of Clinical Hypnosis, 13, 206-207.

#### NOTES

In a previous study, the Direct Experience (DET) group was significantly lower than the Wolpe desensitization group and No Treatment controls on Mandler-Sarason Test Anxiety Questionnaire. One year later this advantage was maintained. They concluded direct-experience hypnosis (a) takes effect more rapidly than does systematic desensitization, since the differences obtained in the original study were produced after only 3 hours of experimental treatment, (b) produces a long-term effect which, by virtue of its duration, may not be attributed to implicit posthypnotic suggestion, (c) is likely to be due to influences other than initial differences in suggestibility between groups, as no such differences had been found in initial administration of the Barber Suggestibility Scale, (d) is unlikely to be due to systematic differences in experimenter variance, as a different E worked with each subject in the original study, and (e) would be difficult to account for in terms of subject demand characteristics, since E's handling the desensitization subjects were either enrolled in or teaching a graduate seminar in desensitization and behavior modification at the time while those handling DET subjects were enrolled in or teaching graduate seminars in hypnosis.

1970

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

#### NOTES

Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other

studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience. Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

**1967**

Schubot, Errol David (1967). The influence of hypnotic and muscular relaxation in systematic desensitization of phobias (Dissertation). Dissertation Abstracts, 27 (n10-B), 3681-3682.

"15 snake phobic subjects had desensitization treatment and 15 matched subjects had desensitization treatment with a hypnotic and muscular relaxation induction. Rate of moving through the fear hierarchy was based on three variables fear report, report of body tension, and time of signaling anxiety. Analysis of results took into consideration initial approach (to snake) level of subjects. Both treatments were effective. However, hypnotic relaxation was significantly important in desensitization for the most phobic subjects (those who couldn't approach closer than 5 feet, initially) though not for less fearful subjects. In fact, the most fearful subjects did not show improved approach behavior if they did not get the hypnosis relaxation treatment, though bodily tension and fear were reported as less while working on early items in the hierarchy. The Waking group, compared to the Relaxation hypnosis group, manifested significantly less improvement in approach and slower progress in desensitization. Hypnotizability was significantly correlated with improvement for the Relaxation subjects, as was vividness of imagery. In summary, hypnosis (a relaxation induction) facilitated desensitization treatment of highly anxiety snake-phobic subjects with the hypnotic relaxation induction, treatment outcome was related both to hypnotizability and to imagery vividness" (p. 3681- 3682).

**1965**

Davison, Gerald C. (1965, June). Anxiety under total curarization: Implications for the role of muscular relaxation in the desensitization of neurotic fears. [Paper] Presented at the annual meeting of the Western Psychological Association, Honolulu.

## NOTES

I began by describing the Jacobson-Wolpe position on the use of deep muscular relaxation as an anxiety-inhibitor: these writers assume that the considerable reduction in proprioceptive feedback from muscles which are in a relaxed state is incompatible with a state of anxiety. Then I mentioned the evidence that at least modern neuromuscular blocking-agents operate solely at the myoneural junction, with no direct central effects. I went on to discuss the various studies which have used paralytic drugs, primarily d- tubocurarine chloride, to show the learning of fear-responses under complete striate muscle paralysis: the fact that these animals are able to acquire classically-conditioned fear-responses under curare was taken as evidence inconsistent with the views of Jacobson and Wolpe. Several studies were then reviewed which purport to furnish confirmatory evidence for the Jacobson position: these studies showed considerable central depression during curare paralysis. I re-interpreted these studies in the light of the over-riding importance of exteroceptive stimulation, stressing that the animals in the curare learning experiments were likewise deprived of proprioceptive feedback and yet were hardly non- anxious: the important difference was that the animals in the conditioning experiments were stimulated frequently from the environment while curarized, this stimulation maintaining an alert, often anxious state. Finally, two hypotheses were put forward as to why training in muscular relaxation does, in fact, inhibit anxiety: the one suggested that relaxing one's muscles generates strong positive affect states, which in turn inhibit anxiety; the other hypothesis called attention to the fact that the states of muscular relaxation under curare versus under self-induced relaxation differ in the important respect that only with self-induced relaxation is there a reduction in efferent activity--perhaps this elimination of efferents, rather than afferents, inhibits anxiety.

## DIAGNOSIS

2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

**ABSTRACT:** This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of

integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**1998**

Wickramasekera, Ian (1998). Secrets kept from the mind but not the body or behavior: the unsolved problems of identifying and treating somatization and psychophysiological disease. Advances in Mind-Body Medicine, 14, 18-132.

The identification and therapy of somatoform and psychophysiological disorders are major problems for medicine. This paper identifies three measurable risk factors (Wickramasekera 1979, 1988, 1993a, b, 1995) that are empirically associated with somatoform and psychophysiological disorders. These risk factors are high hypnotic ability, low hypnotic ability, and high Marlowe Crowne scores. Patients who are positive on one or more of these risk factors (all of which can constrict consciousness) have a high likelihood of having somatoform and psychophysiological disorders and should be studied with the additional risk factors proposed in the High Risk Model of Threat Perception (HRMTP). Treatment of patients should begin with the Trojan Horse Role Induction procedure (Wickramasekera 1988), which enables patients, who might otherwise resist psychological interpretations of their physical problems, to recognize that unconscious threat perception could be driving their somatic symptoms, an understanding that reduces their resistance to psychotherapy. A case study is presented of a patient without identifiable pathophysiology or psychopathology to account for somatic symptoms that were largely resistant to standard medical therapy. The patient was positive for several of the psychosocial and psychophysiological risk factors of the HRMTP and after experiencing the Trojan Horse Role Induction showed improvement in somatic symptoms.

**1996**

Kessler, Rodger; Dane, Joseph R. (1996). Psychological and hypnotic preparation for anesthesia and surgery: An individual differences perspective. International Journal of Clinical and Experimental Hypnosis, 44 (3), 189-207.

Multiple reviews indicate that psychological preparation for surgery can provide psychological, physiological, and economic benefit to the patient. Research demonstrating that hypnosis adds to this benefit is both limited and encouraging. The content and status of this literature, however, are confusing, with little coherent theoretical basis to account for the contradictions and inconsistencies across multiple studies whose methodologies often limit generalization. A model is presented regarding pertinent individual differences that include patient coping styles, prior medical experiences, and hypnotic ability, as well as differences in types

of coping demanded by different surgical procedures. This model (a) helps explain some of the confusion, (b) offers a theoretical focus for patient assessment as well as development and selection of preparation strategies, and (c) clarifies future research goals.

**1995**

**Ganaway, George K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. International Journal of Clinical and Experimental Hypnosis, 43 (2), 127-144.**

It is contended that prevailing exogenous trauma theory provides in most cases neither a sufficient nor a necessary explanation for the current large number of diagnosed cases of dissociative identity disorder (multiple personality disorder) and related dissociative syndromes purported to have arisen as a response to severe early childhood physical and sexual abuse. Relevant aspects of instinctual drive theory, ego psychology, object relations theory, self psychology, social psychological theory, sociocultural influences, and experimental hypnosis findings are drawn on to demonstrate the importance of adopting a more integrative theoretical perspective in the diagnosis and treatment of severe dissociative syndromes. Further cooperative experimental and clinical research on the etiology, prevalence, and clinical manifestations of the group of dissociative disorders is strongly encouraged.

**Sarbin, Theodore R. (1995). On the belief that one body may be host to two or more personalities. International Journal of Clinical and Experimental Hypnosis, 43 (2), 163-183.**

The belief in the validity of the multiple personality concept is discussed in this article. Two scaffolding constructions are analyzed: dissociation and repression. As generally employed, these constructions grant no agency to the multiple personality patient. The claim is made that the conduct of interest arises in discourse, usually with the therapist as the discourse partner. In reviewing the history of multiple personality and the writings of current advocates, it becomes clear that contemporary users of the multiple personality disorder diagnosis participate in a subculture with its own set of myths, one of which is the autonomous actions of mental faculties. Of special significance is the readiness to transfigure imaginings into remembering of child abuse, leading ultimately to the manufacture of persons. The implications for both therapy and theory of regarding the patient as agent in place of the belief that the contranormative conduct is under the control of mentalistic faculties are discussed.

**1994**

**Cardena, Etzel (1994, August). Domain of dissociation. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

**NOTES: Dissociation (a French term) exists when two or more mental contents are not integrated. Dissociation includes a wide variety of behaviors and experiences.**

**Three Concepts: 1. nonconscious or nonintegrated mental models or processes 2. alteration in consciousness when disconnection from self or environment is experienced 3. defense mechanism**

**Explanation of these three concepts:**

**1. Within nonconscious or nonintegrated mental models/processes there are three types: (a) absence of conscious awareness of impinging stimuli or ongoing behaviors (broad, vague, not useful, because we are unaware of physiological processes most of the time) (b) co-existence of separate mental systems or identities that should be integrated (Meyers, 1903, said the memorability of an act is better proof of consciousness than its complexity). Examples: dissociative amnesia (Walter Reed Hospital patient); or in hypnosis telling a person that their hand is going to begin raising on its own (c) ongoing behavior that is inconsistent with person's verbal report. May be part of #2. Example: commisurotomized patients - woman who wanted to smoke couldn't get her hand to lift cigarette to her mouth. Example of student, being criticized, breaking out into a rash while saying that she felt calm.**

**Often repression and dissociation are confused. When dissociation is used as in (c) above, they are indistinct; they are the same. Freud used the terms for the same thing. When we talk about a dissociated memory, it is same as repression.**

**2. Alteration in consciousness (disconnection from the self or environment is experienced). In this case we talk about an experiential event. Caveats: Some use it to refer to \*any\* kind of alteration of consciousness. Braun, 1993, reported that mystical experiences are dissociative; I maintain that many people feel most in contact with the self during mystical experience. Same with drugs: it may not involve primarily separation, disengagement, from self or environment. As you listen to me, you may disengage at times. I think the only legitimate use of "dissociation" is a radical alteration of consciousness; like Tart's altered states of consciousness, like out-of-body experiences. In clinical situation, distraction or dreaminess is usual; but if a patient disengages and starts reliving a situation, it is legitimately regarded as dissociation.**

**3. Defense mechanism - a theoretical construct, referring to intentional disavowing things that would cause anxiety or pain. Clinical observations of people in traumatic events, rape, people may have out of body experiences; explained as the person sending the ego somewhere else because they can't bear the pain. But, you get this separation in non-traumatic circumstances (in meditation, revery, etc.)**

**Alternative Paradigm:**

**Janet's theory which explains cognitively how dissociation occurs, without necessarily proposing an intentional process.**

**For further elaboration of these comments, see Cardena, E. (1994). The domain of dissociation. In S. J. Lynn & J. W. Rhue (Eds.) Dissociation: Clinical and Theoretical Perspectives. New York: Guilford Press**

**Frankel, Fred H. (1994, October). Working with the concept in a clinical setting. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**NOTES: I have concerns about the construction of the Diagnostic and Statistical Manual (DSM) as a whole. It was initially a research document, but it has come to dominate clinical diagnostic practice, and worse, it governs what treatment third party payers will compensate.**

**Dissociative Identity Disorder (DID) to replace Multiple Personality Disorder (MPD) may well change the way the condition is viewed, and we may see fewer alters in each person.**

**I have difficulty understanding the precise nature of dissociation--especially with its powers to produce amnesia. The dissociative disorders are part of the legacy of hysteria; though some parts of hysteria are represented in other DSM categories. The influence of environmental factors and imagination were suspected when the diagnosis was hysteria; everyone knew the picture was complicated, and subject to contagion, etc. The DSM makes little attempt to take that into account in the section on Dissociative Disorder.**

**Questions we must address: 1. How voluntary is clinical dissociation? To what extent can we expect the patient to claim agency for it, e.g. if it is claimed that a crime was committed by an alter? 2. To what extent does the clinical manifestation of dissociation overlap with absorption and attention? 3. How does morbid preoccupation with images differ from regression? How much is the patient the willing agent of that kind of behavior? 4. To what extent are flashbacks remembering or imaginings? 5. How do we control for contagion or imitation on the dissociative disorder inpatient units? 6. Could we be creating things to fit our theories? 7. Are other diagnoses being displaced here? The dissociative disorders being put on center stage may lead us to do disservice to the patient in dealing with their other life crisis. 8. If the shock of the trauma is associated with impaired perception, altered attention, and memory problems, how dependable are the reports that are ultimately retrieved--perhaps decades later? 9. What do we in truth understand by the word dissociation? Is it a psychological event with underlying physiology, or just a metaphor?**

**Psychiatry is subject to diseases rising and falling, e.g. the disappearance of hysteria itself.**

**Spiegel, David (1994, October). Acute stress disorder and dissociation in DSM-IV. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

**NOTES: Starting with the theme on hysteria introduced by Frankel (1994), and Cardena (1994) on trance disorder [Spiegel notes that] in the West our problem is of individuality, so fragmentation of personality is our disorder. There is cultural content in the delusions of schizophrenia, and cultural content in dissociative disorders. We have further evidence of trauma being involved in dissociation. Trauma is the experience of being made into an object, and the core problem is helplessness (not anxiety or fear), and discontinuity in experience. Dissociation permits people to retain control of their minds when they have lost control of their bodies. The discontinuity of dissociation reflects the discontinuity of experience.**

**[This presentation included the material presented at an earlier meeting and is not reported in full here.]**

**The difficulty is the problem of lack of identity rather than too many identities.**

1993

Spiegel, David; Koopman, Cheryl; Classen, Catherine; Freinkel, Andrew (1993, October). Dissociation, trauma, and DSM-IV Acute Stress Disorder. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES:** This represents a progress report on the research in our laboratory, which is different from traditional approaches that link childhood trauma to current problems. We say if there is a link between dissociation and trauma, one should find the symptoms in people who have trauma.

**Earthquake Research:**

They examined data from Loma Prieta earthquake; Stanford had \$164 million damage. Oct 1989. [Presents data that he has presented before.] There was a drop in dissociative symptoms over 4 months. McFarlane found that numbing was the best predictor of later PTSD symptoms, and we find that too.

Most trauma researchers have focused on anxiety because that is what they are interested in; they have ignored dissociative experiences, because such symptoms are designed not to be noticed.

Andrew Frankel and Cheryl Koopman studied 15 journalists who saw Robert Alton Harris' execution--volunteers who reported on the execution, to whom the event did not personally threaten. 40% reported depersonalization experiences, 2/3 felt detached or estranged from others, 27% had problems remembering everyday activities, etc. Dissociative symptoms were especially high in TV journalists, lowest in radio journalists, and in the middle range in newspaper reporters.

**Oakland Fire Research:**

Koopman & Classen looked at immediate psychopathology and later problems. They studied people of low, medium, and high exposure as defined by distance from the fire, which related strongly to both dissociative and anxiety symptoms.

There were strong relationships between the Mississippi PTSD scale scores and anxiety and dissociative symptoms (.50 and .59 respectively). People who reported recent life stress in the intervening period had higher PTSD and dissociative symptoms. The combination of initial dissociation and subsequent stress was additive in their relationships to PTSD.

People who had higher dissociation scores tended to do higher risk things (e.g., cross police barriers). This may explain how clinicians see patients who appear to get themselves re-victimized.

**Law Office Shooting Research:**

We followed up on the 1993 shooting of 14 people (8 fatally) in a law office in San Francisco. Survivors filled out dissociation questionnaires in the office (N = 36). They had high scores on the Impact of Event Intrusion Scale. The more they thought they or colleagues were in danger, the higher their scores on anxiety and dissociation measures and on Impact of Event scale.

**Dissociation Definition:**

These studies led to a project, with Etzel Cardena, in trying to revise DSM-III-R, which doesn't capture the symptoms [of post traumatic dissociation]. In DSM-IV there will be the diagnosis of 308.3 Acute Stress Disorder, characterized as: A. Same as DSM-III-R, except it doesn't require that the trauma be "unusual" B. Requires 3 of 5 dissociative symptoms. C, D, and E are classic dissociative symptoms F, G, and H are delimiting factors (e.g., causes significant impairment, length of time, not due to other factor).

Also, the multiple personality disorder (MPD) diagnosis has been changed to Dissociative Identity Disorder. The problem for these patients is not in having more than one personality, but not having one functioning personality.

Van der Hart, Onno; Spiegel, David (1993). Hypnotic assessment and treatment of trauma-induced psychoses: The early psychotherapy of H. Breukink and modern views. International Journal of Clinical and Experimental Hypnosis, 41 (3), 191-209.

The role of hypnotizability assessment in the differential diagnosis of psychotic patients is still unresolved. In this article, the pioneering work of Dutch psychiatrist H. Breukink (1860-1928) during the 1920s is used as early evidence that hypnotic capacity is clinically helpful in differentiating highly hypnotizable psychotic patients with dissociative symptomatology from schizophrenics. Furthermore, there is a long tradition of employing hypnotic capacity in the treatment of these dissociative psychoses. The ways in which Breukink used hypnosis for diagnostic, prognostic, and treatment purposes are summarized and discussed in light of both old and current views. He felt that hysterical psychosis was trauma-induced, certainly curable, and that psychotherapy using hypnosis was the treatment of choice. Hypnosis was used for symptom-oriented therapy, as a comfortable and supportive mental state, and for the uncovering and integrating of traumatic memories. For the latter purpose, Breukink emphasized a calm mental state, both in hypnosis and in the waking state, thereby discouraging emotional expression, which he considered dangerous in psychotic patients. In the discussion, special attention is paid to the role and dangers of the expression of trauma-related emotions.

1992

Frischholz, Edward J. (1992, October). Dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES: there are two approaches for studying dissociation 1. phenomenological: describe difference types of dissociative phenomena, e.g., forgetting, multiple personality disorder or MPD 2.theoretical: explain the physiological/ psychological processes by which things become associated/disassociated, e.g., Freud (repression) vs. Janet (dissociation).

Two types of dissociation: 1. dissociation of awareness (amnesia, unconscious cognitions) 2. dissociation of volition (loss of executive control over behavior, psychological automatisms)

Normal Dissociation is characterized as: 1. content is narrow and specific 2. duration is brief 3. awareness of loss of material exists 4. control can be re-established

Abnormal Dissociation is characterized as: 1. content is broad (self-identity) 2. duration is extended 3. no awareness of loss of material exists 4. no re-establishment of control

The most widely used measure is Dissociative Experience Scale (Bernstein & Putnam) which has .84 to .96 test-retest correlation (Bernstein & Putnam, 1986; Frischholz et al.)

Mean Scores for DES MPDs 55. DD NOS 40.8 Students 23.8

He advocates a cutoff score above 40 as indicating abnormal dissociative experiences (that would yield 6% false negatives). Above 65, suspect faking or over-reporting of dissociative experiences.

Factor Analysis of the DES would associate the following items: 1. Absorption Factor: 2, 14, 15, 17, 18, 20 (normal dissociation) 2. Amnesia Factor: 3, 4, 5, 8, 25, 26 (pathological dissociation) 3. Depersonalization/Derealization Factor: 7, 12, 13, 14, 27, 28

Correlations of DES with other tests:

Tellegen Ambiguity Jenkins

Absorption Tolerance Activity DES Total .39 .24 .04 DES Amnesia .24 .22

See Table from AJCH in July 1992, which replicates a study by Nadon Table 2  $r = .12$  with hypnotizability (Nadon reported .18).

One could use both the DES and hypnotizability scores to distinguish between different clinical groups. For example, dissociative patients reverse amnesia while schizophrenics don't.

One could distinguish real MPDs vs Simulators based on Special Hypnotic Phenomena: with Real MPDs half show the hidden observer phenomenon, therefore they hide their MPD; simulators show the hidden observer phenomenon 100% of the time. Another item that discriminates is the Orne Double Person Hallucination item. MPDs 50- 62% show it, but 92-80% [incorrect percentage in these notes?] of simulators do experience the hallucination. Of these 70-75% of the MPDs are able to distinguish the hallucination; only 45-40% of simulators are able to distinguish the hallucination. Real MPDs know, can tell difference between a hallucinated person and the real person whereas simulators maintain they can't tell who is the real person.

It's not true that MPDs are extremely high in hypnotizability. They score in 8-10 range. The MPDs score 1 SD above normals but they are not off the end of the scale. These are good ways of testing whether someone is faking MPD. We have replicated this many times, getting better replication of MPD simulators than high hypnotizable simulators.

Another method for distinguishing true MPDs from simulators involves demonstration of the Einstellung (learning set) effect.

Looking at Water Jar Problems, patients learn to solve the problems the long way. They teach personality A how to solve problem by long solution method (four trials of B - A - 2C); on the fifth trial, 95% of Ss solve the problem by the long method, the Einstellung (learning set) effect. Switch to personality B and give the same test. If

there were no transfer, people immediately see A-C, which is a short method for solving the problem. It has been observed that 50-60% of MPDs do not show Einstellung effect; they immediately see the short solution.

Have done this also with retroactive interference word learning model.

Effect of context. Kohlenberg (Behavior Therapy Journal) selectively reinforced one personality of an MPD, which then 'came out' more often; during extinction the frequency of seeing that personality went back to baseline.

I used Greenspan's and Erickson's learning without awareness paradigm. When a low baseline frequency personality emerged, I'd reinforce the person; when a dominant personality came out I'd start yawning, look out the window, etc. During extinction the frequency went back toward normal baseline level, but not all the way. These indicate you can shape the appearance of one personality, but not that it's iatrogenic.

Can also do this with schizophrenics, normal highly hypnotizable subjects.

Spiegel, Herbert; Greenleaf, Marcia (1992). Personality style and hypnotizability: The fix-flex continuum. Psychiatric Medicine, 10, 13-24.

Since Mesmer, there has been much confusion about the inter-relationship between an individual's degree of hypnotizability, the personality style of the individual, and the importance of the therapeutic strategy. Empirical and experimental research supports the hypotheses that there are: 1) biopsychosocial components of hypnotizability on a continuum ranging from ecologically insensitive (not modifiable by external stimuli) to ecologically sensitive (very modifiable by external stimuli); 2) biopsychosocial components that can be measured to identify an individual's degree of hypnotic capacity and responsivity; 3) distinct personality styles which correlation with low, mid-range and high hypnotizability on a fix (ecologically insensitive) - flex (ecologically sensitive) continuum; and 4) different clinical syndromes which correlation with these categorical distinctions. We propose that measuring hypnotizability and personality style is a way to clarify diagnosis and choose appropriate treatment strategies to maximize existing biopsychosocial resources of an individual with a specific problem in a particular context.

1991

Frischholz, Edward J.; Braun, Bennett (1991, August). Diagnosing dissociative disorders: New methods. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

Five new methods which have proven useful in the differential diagnosis of dissociative disorders from other psychiatric syndromes are identified. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences. The second method involves the use of various measures of hypnotizability (e.g., Hypnotic Induction Profile; Stanford Hypnotic Susceptibility Scale, Form C; self-ratings of hypnotizability) in discriminating between various psychiatric groups. The third method involves the use of qualitative

responses to individual test items (e.g., instructed posthypnotic amnesia) to discriminate between different psychiatric syndromes. The fourth method involves the use of an implicit memory test to measure the amount of between-personality state amnesia in patients suffering from Multiple Personality Disorder. The fifth method involves the use of special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

## NOTES

Five new methods have proven useful in the differential diagnosis of dissociative disorders. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences.

The second method involves the use of various measures of hypnotizability in discriminating between various psychiatric groups.

The third method involves the use of qualitative responses to individual test items (e.g., instructed posthypnotic amnesia) to discriminate between different psychiatric syndromes.

The fourth method involves the use of an implicit memory test to measure the amount of between-personality state amnesia in patients suffering from Multiple Personality Disorder.

The fifth method involves the use of special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology.

Spiegel, David; Cardena, Etzel (1991). Disintegrated experience: The dissociative disorders revisited. Journal of Abnormal Psychology, 100 (3), 366-378.

Presents proposed changes to the dissociative disorders section of the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and reviews the concept of pathological and nonpathological dissociation, including empirical findings on the relations between trauma and dissociative phenomenology and between dissociation and hypnosis. The most important proposals include the creation of 2 new diagnostic entities, brief reactive dissociative disorder and transient dissociative disturbance, and the readoption of the criterion of amnesia for a multiple personality disorder diagnosis. Further work on dissociative processes will provide an important link between clinical and experimental approaches to human cognition, emotion, and personality.

1990

Kluft, R. P. (1990). Dissociation and subsequent vulnerability: A preliminary study. Dissociation, 3, 167-173.

Dissociative defenses allow trauma victims to cope with overwhelming stressors but are a two-edged sword and appear to render such persons vulnerable to subsequent revictimization because of decontextualization of traumatic experiences. Of 18 incest victims who developed dissociative disorders and had been sexually exploited by their therapists, 78% (14) had been raped as adults, 100% had ongoing dissociative symptoms that disrupted their sense of mastery and control of their lives, and 100% demonstrated that defensive ablation of memory of crucial information rendered them incapable of perceiving and reacting to actual danger situations appropriately. Most (92%) became frozen or withdrawn under stress, met situations best avoided by decisive action with passive compliance and learned helplessness, and also had a shattering of basic life assumptions. Therapeutic implications and strategies are reviewed.

Ross, Colin A. (1990). Twelve cognitive errors about multiple personality disorder. American Journal of Psychotherapy, 44 (3), 348-356.

Presents 12 cognitive errors made by mental health professionals regarding multiple personality disorder. The errors include the mistaken idea that (1) multiple personality patients actually harbor more than one personality, (2) these patients can evade responsibility for their behavior because of their diagnosis, and (3) the disorder will disappear if treated with benign neglect. The errors are corrected by argument and by reference to research findings.

Ross, Colin A.; Fast, E.; Anderson, G.; Auty, A.; Todd, J. (1990). Somatic symptoms in multiple sclerosis and MPD. Dissociation, 3, 102-106.

Fifty subjects with multiple sclerosis (MS) were compared to 50 subjects with multiple personality disorder (MPD). MS patients endorsed an average of 3.0 somatic symptoms on structured interview, and MPD subjects an average of 14.5. Somatic symptoms characteristic of neurological illness were trouble walking, paralysis, and muscle weakness, while those characteristic of psychiatric illness were genitourinary and gastrointestinal symptoms.

Ross, Colin A.; Joshi, Shaun; Currie, Raymond (1990). Dissociative experiences in the general population. American Journal of Psychiatry, 147 (11), 1547-1552.

The Dissociative Experiences Scale was administered to a random sample of 1055 adults in the city of Winnipeg. Results showed that scale scores did not differ between men and women and were not influenced by income, employment status, education, place of birth, religious affiliation, or number of persons in the respondent's household. Dissociative experiences are common in the general population and decline with age. The findings suggest that dissociative disorders may also be common in the general population.

NOTES:

This scale is different from the dissociation scales produced by either Sanders or Putnam. It is a 38-item, self-report instrument, requiring 10 minutes. It was called the Dissociative Experiences Scale rather than the Dissociative Symptoms Scale in order to normalize the questions, and wording of questions was chosen for the same reason. It does not measure degree of dysfunction.

In clinical studies scores above 30 on the DES are associated with a high likelihood of posttraumatic stress disorder or multiple personality disorder (MPD). In a sample of 82 patients with MPD, mean DES score was 41.4 +/- 20.0 (range = 1.3-83.6) (Ross, Miller, & Reagor. *Am J. Psychiat*, 1990, 147-596-601).

Ross, Colin A.; Miller, S. D.; Reagor, P.; Bjornson, L.; Fraser, G. A.; Anderson, G. (1990). Schneiderian symptoms in multiple personality disorder and schizophrenia. *Comprehensive Psychiatry*, 31, 111-118.

**NOTES:**

Schneiderian first-rank symptoms of schizophrenia were equally common among 102 patients with multiple personality disorder in all four centers where data was collected. The average multiple personality disorder (MPD) patient had experienced 6.4 Schneiderian symptoms. When these 102 cases are combined with two previously reported series of MPD cases, an average of 4.9 Schneiderian symptoms in 368 cases of MPD is noted. This compared with an average of 1.3 symptoms acknowledged by 1,739 schizophrenics in 10 published series. Schneiderian symptoms are more characteristic of MPD than of schizophrenia.

Ross, Colin A.; Miller, Scott D.; Reagor, Pamela; Bjornson, Lynda; et al. (1990). Structured interview data on 102 cases of multiple personality disorder from four centers. *American Journal of Psychiatry*, 147, 596-601.

Data from 102 patients with multiple personality disorder at 4 different centers were collected using the Dissociative Disorders Interview Schedule (C. A. Ross et al, 1989; C. A. Ross, 1989) and the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders - III --- Revised (DSM-III--R) Dissociative Disorders (M. Steinberg et al; ) The presenting characteristics of Subjects at all 4 centers were very similar. The clinical profile that emerged included a history of childhood physical and/or sexual abuse in 97 (95.1%) of the cases. Subjects reported an average of 15.2 somatic symptoms, 6.4 Schneiderian symptoms, 10.2 secondary features of the disorder, 5.2 borderline personality disorder criteria, and 5.6 extrasensory experiences; their average score on a dissociative experiences scale was also meaningful. Multiple personality disorder appears to have a stable, consistent set of features

**1989**

Ross, Colin A.; Heber, Sharon; Norton, G. Ron; Anderson, Geri (1989). Differences between multiple personality disorder and other diagnostic groups on structured interview. *Journal of Nervous and Mental Disease*, 177 (8), 487-491.

The Dissociative Disorders Interview Schedule was administered to 20 Ss with multiple personality disorder, 20 with schizophrenia, 20 with panic disorder, and 20 with eating disorders (mean ages 25.4-38.4 yrs). Findings show that multiple personality could be differentiated from the other groups on variables such as history of physical abuse, sexual abuse, substance abuse, sleepwalking, childhood imaginary playmates, secondary features of multiple personality, and extrasensory and supernatural experiences. Those with multiple personality also differed from the other groups on Diagnostic and Statistical Manual of Mental Disorders (DSM-III) criteria for multiple personality, psychogenic amnesia and psychogenic fugue. The groups did not differ on the number of Ss who had a major depressive episode.

Ross, Colin A.; Heber, S.; Norton, G. R.; Anderson, D.; Anderson, G.; Barchet, P. (1989). The Dissociative Disorders Interview Schedule: A structured interview. Dissociation, 2, 169-189.

The Dissociative Disorders Interview Schedule (DDIS), a structured interview, has been developed to make DSM-III diagnoses of the dissociative disorders, somatization disorder, major depressive episode, and borderline personality disorder. Additional items provide information about substance abuse, childhood physical and sexual abuse, and secondary features of multiple personality disorder. These items provide information useful in the differential diagnosis of dissociative disorders. The DDIS is published in this article. It has an overall interrater reliability of 0.68. For the Diagnosis of MPD it has a specificity and a sensitivity of 90%.

1988

Kemp, Kristen; Gilbertson, Alan D.; Torem, Moshe (1988). The differential diagnosis of multiple personality disorder from borderline personality disorder. Dissociation, 1 (4), 41-46.

Considerable controversy [sic] surrounds the relationship between multiple personality disorder (MPD) and borderline personality disorder (BPD). Some authors argue that MPD is a variant of BPD, and most agree that the differential diagnosis of the two is often very difficult. In this article data are presented from a study comparing historical, demographic and psychological testing variables between the two groups. No statistically significant differences were found between the two groups on these variables. However, certain trends emerged which may serve as a catalyst for further research. The relationship between the disorders may be complex; clinicians may need to use more sophisticated research techniques and develop more sensitive diagnostic criteria before it is understood.

Kluft, Richard P. (1988). On giving consultations to therapists treating MPD: Fifteen years' experience - Part I (Diagnosis and treatment). Dissociation, 1 (3), 23-29.

This paper reviews the author's experience in serving as a consultant to several hundred colleagues working with patients suffering multiple personality disorder (MPD) over the 15 year period 1972-1988. It discusses general trends in the types of patients with regard to whom consultations were sought and in the types of issues raised, and notes recurrent issues that appear to trouble large numbers of consultees. It also reviews the patient-generated consultation request, which reflects both increased consumerism and the avidity with which MPD patients seek information about their condition. Part I offers a general orientation, outlines the methods of the study, and describes consultations regarding diagnostic and treatment issues. Part II explores consultations regarding the "surround" of treatment, forensic matters, the use of hypnosis, and consultations initiated by patients; it concludes with a brief discussion. In general, the author's experience indicated that the publication of DSM-III in 1980 and the publication of four special journal issues in 1984 were watershed events, and marked notable shifts in the nature of many of the consultation requests that he received.

1987

Kluft, Richard P. (1987). Unsuspected multiple personality disorder: An uncommon source of protracted resistance, interruption, and failure in psychoanalysis. Hillside Journal of Clinical Psychiatry, 9 (1), 100-115.

Multiple personality disorder (MPD) is being recognized with increasing frequency. A great imitator, it may be encountered among patients who appear to have a wide range of other diagnoses, and have been in treatment for years without the presence of MPD being discovered. Nine of 241 MPD patients interviewed by the author, 3.7%, had been accepted for psychoanalysis. In only one case had the diagnosis been appreciated by the analyst prior to his accepting the patient for analytic treatment. Four patients were profoundly resistant and/or inaccessible to analysis for protracted periods. In one of these cases the diagnosis became clear and successful analysis was concluded, but three analyses ended unsuccessfully with the diagnosis still unknown. Two patients' analyses ended unsuccessfully with the diagnosis still unknown. Two patients' analyses were interrupted due to abrupt regressive events initially perceived to indicate severe ego weakness incompatible with sustaining an analytic process, but later appreciated as signs of MPD. In three cases it appeared that the patients' being accepted for analysis triggered the emergence of the dissociative process, and either the patient or the analyst decided to pursue a different form of therapy. Unsuspected MPD appears to account for a small percentage of stalemates, failures, interruptions, and early flights from analysis.

#### NOTES

"In most other literatures, dissociation is considered reflective of a capacity for hypnotizability, without any connotation of a particular level of psychopathology. There is solid evidence that hypnotizability is intrinsic to MPD (Bliss, 1980, 1983, 1984; Lipman, Frischholz, and Braun, 1984), and a borderline level of organization is not (Horevitz and Braun, 1984). It is more parsimonious and consistent with clinical experience and research findings to infer that the splitting noted in

pregenital pathologies and the splitting found in MPD are different although enticingly similar phenomena, and that in some patients they coexist in such a way that one could easily agree that a patient was both MPD and borderline. The linguistic confusion is to be deplored, and hopefully to be remedied in the near future" (p. 111).

1986

Kluft, Richard P. (1986). High-functioning multiple personality patients: Three cases. Journal of Nervous and Mental Disease, 174 (12), 722-726.

This article describes the circumstances of the diagnosis of three of a group of 12 high-functioning multiple personality disorder patients. All had performed major social and professional activities with consistent competence, and all appeared to be neurotic patients suitable for classical psychoanalysis. All 12 had been misdiagnosed on at least three occasions before the correct diagnosis was made. Aspects of the difficulties encountered in assessing these patients are discussed and guidelines for the preservation of their high level of function during the treatment process are offered.

NOTES

"The therapy proceeds most smoothly when preservation of function takes priority over rapidity of results. With one exception, it was possible to work without time pressure. ... Successful therapies were generally very gentle supportive/expressive psychoanalytic psychotherapies, but included a single classical psychoanalysis. In most cases, hypnosis was used both for symptom relief and exploration. Longer sessions were scheduled for work on painful areas so that equilibrium could be restored before the patient left the office" (pp. 725-726).

1985

Hoffman, William (1985). Hypnosis as a diagnostic tool. American Journal of Psychiatry, 142 (2), 272-273.

Discusses the case of a 22-yr-old Swedish female who became withdrawn and depressed and developed suicidal ideation and paranoid and grandiose delusions. S was also disoriented to time and place and displayed poor memory, insight, and judgment. After a diagnosis of brief reactive psychosis, S was placed on a regimen of oral haloperidol (2 mg, 4 times/day), but she remained confused and disoriented. After induction into a trance state, S coherently recollected the events leading to hospitalization, after which medication was discontinued. It is suggested that trance induction be attempted before treatment in individuals with symptoms of hysterical psychosis.

Hoffmann, William F. (1985). Hypnosis as a diagnostic tool. American Journal of Psychiatry, 142 (2), 272-273.

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MacHovec, Frank J. (1985). Treatment variables and the use of hypnosis in the brief therapy of post-traumatic stress disorders. International Journal of Clinical and Experimental Hypnosis, 33 (1), 6-14.

This paper describes treatment variables in the use of hypnosis in the brief treatment of 4 post-traumatic stress disorder cases. The number of sessions varied with the length of time between trauma and treatment, severity of stressor, and the personality of the patient. Individual differences in response to treatment are reported, as well as considerations for differential diagnosis to prevent misdiagnosis.

1984

Allison, R. B. (1984). Difficulties diagnosing the multiple personality syndrome in a death penalty case. International Journal of Clinical and Experimental Hypnosis, 32 (2), 102-117.

The problems involved in diagnosing the multiple personality syndrome in a rape-murder suspect are illustrated by the case of Kenneth Bianchi and the Hillside Stranglings. Hypnotic investigations of his amnesia revealed "Steve," who admitted guilt for the rape-murders. "Billy" later emerged, claiming responsibility for thefts and forgeries. Attempts to evaluate Kenneth Bianchi with methods used in therapy yielded an original opinion that he was a multiple personality and legally insane. Later events showed the diagnosis to be in error. A new diagnosis was made of atypical dissociative disorder due to the effects of the examining methods themselves. Warning is given that it may be impossible to determine the correct diagnosis of a dissociating defendant in a death penalty case.

Bliss, Eugene L. (1984). Hysteria and hypnosis. Journal of Nervous and Mental Disease, 172 (4), 203-206.

Studied 33 female patients with Briquet's syndrome to investigate the possibility that severe hysteria might be a spontaneous self-hypnotic disorder. Excellent hypnotic Ss were defined clinically as those who entered a trance rapidly, experienced lid closure and arm and elbow elevation, perceived hypnotic events with realism, could regress to early experiences, and usually had amnesic capabilities. Ss were administered the Stanford Hypnotic Susceptibility Scale, Form C. 17 of the 33 Ss were clinically tested for hypnotizability. 14 were found to be excellent hypnotic

Ss, 2 were found to be good, and 1 was found to be a poor hypnotic S. 14 of the 33 Ss met the DSM-III criteria for multiple personalities. It is concluded that patients suffering from Briquet's syndrome are usually good or excellent hypnotic Ss with few exceptions, and many have multiple personalities. Evidence is also discussed that patients with major conversion symptoms are excellent hypnotic Ss. (39 ref).

Herzog, A. (1984). On multiple personality: Comments on diagnosis, etiology and treatment. International Journal of Clinical and Experimental Hypnosis, 32 (2), 210-221.

Relevant diagnostic and etiologic aspects of multiple personality are discussed, with particular emphasis on the range of the underlying character structure of the "main" personality. The concept of "high level" and "low level" multiple personality organization is proposed and 2 clinical examples are described to illustrate this. Treatment issues which are examined and explored include (a) uses and misuses of hypnosis, (b) general as well as some specific treatment strategies, and (c) countertransference feelings which these patients elicit in the therapist.

Jensen, Peter S. (1984). Case report of conversion catatonia: Indication for hypnosis. American Journal of Psychotherapy, 38 (4), 566-570.

Describes the successful hypnotic treatment of a 25-yr-old Black male who displayed symptoms of suicidal ideation, insomnia, and feelings of depression alternating with emptiness and boredom that led to an acute catatonic reaction. S met DSM-III criteria for borderline personality disorder. It is contended that since conversion mechanisms may underlie some presentations of catatonia, hypnosis may assist clinicians in the differential diagnosis of acute catatonic conditions.

Orne, Martin T.; Dinges, David F.; Orne, Emily Carota (1984). On the differential diagnosis of multiple personality in the forensic context. International Journal of Clinical and Experimental Hypnosis, 32 (2), 118-169.

The problems of diagnosing multiple personality disorder in a forensic context are discussed, and illustrated by the case of State v. Kenneth Bianchi (1979), a defendant who was both charged with first degree murder and suspected of having the disorder. Because of the secondary gain (e.g., avoiding the death penalty) associated with the diagnosis of multiplicity in such a case, hypotheses had to be developed to permit an informed differential diagnosis between multiple personality and malingering. If a true multiple personality disorder existed, then (a) the structure and content of the various personalities should have been consistent over time, (b) the boundaries between different personalities should have been stable and not readily altered by social cues, (c) the response to hypnosis should have been similar to that of other deeply hypnotized subjects, and (d) those who had known him over a period of years should have been able to provide examples of sudden, inexplicable changes in behavior and identity, and evidence to be the case. Rather, the content, boundaries, and number of personalities changed in response to cues

about how to make the condition more believable, and his response to hypnosis appeared to reflect conscious role playing. Further, the life history indicated a persistent pattern of conning and deliberate deception. It is concluded that Mr. Bianchi was simulating a multiple personality and the diagnosis of Antisocial Personality Disorder with Sexual Sadism was made. Differential diagnoses and the clinical aspects that appeared to account for his behavior are discussed.

Ross, C. A. (1984). Diagnosis of multiple personality during hypnosis: A case report. International Journal of Clinical and Experimental Hypnosis, 32 (2), 222-235.

Multiple personality disorder, though uncommon, is not an exotic disease; it is not a curiosity, but a vividly etched experiment of nature, one which could teach us a great deal about the human mind. In this paper, a case report is presented and a number of problems in the study of multiple personality are defined; the condition raises questions about ego function, pharmacotherapy, and the therapist himself. A hypothesis is developed about the etiology of the dissociation in the present case, and a 1.5-year follow-up is reported. Multiple personality disorder deserves renewed attention from the general psychiatrist.

Thigpen, C. H.; Cleckley, H. M. (1984). On the incidence of multiple personality disorder: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (2), 63-66.

Since reporting a case of multiple personality (Eve) over 25 years ago, we have seen many patients who were thought by others or themselves to have the disorder, but we have found only 1 case that fit the diagnosis. The other cases manifested either pseudo- or quasi-dissociative symptoms related to dissatisfaction with self-identity or hysterical acting out for secondary gain. One particular form of secondary gain, namely, avoiding responsibility for certain actions, was evident in a recent legal case where the person was diagnosed as having the disorder and successfully pled not guilty by reason of insanity. We urge that a diagnosis of multiple personality not be used in such a manner and recommend that therapists consider the hysterical basis of the symptoms, as well as the adaptive dynamics of personality before diagnosing someone as having the disorder. If such factors are considered, the incidence of the disorder will be found to be far less than the "epidemic" recently claimed.

1981

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

#### NOTES

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be

diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

1978

Gruenewald, Doris (1978). Analogues of multiple personality in psychosis. International Journal of Clinical and Experimental Hypnosis, 26, 1-8.

A brief discussion of taxonomic and diagnostic problems in the multiple-personality syndrome precedes presentation of theoretical considerations. The disorder is conceptualized as a category sui generis on a continuum from neurosis to psychosis. Attenuated forms are considered as pertaining to the syndrome with supporting case material.

1972

Cedercreutz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.

In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share

his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

## NOTES

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

1969

Kampman, R.; Hirvenoja, R. (1969). Research of latent multiple personality phenomenon using hypnosis, projective tests and clinical interviews. Scandinavian Journal of Clinical and Laboratory Investigation, 23, 86. (Abstracted in American Journal of Clinical Hypnosis, 1971, 14, 71.)

190 volunteer students, from 11 to 22 years old, were experimented on for multiple personality, which is explained as hysterical dissociation, a manifest pathological state. The incidence found of multiple personality was 6.7% (13 subjects). The differences between the test results in secondary personalities of the same subject were significant.

1966

Wagner, Frederik F. (1966). The delusion of hypnotic influence and the hypnotic state. International Journal of Clinical and Experimental Hypnosis, 14 (1), 22-29.

Several case studies are discussed briefly, illustrating the main aspects of delusions of hypnotic influence and how the delusional system differs from the hypnotic state. It is a symptom of (usually paranoid) schizophrenia, often appearing among the earliest symptoms in the course of the illness. These feelings usually arise when the patient experiences a weakening of ego functions, or a breakthrough of libidinous or aggressive impulses. While there is a tendency to rationalize aspects of hypnotic behavior, delusions of hypnotic influence are deeply rooted in the dynamics of the patient's psychopathology. They usually remain as a permanent symptom, and prognosis is poor. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Deckert, G. H.; West, L. J. (1963). The problem of hypnotizability: A review. International Journal of Clinical and Experimental Hypnosis, 11, 205-235.

This paper summarizes the relatively unsuccessful effort to relate hypnotizability to sex, age, psychiatric diagnoses, suggestibility, and various personality traits. The problems of measurement, subject selection, controls, and experimenter bias are reviewed. Comparison of data is difficult and replication of studies infrequent. This

might be attributed to incomplete reporting of methodology, defects in experimental design, and various conceptual problems. Concepts which view hypnotizability as "something" universal, "something" unique, or "nothing" are briefly appraised. Finally, hypnotizability is seen as a "term" describing a relationship between a "route" and a "state"--each identifiable by measurable criteria. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

#### NOTES

**Summary and Conclusions.** A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).

#### 1956

Shapiro, Arthur; Kline, Milton V. (1956). The use of hypnosis in evaluating physiological and psychological components of multiple sclerosis. Journal of Clinical and Experimental Hypnosis, 4, 69-78.

#### NOTES

1:

"Summary:

1) - The availability of a patient with multiple sclerosis who was known to be a good hypnotic subject provided an opportunity for the study of the effect of hypnosis on the manifestations of his disease [sic].

2) - Because of the patient's unwillingness to accept psychodynamic psychotherapy or to allow personal interviewing under hypnosis, therapy was limited to the

induction of hypnosis; suggestion of improved performance and the visualization of improved performance, and self-hypnosis.

3) - Certain subjective and objective improvements were noted.

4) - Psychological evaluation was limited to superficial observation and psychological testing in the waking state and under hypnosis.

5) - Psychological test data were used to formulate a mechanism whereby the patient's hypnotically altered perception and conception of his damaged body image served as a means of reducing his anxiety and depression and improving his performance.

6) - The value of hypnosis in the treatment of multiple sclerosis and in the separation of impairment due to the anatomical lesion from that due to the patient's reaction to the lesion has been suggested and discussed.

7) - Further investigations of this kind have been suggested" (p. 77).

**1954**

Madison, LeRoi (1954). The use of hypnosis in the differential diagnosis of a speech disorder. Journal of Clinical and Experimental Hypnosis, 2 (2), 140-144.

**NOTES**

**1:**

"Summary and Conclusions. The case of an eight-and-a-half-year-old boy has been presented to illustrate how hypnosis was used as an aid in the differential diagnosis of a speech defect which presented symptoms of both stuttering and an articulation disorder. The case was diagnosed as primarily an articulation defect. No direct attack was made on the speech blocks other than hypnotic suggestions to relieve tension and some environmental modifications. However, the tonic spasms entirely disappeared within a period of three weeks. This remission plus the rapid strides made in the speech rehabilitation would indicate that the correct diagnosis had been made and as a result an effective plan of therapy instituted.

"It is postulated that hypnosis can be a valuable technique in the diagnosis of speech cases presenting symptoms of several disorders, especially if one of them is stuttering. It is also suggested that hypnosis may be a valuable therapeutic method for treating many cases which present stuttering symptoms" (p. 143-144).

**1953**

Rosen, Harold (1953). Hypnodiagnostic and hypnotherapeutic fantasy---evocation and acting-out techniques. Journal of Clinical and Experimental Hypnosis, 1 (1), 54-66.

**NOTES**

Developed techniques to reach patients who have little motivation for psychotherapy, sometimes hypnotizing them without their knowledge or conscious consent. "By still other techniques, symptom-formation was then blocked and the inevitable, resultant anxiety reaction repressed, so that underlying fantasies could erupt into conscious awareness even to the point of being acted out" (p. 65). By these means he determined the neurotic or psychotic functions being served by the patient's physical symptoms. The hypnotic interpersonal relationship is "a fantasy-

evoking one in which the patient, on the basis of his own experiential background and with more ready access to his pre-conscious, thinks, feels, experiences, reacts and even acts-out exactly as he believes the hypnotist wishes him to, projecting his own impulses, desires and fantasies to the therapist" (p. 66).

Rosen, Harold (1953). The emotionally sick pregnant patient: Hypnodiagnosis and hypno-evaluation - Psychiatric indications and contraindications to the interruption of pregnancy. Journal of Clinical and Experimental Hypnosis, 1 (2), 8-27.

## NOTES

1:

The author discusses several different groups of patients referred to psychiatrists in the hope of obtaining recommendation for abortion. Some threaten illegal abortion or suicide. Some previously had severe post-partum depressions. "Each case must be judged on its own merits. Legal, moral and ethical factors are of prime importance. Social, economic and religious imperatives cannot be over-emphasized" (p. 25). "It seems impossible to over-emphasize the fact that we usually are dealing with emotionally ill patients who rationalize their need for an abortion as the cause of their illness, rather than a symptom of it" (p. 26). "However, if for psychiatric reasons it does seem advisable to recommend that a given pregnancy be interrupted, in our opinion psychotherapy invariably is indicated" (p. 26).

## DISABILITY/HANDICAP

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist

is to persuade the would-be patient/client that he or she has something to offer that can help take away pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1997**

**Sapp, Marty; Farrell, Walter C. Jr.; Johnson, James Jr.; Kirby, Renee Sartin; Pumphrey, Khyana K. (1997). Hypnosis: Applications for rehabilitation counselors. Journal of Applied Rehabilitation Counseling, 28 (2), 43-49.**

This article describes how the rehabilitation counselor can employ hypnosis. Hypnosis can be employed as a useful tool in working with individuals who have experienced a disability. It can be used to reduce anxiety and stress related to returning to work; it can help clients learn to reduce stress and to modify themselves, even if their environments cannot change; and it can be used to increase the self-esteem of clients with disabilities.

**1991**

**Young, M. H.; Montano, R. J.; Goldberg, R. L. (1991). Self-hypnosis, sensory cuing, and response prevention: Decreasing anxiety and improving written output of a preadolescent with learning disabilities. American Journal of Clinical Hypnosis, 34 (2), 129-136.**

Divided 64 10.8 - 19.3 yr old emotionally disturbed residents of a treatment school into an experimental and control group matched for age, IQ, and reading ability. Both groups were seen 5 times/week for 6 weeks for tachistoscopic exposures of a subliminal stimulus. The stimulus for the experimental group was the phrase, "Mommy and I are one," conceived of as activating symbiotic fantasies that in a number of previous studies with varying groups of Ss had led to greater adaptive behavior. The control group was exposed to the phrase, "People are walking." Results show that experimental Ss manifested significantly greater improvement on the California Achievement Tests-- Reading than did the controls. On 5 of 6 secondary variables--arithmetic achievement, self-concept, the handing in of homework assignments, independent classroom functioning, and self-imposed limits on TV viewing--the experimental Ss showed better adaptive functioning. It is suggested that activation of unconscious symbiotic fantasies can increase the effectiveness of counseling and teaching. (42 ref)

**1977**

Lazar, Billie S. (1977). Hypnotic imagery as a tool in working with a cerebral palsied child. International Journal of Clinical and Experimental Hypnosis, 25 (2), 78-87.

Hypnotic imagery was used with a moderately severe athetoid cerebral palsied 12-year-old boy who was mildly retarded and a poor hypnotic subject. Techniques included imagery, observation of the self, revivification of relaxing experiences, proprioceptive feedback about the athetoid movements, and dealing with feelings and motivation. Athetoid movements were reduced, results extended beyond the treatment situation, and improvement was made in practical skills.

1964

Falck, Frank J. (1964). Stuttering and hypnosis. International Journal of Clinical and Experimental Hypnosis, 12, 67-74.

Differences of opinion regarding the use of hypnosis in the treatment of stuttering are briefly reviewed. A viewpoint of stuttering is presented, suggesting how this behavior develops and becomes habitual. The requirements of an adequate program of stuttering therapy are listed with the hope that clinicians will be better able to evaluate where particular hypnotherapeutic techniques may be applicable. A plea is made for comprehensive, objective reporting of clinical experiences when hypnotherapy is used in a program of stuttering therapy. (15 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1954

Madison, LeRoi (1954). The use of hypnosis in the differential diagnosis of a speech disorder. Journal of Clinical and Experimental Hypnosis, 2 (2), 140-144.

Summary and Conclusions. The case of an eight-and-a-half-year-old boy has been presented to illustrate how hypnosis was used as an aid in the differential diagnosis of a speech defect which presented symptoms of both stuttering and an articulation disorder. The case was diagnosed as primarily an articulation defect. No direct attack was made on the speech blocks other than hypnotic suggestions to relieve tension and some environmental modifications. However, the tonic spasms entirely disappeared within a period of three weeks. This remission plus the rapid strides made in the speech rehabilitation would indicate that the correct diagnosis had been made and as a result an effective plan of therapy instituted.

"It is postulated that hypnosis can be a valuable technique in the diagnosis of speech cases presenting symptoms of several disorders, especially if one of them is stuttering. It is also suggested that hypnosis may be a valuable therapeutic method for treating many cases which present stuttering symptoms" (p. 143-144).

## DISSOCIATION

1995

**Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

**NOTES: Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.**

**The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.**

**Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.**

**The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.**

**In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.**

**Freud presented his theory to his patients and then sought confirmation.**

**Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.**

**Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.**

**Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.**

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years.

Eisen, Mitchell L.; Henn-Haase, Clare (1995, November). Memory and suggestibility for events occurring in and out of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES: Resistance to misinformation uses two paradigms: 1. Elizabeth Loftus - expose Subject to slides or videotape, give misinformation with leading or

misleading questions 2. Martin Orne - pseudomemory, i.e. age regress people in hypnosis and suggest events occurred.

Each approach yields mixed results. Misinformation is accepted more readily in context of hypnosis; but there is no relationship to hypnotizability. Spanos found that highs were more responsive to social pressure. In general, in the absence of social pressure, when presented subtly and outside the context of hypnosis, the relationship diminishes. Other factors play a more prominent role: source of information, type of information, salience of information, etc.

They examined whether events occurring in context of hypnosis were more prone to distortion when assessed in biased fashion with use of misleading information, than outside hypnosis. Also, form of questions (dichotomous or with 'I don't remember' option).

They gave the Harvard and asked afterwards 3 misleading items (e.g. did you clench your fist, when they didn't do it). Also asked them to circle items if they had no memory of it. Tellegen Absorption Scale and Dissociation scale (DES) were administered a week later. Also a week later asked about events that occurred, including confederate items. Half of Ss had 2 choices, half had also 'I don't remember' as a third option.

In a previous study, resistance to misleading information was related to the strength of the initial memory and not to hypnotizability (article published in AJCH).

**RESULTS.** When given 3 choices, the number of misleading items endorsed dropped from .7 to 0.4 which is the most robust finding in the study and affects the rest of the study. Many Ss who endorsed the items reported minutes later that they had no memory for the event (on the check list). While many Ss given only two choices wrote in the margin that the event had never occurred.

Offering an 'I don't know' third option decreased endorsement of the Harvard items also, from 6.4 to 5.2 which is significant. The relationship between hypnotizability and endorsement of misleading items became much weaker when accounting for this.

Scoring high on DES is significantly related to accepting misinformation. Tellegen Absorption Scale also related to accepting misleading information. Harvard Hypnotizability Scale was not related to accepting misinformation.

Total memory on the Harvard (before cue plus after cue) did not correlate with resistance to misleading information. History of abuse was related to hypnotizability. Have to evaluate whether it was traumatizing, multiple abuse, etc.

Eisen, Mitchell L.; Goodman, Gail S.; Qin, Jianjian (1995, November). Child witnesses: Dissociation and memory and suggestibility in abused children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES:** Our study looked at suggestibility and resistance to suggestion. During 5-day hospitalization for investigation of child abuse. The first day patient gets physical exam; 2nd day a genital exam, heart arousal, stress arousal; a later day had mental status, emotional functioning, cognitive functioning--and gross screen of IQ for age 5 and up and the digit span for 6 and up, plus rating of global functioning

and provisional diagnosis. On Day 5 each child was given structured interview that included questions about the anal- genital exam, with some misleading questions included.

35 minutes after the psychological examination they were given questions about the exam, for brief memory. Next exam was forensic examination of memory for abuse. Gave memory for sentences, perceptual alterations scale (PAS), adolescent version of Dissociative Experiences Scale (A-DES); gave questionnaire to parents.

Hypotheses: suggestibility would be negatively related to age (more errors when younger). Sexually and physically abused children would show more dissociation or psychopathology. Dissociation or psychopathology should be inversely related to memory ability. IQ should be related to memory and resistance to misinformation. Wanted to reconcile two models of post traumatic stress disorder (PTSD): one says they have poorer memory, and the other says they are hypervigilant.

Over 100 children in the 200 received the questionnaire on Day 5. 39% were 3-5 years old, 41% 6-10 years old. 76% were African American. 22% had no documented abuse or neglect; 13% had experienced physical abuse; 30% sex abuse; 12% both types of abuse; 15% neglect; 8% parental addiction.

Measuring dissociation in kids is problematic. The concept is used to describe a huge range of phenomena. Scores on the DES are more highly correlated with the F Scale on the MMPI than with any other measure (Michael Nash's research). So the DES measures psychopathology. Also, children have healthy kinds of dissociation-- daydreaming, etc. Josephine Hilgard noted that young kids are naturally involved in imagination. Early traumas may lead to this dissociative style. How do we sort out the healthy imaginal involvements of children from the psychopathology? There is not sufficient data at this time.

Available measures are not validated well. The CDC indicates behavior problems in children. The C-PAS conceptualizes dissociation as relating to eating disorders; the A- DES is a self report measure that related to psychopathology.

CDC scores increase, in 3-5 year olds, as the amount of abuse increases. This looks like general psychopathology, and it is a parental rating. The A-DES and C-PAS were not related to abuse or neglect. In the older groups the CDC related to poor performance on memory tests; but only for the 6-10 year olds. (Poorer memories in younger children could have masked the effect in them.)

The main finding for the study was clinician's estimate of Global Adaptive Functioning was significantly related to Resistance to Misleading Information. The effect did not show for the 3-5 yr old group, perhaps because their memory functioning is poor anyway. Also age was related to memory and suggestibility.

Frischholz, Edward J. (1995, November). A critical evaluation of the 1985 AMA Report on hypnosis and memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

JAMA 1985 concluded that hypnotically refreshed memories are less reliable than nonhypnotic recall. There are two problems with their conclusion: 1. No consensually validated definition of 'hypnosis' is identified. They talk about

administration of induction, and differences in hypnotic susceptibility. 2. Empirical criteria for discriminating the unique and/or moderating effects attributable to hypnosis are not specified.

For example Loftus showed that memory errors can be created without hypnosis. You should not just add hypnosis to that model.

The criticisms have not led to remedial practices. No research has been done to show how to minimize errors or how to facilitate accuracy.

'What is Hypnosis?' Something that is done vs. something that happens? A procedure or responsivity? Questions like this are relevant to research on whether hypnotically refreshed memories are less reliable than ordinary recall.

Hypnosis is not a 'valid therapeutic modality' (i.e., 'hypnotherapy' is a misnomer). Hypnosis can be used adjunctively with many different types of therapeutic modalities: --psychodynamic therapies --behavior modification treatments --cognitive restructuring strategies --systematic desensitization --flooding --direct suggestion

There is a specious communality: hypnosis is used in a different kind of way with each approach.

If hypnosis is defined in terms of whether an hypnotic induction procedure was administered to the subject, then hypnosis is a universal phenomenon (i.e., everyone can be administered an hypnotic induction procedure). This, in the AMA report, permitted the courts to define it this way, which leads to a number of ridiculous results.

We need to highlight 'What are the variables that are the source of the errors?' The sources are not hypnosis. We can minimize the sources by the way we ask questions, instruct the subjects, etc.

If hypnosis is defined in terms of the nature of the subjects' response to the procedures, then hypnosis is not a universal phenomenon (i.e., there are wide individual differences in hypnotic responsivity). I have shown that it is possible to alter memories, using the Loftus model, in people who are both low and high hypnotizable.

We need to take into account induction procedure, hypnotizability, type of memory, and the retrieval/influence procedure. The demand characteristics re forced responding, expectancies about memory (e.g. video recorder model), expectancies about hypnosis (e.g., everyone remembers) must be accounted for.

Dependent variables in this type of research include memory accuracy, memory errors, and subjective confidence.

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

1994

Cardena, Etzel (1994, August). Domain of dissociation. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Dissociation (a French term) exists when two or more mental contents are not integrated. Dissociation includes a wide variety of behaviors and experiences.

Three Concepts: 1. nonconscious or nonintegrated mental models or processes 2. alteration in consciousness when disconnection from self or environment is experienced 3. defense mechanism

Explanation of these three concepts:

1. Within nonconscious or nonintegrated mental models/processes there are three types: (a) absence of conscious awareness of impinging stimuli or ongoing behaviors

(broad, vague, not useful, because we are unaware of physiological processes most of the time) (b) co-existence of separate mental systems or identities that should be integrated (Meyers, 1903, said the memorability of an act is better proof of consciousness than its complexity). Examples: dissociative amnesia (Walter Reed Hospital patient); or in hypnosis telling a person that their hand is going to begin raising on its own (c) ongoing behavior that is inconsistent with person's verbal report. May be part of #2. Example: commisurotomy patients - woman who wanted to smoke couldn't get her hand to lift cigarette to her mouth. Example of student, being criticized, breaking out into a rash while saying that she felt calm.

Often repression and dissociation are confused. When dissociation is used as in (c) above, they are indistinct; they are the same. Freud used the terms for the same thing. When we talk about a dissociated memory, it is same as repression.

2. Alteration in consciousness (disconnection from the self or environment is experienced). In this case we talk about an experiential event. Caveats: Some use it to refer to \*any\* kind of alteration of consciousness. Braun, 1993, reported that mystical experiences are dissociative; I maintain that many people feel most in contact with the self during mystical experience. Same with drugs: it may not involve primarily separation, disengagement, from self or environment. As you listen to me, you may disengage at times. I think the only legitimate use of "dissociation" is a radical alteration of consciousness; like Tart's altered states of consciousness, like out-of-body experiences. In clinical situation, distraction or dreaminess is usual; but if a patient disengages and starts reliving a situation, it is legitimately regarded as dissociation.

3. Defense mechanism - a theoretical construct, referring to intentional disavowing things that would cause anxiety or pain. Clinical observations of people in traumatic events, rape, people may have out of body experiences; explained as the person sending the ego somewhere else because they can't bear the pain. But, you get this separation in non-traumatic circumstances (in meditation, revery, etc.)

Alternative Paradigm:

Janet's theory which explains cognitively how dissociation occurs, without necessarily proposing an intentional process.

For further elaboration of these comments, see Cardena, E. (1994). The domain of dissociation. In S. J. Lynn & J. W. Rhue (Eds.) *Dissociation: Clinical and Theoretical Perspectives*. New York: Guilford Press

Csoli, Karen; Ramsay, Jason T.; Spanos, Nicholas P. (1994, August). Psychological correlates of the out-of-body experiences--a reexamination. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

12% of population reports an out-of-body experience (OBE) sometime in their lives. They leave their body and can see self from the outside. Awareness is confined to the new point of view, not fragmented; there is unimpaired intellectual ability; feelings of detachment, completeness, well being, and profound relaxation. Can occur under stress or deep relaxation; not while driving a car.

Psychological correlates aren't known. Studies are inconclusive with respect to belief systems (religious, death anxiety, etc.); measures of absorption, hypnosis, imaginative ability, imagery controls. Recent Carlton study with 87 Ss (33 had OBE) got results we didn't expect. They completed questionnaires, were tested for hypnotizability, had an interview re OBE experience.

This study found the OBE-experiencing people had higher levels of anxiety, psychosomatic symptoms, and panic attacks. They were also higher on magical thinking, perceptual aberration, and Schizophrenia scores. They didn't differ on mysticism, levels of drug or alcohol use, or level of self esteem.

Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

**NOTES:**

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual.]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question? Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Frankel, Fred H. (1994, October). Working with the concept in a clinical setting. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

**NOTES:**

I have concerns about the construction of the Diagnostic and Statistical Manual (DSM) as a whole. It was initially a research document, but it has come to dominate clinical diagnostic practice, and worse, it governs what treatment third party payers will compensate.

Dissociative Identity Disorder (DID) to replace Multiple Personality Disorder (MPD) may well change the way the condition is viewed, and we may see fewer alters in each person.

I have difficulty understanding the precise nature of dissociation--especially with its powers to produce amnesia. The dissociative disorders are part of the legacy of hysteria; though some parts of hysteria are represented in other DSM categories. The influence of environmental factors and imagination were suspected when the diagnosis was hysteria; everyone knew the picture was complicated, and subject to contagion, etc. The DSM makes little attempt to take that into account in the section on Dissociative Disorder.

Questions we must address: 1. How voluntary is clinical dissociation? To what extent can we expect the patient to claim agency for it, e.g. if it is claimed that a crime was committed by an alter? 2. To what extent does the clinical manifestation of dissociation overlap with absorption and attention? 3. How does morbid preoccupation with images differ from regression? How much is the patient the willing agent of that kind of behavior? 4. To what extent are flashbacks remembering or imaginings? 5. How do we control for contagion or imitation on the dissociative disorder inpatient units? 6. Could we be creating things to fit our theories? 7. Are other diagnoses being displaced here? The dissociative disorders being put on center stage may lead us to do disservice to the patient in dealing with their other life crisis. 8. If the shock of the trauma is associated with impaired perception, altered attention, and memory problems, how dependable are the reports that are ultimately retrieved--perhaps decades later? 9. What do we in truth understand by the word dissociation? Is it a psychological event with underlying physiology, or just a metaphor?

Psychiatry is subject to diseases rising and falling, e.g. the disappearance of hysteria itself.

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES:

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall sequence of light changes that occurred during 60 sec when arm was in the cold water.

**Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)**

**Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.**

**Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.**

**30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).**

**60 second pain scores: Showed same trend**

**There was no difference whatsoever for the lows.**

**Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).**

**Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.**

**RESULTS. Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.**

**Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.**

**P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.**

**State and trait differences are apparent.**

**The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory**

**The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."**

**Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.**

**Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.**

**Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental**

ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

#### NOTES

A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

Ganaway, George K. (1994, October). The thin line: Reality and fantasy in hypnotically facilitated memory retrieval during psychotherapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Historical review: Every hundred years there has been a peak in interest in altered states--a fin de cicle zeitgeist. It is the Brigadoon effect, i.e. something materializing for one day every 100 years. The theories developed then suffer from "paradigm grandiosity." In hypnosis, we can refer back to:

1694 Salem witch trials

1790s Gaussner's exorcism (see Ellenberger); in a 1775 showdown between him and Mesmer, there occurred the turning point between exorcism and psychotherapy.

1880s Charcot at Salpêtrier 'demonstrated' that hypnosis was an organic, pathological condition. Ultimately this contributed information about the plasticity of hypnotized people. (In the 1880s Bernheim thought it wasn't pathological and thought that suggestion was the important element in hypnosis.)

Recent historical contributions have influenced our views of MPD. Spiegel and Kardiner published book about hypnosis and war neuroses. Cheek & LeCron developed ideomotor questioning, which ignores the contribution of unconscious fantasy. Jacob Arlow's metaphor for MPD is two movie projectors aiming at a screen from two different sides. The subjectively known experiential world thereby combines external reality and the person's internal, motivated perceptions. The

author presented a case study of female therapist, who had been previously diagnosed as MPD, who presented with dissociative symptoms that she thought were due to abuse by her grandmother. She fabricated the memories in order to get the holding and physical nurturing from her therapist for being courageous and remembering the abuse.

Maintenance of professional boundaries is very important in treatment.

Kihlstrom, John F.; Glisky, M. L.; Angiulo, M. J. (1994). Dissociative tendencies and dissociative disorders. Journal of Abnormal Psychology, 103, 117-124.

Although dissociative disorders are relatively rare, dissociative experiences are rather common in everyday life. Dissociative tendencies appear to be modestly related to other dimensions of personality, such as hypnotizability, absorption, some facets of openness to experience, and quite modestly to fantasy proneness. These dispositional variables may constitute diatheses, or risk factors, for dissociative psychopathology, but more complex models relating personality to psychopathology may be more appropriate. The dissociative disorders raise fundamental questions about the nature of self and identity and the role of consciousness and autobiographical memory in the continuity of personality.

Lynn, Steven Jay (1994, October). Toward an integrative theory of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

This is a re-evaluation of neodissociation and cognitive models of hypnosis, and an attempt to be integrative. This paper focuses more on ideomotor behaviors but we will extend the model to other hypnotic behaviors in the future.

Automaticity of behavior in hypnosis can be accounted for without using a concept of divided consciousness or weakened consciousness. Parapraxes (doing one behavior while intending another) are not instances of decreased control of behavior, but relate to where attention is drawn. This requires a different use of the hierarchy concept from Hilgard's model (which in turn comes from Hull's concept of habit hierarchy).

Here hierarchy is a concept drawn from Miller, Galanter, & Pribram: acts are comprised of molecular units, that are comprised of even more molecular units. Behavior only needs to be processed at an executive level when unusual events occur. But one or more hierarchies may be set into motion at the same time. Dissociation is not an infrequent event. Behavior is controlled by subroutines rather than by an executive control structure; subroutines operate in parallel rather than in a hierarchy. Parapraxes are due to an overlap between two subfunctions.

Parapraxes are different from ideomotor responses, where we pay close attention and involuntariness is reported not just post facto but as part of the experience.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

RESULTS. Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Marmar, Charles (1994, October). Peritraumatic dissociation and PTSD. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Following trauma there is a tendency to more dissociation and vulnerability. We completed 3 recent studies. In 1991 Spiegel and Cardena presented review that found: 1. Early childhood abuse is associated with profound dissociation. 2. Repeated abuse is more important and profound than single abuse for producing dissociation. 3. Dissociation in childhood and perhaps in adulthood has been viewed as an adaptive attempt to cope, to take distance in time, place, and person; does that confirm long term adaptation, or is it a risk factor? 4. Dissociation is not limited to childhood trauma; it occurs in adults exposed to overwhelming trauma. 5. In adults with PTSD, there is an increase in hypnotizability, which is interesting because most Axis I disorders are associated with reduced hypnotizability.

Peritraumatic dissociation is defined as an immediate dissociative response to trauma. We developed a scale that robustly captures the phenomena. The scale has both self report and rater versions.

Authors used this measure in many studies: combat trauma, accident trauma, victims of terrorism. The scale predicts who will be a PTSD patient 5 months later, even after controlling for initial response in first week (how many symptoms they had) and for the degree of trauma.

Study 1 (Am. J. Psychiatry, June 1994)

Studied 251 male Vietnam Theater Veterans, mean age 41 at time of study. Had high combat exposure and high risk for PTSD. Rater version of Peritraumatic Dissociative Experiences Questionnaire was used. There was a lot of variability in response, but one underlying dimension resulted from the factor analysis (and this factor accounts for 40- 50% of the variance).

Author hypothesized that those who have a greater response to trauma will have more problems later, and would predict stress symptoms but not necessarily psychopathology. The score correlates highly with: Mississippi Scale for PTSD .51; Horowitz's scales; Impact of Events Scale (Intrusion .53, Avoidance .60); MMPI

derived PTSD .42; Dissociative Experiences Scale (recall of time of event) .41; and War Zone Stress Exposure .48.

MMPI-2 clinical scales had almost no correlation with this scale (using partial r's, and controlling for MMPI-2 PTSD scores).

Prediction of PTSD case classification from this scale, after taking into consideration other predictors: War Zone Stress War Zone Stress, DES War Zone Stress, DES, PDEQ-RV Kappa is .63

You know much more about who will be a case taking into consideration the DES and DEQ than just knowing the amount of stress. Peritraumatic stress is strongly associated with PTSD but not with psychopathology.

#### Study 2

Replicated Study 1 using 77 female veterans. Females Ss were more highly educated, older, more likely to be in a health profession role (trauma was working with death and dying, exposure to sex abuse and harassment, given even less support than the males). Yet women have had a better course of recovery, though rates were the same (30% developed PTSD after return from war).

Correlation with Impact of Event Scale (Intrusion .41 and Avoidance .40), but correlations with MMPI-2 are low (and with other PTSD scales are lower than with the males). Hierarchical multiple regression models show R squared doesn't increase with DES but does with PDEQ to Intrusion (less so to Avoidance).

This study replicates the same pattern, with peritraumatic dissociation strongly related to PTSD symptoms years later, and not to general psychopathology, even after accounting for the nature of the stress and for the degree of dissociation.

#### Study 3

After the 1989 Loma Prieta earthquake in Northern California we studied emergency services personnel involved in the collapse of a freeway in Oakland. 1000 rescue workers were involved. The workers (police, fire personnel, paramedics, CALTRANS road workers) involved one I-880 cohort and a replication cohort, with two control groups (smaller scale incidents like attending a child drowned in swimming pool, removing someone from a wrecked auto). In all 3 samples, 90% were male.

What characteristics of the person or their exposure account for which workers go on to cope and which will later have PTSD symptoms? Predictors: IES-I IES-A IES-H M-PTSD SCL-GSI.

Variables most associated with problems 1.5 to 3 years afterward were years of experience, exposure, adjustment (measured by the Hogan Personality Inventory measure of adjustment), social support, DES, and PDEQ. Regression analyses used the best predictors first: forced exposure, adjustment, years experience, locus of control, social support. For Intrusion scores there were modest but significant increments by the DES and PDEQ; for avoidance scores, there were very significant contributions (.072 and .078).

There is a robust relationship between the DES and PDEQ and how much hyperarousal there is afterward (.104 and .110 %). DES measures a trait, PDEQ measures a state; yet the latter continues to contribute even after accounting for variance by the DES.

The PDEQ also has been found to predict among rape victims who will have PTSD. This was replicated in different cultures and different language groups.

**FUTURE DIRECTIONS.** Authors plan to examine people with moderate to high exposure after the L.A. earthquake. They gathered personality and coping style data on the rescue workers to answer the question: what characterizes those who are more vulnerable to dissociative tendencies during trauma?

There are treatment implications: given that those who develop the most profound response are the ones who will have more PTSD later, what are the implications?

Uncovering the trauma that caused the PTSD is often associated with re-dissociation There is a question of how this should be managed.

The authors will attempt to see if they can predict in advance if a person would dissociate if exposed. Do those who dissociate have more childhood abusive environments? Hypothesis: there may be an interaction of childhood trauma and combat trauma that produces PTSD.

Nash, Michael R. (1994, October). Reports of early sexual trauma: The problem of false negatives and false positives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The problem of false positives and problem of false negatives are distinct and should be treated differently. The question involves pseudomemories vs repression.

Evidence for false positives: 1. Memory research 2. Developmental psychopathology 3. Contemporary psychoanalytic theory 4. Clinical field studies

No laboratory researcher has produced false memories that are as vivid, or as emotionally loaded as early abuse.

Evidence for repression: 1. "Repressor Personality" research (Weinberger & Schwartz, who view it as a trait rather than a state). 2. Implicit memory research 3. Hypnosis research on memory (see Nash chapter in Fromm & Nash book on research in hypnosis) 4. Clinical field studies

1993

Alden, Phyllis A. (1993, October). Hypnosis in the treatment of posttraumatic stress. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

[Author is at Grimsby Hospital in England.] Discussion of practical aspects of treatment of PTSD. Work began with Janoff-Bulman (1985) and Epstein (1990) focuses on cognitive appraisal. Affect and meaning are shunted into unconsciousness. She observes that when patients report intrusions, there are pieces missing from the memory: they recall the horror but not the positive part.

Used the following technique: Ask patient to get comfortable and imagine being in a theater; then go to a projection room where she can control all parameters; then watch herself watching a pleasant film; then the scene; then return to a seat in the theater and watch the upsetting film, freezing it; when uncomfortable, describe associations; then return to projection room where she watched film of what she

imagined might have occurred--the image behind the image, that holds the affect; then going back to image and playing it through, with more comfort; then leave the theater and go into the film, into the screen, to go through the scene. Then asked patient to get back the intrusive image and go through it, which she did with comfort.

With another patient she introduced the "current" person into the image to reassure her that everything would be all right--i.e. she would survive. This is called "double dissociation method."

She also has the patient tell people in the scene what they should have done, or express anger verbally toward them, etc. Or she might have them make the intrusive imagery less threatening or amusing by introducing other imagery.

Balthazard, Claude G. (1993). The hypnosis scales at their centenary: Some fundamental issues still unresolved. International Journal of Clinical and Experimental Hypnosis, 41, 47-73.

Current approaches to the measurement of hypnotic performance can be traced back to the 19th century. In part because of these early origins and in part because of the nature of hypnotic phenomena, the hypnosis scales are unique psychometric instruments. The classic hypnosis scales are based on the notion of a "performance ladder"; items are scored on a pass/fail basis and can be arranged in increasing order of difficulty. Some of the implications on [sic]this "performance ladder" approach are reviewed. The evidence for two-mechanism models of hypnotic performance is reviewed. It is argued that this kind of formulation is at least as plausible as one that argues that the hypnosis scales measure "one thing" or "mostly one thing." If it were the case that the hypnosis scales were tapping two different and distinct processes, the label "hypnotic susceptibility" could not be unambiguously applied to scores on the hypnosis scales. The hypnosis scales would appear well-suited to the investigation of underlying mechanisms, yet no consistent picture of the mechanisms underlying hypnotic performance on the scales has emerged thus far. No resolution is presented, but some of the reasons why such a resolution is so elusive are discussed. The future of hypnosis scales is discussed with respect to multidimensional assessment and alternatives to the "work sample" approach.

## NOTES

Author discusses the hypnotizability scales' history and psychometric properties, suggesting that they cannot have construct validity if more than one construct is involved. He states that many of the alternative formulations "posit structurally similar two- mechanism models, where the relative contributions of one and the other mechanism changes gradually with the difficulty of the hypnotic performance--that is, one mechanism is more important for easy items and the other more important in the difficult range. This kind of formulation has been advanced by a number of authors .... Although these formulations are structurally similar, the nature of the mechanisms has been variously conceptualized: nonability and ability components (Shor, Orne & O'Connell, 1962), primary suggestibility and somnambulism (Weitzenhoffer, 1962), minor and major dissociations (Hilgard, 1977), compliance and true hypnosis (Tellegen, 1978-1979), and cooperativeness and

expectation at one end and absorption at the other (Spanos, Mah, Pawlak, D'Eon, & Ritchie, 1980). ... In a formulation such as Hilgard's (1977), where both mechanisms are dissociative, it may be that it makes some sense to understand both mechanisms as aspects of the same complex construct. In other formulations... it would appear more cogent to speak of two constructs. Spanos et al. (1980) found that 'cooperativeness and expectation may be particularly important in responding to ideomotor and challenge suggestions, while the ability to convincingly treat imaginings as real (i.e., absorption) becomes increasingly important for more difficult 'cognitive' items" (p. 21). Balthazard & Woody (1992) presented evidence that the more difficult items on hypnotizability scales are related to absorption more than the easier items.

Balthazard & Woody (1989) investigated the proposition that hypnotizability scores are distributed bimodally, and concluded that statistical problems clouded the issue. Furthermore, most analyses previously have been of surface structure, which does not relate directly to the underlying mechanisms of hypnosis, and current psychometric methods cannot address the mechanisms that underlie surface relations. "There are two aspects of hypnotic processes ... that obscure underlying mechanism: synergisms and overdetermination. Synergisms occur when mechanisms potentiate each other in such a way that a combination of processes becomes more than the sum of its parts. Overdetermination occurs when co-occurring mechanisms do not potentiate each other, such that any one of the mechanisms would have been sufficient to produce the observed effect" (p. 63-64).

The author suggests there are two options at present: Corrective Scoring (like the Curss.OI, an objective-involuntary score which, although unreliable on test-retest, appears it could be more a measure of "pure" hypnotizability) and not using the typical "work sample" approach. Balthazard and Woody (1992) suggested the Absorption Scale may provide a better measure of "hypnotizability" than the standard hypnosis scales because absorption scores are more strongly related to difficult hypnotic performances.

Cardena, Etzel (1993, October). Trance and possession as dissociative disorders: How exotic are they?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES: Joke: "What happened to the possessed patient who didn't pay his exorcist?" Answer: "He got repossessed."

Began with a quotation of Lagerkvist's book describing possession of a Sybil in Greek temple. Possession is part of religious experience worldwide, that he is not discussing here.

The revised diagnostic manual, ICD-10, has included "dissociative trance disorders." To diagnose this one must have either trance (narrowing awareness or focusing and stereotyped movements, behaviors) or possession trance (replacement of sense of personal identity by a new identity, with stereotyped culturally-determined behaviors or movements that are experienced as being controlled by the possessing agent), \*and\* full or partial amnesia for the event. Cardena emphasizes it doesn't need to be full amnesia.

To be diagnosed as dissociative trance disorder, the trance or possession state observed cannot be a normal part of a broadly accepted cultural or religious practice, and it must produce distress or maladjustment.

These are the most common type of dissociative disorders in non-Western cultures, e.g. 90% in India. So this diagnosis in India is not "atypical." "Non-Western" applies to 80% of the World and 1/3 of the USA population. DSM is trying to expand cultural relevance.

Also, even in the Western culture Allison and others have published cases of dissociative trance disorder, and others have described trance disorders:

Spiegel & Spiegel's Grade 5 personality is vulnerable to dissociative disorder. Hartman's chronic nightmare patients have "boundary thinness" (i.e. they are not clear if they are awake or asleep, lack separation from themselves and others). Lynn & Rhue's fantasy prone individuals, 22% of people, are vulnerable to maladjustment.

Cardena's recommended change in diagnosis of dissociation is critiqued in Transcultural Psychiatric Research Review (1992). Criticisms of the new diagnosis, published in that journal, are: 1. Culture-bound syndromes cut across Western diagnostic boundaries. 2. The diagnosis may be insensitive to the cultural context in which phenomena occur (e.g. distress may lead a person to participate in a cult of affliction) and it may require anthropological sophistication of diagnosticians or consultation with someone who has that knowledge. 2a. It may disregard considerations such as who has the power to "authorize" the phenomenon, under what circumstances, etc. [That would be true with any diagnosis however.] 3. Dissociative Trance Disorder may assume greater within and across-culture uniformity for the conditions than is warranted. 4. It may give validity to metaphysical explanations for spirit possession. [But in psychiatry we often use terms that don't take into consideration validating metaphysical explanations, e.g. "phantom limb" pain. 5. The medical model that underlies DSM is inappropriate for ontological considerations on the nature of the self. [But those with this diagnosis give us some understanding, not what the ultimate nature of the self and consciousness are. Diagnoses are pragmatic ways of dealing with problems.]

At the present time, the diagnosis of Dissociative Trance Disorder is included in the Appendix of DSM-IV.

For further elaboration of this material, see Cardena, E. (1992). Trance and possession as dissociative disorders. *Transcultural Psychiatric Research Review*, 29, 283- 297.

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. *International Journal of Psychophysiology*, 15, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only

highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

Eisen, Mitchell (1993). Assessing the hypnotizability of college students from addictive families. Contemporary Hypnosis, 10, 11-17.

The present study examined the relation between hypnotizability and the report of growing up in an addictive family where one or both parents were addicted to drugs and/or alcohol. A sample of 113 college students (47 male, 66 female) were studied for measure of childhood abuse, addiction history, dissociation and hypnotizability. As predicted, subjects from an addictive family were more hypnotizable than subject from a nonaddictive family. However, no relation between family addiction and dissociation was secured. Whereas abuse was found to be related to dissociation, it was not related to hypnotizability. The findings are discussed in terms of the effects of child abuse and neglect on dissociation and hypnotizability as it relates to the addictive family.

#### NOTES

Author reviews the literature in area of abuse and hypnotizability as well as dissociation. Subjects were unaware of purposes of the experiment when they volunteered. Of 113 Ss, 18% were reared in an addictive family; 13 Ss reported being abused, of whom 6 reported sexual abuse and seven physical abuse. Five of the 21 Ss who reported being reared in addictive families also reported being abused (3 physical, two sexual). Only one S reported both physical and sexual abuse.

Used HGSHS:A, Children of Alcoholics Screening Test, and Dissociative Experiences Scale of Carlson and Putnam (1986). Those with addiction in the family had Harvard scale mean score of 8.05, compared to those who didn't have it with mean of 6.95. No significant effect was found for ABUSE or the interaction of ABUSE and family addiction. The abuse question was, "Before the age of 12 parent punishment of you resulted in your physical injury (bruises, scarring, broken bones, etc.). Second question was, "Before the age of 12, did you participate in sexual behaviors (either with or without coercion) with a much older person?"

The Discussion thoroughly explores the possible reasons why their results differ from those of others.

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, 102, 29-38.

High-hypnotizable subjects were found superior to low-hypnotizable subjects in degree of pain reduction produced by hypnotic analgesia and by a stress-inoculation (cognitive-therapy) procedure. But, stress inoculation and not hypnotic analgesia impaired performance on a cognitively demanding task that competed with pain reduction for cognitive resources. This outcome implies that hypnotic analgesia occurs with little or no cognitive effort to reduce pain, challenging the social psychological theory of hypnotic response, at least in high-hypnotizable individuals. The findings are also incompatible with the concept of dissociated experience wherein the pain and cognitive efforts to reduce it are separated from consciousness by an amnesia-like barrier. But the results do support the concept of dissociated control, which proposes that suggestions for hypnotic analgesia directly activate pain reduction and thereby avert the need for cognitive strategies to reduce pain.

1992

Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014.

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

Christianson, S-A (1992). Emotional stress and eyewitness memory: A critical review. Psychological Bulletin, 112, 284-309.

#### NOTES

Although not addressing hypnosis specifically, this is a comprehensive review of literature on memory for negative emotional events relevant to issues of hypnosis and memory. The final conclusion is that emotional events are indeed remembered differently than neutral or ordinary events and are well retained with respect to the event itself and concerning central, critical detail (not peripheral detail). Such

memories seem less susceptible to forgetting. There is evidence for dissociation between memory for emotional information and memory for specific event information. There is also evidence of amnesia or memory impairment effects after high-arousal events, with memory increasing as more time passes after the event. The functional amnesia effects are probably due to an interaction between altered encoding operations and the specific retrieval circumstances aiding consciously and unconsciously controlled reconstructive processes. There is little evidence to support Loftus' contentions that emotional stress is bad for memory.

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. Psychotherapy, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Dixon, Michael; Laurence, Jean-Roch (1992). Two hundred years of hypnosis research: Questions resolved? Questions unanswered!. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 34-66). New York: Guilford Press.

#### NOTES

These notes summarize only that part of the chapter concerning nonvoluntary behavior (pp 38-39; 58-61).

The concept of 'nonvolition' has been and continues to be an important issue in hypnosis research. The concept pertains to the "subjective report that the hypnotic suggestion is enacted without the subject's conscious and willful participation" (p. 38). When hypnosis was attributed to a magnetic fluid, in the days of Mesmer, the issue did not arise (because of course a person would not have control over something that happened to them physically). However, when hypnosis came to be considered a psychological phenomenon, the issue of how a behavior could be the result of motivated action and yet not perceived as being under conscious influence became important. In 1819 Faria wrote that the nonvolition paradox is due to the hypnotized subject's tendency to misattribute the source or reason for one's behaviors; he noted that successful suggestions depended upon the subject falsely attributing to the hypnotist the power to influence them. From that point forward, circular reasoning was used to state that one is hypnotized if one experiences their behavior as nonvolitional, and nonvolitional behavior signifies that a person is hypnotized.

**"The observation of the seemingly complete automaticity of response in the highly hypnotizable subject led Liebeault in his 1866 book (followed later on by Bernheim and Liegeois) to describe these subjects as 'puppets' in the hands of the hypnotist. This was a quite unfortunate statement, since it would lead to one of the fiercest legal debates surrounding the use of hypnosis in the last 20 years of the 19th century (Laurence & Perry, 1988). ...**

**"The most prominent author (if not the only one) who attempted to tackle this difficult question was Pierre Janet, who would make the investigation of automatism the basis of his theory of hypnosis, rather than suggestion or suggestibility. This theoretical orientation is best exemplified by his concept of desagrégation psychologique seen in some psychopathologies, or the carrying out of a posthypnotic suggestion in the normal individual (Janet, 1889; see also Ellenberger, 1970; Perry & Laurence, 1984; Prevost, 1973). Nonetheless, until the end of the 19th century, and for a good part of the 20th century, these reports of nonvolition were thought to be the end result of some neurological changes happening during hypnosis--an idea that has not been substantiated by contemporary research." (pp 38-39)**

**Reports of nonvolition are explained as due to dissociation by Hilgard, or as the results of misattributing the origins of behaviors and experiences by Spanos and by Lynn. Neodissociationists like Hilgard regard misattribution to be a cognitive alteration, mainly an internal triggering mechanism, while social psychologists like Spanos and Lynn regard the misattribution to be the results of situational demands and therefore an external triggering mechanism.**

**"Regardless of one's preferred metaphor, the issue of nonvolitional reports remains at the core of an integrated view of hypnosis and hypnotizability. The question remains as follows: By which mechanisms does this occur, and how can we predict a priori who will report involuntariness and under what circumstances? Whereas dissociationists have emphasized general cognitive mechanisms and de-emphasized situational factors, social- psychological theorists have emphasized situational variables and de-emphasized individual differences. Given the limitations of both approaches, emphasis will have to be placed not on their continued separation but on their integration, as more and more investigations demonstrate that they clearly interact with each other (see, e.g., Nadon, Laurence, & Perry, 1991)." (p. 60)**

**"At the height of the confrontation between the two French schools, hypnosis found its way into the legal arena. Following a series of criminal cases in which hypnosis had been allegedly involved, the two schools once again found themselves on opposite sides of the fence. For La Salpetriere, only those who had a propensity toward criminality (and hystericals were prime candidates) could be the victims of hypnosis. For the Nancy school, in highly responsive individuals suggestions could lead to criminal behavior. Unfortunately for the Nancy school, it soon became evident that the concept of suggestion was not sufficient in explaining the questions raised by the courts, and Bernheim was forced to recognize that in cases where suggestions had played a role, other dispositional and situational factors were probably more important in the genesis of the reprehensible behaviors. His espousing a too extreme position meant that the baby was thrown out with the bathwater. History may indicate that the same fate is now awaiting contemporary**

theoretical positions that adopt an extreme stance vis-a-vis the phenomenon of hypnosis" (p. 61).

Erdelyi, Matthew, Hugh (1992). Psychodynamics and the unconscious. American Psychologist, 47, 784-787.

The original New Look integrated the constructivist-psychodynamic traditions of Bartlett and Freud. The unconscious (Greenwald's "New Look 3") is a logically different idea, although in practice it is often intertwined with constructivist - psychodynamic approaches. The unconscious is a pretheoretic term with a variety of problems: It has multiple and unsettled meanings; null reports need not signify null awareness; the conscious-unconscious dichotomy implied by the limen may not exist; even "absolute subliminality" (chance-level accessibility) is relative to the time interval of testing, as accessibility can increase to above-chance levels over time (hypermnesia). Yet, the phenomena that the unconscious sloppily subsumes are not simple or dumb. The capacity of subliminal perception should not be confused with the capacity of subliminal (unconscious) memory and cognition.

Frischholz, Edward J. (1992, October). Dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

There are two approaches for studying dissociation 1. phenomenological: describe difference types of dissociative phenomena, e.g., forgetting, multiple personality disorder or MPD 2.theoretical: explain the physiological/ psychological processes by which things become associated/disassociated, e.g., Freud (repression) vs. Janet (dissociation).

Two types of dissociation: 1. dissociation of awareness (amnesia, unconscious cognitions) 2. dissociation of volition (loss of executive control over behavior, psychological automatisms)

Normal Dissociation is characterized as: 1. content is narrow and specific 2. duration is brief 3. awareness of loss of material exists 4. control can be re-established

Abnormal Dissociation is characterized as: 1. content is broad (self-identity) 2. duration is extended 3. no awareness of loss of material exists 4. no re-establishment of control

The most widely used measure is Dissociative Experience Scale (Bernstein & Putnam) which has .84 to .96 test-retest correlation (Bernstein & Putnam, 1986; Frischholz et al.)

Mean Scores for DES MPDs 55. DD NOS 40.8 Students 23.8

He advocates a cutoff score above 40 as indicating abnormal dissociative experiences (that would yield 6% false negatives). Above 65, suspect faking or over-reporting of dissociative experiences.

Factor Analysis of the DES would associate the following items: 1. Absorption Factor: 2, 14, 15, 17, 18, 20 (normal dissociation) 2. Amnesia Factor: 3, 4, 5, 8, 25, 26

(pathological dissociation) 3. Depersonalization/Derealization Factor: 7, 12, 13, 14, 27, 28

Correlations of DES with other tests:

Tellegen Ambiguity Jenkins

Absorption Tolerance Activity DES Total .39 .24 .04 DES Amnesia .24 .22

See Table from AJCH in July 1992, which replicates a study by Nadon Table 2  $r = .12$  with hypnotizability (Nadon reported .18).

One could use both the DES and hypnotizability scores to distinguish between different clinical groups. For example, dissociative patients reverse amnesia while schizophrenics don't.

One could distinguish real MPDs vs Simulators based on Special Hypnotic Phenomena: with Real MPDs half show the hidden observer phenomenon, therefore they hide their MPD; simulators show the hidden observer phenomenon 100% of the time. Another item that discriminates is the Orne Double Person Hallucination item. MPDs 50- 62% show it, but 92-80% [incorrect percentage in these notes?] of simulators do experience the hallucination. Of these 70-75% of the MPDs are able to distinguish the hallucination; only 45-40% of simulators are able to distinguish the hallucination. Real MPDs know, can tell difference between a hallucinated person and the real person whereas simulators maintain they can't tell who is the real person.

It's not true that MPDs are extremely high in hypnotizability. They score in 8-10 range. The MPDs score 1 SD above normals but they are not off the end of the scale. These are good ways of testing whether someone is faking MPD. We have replicated this many times, getting better replication of MPD simulators than high hypnotizable simulators.

Another method for distinguishing true MPDs from simulators involves demonstration of the Einstellung (learning set) effect.

Looking at Water Jar Problems, patients learn to solve the problems the long way. They teach personality A how to solve problem by long solution method (four trials of B - A - 2C); on the fifth trial, 95% of Ss solve the problem by the long method, the Einstellung (learning set) effect. Switch to personality B and give the same test. If there were no transfer, people immediately see A-C, which is a short method for solving the problem. It has been observed that 50-60% of MPDs do not show Einstellung effect; they immediately see the short solution.

Have done this also with retroactive interference word learning model.

Effect of context. Kohlenberg (Behavior Therapy Journal) selectively reinforced one personality of an MPD, which then 'came out' more often; during extinction the frequency of seeing that personality went back to baseline.

I used Greenspan's and Erickson's learning without awareness paradigm. When a low baseline frequency personality emerged, I'd reinforce the person; when a dominant personality came out I'd start yawning, look out the window, etc. During extinction the frequency went back toward normal baseline level, but not all the way. These indicate you can shape the appearance of one personality, but not that it's iatrogenic.

Can also do this with schizophrenics, normal highly hypnotizable subjects.

Frischholz, Edward (1992, October). The dimensionality of hypnotic performance. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

**NOTES:**

A 1985 article by Balthazar & Woody in Psychological Bulletin is the best I have read on this topic, and on how factor analysis can be used fruitfully.

Many people using the same data sets have arrived at difference conclusions. My results are based on two data sets: Balthazar & Woody's, in which they created a unidimensional scale. (If you factor analyze a simplex matrix you obtain a 3 factor matrix; yet you knew it was unidimensional. They pointed out the 2nd factor correlated with item difficulty, and the 3rd factor had a U-shaped correlation with item difficulty.)

Factor analysis may not be best way to demonstrate unidimensionality.

I decided to use non metric multidimensional analysis to confirm unidimension. By this, Form A appears to be multidimensional. The same holds true for Stanford Form C scale.

Interpretability of the different dimensions? I agree with Dr. Stone: unidimensions are better for interpreting tests. But you should start out by constructing one in the first place.

I argue that Form C is unidimensional, because the items were selected by using item/full score correlations, hence a first component was built into it. But what does the scale measure? The only way to know is to correlate it with external measures, like Woody does. There are no studies using factor analysis showing that different factors on hypnotizability tests have different correlations with external measures (e.g. Factor 1 doesn't correlate differently with Absorption than Factor 3).

We might better start with a theory if we are going to construct new hypnotizability scales. Don't just use item total correlations. It would be better to find items representing different dimensions, scale the items, then correlate them with different external referents.

Then when we do collect data, make sure the items are unidimensional representations.

Third, we should appropriately validate these dimensions.

Frischholz, Edward J.; Lipman, L. S.; Braun, B. G.; Sachs, R. G. (1992). Psychopathology, hypnotizability, and dissociation. American Journal of Psychiatry, 149, 1521-1525.

This study sought to replicate and extend previous findings regarding the hypnotizability of different groups. They compared the hypnotizability of four psychiatric groups--dissociative disorders (N = 17), schizophrenia (N = 13), mood disorders (N = 13), and anxiety disorders (N = 14), as well as a normal college student group (N = 63). Hypnotizability was assessed by four different measures: the eye-roll sign and the induction score of the HIP, the Stanford Hypnotic Susceptibility Scale, Form C, and two self-ratings of hypnotizability. As predicted, dissociative disorder patients had significantly higher hypnotizability scores on al

measures than all other groups. Schizophrenia patients, on the other hand, had significantly lower scores than normal subjects on the eye-roll sign and induction score, but not on the other measures. Some other unpredicted between-group differences were also found. Nevertheless, despite the between-group differences, the intercorrelations between the various hypnotizability measures within the normal group were very similar to those observed in the combined patients groups. Findings suggest that routine hypnotizability assessment may be useful in the differential diagnosis of patients with dissociative disorders.

**Giolas, M. H.; Saners, B. (1992). Pain and suffering as a function of dissociation level and instructional set. Dissociation, 5, 205-209.**

48 female student Ss who scored above 20 on the Dissociative Experiences Scale and 48 subjects scoring below 20 on the DES were compared for response to ischemic pain. Experimental conditions included (1) a group imagining their arm becoming numb and insensitive, (2) a distraction group focusing on their breathing, and (3) a control group with no instructions. Subjects rated pain at one-minute intervals for the sensory experience of pain and for suffering (the emotional experience). The procedure was ended at subject's request or after 20 minutes. Across all conditions, the high dissociative group tolerated pain significantly longer than low dissociatives. Analysis revealed lower suffering ratings for high dissociators in the condition where, like in hypnosis, they imagined their arm numb. This is consistent with beliefs that during abuse in childhood the child learns to use imagination to reduce suffering.

**Hargadon, Robin M.; Bowers, Kenneth S. (1992, October). High hypnotizables and hypnotic analgesia: An examination of underlying mechanisms. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

## **NOTES**

**Bowers' dissociated control adaptation of Hilgard's neodissociation theory of hypnosis posits that higher control systems are not used if lower systems are activated.**

**Imagery may be less important for achieving hypnotic effects. It also may contribute differently than previously thought, an uncorrelated factor. If imaginal involvement and imagery is integral to the production of analgesia using hypnosis, one would get results different than if not integral.**

**Research: 65 Ss rated as high on two hypnotizability tests participated.**

**Session 1:**

**Procedure entailed finger pressure pain: baseline, followed by 2 hypnosis treatment trials. Ss were not informed of the second trial before they did the first.**

**Standard suggestions: imagery congruent with the suggestion (hand like block of wood, protected by a glove)**

**Imageless condition: your hand will remain comfortably nonresponsive to the pressure; you will not allow other things to come into your mind.**

## **Outcome Measures**

**Analogue scale for pain 0-10**

**Nonvoluntary experience rated 0-4**

**Session 2:**

**Administered Tellegen Scale, Woody & Oakman Scale, Marks Vividness of Imagery, Bowers' Effortless Experiencing, and Duality of Experience during age regression.**

**RESULTS.** No difference was found between the standard and imageless conditions in amount of pain reduced. So in high hypnotizables, use of imagery or not doesn't matter for controlling pain. Some Ss had a clear preference however, for one or the other method (even counter to their own expectations).

**Feelings of nonvolition did not differ as a function of imagery use.**

**Multiple regression showed effects of hypnotizability and effortless experiencing. Ss who have an effortless experiencing of imagery benefit from using it to reduce pain; those who find it more effortful do better without imagery when attempting to reduce pain.**

**Contrary to last year's results reported by Bowers, high imagery was related to duality of experiencing in age regression.**

**Dissociated control theory is consistent with the results but not necessarily demonstrated. It is important to discriminate between imagery as a mediator rather than as a co-occurrence. This research suggests, as did Zamansky's work on counter suggestions, that imagery is not as critical for hypnotic response as we previously thought.**

**Hilgard, Ernest R. (1992). Dissociation and theories of hypnosis. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 69-101). New York: Guilford Press.**

## **NOTES:**

**[These Notes were made from a prepublication copy and the pagination for quotes added later.]**

**The author reviews the history of dissociation theory, the hidden observer, and the credible-skeptical arguments regarding hypnosis. He briefly summarizes alternative theories about hypnosis, and asserts that we can turn aside from debate by examining the common topic studied, the "domain of hypnosis" or what happens when hypnotist, with consent of subject, attempts to induce hypnosis through conventional procedures: production of hallucinations, contractions, paralyzes, age regression, analgesia, posthypnotic amnesia, etc. Even if one disagrees about the nature of these phenomena or the appropriate explanatory concepts, one can agree on the area to be investigated.**

**The author notes that one never sees these behaviors in the same situation, in any other context. They are distinguishable from other phenomena like meditation, highway hypnosis, responses to a persuasive leader, and even some waking suggestions by several delimiting factors:**

**1. Hypnosis is not simply a response to suggestion, because that kind of response occurs in other situations. Suggestions can be divided into personal and impersonal**

(Hull, 1933); and suggestibility can be divided into primary and secondary (Eysenck & Furneaux, 1945). Primary suggestibility includes responses to waking suggestion (e.g. postural sway) that correlate with hypnotizability; secondary suggestibility involves responses to waking suggestion that do not correlate with primary suggestibility. Hypnotizability does not correlate with social suggestibility (i.e. gullibility or conformity) (Burns & Hammer, 1970; Moore, 1964); nor does it correlate with placebo response (McGlashan, Evans, & Orne, 1979).

2. Test-retest correlations are approximately  $+0.70$  between scores on hypnotizability scales with and without formal inductions. Thus, responses to the type of suggestion on hypnotizability scales--even when in the waking context--belong within the domain of hypnosis. The individual differences in responsivity to items on hypnotizability scales persist over time (Piccione, Hilgard, & Zimbardo, 1989:  $r = .64$  for 10 years test- retest,  $.82$  for 15 years, and  $.71$  for 25 years, on Stanford Form A); and this persistence is observed in twin studies as well (Morgan, 1973; Morgan, Hilgard, & Davert, 1970).

3. Additional evidence of coherence of the domain comes from reports of hypnotized Subjects about their phenomenological experience.

Hilgard's discussion of the executive and monitoring functions within hypnosis place his theory within the area of cognitive psychology. He presents a theory of a central regulating mechanism, with a hierarchy of subsystems that may be activated (and once activated may continue with some autonomy). When autonomous action occurs, the conscious representation of the control system may recede. Furthermore, the hypnotist's suggestions may alter the relationships within the hierarchy of subsystems and may also influence the executive functions. He gives as a common example, when a bilingual person talks in one language, the other language is temporarily inhibited.

There are a number of concepts or positions in the history of psychology that relate to Hilgard's theory of hierarchical control with executive and subsystems:

1. 'Cognitive structure' (Edward Tolman, 1932; 1938; Kurt Lewin, 1935). There may be communication problems between cognitive structures.
2. 'Habit family hierarchy' (Clark Hull, 1934). Habits are organized in a preferential system, so that if one is blocked the next is activated.
3. 'Cell assemblies' (Hebb, 1949; 1975), which are a physiological counterpart of the 'hidden observer' phenomenon.
4. 'Roles' (Sarbin & Coe, 1972) may be considered cognitive substructures.
5. 'Cognitive networks' (Blum, Geiwitz, & Stewart, 1967) serve similar functions.
6. 'Images' and 'plans' (Miller, Galanter, & Pribram, 1960) provide for control of thought and action and have some kind of hierarchy.
7. 'Subordinate ego-structures' (Gill & Brenman, 1959) with a dominant ego; or the ego-apparatuses in a 'conflict-free ego sphere' (Hartmann, 1958).

In hypnosis, central executive functions may be shared between hypnotist and Subject. Hilgard gives extensive examples of varying degrees of split in the executive control system.

"It can be argued that, except for relinquishing control over the subsystems that are specifically dissociated from control by suggestion, and the readiness for relinquishing control, the central executive functions have not been much modified

in hypnosis. In superficial hypnosis, these mild dissociations can occur through waking suggestions, with little alteration of the general state of consciousness. When varied suggestions to a talented hypnotic subject have cumulative effects, as in suggestions of relaxation and detachment from the environment, the more general features of the hypnotic state begin to appear. A more massive dissociation, so far as the executive is concerned, may be the consequence of the summing up of many specific subsystems for which control has been relinquished. Such an interpretation permits hypnosis as a state to be a relative matter, the specific dissociations being identifiable, but the general state being a matter of how many specific dissociations are operative and how pervasive they are. Only when they are sufficiently pervasive is it appropriate to speak of a change of state" (p. 96).

Hilgard also discusses the monitoring function extensively, relating it to trance logic and contrasting it with the waking state. Less of the usual monitor is retained when the hypnotic involvement is greater, as in deep hypnosis, or when the subject becomes more deeply engrossed in an activated system that has been aroused. He also relates the monitoring function to the Hidden Observer phenomenon.

Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.

#### NOTES:

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social-cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

**Kihlstrom, John F.; Barnhardt, Terrence M.; Tataryn, Douglas J. (1992). The psychological unconscious. American Psychologist, 47, 788-791.**

**In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.**

**Kunzendorf, Robert; Carrabino, Carlene; Capone, Daniel (1992-93). 'Safe' fantasy: The self-conscious boundary between wishing and willing. Imagination, Cognition and Personality, 12, 177-188.**

**This experiment tested the hypothesis that a fantasy will impel people to 'act out' only if they fail to distinguish the fantasy from the anticipated reality. In the experiment, one task obtained a baseline measure of how long subjects could resist eating popcorn, then measured how long subjects could resist popcorn while fantasizing its taste. Another task instructed subjects to merge three circular images with three circular percepts of equal vividness, then presented subjects unexpectedly with only two of the three circular percepts. Some subjects thought that there were three circular percepts during the merger, and for these subjects, the length of resistance to popcorn was significantly shorter during the popcorn fantasy. But for subjects who self-consciously differentiated the two real circles from the three merging images, the normal 'boundary' between wishful fantasy and willful eating was intact.**

#### **NOTES**

**This research investigated whether people can fantasize without acting out. The authors place the study in the context of theories proposed by Freud and William James. Kunzendorf's source monitoring theory of self-consciousness suggests that "self-consciousness \_that one is imaging\_ is the phenomenal consequence of neurally monitoring the central source of one's imaged sensations, and self-consciousness \_that one is perceiving\_ is the subjective quality of neurally monitoring the peripheral source of one's perceived sensations" (p. 178).**

**The ability to carry out source monitoring varies. Those who have difficulty monitoring whether they are imaging or perceiving may also have trouble distinguishing wishful fantasy from anticipatory imagery, and therefore they might act on it.**

**This research "identified subjects with poor source monitoring--nondiscerners of reality--and investigated the effect of fantasy on their impulse control" (p. 179).**

#### **METHODS**

**Subjects sat in front of a computer monitor for all tests; they completed Eysenck's seventh impulsivity questionnaire for measures of impulsivity, venturesomeness, and empathy, Marks' Vividness of Visual Imagery Questionnaire (VVIQ).**

The study used a test in which subjects maintained in mental imagery a red, green, and yellow filled circle that had been on screen, with eyes closed; were instructed to open eyes and merge their 3 imaginary circles with the 3 on the screen (but when they opened eyes only 2 were there), and they were then asked questions about how many circles they saw when they opened their eyes.

Then they were given a taste of popcorn, told to resist eating any more (but could press a key to receive a little if they couldn't resist), and then were told to resist by imagining that they were eating popcorn.

## **RESULTS**

Those who discerned the two real circles while imaging a third circle of equal vividness (the Discerners), could resist eating popcorn for 137 sec in the baseline condition and 132 sec in the fantasy condition. Those who could not discern two real circles while imagining a third (Nondiscerners) could resist eating popcorn for 127 sec in the baseline treatment but only 95 sec in the fantasy treatment.

Discerners could identify the missing circle as the red one, whereas nondiscerners could not do so with any certainty; there was no effect of "image vividness".

"Vivid imagers" whose imagery matched real yellow circles of greater illuminance, exhibited more vivid imagery on the VVIQ as well.

In their Discussion, the authors suggest that "fantasy impels people to 'act out' only if they fail to distinguish fantasized sensations from perceived sensations. ... [the theory] is applicable to sexual fantasy and aggressive fantasy as well. This theory--Kunzendorf's 'source monitoring' theory of self-consciousness--implies that fantasies of the sensory consequences of a behavior should not lead to the behavior, so long as the fantasies are self-consciously known to be imaginal and are not expected to be perceptual... But for people who cannot self-consciously distinguish between wishful images of pure fantasy and anticipatory images of perceptual reality, between wishing and willing, fantasies of gastronomical, sexual, or aggressive sensations are implicitly unsafe.

"Indeed, as Baars notes, 'the issue of voluntary control is at the very core of human psychopathology' [31, p. 254]. But recently, Baars' and others' theories of volition have emphasized the computer-metaphoric distinction between conscious 'willful' behavior and unconscious 'automatic' action [31, 39-40], and have neglected James' distinction between conscious willing and conscious wishing. Decades ago, when pre-computational theorists like Janet used the term 'automatism' to describe psychopathological behavior, they meant that an abnormally behaving patient was \_consciously 'possessed' by a fantasy\_--a wishful image, a hypnotic suggestion, or a fantasized personality [41]. In reemphasizing the phenomena of wishing, willing, and possession by fantasies, the present article redefines the latter phenomenon as possession by 'unmonitored' fantasies, which are distinguishable from anticipatory images impelling action" (pp. 184-185).

**Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131.**

Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members

of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

**Loftus, Elizabeth F.; Klinger, Mark R. (1992). Is the unconscious smart or dumb?. American Psychologist, 47, 761-765.**

How sophisticated is unconscious cognition? This is one of the most fundamental questions about the unconscious that has been posed by research psychologists over the past century. Anthony Greenwald takes a contemporary look at this classical problem and concludes that unconscious cognition is severely limited in its analytic capability. In response, other leading scholars agree that the reality of unconscious processes is no longer questionable. Although there is some disagreement about just how sophisticated these processes are, the consensus is that exciting times are ahead for both research and theory concerning the mental processes involved in unconscious cognition.

**Miller, Scott D.; Triggiano, Patrick J. (1992). The psychophysiological investigation of multiple personality disorder: Review and update. American Journal of Clinical Hypnosis, 35, 47-61.**

#### **NOTES**

A review and methodological critique. Updates Putnam, 1984. Currently, psychophysiological differences reported in the literature include changes in cerebral electrical activity, cerebral blood flow, galvanic skin response, skin temperature, event-related potentials, neuroendocrine profiles, thyroid function, response to medication, perception, visual functioning, visual evoked potentials, and in voice, posture, and motor behavior. Reviews the new research on the psychophysiological investigation of MPD from published, unpublished, and ongoing studies, and attempts to place current findings into a conceptual framework. Authors note results from unpublished and ongoing studies and include a critical analysis of current research methodology as well as suggestions for future research.

**Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.**

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Perry, Campbell (1992). Theorizing about hypnosis in either/or terms. International Journal of Clinical and Experimental Hypnosis, 40, 238-252.

The present paper addresses 3 issues raised by Coe (1992). First, it maintains that the "altered state" issue of the 1960s remains buried in current dichotomous classifications of hypnosis theories as involving either "special processes" or the social- psychological position. Given the current diversity of the field, it appears imprudent to classify theorizing in either/or terms; additionally, despite a history of using the term "altered state" in a circular way, it is not an inherently circular formulation. It can be used descriptively simply to point to the observation that some individuals in hypnosis report subjective alterations. A second issue broached concerns the metaphorical status of the term "hypnosis"; it is accepted as a misleading metaphor inherited from 19th century investigators such as Braid, Faria, Puysegur, and Liebeault. Provided that it is recognized that this metaphor refers to a "domain" (E. G. Hilgard, 1973) of characteristically elicited behaviors, no problem ensues in retaining this metaphor derived from nocturnal sleep. A subsequent discussion of current conceptualizations of hypnosis indicates considerable agreement among investigators; there is much consensus that hypnosis is an individual differences phenomenon, in which imagination may, in some individuals, become so intense and so vivid, as to take on "reality value," to the extent that a hypnotized person may have difficulty in distinguishing fantasy from reality. The S abilities of imagery/imagination, absorption, dissociation, and automaticity (which may be proved to be an index of dissociation) are proposed as being the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.

1991

Bowers, Kenneth S. (1991). Dissociation in hypnosis and multiple personality disorder. International Journal of Clinical and Experimental Hypnosis, 39, 155-176.

The first part of this paper examines the concept of dissociation in the context of hypnosis. In particular, the neodissociative and social psychological models of hypnosis are compared. It is argued that the social psychological model, in describing hypnotic enactments as purposeful, does not adequately distinguish between behavior that is enacted "on purpose" and behavior that serves or achieves a purpose. 2 recent dissertations (Hughes, 1988; Miller, 1986) from the University of Waterloo are summarized, each of which supports the neodissociative view that hypnotic behavior can be purposeful (in the sense that the suggested state of affairs is achieved) and nonvolitional (in the sense that the suggested state of affairs is not achieved by high level executive initiative and ongoing effort). The second part of the paper employs a neodissociative view of hypnosis to help understand the current epidemic of multiple personality disorder (MPD). In particular, it is argued that many symptoms of MPD are implicitly suggested effects--particularly prone to occur in persons who have a lifelong tendency to use dissociative type defenses. The present author believes that this account is easier to sustain conceptually and empirically than the current view, which states that a secondary (tertiary, etc.) personality accounts for the striking phenomenological discontinuities experienced by MPD patients.

#### NOTES

As an example of the fact that behavior that serves a purpose is not always performed on purpose, the author cites not falling out of bed while sleeping, and waking up in response to signals from the bladder to go to the bathroom. Lower levels of control can be dissociated from executive initiative and/or monitoring. "Since the experience of volition is closely tied to executive initiative and effort, suggested behaviors that bypass such initiative and effort are typically experienced as nonvolitional" (p. 157). Dissociated control occurs under waking conditions also, as when one dials a very familiar phone number rather than the one that they intended to dial. In this case, the behavior that is enacted is not what one consciously intended.

Miller's dissertation, also published as Miller & Bowers, 1986, is described on p. 158 ff. Without hypnosis, cold pressor pain (cold water immersion) reduced accuracy of performance on a multiple choice vocabulary test 35%. Both hypnotic analgesia and cognitive pain management strategies were equally effective in reducing pain of cold pressor test (and both interventions were more effective for high than for low hypnotizable Ss). However, the cognitive strategy group showed an additional drop of 30% in vocabulary performance from pre- to posttreatment cold water immersion (despite successfully reducing their pain). In the hypnosis condition, lows showed only a slight additional decrease (8%) while highs showed a slight (10%) increase in their vocabulary performance from pre- to posttreatment immersion. Thus, the effect of hypnosis in pain control "does not depend on S's utilization of high-level cognitive strategies. Rather, hypnotic analgesia seems to involve the dissociated control of pain--that is, control which is relatively free of the need for high- level, executive initiative and effort. ... Because hypnotic analgesia minimizes the degree of executive initiative and ongoing effort required to reduce pain,

however, it seems inappropriate to view such reductions as something achieved on purpose" (p. 161).

Hughes' dissertation is described on p. 162 and ff. Instead of performance decrement on a cognitive task like vocabulary testing, she used increased heart rate as an index of cognitive effort. If heart rate increases when Ss successfully use hypnotic imagery, that would confirm the social psychological view that "suggested effects are achieved by this kind of ongoing allocation of high-level cognitive force or work" (p. 162).

Highs and lows were hypnotized and administered three trials of neutral and three trials of fearful imagery in counterbalanced order. Each imagery trial lasted 1 minute, after which Ss rated vividness of imagery, effort required, and amount of fear experienced.

Average imagery vividness was higher in highs than lows, for both neutral and fear imagery. For lows the correlation between heart rate increases and ratings of cognitive effort were .54 (neutral imagery) and .49 (fear imagery). For highs, the correlations were -.05 (neutral) and -.52 (fear). Thus, "for low but not high hypnotizable Ss, we find the predicted positive relationship between a cardiac indicator of cognitive effort and the ratings of cognitive effort involved in producing neutral imagery" (p. 163).

"First, for low hypnotizables engaged in fear imagery, ratings of effort are correlated .66 with ratings of fear. In other words, the more low hypnotizable Ss work to produce a fearful image, the more frightening the image is. Second, for high hypnotizables engaged in fear imagery, the correlation between ratings of fear and effort is minus .68-- indicating that the less effort highs report in producing fear imagery, the more frightened they become. Finally, for high hypnotizables, the correlation between ratings of fear and heart rate increase is .59, indicating that the more fear high hypnotizable Ss experience when engaged in fear imagery, the more their heart rate increases (the comparable figure for low hypnotizables is .16)" (p. 164).

The authors discuss why the pattern of correlations is different for people high and low in measured hypnotizability, and summarize the implications of both Miller's and Hughes' research. Both investigations indicate that, at least for high hypnotizable people, less initiative and effort are required to effect a response to hypnotic suggestion than one would expect. They show how behavior can be both purposeful and nonvolitional (in the sense of not exhibiting conscious intention and strategic efforts). By noting that the sense of nonvolition that accompanies a response to suggestion is an actual alteration in executive control, they provide a model for dissociative psychopathology such as MPD. For although executive control is dissociated, these experiments do not suggest that there is a second executive system or 'personality' that is responsible for the behavior.

Patients diagnosed with MPD have very high measured hypnotizability (Bliss, 1984). In fact, they seem to engage in self hypnosis, withdrawing into a trance or a dissociated state (Bliss, 1984). The authors quote Wilson & Barber (1983) as indicating that highly hypnotized, fantasy-prone normal individuals may become so absorbed in a character being imagined that they lose awareness of their own identity.

The authors offer a neodissociative account of MPD: "People prone to MPD are very high in hypnotic ability and are, therefore, vulnerable to the suggestive impact of ideas, imaginings, and fantasies; what is more, they are high in hypnotic ability because they have learned to use dissociative defenses as a way of dealing with inescapable threat-- such as physical and sexual abuse (Kluft, 1987). ... Fantasied alternatives to reality (including a fantasied alter ego ... ) can become increasingly complex and differentiated. Gradually, these fantasied alternatives begin to activate subsystems of control more or less directly--that is, with minimal involvement of executive level initiative and control. Such 'dissociated control' of behavior does not necessarily eliminate consciousness of it, though one's actions are apt to be experienced as increasingly ego-alien. If and when the activating fantasies and resulting behaviors become sufficiently threatening, however, they can also be repressed into an unconscious (i.e., amnesic) status, thus further separating high-level executive and monitoring functions from the dissociated, ego-alien aspects of oneself. The fully realized result of this process is an individual who is subject to profound discontinuities in his or her sense of self. ... The experience of behaving in an outwardly uncharacteristic manner requires only that subsystems of control are more or less directly activated by ideas and fantasies in a manner that effectively bypasses executive initiative and control" (pp. 168-169).

923, Bowers, 1992 NOTES: Tart allegedly taught ESP skills based on reinforcement, using a machine that projected display and gave feedback immediately, so the subjects could learn to anticipate the picture better. But the picture presented next was time-linked to the S's response (so S could learn it).

1987 Behavioral and Brain Sciences review, with 2 target articles, makes one doubt strength of findings. ESP research doesn't distinguish between description of an observation and it's proposed cause.

MPD shares with ESP a tendency to predispose toward a certain explanation. Feeling like one has a separate personality leads to finding evidence for one. But an MPD account is wrong-headed because the diagnosis misconstrues a notion of personality, which is a developmental concept (a pattern of thought, feeling, and behavior). Mischel's (1968) account of human functioning competed with trait theory, so "personality" concept became extraneous.

Defining personality in terms of one's experiences or beliefs about oneself has led to further problems, encouraged by the descriptive approach of DSM III (which depends on patient reports). Drew Weston distinguished between the self and self representation. One can't argue that a computer programmed to describe itself is the same as it's descriptions.

Personality can't be reduced to person's beliefs about themselves. A secondary personality cannot be reduced to bizarre experiences a person believes are due to a second personality. Clinicians do not accept as valid the beliefs of a paranoid schizophrenic; or of an anxious neurotic. With multiple personality disorder (MPD) the patient becomes the expert and the clinician the student.

William Smith's 1986 SCEH paper: case study of patient who was convinced her problems were due to unresolved problems from a previous life. He didn't challenge her system but still worked with her successfully, communicating respect without validating her belief.

Advocates of MPDs think the observation that it is associated with high hypnotizability indicates great dissociation; critics think the association indicates great suggestibility. There is a historical parallel: Mesmer probably didn't suggest seizure-like episodes, but implicit suggestions for seizures were probably partially responsible. Mistaken attribution permitted Mesmer to see this as validation of his theory of animal magnetism.

Clinicians are not the only ones to "suggest" MPD syndrome. High profile cases are in the media. We should also remember Orne's 1959 research showing that students who received false information a week earlier in lecture on hypnosis showed the behavior when they were hypnotized.

Janet's disaggregation (dissociation) theory said hysterics and hypnotized people responded to ideas dissociated from the main stream of consciousness. So his contemporaries thought that spontaneous amnesia was a defining feature of hypnosis; yet it is not thought to be so in our era. The idea may have circulated in Janet's time, by popular culture.

MPDs are always highly suggestible so can respond to circulating accounts in the media, and every account that reaches the media can influence these people.

We could abandon the diagnosis of MPD in favor of Spiegel's "disorder of self integration." It is less provocative, does not imply any clinical benefit in the benefits of seeking out more personalities. This might reduce the incidence of this disorder, or likelihood that a suggestible person would develop the disorder iatrogenically.

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness"

(p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space. He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) ... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

**NOTES: Notes are taken from a review of this book: Diamond, Michael (1993). Book review. Bulletin of the Menninger Clinic, 57 (Winter), 120-121.**

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Cornell, William F.; Olio, Karen A. (1991). Integrating affect in treatment with adult survivors of physical and sexual abuse. American Journal of Orthopsychiatry, 61 (1), 59-69.

Presents a theoretical and technical model for affectively centered treatment of adults abused as children, focusing on the function of denial and dissociation as central defense mechanisms. The concept is introduced of working at an "affective edge." At this experiential point, a client can maintain both cognitive understanding and emotional and bodily awareness without triggering denial and dissociation. This approach fosters careful monitoring of the client's functioning both during and between therapeutic sessions. The proposed therapeutic approach uses noninvasive touch and body-centered techniques. Focus is on integrating affect and on the importance of the therapeutic relationship.

Dixon, Norman F.; Henley, Susan H. (1991). Unconscious perception: Possible implications of data from academic research for clinical practice. Journal of Nervous and Mental Disease, 179 (5), 243-252.

Evidence for the reality of unconscious perception and perceptual defense suggests that the experimental paradigms used to investigate these phenomena might play a role in the understanding and treatment of mental disorders. The literature on applying subliminal stimulation to problems of diagnosis and therapy indicates that data support the view that the meaning of external stimuli of which the recipient is unaware may be responded to and determine emotional responses, lexical decisions, overt behavior, and subjective experience. Data confirm the reality of psychopathology as a substrate of emotionally colored, stored information with a potential for producing somatic symptoms and disorders of thinking, affect, and behavior. To the extent that psychopathology is screened from conscious scrutiny and thus impervious to supraliminal information, it may be accessed and ameliorated by drive-related stimuli of which the S is not aware.

Frankel, Fred H. (1991). Comments on hypnotizability and dissociation. American Journal of Psychiatry, 148 (6), 814-815.

**NOTES:** Responds to comments by D. Spiegel and E. Cardena (see PA, vol 78:29491) concerning F. H. Frankel's (see PA, vol 77:27535) article in which he cautioned against over interpreting the relationship between hypnotizability and dissociation. It is reiterated that the concept of dissociation has been elaborated in recent years to an exaggerated degree.

**Frischholz, Edward J.; Braun, Bennett (1991, August). Diagnosing dissociative disorders: New methods. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.**

Five new methods which have proven useful in the differential diagnosis of dissociative disorders from other psychiatric syndromes are identified. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences. The second method involves the use of various measures of hypnotizability (e.g., Hypnotic Induction Profile; Stanford Hypnotic Susceptibility Scale, Form C; self-ratings of hypnotizability) in discriminating between various psychiatric groups. The third method involves the use of qualitative responses to individual test items (e.g., instructed posthypnotic amnesia) to discriminate between different psychiatric syndromes. The fourth method involves the use of an implicit memory test to measure the amount of between-personality state amnesia in patients suffering from Multiple Personality Disorder. The fifth method involves the use of special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

#### **NOTES**

Five new methods have proven useful in the differential diagnosis of dissociative disorders. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences.

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The fifth method involves the use of special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology.

**1990**

**Barabasz, Marianne (1990). Treatment of bulimia with hypnosis involving awareness and control in clients with high dissociative capacity. International Journal of Psychosomatics, 37, 53-56.**

The details of an easily replicable intervention using hypnosis in the treatment of bulimia are presented. Follow-ups at 1, 3, 6, and 12 months indicated the intervention appeared effective in two out of the three cases presented. Factors affecting treatment outcomes are discussed.

**Bartis, Scott P.; Zamansky, Harold S. (1990). Cognitive strategies in hypnosis: Toward resolving the hypnotic conflict. International Journal of Clinical and Experimental Hypnosis, 38, 168-182.**

Two experiments were carried out to assess the relative contributions of dissociation and absorption as cognitive strategies employed by high and low hypnotizability Ss in responding successfully to hypnotic suggestions. Of special interest was the manner in which Ss deal with conflicting information typically inherent in hypnotic suggestions. In the first experiment, Ss rated their attentional focus and the involuntariness of their experience after responding to a number of hypnotic suggestions administered in the usual manner. In the second experiment, the level of conflict was varied by instructing some Ss to imagine a circumstance that was congruent and other Ss to imagine a circumstance that was incongruent with the suggested behavioral response. The results of the 2 experiments were consistent in suggesting that, depending upon the nature of the hypnotic suggestion, high hypnotizability Ss are able to employ dissociation or absorption in order to respond successfully. Low hypnotizability Ss, on the other hand, seem to be relatively ineffective dissociators. When the structure of the hypnotic suggestion precludes the use of absorption, the performance of low hypnotizables deteriorates.

**Briere, John; Runtz, Marsha (1990). Augmenting Hopkins SCL scales to measure dissociative symptoms: Data from two nonclinical samples. Journal of Personality Assessment, 55, 376-379.**

Describes a 13-item dissociation scale (DS) that uses numerical ratings and presents preliminary data regarding its reliability. The DS was administered to 2 samples of undergraduate women (N=569). Ss also completed the SCL-90 or the Hopkins Symptom Checklist (HSCL). The DS was found to be reliable, and there was a correlation of the DS with self-reported child abuse history. Designed to complement the SCL-90 and the HSCL, the DS may be useful in research on the effects of psychological trauma.

**Counts, R. M. (1990). The concepts of dissociation. Journal of American Academy of Psychoanalysis, 18, 460-479.**

Reviews conceptualizations of dissociation. Dissociation is the underlying mechanism in a number of defensive mechanisms. Repression, intellectualization, splitting, and other defense mechanisms rely upon dissociation to accomplish their specific tasks. Dissociation is thus believed to be the underlying and basic mechanism of many aspects of mental functioning.

**Demitrack, Mark A.; Putnam, Frank W.; Brewerton, Timothy D.; Brandt, Harry A.; et al. (1990). Relation of clinical variables to dissociative phenomena in eating disorders. American Journal of Psychiatry, 147 (9), 1184-1188.**

Compared 30 female patients (aged 16-39 yrs) with eating disorders with 30 age-matched normal female Ss, using the Dissociative Experiences Scale (E. M. Bernstein and F. W. Putnam; see PA, Vol 74:14407) and additional self-report measures such as the Beck Depression Inventory. The patients demonstrated significantly higher levels of dissociative psychopathology compared with controls. Furthermore, the presence of severe dissociative experience appeared to be specifically related to a propensity for self-mutilation and suicidal behavior. Findings are discussed in light of recent data suggesting that neurochemical systems shown to be abnormal in patients with eating disorders may be key pathophysiological substrates for dissociative experience.

**Downs, John M.; Dahmer, Sharon K.; Battle, Allen O. (1990). Multiple personality disorder in India. American Journal of Psychiatry, 147 (9), 1260.**

Comments on the article by Adityanjee et al (see PA, Vol 77:12344) on multiple personality vs possession syndrome in India. The history of the trends of these disorders is presented, and the differences between multiple personality and possession are described. The only fundamental difference between the 2 disorders may be in the voluntary type.

**Fellows, Brian J. (1990). Current theories of hypnosis: A critical overview. British Journal of Experimental and Clinical Hypnosis, 7, 81-92.**

The present state of theory in hypnosis is reviewed and observations are made concerning future prospects. The state- non-state issue continues to dominate theoretical debate, although no satisfactory reply has yet been made to T. X. Barber's criticisms of the 'hypnotic trance' concept. The impact of social-psychological theory has been considerable and the results of Spanos's hypnotic training programme could have significant implications for our understanding of hypnosis. Future theorizing should see a move towards a more integrated sociocognitive approach. Neodissociation theory has generally not fulfilled its early promise and is encumbered with the 'hidden observer' concept. The role of imaginative processes continues to be a dominant theme in hypnosis theory, although the relatively small correlation between imaginative and hypnotic abilities remains a problem. The links between hypnosis, sleep and relaxation deserve further research, although, as theories of hypnosis, their scope seems limited.

Suggestibility and role enactment theories have shown few signs of development in recent years. Theoretical problems over the interpretation of hypnosis need to be more widely recognized and the use of question-begging terminology curtailed. One advantage of the imagination hypothesis is that it provides a bridge, or a point of convergence, between state and non-state approaches (Spanos & Barber, 1974). It also handles certain hypnotic phenomena very well. For example, the known facts of age regression can be readily interpreted, together with the oddities of age progression and past life regression, as imaginative reconstructions (Barber, 1979). However, other phenomena, such as amnesia and analgesia, are less easily explained.

Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. American Journal of Clinical Hypnosis, 32, 201-207.

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales.

#### NOTES

The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

"The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items related to modifications of regulatory control, changes in self-monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10- point scale. The items related to the experience of disturbances in identity, memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202- 203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205).

"All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

Frankel, Fred H. (1990). Hypnotizability and dissociation. American Journal of Psychiatry, 147, 823-829.

Describes the multidimensionality of hypnosis and hypnotizability. He also points to the lack of clarity regarding the concept of dissociation and the extent to which its roots lie in the clinical experience of hypnosis. The concept of dissociation increasingly preempts repression and other defense mechanisms in current nosological thinking. The author cautions against equating hypnosis scores with dissociative capacity and advocates a clearer elaboration of the term "dissociation." Meanwhile, restraint in the use of the term "dissociation" is recommended.

Freeman, William B., Jr.; Kessler, Marc; Vigne, Jeffery (1990). Random number generation, absorption, and hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 10-16.

Graham and Evans (1977) found that a measure of random number generation (RNG) was related to hypnotizability. In 2 studies, the relationship between hypnotizability and Graham and Evans' RNG (1977) index was examined. In Study 1 Evans' (1981) measures of controlled and automatic absorption were also evaluated. In Study 1 no relationship was found between the measures of absorption

or RNG and hypnotizability. Since Study 1 was carried out primarily to evaluate methods for modifying hypnotizability, Study 2 was designed to evaluate RNG measure directly. Study 2 found no consistent relationship between RNG and hypnotizability, or between RNG and measures of the experience of hypnotic depth and nonvolition.

Frischholz, Edward J.; Braun, B. G.; Sachs, R. G.; Hopkines, L.; Schaeffer, D. M.; Lewis, J.; Leavitt, F.; Pasquotto, J. N.; Schwartz, D. R. (1990). The dissociative experiences scale: Further replication and validation. Dissociation, 3, 151-153.

Interrater reliability for the DES was .96-.99, test-retest reliability was .93-.96, and internal consistency of DES scores was very high .93-.95. Both MPD and dissociative disorder NOS (DDNOS) patients scored significantly higher than students, and MPD patients scored significantly higher than DDNOS patients. A cutoff score of 45 to 55 maximizes the probability of distinguishing students from dissociative disorders (87%) while minimizing false positives (2%-6%) and false negatives (7%-11%). Suggestions for further research are made.

Gravitz, Melvin A. (1990). Adverse behavior associated with the eye-roll test of hypnotizability: Clinical and theoretical considerations. Psychotherapy: Theory, Research and Practice, 27, 267-270.

For 15 years, subjects' response to the eye-roll test has been used to measure susceptibility without adverse effects. A case is described of a hospitalized young man who displayed dissociative behavior when asked to do the eye-roll as part of a diagnostic evaluation. Etiological and theoretical considerations, and implications for therapeutic strategy are discussed.

Halleck, Seymore L. (1990). Dissociative phenomena and the question of responsibility. International Journal of Clinical and Experimental Hypnosis, 38, 298-314.

There are many controversies regarding the prevalence, causation, possible iatrogenicity, and treatment of multiple personality disorder. Those who view the disorder as much more prevalent than has previously been suspected believe it is caused by experiences of severe child abuse and have used rather unorthodox techniques to help the patient relate the experience of abuse to current problems of dissociation. Other clinicians believe the disorder is overdiagnosed and that it may be created or made worse by therapists who unwittingly reinforce symptoms of dissociation. Many of the controversies about these issues can be clarified by considering the manner in which clinicians attribute responsibility for undesirable conduct associated with the disorder. In dealing with multiple personality patients, clinicians regularly must decide whether their therapeutic approach will emphasize the patient's responsibility for undesirable conduct or will minimize it. Practical and theoretical arguments can be made for both approaches. There are important consequences to patients using either approach, and particularly harmful

consequences with inconsistent approaches. Clinical experience and wisdom dictate that until we have more objective data about the results of various forms of treatment, the preferred method of treatment of multiple personality patients should continue to focus upon maximizing their responsibility for any type of undesirable conduct.

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189.

#### NOTES

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

**DISCUSSION.** The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

1989

Alvarado, C. S. (1989). Dissociation and state-specific psychophysiology during the nineteenth century. Dissociation, 2, 160-168.

Reviews examples of state-specific psychophysiology in nineteenth century reports of dissociative disorders. These cases occurred in the context of rapid developments both in neurology and in the understanding of phenomena suggesting the possible influence of the mind, emotions, or psychological states on general health and specific bodily functions (e.g., the study of hypnosis and hysteria). It is argued that interest in such cases was part of a general concern with mind/body interactions. The explanations offered to account for these cases reflected different orientations to the mind/body problem prevalent during this era.

Carlson, Eve Bernstein; Putnam, Frank W. (1989). Integrating research on dissociation and hypnotizability: Are there two pathways to hypnotizability?. Dissociation, 2, 32-38.

Attention to the relationship between hypnotizability and dissociation has been limited to date. Reviews recent studies implying a relationship between "dissociativity" and hypnotizability, and places in context of J. Hilgard's theory of two developmental pathways to hypnotizability (imagination/absorption and punishment). This might imply two subsets of hypnotizable persons, as Nadon et al. (1988) postulate--one with a dissociative style and one with an absorption style. Also, high capacity for imaginative involvement may be a necessary condition for a dissociative response to trauma. Branscomb (1988; unpublished) posits a genetic-stressor model for PTSD in which a history of dissociative-proneness and child abuse predispose one to PTSD when a trauma occurs in a non-supportive environment. Relates this theory to hidden observer research and to dissociative patients.

Gabel, Stewart (1989). Dreams as a possible reflection of a dissociated self-monitoring system. Journal of Nervous and Mental Disease, 177 (9), 560-568.

Argues that dreams may be thought of as dissociative phenomena of a particular type that reflect a monitoring of and reaction to internal and external conditions within the dreamer. Under conditions of sleep, memories, emotions, information processing, and judgments about internal and external events may occur independently of the usual waking conscious system's information processing. Experimental and/or clinical work, related to hypnosis, REM phenomena, dreams, and hemispheric specialization are discussed to support this view. Dreams are described within the context of dissociation-based theories of personality organization.

Ganaway, George K. (1989). Historical versus narrative truth: Clarifying the role of exogenous trauma in the etiology of MPD and its variants. Dissociation, 2, 205-220.

The author notes a current trend toward viewing multiple personality disorder (MPD) and its variants as a form of chronic post-traumatic stress disorder based solely on exogenous childhood trauma, and cautions against prematurely reductionistic hypotheses. He focuses on Kluff's Third Etiological Factor, which

includes the various developmental, biological, interpersonal, sociocultural, and psychodynamic shaping influences and substrates that determine the form taken by the dissociative defense. He hypothesizes a credibility continuum of childhood and contemporary memories arising primarily from exogenous trauma at one end, and endogenous trauma (stemming from intrapsychic adaptational needs) at the other. The author offers alternative multidetermined explanations for certain unverified trauma memories that currently are being accepted and validated as factual experiences by many therapists. He describes some potentially deleterious effects of validating unverified trauma memories during psychotherapy, and recommends that the MPD patients' need for unconditional credibility be responded to in the same manner as other transference-generated productions.

Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.

#### NOTES

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGSHS:A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47-item scale designed to demonstrate the existence of five factors of the hypnotic experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General Depth, was also derived to provide a summary measure of the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

#### 1988

Chu, James A. (1988). Some aspects of resistance in the treatment of multiple personality disorder. Dissociation, 1, 34-38.

Therapists who treat patients with MPD commonly experience discomfort and frustration. This paper contends that the most significant cause of therapist

discomfort is the particular resistances encountered in the treatment of MPD. In MPD, etiologic childhood traumatic experiences are defensively repressed and dissociated. In addition, the normal ability to engage in trusting interpersonal relationships is disrupted. Thus, a psychotherapy which requires the retrieval of past traumas in the context of an interpersonal therapeutic relationship is tremendously threatening to the patient with MPD. In the normal course of the psychotherapy of MPD, intense resistances are encountered at every stage. This paper outlines the nature of resistance in the treatment of MPD patients, presents clinical examples, and discusses the importance of understanding and working with resistance as an intrinsic part of the treatment.

**Chu, James A. (1988). Ten traps for therapists in the treatment of trauma survivors. Dissociation, 1, 24-32.**

Patients who have survived trauma, particularly those who have experienced early childhood abuse, stand out in the clinical experience of many therapists as being among the most difficult patients to treat. These patients have particular patterns of relatedness, along with intense neediness and dependency which make them superb testers of the abilities of their therapists. They often push therapists to examine the rationales and limits of their therapeutic abilities, and frequently force therapists to examine their own personal issues and ethical beliefs. A conceptual framework for understanding treatment traps is presented, along with 10 traps which these patients present, consciously and unconsciously, in the course of treatment. Included are traps around trust, distance, boundaries, limits, responsibility, control, denial, projection, idealization, and motivation.

**Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.**

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

**Greaves, G. B. (1988). Common errors in the treatment of multiple personality disorder. Dissociation, 1, 61-66.**

Psychotherapists report widely different experiences in their attempts at treating multiple personality disorder (MPD) patients. Some have deepened their interests and developed full-time specialized practices with this clinical population. Others have declined to have any further contact with them at all, referring possible MPD patients to colleagues when they first suspect that this disorder may be present. Still others have decided against treating more than one or two MPD patients. These diverse decisions are examined with a focus upon the effects of therapists' uneven attention to the formal properties of the dyadic psychotherapeutic experiences as a possible influence upon their future work with MPD. Problems concerning the framework of psychotherapy and the countertransference conflicts which often move the therapist unconsciously and irrationally to alter the canons of psychotherapy in mutually detrimental ways appear to be crucial determinants.

Kluft, R. P. (1988). The phenomenology and treatment of extremely complex multiple personality disorder. Dissociation, 1, 47-58.

Contemporary reports indicate that the average number of personalities in recently reported patients with MPD is larger than that reported in the older literature. A minority of these recent patients demonstrate extreme complexity. A group of 26 patients with 26 or more personalities and under observation for a minimum of 3 years was studied. Their presentations, the reasons that appeared to underlie their complexity, and their courses of treatment are reviewed. Findings indicate that this group of patients is diverse, with some proving readily treatable, and others proving quite refractory. Observations that appear constructive for the treatment of such patients are offered. The concept of personality is discussed and an alternative description is explored. The usefulness of the paradigms and metaphors of splitting and division as heuristics for the understanding of MPD is challenged, and a paradigm/metaphor of redoubling and reconfiguration is offered for further study.

Loewenstein, R. J.; Putnam, F. W. (1988). A comparison study of dissociative symptoms in patients with complex partial seizures, MPD, and posttraumatic stress disorder. Dissociation, 1, 17-23.

Depersonalization and dissociative symptoms have been widely reported in chronic seizure disorder patients, especially those with temporal lobe involvement and complex partial seizures (CPS). It has been theorized that development of multiple personality disorder may be related to temporal lobe pathology. We administered the Dissociative Experiences Scale (DES) to 12 male patients with severe chronic epilepsy, primarily of the complex partial type. Patients had epilepsy from 1 to 30 years. Most were being evaluated for intractable seizures occurring several times per week. DES data on the epileptic patients were compared with DES data on 9 male MPD patients and 39 PTSD patients. MPD and PTSD patients were significantly different from CPS patients in median DES scores and all DES subscale scores. MPD and PTSD patients were far more similar on the DES, although MPD patients had a significantly higher score on the

dissociation/psychogenic amnesia subscale of the DES. The authors conclude that there is little data to support a relationship between MPD, dissociation, and epilepsy.

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

#### NOTES

From a review in *British Journal of Experimental and Clinical Hypnosis*, 7, 175-178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility.

In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

1987

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. *Journal of Personality and Social Psychology*, 53, 563-571.

#### NOTES

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception.

**Gorassini, Donald R. (1987). Use of concurrent verbalization to assess the dissociation of conscious controls. Journal of Abnormal Psychology, 96 (3), 218-222.**

The degree of dissociation of conscious controls that occurred when, according to the neodissociation theory (Hilgard, 1977, 1979), conditions were optimal for such an event was assessed. A task that required subjects to locate specified sentences in a textbook was conducted under these optimal conditions, as well as under conditions that were expected to mitigate against the occurrence of dissociation. The sentence-search task necessitated rehearsal for its successful completion. The correspondence between task rehearsal and task performance did not differ between optimal and mitigating conditions, thus suggesting a failure to dissociate. Nevertheless, search behavior was self-rated as substantially more involuntary under the optimal than under the mitigating conditions. The implications of these findings for the neodissociation and social role theories of hypnosis were discussed.

**Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.**

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

#### **NOTES**

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does.

We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259).

The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

## NOTES

Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

## 1986

Bernstein, Eve; Putnam, Frank W. (1986). Development, reliability, and validity of a dissociation scale. Journal of Nervous and Mental Disease, 174, 727-734.

Dissociation is a lack of the normal integration of thoughts, feelings, and experiences into the stream of consciousness and memory. Dissociation occurs to some degree in normal individuals and is thought to be more prevalent in persons with major mental illnesses. The Dissociative Experiences Scale (DES) has been developed to

offer a means of reliably measuring dissociation in normal and clinical populations. Scale items were developed using clinical data and interviews, scales involving memory loss, and consultations with experts in dissociation. Pilot testing was performed to refine the wording and format of the scale. The scale is a 28-item self-report questionnaire. Subjects were asked to make slashes on 100-mm lines to indicate where they fall on a continuum for each question. In addition, demographic information (age, sex, occupation, and level of education) was collected so that the connection between these variables and scale scores could be examined. The mean of all item scores ranges from 0 to 100 and is called the DES score. The scale was administered to between 10 and 39 subjects in each of the following populations: normal adults, late adolescent college students, and persons suffering from alcoholism, agoraphobia, phobic-anxious disorders, posttraumatic stress disorder, schizophrenia, and multiple personality disorder. Reliability testing of the scale showed that the scale had good test-retest and good split-half reliability. Item-scale score correlations were all significant, indicating good internal consistency and construct validity. A Kruskal-Wallis test and post hoc comparisons of the scores of the eight populations provided evidence of the scale's criterion-referenced validity. The scale was able to distinguish between subjects with a dissociative disorder (multiple personality) and all other subjects.

Davidson, Thomas McCabe (1986, January). Recall organization and volitional/non-volitional experiencing in posthypnotic and intrahypnotic amnesia: Inattention versus dissociation hypotheses (Dissertation, University of Waterloo). Dissertation Abstracts International, 47 (7), 3103-B.

Two studies are reported which seek to evaluate the relative merits of two differing hypotheses concerning the cognitive processes underlying suggested hypnotic amnesia. The inattention hypothesis maintains that amnesia effects are produced when subjects volitionally divert attention from relevant retrieval cues so that recall is inefficient. The dissociation position is that amnesic subjects are prevented from utilizing normally relevant retrieval cues by a dissociative barrier that blocks access to target memories -- a forgetting over which subjects experience no volitional control. The two hypotheses were evaluated by means of a selective amnesia suggestion in the recall organization paradigm. "In the first experiment, high, medium, and low hypnotic susceptible subjects were administered either hypnotic induction or task-motivating instructions. Results indicated that there was no disorganization of amnesia trial recall or forgetting of words not targeted for amnesia, contrary to predictions from the inattention hypothesis. "In the second experiment, high hypnotizable subjects received the selective amnesia suggestion in both posthypnotic and intrahypnotic conditions. Intrahypnotic subjects were also separated into one group that received a ten second interval between the administration of the amnesia suggestion and the amnesia trial, and another group that had a delay between the suggestion and the amnesia trial equivalent to the posthypnotic group. Eight subjects who had testified that they were volitionally amnesic on a pre- screening amnesia test were also included in the posthypnotic condition. Again, the results indicated no recall disorganization or reduction in

recall of words not targeted for amnesia. Subjects also uniformly provided evidence that their amnesia was experienced as non-volitional. There was, however, evidence that some amnesiacs were aware during the amnesia trial of the specific category targeted for amnesia. "The most important finding of both experiments is that subjects may attend to normally relevant retrieval cues and yet continue to evidence amnesia. The evidence is therefore consistent with the dissociation hypothesis, but disconfirms the inattention account of hypnotic amnesia. It appears that the selective amnesia context effectively prevents the successful use of volitional forgetting strategies. (Abstract shortened with permission of author)" (p. 3103).

Holroyd, Jean (1986). Hypnosis applications in psychological research. Imagination, Cognition and Personality, 5, 103-115.

It is proposed that hypnosis leads to altered cognition, affect, or motivation as reflected by changes in 1) reality orientation, 2) attention and awareness, 3) imagery, 4) dissociation, 5) suggestibility, and 6) mind-body interaction. Hypnosis may be used as an experimental method to effect such cognitive, affective and motivational changes in order to pursue research in learning, personality, physiological, and social psychology. Examples of possible applications of hypnosis are provided. The influence of individual differences in hypnotic responsivity on research also is discussed.

#### NOTES

The author concludes, "Contributions of hypnosis to research in psychology may have been diminished by the confusion inherent in searching for main effects while giving insufficient attention to interaction effects between personality variables and experimental manipulations. As psychology becomes more cognitive in orientation, the phenomena of hypnosis may seem less bizarre and more amenable to inclusion in psychological research. However great care must be taken not to confuse the contributions of hypnosis with the contributions of the hypnotically responsive personality" (p. 109).

Laurence, Jean-Roch; Nadon, Robert; Nogrady, Heather; Perry, Campbell (1986). Duality, dissociation, and memory creation in highly hypnotizability subjects. International Journal of Clinical and Experimental Hypnosis, 34, 295-310.

The present paper reports an initial attempt to create a pseudomemory in a group of highly hypnotizable individuals. It was found that for approximately 50% of Ss tested, recall of a specific event was modified when Ss integrated hypnotically suggested material which then posthypnotically was believed to be veridical. This modification in a previously reported memory was linked to a particular cognitive style found in high hypnotizable Ss, namely dual cognitive functioning. Ss reporting duality in hypnotic age regression, and, to a lesser extent, the hidden observer effect, were found to be the most prone to accept a suggested memory as real. These findings suggest the need to emphasize the importance of a cognitive-phenomenological approach to hypnosis and hypnotizability.

Markus, Hazel; Nurius, Paula (1986). Possible selves. American Psychologist, 41 (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self-relevant form, meaning, organization, and direction to these dynamics. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self-distortion, and the relationship between the self-concept and behavior

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

1985

Bliss, Eugene L.; Larson, Esther M. (1985). Sexual criminality and hypnotizability. Journal of Nervous and Mental Disease, 173, 522-526.

Investigated 33 17-35 yr old sexual offenders, 18 of whom had been convicted of rape, 9 of pedophilia, and 6 of incest. Ss completed a questionnaire containing a list of 15 factors that might have contributed to their crime, a self-report containing 305 items that are symptoms characteristic of 11 major psychiatric syndromes, and the Stanford Hypnotic Susceptibility Scale. Controls for the self-report were 48 individuals taken from a church group, nurses, technicians, and graduate students. Controls for the hypnotizability scale were cigarette smokers who smoked 1 1/2

pack/day and S data taken from the literature. Results show that two-thirds of the Ss had histories of spontaneous self-hypnotic experiences (dissociations); 7 of these were DSM-III multiples and 6 were probable multiples. This group had very high hypnotizability scores. The other one-third without histories of spontaneous self-hypnosis had normal scores. It is concluded that spontaneous self-hypnosis contributed to the perpetration of the crimes in many of these cases, although other factors also directed the antisocial behaviors. (22 ref).

**Gibson (1985). Dreaming and hypnotic susceptibility: A pilot study. Perceptual and Motor Skills, 60, 387-394.**

Previous experimental work has indicated that certain stable personality characteristics are reliably associated with differential susceptibility to hypnosis. It is suggested that people who are more susceptible will be characterized by an awareness of dreaming more frequently, vividly and creatively. This study describes the construction of a Dream Questionnaire and the relations of the scores obtained on it to scores previously obtained on the Harvard Group Scale of Hypnotic Susceptibility. Sex differences were noted in response to the questionnaire. For women, a global score was derived from the questionnaire, and this was positively and significantly associated with hypnotic susceptibility. Men responded rather differently to the questionnaire and as hypnotic susceptibility scores were available for only a more limited number, further analysis was postponed until more data from men may become available. Some suggestions for research are discussed, and the relations between sleep research and hypnosis research are briefly considered.

**NOTES:**

This article provides an example of dissociation-hypnosis contribution to sleep research:

"There has hitherto been little link between research on sleep and on hypnosis. Cartwright's (1978) review of dream research makes no mention of hypnosis, but a little common ground is referred to in Ernest Hilgard's (1975) review of hypnosis research. More recently, Belicki and Belicki (1984) and Perreault and Montplaisir (1984) have renewed the effort to link the two areas. Such research may not begin to pay off in terms of delineating more fully the traits of personality which refer to dissociative ability both in sleep and in wakefulness. It is hoped that the pilot questionnaire provided by the present study will serve to further such research."

[Note that in Nadon, Hoyt, & Kihlstrom, 1987, some questions from Evans' sleep questionnaire were predictive of hypnotizability.]

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and

relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

Morris, Don M.; Nathan, Ronald G.; Goebel, Ronald A.; Blass, Norman H. (1985). Hypnoanesthesia in the morbidly obese. Journal of the American Medical Association, 253 (22), 3292-3294.

The advent of chemical anesthesia relegated hypnosis to an adjunctive role in patients requiring major operations. Anesthesia can be utilized with acceptable risk in the great majority of patients encountered in modern practice. But an occasional patient will present--such as one with morbid obesity--who needs a surgical procedure and who cannot be safely managed by conventional anesthetic techniques. This report describes our experience with such a patient and illustrates some of the advantages and disadvantages of hypnoanesthesia. The greatest disadvantage is that it is unpredictable. Close cooperation between the patient, hypnotist, anesthesiologist, and surgeon is critical. However, the technique may be utilized to remove very large lesions in selected patients. Hypnoanesthesia is an important alternative for some patients who cannot and should not be managed with conventional anesthetic techniques.

1984

Bowers, Kenneth S. (1984). On being unconsciously influenced and informed. In Bowers, Kenneth S.; Meichenbaum, D. (Ed.), The unconscious reconsidered (pp. 227-273). New York: John Wiley & Sons.

#### NOTES

Research on confirmatory bias has uncovered additional cognitive processes that are frequently automatic in function and significant in modifying behavior, affect, and cognition. Snyder and Swann (1976, 1978) provided subjects with set inducing hypotheses about the personalities of certain target individuals. Subjects were then asked to test these hypotheses by interviewing the target individuals. It was found that subjects regularly looked for and found evidence that was consistent with their initial hypotheses rather than for evidence which could show these hypotheses to be incorrect. This biased search strategy of the subjects had more profound effects as well, for it also influenced the behaviors of the target individuals in a manner leading them to produce behaviors that seemed to confirm the original mental set of the subjects. Subjects were unaware that their manner of interviewing was producing a biased sample of behavior from the targets. Here too an automatic cognitive process was affecting perception and thinking without conscious awareness" (p. 280).

Carlson, Eric T. (1984, October/1986). The history of dissociation until 1880. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 7-30). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

#### NOTES:

Provides summary of the history of associationism. Refers to Beddoes' essays (1802-03) which state that (1) emotions play a significant role in strengthening associations, and a study of emotions would be the 'chief secret for unriddling the inconsistencies of dreams,' and (2) variations could occur in associations (from very strong to very weak).

In the 19th century there was an ongoing debate about the role of the reflex in the nervous system, about how high up it could function, and whether it could still take place if it reached areas that subserved consciousness. Dr. William Carpenter postulated three levels: (1) excitomotor reflex (spinal, and maybe lower brain), (2) sensorimotor or consensual (midbrain) which was unconscious, (3) ideomotor (cerebral) - based on evidence from hypnosis in which volition appeared suspended and the subject became 'a mere thinking automaton' whose flow of ideas resulted from external suggestions only. The ideomotor response could be unconscious.

In the 1830's and 40's Thomas Laycock brought Associationism together with the concept of reflex. "By bringing the reflex into 'cerebral processes,' he proposed a model that made fast and automatic responses possible in the realm of ideas. Automatic thinking, speaking, writing, and more complex actions became topics of increasing interest to psychologists later in the century. As early as 1868, Prosper Despine had been speaking of 'psychological automatisms.' Laycock proclaimed most of these responses as being unconscious, that ideas could be charged with

varying amounts of energy, and that ideas could act as causes of human disturbances, both psychological and physiological" (pp. 25- 26).

1860's - 90's saw the rise of hypnotism, with Eugene Azam using it in surgery and psychiatry; Durand de Gros's book on Braid; Liebeault publishing a book; Bernheim launching his career; Charcot shifting interest from organic neurological conditions to functional conditions; and Charcot teaching both Janet and Freud.

The author notes that "in July 1880, a bright and educated young woman of 20 started to nurse her dying father. Like the shamans before her, she had to grapple with the spectre of death and in her own fashion, she developed a creative illness. Her symptoms were myriad, but many had to do with changes in her consciousness (including 'absences,' clear-cut trances) and splits in her memory, including the loss of an entire language. At one point her current personality disappeared and another took its place: in this case it was herself but existing a year before in a state in which she lived without any apparent awareness of what had happened to her in the interim. It is this case of Anna O. and her doctor, Josef Breuer, which became important to the next epoch in our review and who had so much to do in inspiring the studies that followed" pp. 27-28.

Cocores, James A.; Bender, Andrew L.; McBride, Eugene (1984). Multiple personality, seizure disorder, and the electroencephalogram. Journal of Nervous and Mental Disease, 172, 436-438.

Used the EEG to study multiple personality in a 48-yr-old ambidextrous male admitted for alcohol detoxification and individual psychotherapy. Despite conflicting reports in the literature, no changes in the EEG were found that could not be ascribed to the normal changes seen in transitions from various states of alertness. The problems of differentiating multiple personality as a psychiatric entity in itself from those cases arising as a result of chronic partial or partial-complex epilepsy are discussed.

Crabtree, Adam (1984, October/1986). Explanations of dissociation in the first half of the twentieth century. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 85-108). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

#### NOTES

In 1907 Morton Prince, Editor of *Journal of Abnormal Psychology*, introduced a symposium by listing 6 meanings of subconscious: 1. that portion of our field of consciousness which is outside the focus of attention 2. (Janet's idea) - split off ideas which may be isolated sensations like the lost tactile sensation of anesthesia, or maybe aggregated into groups or systems. The author quotes Janet as stating that "they form a consciousness coexisting with the primary consciousness and thereby a doubling of consciousness results" (p. 87). The primary consciousness is usually dominant, but sometimes is reduced under exceptional conditions (e.g. automatic writing). 3. the subconscious self or hidden self -- a part of every human, not just seen in psychopathology; this is a personalized entity; every mind has a double, with

the unconscious self having powerful effects on feelings, thoughts, and reactions of the conscious self 4. extends #3 to include not only ideas that remain active below surface but also those which are inactive -- forgotten or out of mind 5. Frederic Myers' concept of the 'subliminal self' which had 3 functions:

a) inferior - seen in processes of dissociation

b) superior - seen in works of genius, arising from 'subliminal rush' of information, feelings, and thoughts which lie below consciousness

c) mythopoeic - the unconscious tendency to create fantasies 6. physiological meaning, e.g. William Carpenter's 'unconscious cerebration' in which unconscious phenomena are interpreted in terms of pure neural processes unaccompanied by mental activity.

Prince suggested some redefinitions to clarify unconscious and subconscious. He would replace Janet's subconscious with co-conscious and reserve unconscious for physiological processes that lack the attributes of consciousness. Prince noted that co-conscious ideas have been called unconscious (e.g. by Freud) but said that is confusing and to be avoided.

"Coconscious ideas include states we are not aware of because they are not the focus of our attention, and also pathologically split-off and independently active ideas or systems of ideas, such as occur in hysteria and reach their most striking form in co-conscious personalities and automatic writing.

"Prince prefers the term coconscious to Janet's subconscious for two reasons. First, because it expresses the simultaneous coactivity of a second consciousness. And second, because the coactive ideas or idea systems may not be outside the awareness of the personal consciousness at all. They may be recognized by the personal consciousness as a distinct consciousness existing alongside it.

"Thus, through his redefinition of terms, Prince makes simultaneous activity of two or more systems of consciousness in one individual the key element in dissociation. He thereby moves the issue of amnesia or lack of awareness by one system of another into the background, making it a secondary, nonessential element. Prince was one of the few to provide a theoretical framework for dissociation in which any combination of interawareness among the coconscious systems was possible" (p. 91). Two researchers at the turn of the century came to opposite conclusions about the nature of the Subconscious Self that every human has. Morris Sidis saw it as "a brutelike consciousness with a tendency toward personalization. Frederic Myers held that it included those functions and much more, being the source of all that is human, including the highest intuitive powers" p. 96.

Bernard Hart, in 1910, did an analysis of Janet and Freud. Janet's work is essentially descriptive: "he is always talking about a consciousness which manifests itself in a way we can \_perceive\_, whether by listening to it talk, reading its written communications, or watching its movements" (p. 97). However Janet's spatial model of dissociation cannot explain the presence of the same material (e.g. memories) in two or more dissociated systems. According to Hart, Freud offered the conceptualization that Janet lacked, in his idea of the Unconscious .

Freud's Unconscious is not in competition with Janet's subconscious. "Janet's subconscious is the arena of dissociated phenomena which manifest in observable form as elements coactive with the personal self. Freud's unconscious is a

conceptual, nonobservable construction put forward to explain certain facts of human experience. In this way Hart equates the unconscious with the atomic theory in physics or the theory of heredity in biology" p. 99. But Hart also thought Freud's theory did not do justice to dissociative phenomena. Not only do psychoanalysts show little interest in double personality or multiple personality, they also neglected dissociation on the phenomenal level.

In 1915 Freud denied the existence of a second consciousness and wrote, "there is no choice for us but to assert that mental processes are in themselves unconscious, and to liken the perception of them by means of consciousness to the perception of the external world by means of the sense organs" (p. 101). Janet claimed that Freud had simply taken over his own system and given it a new terminology, and in 1924 Freud wrote an angry rebuttal. For him, "dissociated systems are simply separate groups of mental but unconscious elements. As our consciousness turns now to one group, now to another, as a searchlight shines now on one object and now on another, the dissociated groups manifest in conscious life. ... There exists no doubling of consciousness" p. 102.

Jung's ideas were closer to those of Janet, and like Janet he made dissociation a key concept in his theory. The \_complex\_ is unconscious, has an archetypal core clothed in personal experience, is like a self-contained psyche within the big psyche, sometimes called a fragmentary personality dwelling inside us. Dissociation for him meant being cut off from the Ego, which is the center of an individual's field of consciousness. "Dissociated or autonomous complexes are those which have no direct association with the ego" (p. 103). If complexes are charged with enough energy they will become manifest--as a neurotic symptom, as projected into idea of a god or demon, or perhaps as an alternate personality. Therefore Jungian treatment aims at assimilating dissociated complexes into the ego.

Decker, Hannah S. (1984, October/1986). The lure of nonmaterialism in materialist Europe: Investigations of dissociative phenomena, 1880-1915. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 31-62). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

## NOTES

Emphasizes spiritism, hypnotism, and the career of Pierre Janet.

Janet's career paralleled an increased interest in dissociation, because he had contact with scientists studying spiritism, used hypnosis, and insisted on a scientific approach. He coined the words "subconscious" and "dissociation." As his sphere of influence declined, so did scientific interest in dissociation--especially multiple personality disorder.

Scientific study of dissociation began with investigations into religious exorcism and spirit possession. For example, at the behest of Prince Max Joseph of Bavaria, Mesmer duplicated the exorcisms of Father Gassner (causing convulsions) using hypnosis. Following Mesmer, there were reports of multiple personalities (e.g. an "exchanged personality" in Germany, reported in 1791 by Eberhardt Gmelin).

"Partly because of this growth of knowledge of multiple personality, a new model of the mind developed during the early 19th century: the mind was dual; there were conscious and unconscious mental states. Later, it was said that there was a dominant conscious personality with a group of underlying subpersonalities. Eventually it was declared that split fragments of personality could act autonomously" p. 37.

The scientific study of these phenomena continued under the leadership of Frederic Myers of The Cambridge Society for Psychical Research. According to William James, Myers was the first to consider the phenomena of hallucination, hypnotism, automatism, double personality, and mediumship as connected parts of one whole subject. The Cambridge Society was involved in the transition from the use of automatic writing by mediums to its use for clinical purposes and experimental research in the 1880's and 1890's.

Increasing numbers of multiple personalities reported in the literature in late 19th century led to increased interest in hypnosis and to the concept of dissociation. The author details the contributions of Janet, and then explains how interest declined in dissociation and in hypnosis due to the following: 1. Experimental psychologists in Germany (e.g. Wundt) refused to deal with anything that resembled the "unconscious," and neglected the point of view of the experiencing person. 2. Those few psychologists interested in the unconscious found projective tests (Rorschach, TAT) an easier avenue than hypnosis or automatic writing. 3. Many mediums were exposed as frauds, e.g. Flournoy's popular "From India to the Planet Mars". 4. Janet himself was very critical of parapsychology. 5. When Charcot died suddenly, it was discovered that some of his assistants had rehearsed the behavior of hypnotized patients. 6. Hypnotists' extravagant claims (e.g. past life age regression) led to a wave of reaction against them. 7. Questions were raised about the iatrogenic nature of multiple personality. 8. Conscientious hypnotists discovered drawbacks

- not everyone could become good hypnotists (e.g. Freud)
  - not everyone could be hypnotized
  - some patients faked hypnosis
  - extreme sensitivity of hypnotized patients to the hypnotist's wishes led to biased results
  - hypnotist sometimes was conditioned to things in certain way by his first patient
9. Janet didn't have the personality of a leader, and he argued with the psychoanalysts about who should get credit for certain ideas.

Fewtrell, W. E. (1984). Relaxation and depersonalization. British Journal of Psychiatry, 145, 217.

## NOTES

In 40 anxious patients treated with Jacobson's progressive relaxation, 7 reported distress (something like Heide's Relaxation Induced Anxiety). Looking retrospectively at the clinical notes, these seven usually reported symptoms of a depersonalization syndrome prior to treatment. The author administered Dixon's (1963) Self Alienation Questionnaire, which purports to measure depersonalization. The patients who had distress scored significantly higher on Self-Alienation than ten

randomly selected control subjects who had responded to the relaxation procedures without problems (adverse effects patients' mean = 32; controls' mean = 22;  $P = .05$ ). This article presents evidence that the presence of relaxation may distress depersonalized patients, presumably exacerbating feelings of unreality.

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post-Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

Nash, Michael R.; Lynn, Steven Jay; Givens, Deborah L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 6-11.

Earlier empirical and theoretical work has suggested that there is a relationship between higher hypnotic susceptibility and severity of childhood punishment. Experiment 1 surveyed the parents of 14 extremely high and 11 extremely low susceptible Ss concerning punishment. Low susceptible Ss were found to be more frequently punished than highs; no significant differences were found on the severity measure. Experiment 2 assessed the hypnotizability of 16 adult Ss who reported being physically abused before the age of 10 and compared these scores to those of 300 adult Ss who had not reported being abused. The mean hypnotizability of abused Ss was greater than that of controls, and the distribution of their scores appeared bimodal. Limitations of both experiments are discussed and suggestions are made for future investigations.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott (1984). The direct hypnotic suggestion of altered mind/body perception. American Journal of Clinical Hypnosis, 27, 95-102.

Attentional and emotional shifts are examined following a hypnotically suggested out-of-body experience (OBE). Two hypotheses were tested: 1) that the OBE is maintained by blocking the perception of body-relevant stimulation at a sensory

level; 2) that a hypnotically produced OBE is an emotionally neutral or even pleasant experience. Fourteen hypnotic subjects and 15 simulating Ss were administered a standardized induction followed by suggestions for an OBE. Geometric figures were then presented to the body but not to the "awareness." Although hypnotic Ss reported that they could not see the information, they still correctly "guess" the identity of the figures beyond chance levels. Thus, body-relevant information was obviously not blocked at a sensory level, but was kept out of awareness by some other mechanism. In addition, a significantly greater number of hypnotized than simulating Ss reported the OBE to be troubling and unpleasant, despite explicit suggestions for a positive experience. The potentially disturbing nature of OBEs and ways to minimize risk of negative affect are discussed.

Perry, Campbell (1984). Dissociative phenomena of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 12, 71-84.

Janet's concept of dissociation, Freud's notion of the Censor and Hilgard's multiple controls of consciousness are considered in relation to the hidden observer (HO) phenomenon. A review of reports of recent research, including that of the author and co-workers, indicates that the hidden observer effect occurs only in 40-50% of high susceptible subjects. It is speculated that subjects who show Hidden observer have maintained some contact with reality whilst those high susceptibles who do not show hidden observer are more deeply involved in hypnosis.

#### NOTES

Author describes a series of experiments in their laboratory. Ss are double screened to select highly hypnotizable people, and accepted into the research only if they pass the amnesia item of SHSS:C and most of the other 11 items of that scale. Ss are told that hypnosis is a procedure which permits subjects to exercise various skills or abilities such as relaxation, imagination, imagery, absorption and selective attention--that everyone has some of these skills to varying degrees, and that hypnosis is one of many techniques (including yoga, etc.) for bringing out these skills and abilities. All sessions are videotaped for the Experiential Analysis Technique (EAT). The Hidden Observer (HO) procedure was modified so that E touched the S's shoulder lightly at the start of the item, and a second time to terminate the item. Whereas Hilgard used cold pressor pain, they used a mildly unpleasant shock provided by a Take-Me-Along electric stimulator.

Replying to Spanos and Hewitt (1980) in which data was interpreted as implying that the HO is an artifact of demand characteristics, "It struck me then, and still does, that people like Hilgard and ourselves, who believe that the HO is a phenomenon of hypnosis and not just some laboratory artifact, can only get it 40-50% of the time, whereas the investigators like Spanos and Hewitt, who believe it is all laboratory artifact, get the phenomenon almost 100% of the time. Usually it is the other way around, so it seems to me that if the HO is an artifact, it is unique in the history of psychology" (p. 77).

They found that all highs with the HO also reported subjective experiences similar to HO experience when they were not hypnotized. "For instance, one female subject

who has the HO, insists that she is not hypnotized, despite compelling evidence to the contrary, because she feels the same way when she is not hypnotized. By contrast, another subject who is interested in creative writing reports HO type experiences when she is on a creativity binge and also when she is stoned" (p. 79).

They observed several consistent findings in their research: "(1) contrary to the belief that subjects who report HO's are more susceptible than those who do not, our findings are the reverse" (p. 79). The differences are not large enough to be significant, but that may be due to a ceiling effect on the scales since the subjects are already selected to be high hypnotizables. "(2) A second repeated observation is that when all the Ss were administered the HO instructions, they were given a second electric shock to the still analgesic hand, and asked to report the degree of pain they felt on a 1-10 scale where 1 = no pain and 10 = extreme pain. ... the HOs report having the HO experience and their pain reports on the 1-10 scale increase, in the manner described by Hilgard using cold pressor pain. The no HOS report no subjective difference, and their degree of analgesia actually increases" (p. 79).

The author describes further studies in which they obtained results in the opposite direction from what they had expected, based on the supposition that people who do not have the HO appear to set aside critical judgement more and to be more imaginatively involved. "So the finding of greater recall after reversal of amnesia for the no HOs both on number of items and on bits was a surprise" (p. 81). When they extended this research into the area of pseudo-memories, they found that "of the 8 subjects who had the HO, 7 of them believed the pseudo-memory was real. Of the 19 subjects who did not have the HO, only 6 of them accepted the pseudo-memory as real ... The effect was even stronger for duality in age regression. Of 12 subjects reporting duality, 10 reported the hallucinated noises as real; of the 15 with no duality, 3 accepted the reality of the pseudo-memory as actually having happened" (p. 81).

Pettinati, Helen M. (1984, October). Differential hypnotic response in anorexia nervosa and bulimia: An item analysis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Because bulimics are thought to be dissociative, congruent with their symptoms, it was predicted that they would score higher on the dissociative items of the hypnotizability scales. Previously published data shows:

N Mean Score College students 203 5.07

Bulimics 21 7.71\*\*

Anorexic Purgers 46 6.13\*

Anorexic Abstainers 19 5.00

\* & \*\* = higher than norms

Hilgard's 3 factors of hypnotizability scales were scored. Bulimics scored higher than norms on the cognitive dissociation factor but not on the motor and motor challenge factors, and purging anorectics also scored higher on this factor. The cognitive dissociation factor consists of neither the easiest nor the most difficult items on Form C, so this doesn't represent item difficulty.

Item analysis: 1. Bulimics score higher on taste hallucination, arm rigidity, dream, age regression, arm immobilization, & hallucinated voice. 2. Purgers score higher on arm rigidity, dream, and arm immobilization 3. Abstainers evidenced no difference from norms.

1983

Myles, (1983, April). Cognition, hypnotic susceptibility, and laboratory induced pain (Dissertation, University of Waterloo). Dissertation Abstracts International, 43 (10), 3360-B.

"Individuals' experiences of pain, and responses to pain treatments vary greatly. This study attempted to relate two areas of research concerned with this variation: (a) cognitions and pain (thoughts, images, etc.), in particular, catastrophizing versus coping; and (b) hypnotic susceptibility and analgesia. "Subjects were preselected for high or low hypnotic susceptibility. Susceptibility assessment was divorced from the laboratory study to minimize the potential bias of expectancies concerning hypnosis. High hypnotic susceptibility was expected to potentiate therapeutic effects of hypnotic-like treatment that did not involve a hypnotic induction. "Ten high and ten low-susceptible subjects were assigned to each of three groups: (a) a cognitive treatment, encouraging subjects to reduce spontaneous catastrophizing and increase self-generated coping cognitions; (b) a dissociative imagery treatment, encouraging subjects to engage in self-generated engrossing images; (c) an attention- placebo manipulation. "Pre and post-treatment assessments involved tolerance and pain-report measures during the cold-pressor task, and interview and questionnaire information concerning cognitions. "No treatment effects were evident on measures of pain. Cognitive data indicated less catastrophizing and more coping during the post-treatment stressor across all groups. Subjects in the dissociative imagery group did report more imagery during the post-treatment assessment than subjects in the other groups, but this increased use of imagery was not associated with a decrease in pain. "Interview and questionnaire data supported prior reports that catastrophizing is related to increased pain. Low catastrophizing was associated with a high sense of control, high use of a variety of coping strategies, and lower pain reports. These relationships were altered following treatment, however, leading to a caution in generalizing about such variables. "High susceptibility did not potentiate therapeutic effects for either experimental treatment. Nor was susceptibility related in any other consistent way to pain, although high susceptibility was associated with more extensive use of post-treatment imagery. "Methodological inconsistencies and problems in laboratory pain research were discussed, and suggestions made for future work in the area" (p. 3360).

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology.

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these

phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

1982

Belicki, Kathryn; Bowers, Patricia (1982, October). Dimensions of dissociative processing, absorption and dream change following a presleep instruction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

#### NOTES

Subjects' tendency to have things pop into their mind when asked to imagine, image them, or to do a divergent thinking task is correlated with behavior change out of awareness (dissociated), change in dream content in response to indirect suggestion - the request to pay attention to a certain element in their dreams. Effortless imagining (as opposed to working at it), a particular type of dissociative phenomenon, is associated with dream change.

Brende, Joel O. (1982). Electrodermal responses in post-traumatic syndromes: A pilot study of cerebral hemisphere functioning in Vietnam veterans. Journal of Nervous and Mental Disease, 170, 352-361.

This paper summarizes the findings of a pilot study which found a relationship between the post-traumatic symptoms of a) psychic numbing, b) intrusive recollections of traumatic events, and c) hypervigilance and lateralization of electrodermal response (EDR) measurements in six victims of psychological trauma. Hypnotically induced imagery of past traumatic events was often associated with left-sided EDR increases, psychic numbing with left-sided EDR decreases or bilateral EDR unresponsiveness, and revivifications of hypervigilant states with right-sided EDR lateralization. In several cases control of the experience of fear was associated with left- sided or bilaterally decreased EDR. These pilot study findings support previously stated hypotheses: a) EDR obtained from an extremity reflects contralateral cerebral hemisphere functioning; b) left hemisphere functioning is associated with hypervigilance; and c) right hemisphere functioning is associated with emotions and imagery. In addition, the pilot study findings suggest additional hypotheses: a) Post- traumatic symptoms are associated with poorly controlled or

integrated cerebral hemisphere functioning; b) psychic numbing and intrusive images, flashbacks, and nightmares are associated with abnormal activation, suppression, or integration of right hemisphere functioning in relationship to the left; c) aggressive behavior, hypervigilance, and character pathology are associated with abnormal activation, suppression, or integration of functioning of the left hemisphere function in relationship to the right; and d) "splitting" as a psychological defense in Vietnam veterans with Borderline Personality Disorders is associated with physiologically impaired interhemispheric integration.

#### NOTES

The authors report that previous research suggests that electrodermal asymmetry may be related to emotional factors. They further suggest that electrodermal responsiveness reflects contralateral cerebral hemispheric functioning, with lower GSR associated with higher activation of the opposite cerebral hemisphere (see Lacroix and Comper, 1979). They indicate that the right hemisphere, which is involved in experience of emotion, also is associated with depression (when there is abnormal inhibitory function of right hemisphere) and affective disorders. The left hemisphere is involved in vigilance (Dimond & Beaumont, 1974). "Based on these findings, the post-traumatic symptoms hypervigilance, anxiety, and behavior disorders appear to be associated with atypical left hemisphere activation, intrusive recollections of traumatic memories and disturbing emotional states with atypical right hemisphere activation, and psychic numbing or emotional unresponsiveness with diminished right hemisphere activation, or overactivation of the left hemisphere" (p. 354).

In this pilot study, the therapist, who used hypnosis in all but one case, interviewed the patient for 30-50 minutes, focusing on helping the S to recall experiences of a traumatic nature. The therapist was supportive when disturbing emotions were evoked, responding flexibly by monitoring S's anxiety and moving back and forth between uncovering and supportive techniques.

#### SUMMARY

There were observably variable changes and bilateral differences in EDR within each of the six subjects in relationship to varying verbal, emotional, and imagery content, postulated to reflect contralateral hemispheric functioning. These observed changes were considered conclusive evidence of such functioning in post-traumatic states" (p. 358). "1. Lateralization of EDR to the left is associated with unpleasant emotions and traumatic imagery. ... "2. Lateralization of EDR to the right is associated with hypervigilance and aggressive outbursts. ... "3. Psychic numbing is associated with inhibition of bilateral EDRs (for example, lack of bilateral EDR activation occurred in every case at times) or with suppression of the left EDR. ... "4. General physiological arousal, a normal response to fear, is associated with increased EDRs bilaterally. ... "5. Relaxation and the subjective experience of safety and well-being, which have been reported to foster interhemispheric integration in normal subjects ... were observed to be associated with bilaterally decreased EDR in case I, an example of a less severe post- traumatic condition, but not observed during attempts at relaxation in Vietnam veterans with more severe post-traumatic

symptoms. "6. Voluntary efforts to cognitively control fear were related to left hemispheric functioning, as observed in case IV when the subject attempted to control intrusive thoughts with cognitive activity and in Case III following the revivification of a frightening event when he made a shift from the hypnotic trance state to waking cognitive activity. In both cases, such cognitive activity was associated with a decreased right-sided EDR" (p. 359).

## DISCUSSION

The results of this pilot study, which demonstrated frequent EDR differences between hands during subjects' recollections of or attempts to suppress recollections of prior traumatic experiences, alters the traditional belief that increased skin conductance is always a predictable physiological measurement when the electrode is placed on only one hand, as Lacroix and Comper (46) have pointed out.

"The finding of EDR lateralization is consistent with the findings of deBonis and Baque (10) who reported that the degree of anxiety determines the presence of lateralization of EDR responses, of Gruzelier and Venables (30, 32) and Myslobodsky and Horesh (53) who reported that the presence or absence of psychopathology determines the direction of the lateralized response, and of Lacroix and Comper (46) that activation of one hemisphere may suppress contralateral EDR" (p. 359).

1981

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136.

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6 seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

## NOTES

Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory.

The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum. ...

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows

a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is associated with altered states of consciousness (Tebecis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that hypnosis has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical pain were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

## NOTES

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

1980

Hilgard, Ernest R. (1980, October). Hypnotic modification of sensitivity and control. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Chicago.

#### NOTES

The author presents a factor analysis of several scales in the hypnosis domain: HGSHS:A, Wilson-Barber CIS, Stanford Hypnotic Susceptibility Scale Form C, Questionnaire on Mental Imagery (Sheehan's modification of Betts) and the Tellegen- Atkinson Absorption Scale. Scales were broken down into components first. He didn't report all of the factors, but shows how these tests fall on a graph defined by Factor 1 (Amnesia/Cognitive) and Factor 4 (Absorption/Imagery). "Capacity for fantasy and amnesia are so different that hypnosis probably includes both."

Hilgard concludes that he doesn't like a state theory for hypnosis or the idea of "trance" because it is unidimensional. He prefers "dissociation" because we think of it as a continuum. Even Highs differ one from another in the nature of their responses. Altered- state-of-consciousness theories don't readily explain partial

dissociation (e.g. persistence of a suggestion such as arm rigidity after hypnosis is terminated; or hysterical paralysis).

Prince, Raymond (1980). Variations in psychotherapeutic procedures. In Triandis, Harry C.; Draguns, Juris G. (Ed.), Psychopathology (6, pp. 291-349). Boston: Allyn & Bacon.

#### NOTES

Prince points out that indigenous practitioners often capitalize on the organism's endogenous healing mechanisms which develop spontaneously when the individual is distressed. "healers around the world have learned to manipulate and build upon these endogenous mechanisms in a variety of ways to bring about resolution of life's problems and alleviation of suffering" (p. 292). Prince is referring here to altered states of consciousness such as dreams, trance states, dissociations, and mystical experiences of various sorts which are cultivated and elaborated by indigenous healers for therapeutic purposes. In general, Western type practitioners have denigrated these procedures...." (from *Ann. Rev. of Psychol.*, 1982, pp 243-244).

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

#### NOTES

Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

Pelletier, K. R.; Peper, E. (1977). Developing a biofeedback model: Alpha EEG feedback as a means for pain control. International Journal of Clinical and Experimental Hypnosis, 25, 361-371.

3 adept meditators voluntarily inserted steel needles into their bodies while physiological measures (EEG, EMG, GSR, EKG, and respiration) were recorded. Although each adept used a different passive attention technique, none reported pain. During the insertion, 2 of the 3 Ss increased their alpha EEG activity. The role of alpha EEG and its relationship to pain control is discussed.

#### NOTES

The three adepts studied were: (1) RCT, a 34 yr old Ecuadorian who had "demonstrated control over pain by placing bicycle spokes through his body, being suspended from hooks inserted under his shoulder blades, and walking through fire -- all without reported pain or observed damage to his skin;" (2) JSL, a 31 yr old Korean karate expert, who "suspended a 25-pound bucket of water from a sharpened spoke placed through a fold of skin on his forearm;" and (3) JS, a 50-yr old Dutch meditator who had "demonstrated pain and bleeding control" (pp. 363-365). "RCT, JSL, and JS each remarked that pain is principally fear of and attention to pain, and they maintained that anyone can learn to control pain through relaxation and passive attention" (p. 367). Both JS and RCT had increased alpha EEG activity during piercing, whereas JSL showed no increase. The authors suggest that "the karate expert practiced a very focused meditation, during which he mentally saw and felt the ki energy as a point, while RCT and JS employed passive attention and did not attend to the body stimuli. Thus, it is possible for physiological measurements to reflect strategies used in dissociation of pain perception, and that the quality of pain perception is altered if S is at either extreme of focused or unfocused conscious attention" (p. 368). "We hypothesize that, for nonadepts, alpha EEG training without alpha blocking to stimuli could become a distraction technique whereby S again could learn self-control and competence as he becomes more successful in controlling his EEG" (p. 369).

1976

Coe, William C.; Basden, B.; Basden, D.; Graham, C. (1976). Posthypnotic amnesia: Suggestions of an active process in dissociative phenomena. Journal of Abnormal Psychology, 85, 455-458.

A retroactive inhibition design was used to examine the process of posthypnotic amnesia. The results supported the notion that "forgotten" material is as available to amnesic subjects at some level as it is to nonamnesic subjects. Further, so-called forgetting appears to be the result of an active process, that is, something the subject does. Implications for understanding dissociative phenomena in general are discussed.

**Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, 18, 153-171.**

The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.

**Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. International Journal of Clinical and Experimental Hypnosis, 24, 215-227.**

The purpose of the study was to clarify the frequency of appearance of a hypnotically induced secondary personality and to compare Ss who were able to create secondary personalities in hypnosis to control Ss who could enter a deep hypnotic trance but were unable to produce secondary personalities.

The sample of 1,200 pupils was made up of the 3 highest grades of the secondary schools in the city of Oulu, Finland. A total of 450 students volunteered to participate in the study. All those who could enter a deep hypnotic state, 78 in all, were selected for closer study. 32 Ss were able and 43 were unable to create multiple personalities in hypnosis.

Ss also underwent a psychiatric interview. In addition, the identity of Ss was measured.

Both the psychiatric interview and identity examination gave parallel results to the effect that Ss capable of producing secondary personalities were clinically healthier and more adaptive than the group without secondary personalities. This finding is at variance with results presented in previous studies.

#### **NOTES**

Procedure for induction of multiple personalities involved re-hypnotizing Ss, suggesting, "You go back to an age preceding your birth, you are somebody else, somewhere else," and repeating the suggestion many times. Other suggestions were given that everything was completely normal, nothing miraculous was happening. A multiple personality was counted if the S then said he was a human being, was able to give his name and where he lived, could describe the social environment and his own personality.

#### **1973**

**Hilgard, Ernest R. (1973). A neodissociation interpretation of pain reduction in hypnosis. Psychological Review, 80 (5), 396-411.**

When cold pressor pain is reduced through hypnotically suggested analgesia, the concomitant changes in heart rate and blood pressure remain essentially what they were when the pain of the ice water was normally perceived. Investigation of this somewhat paradoxical finding by way of hypnotically induced automatic writing (or its equivalent in automatic keypressing or automatic talking) reveals that at some cognitive level the subject has experienced the cold and can report its intensity, even though the suffering may be reduced. The theoretical problems posed by the experience are presented according to a possible neodissociation interpretation, compared with interpretations according to psychoanalytic ego theory and role theory. The neodissociation theory is further explicated in relation to the gate theory of pain.

1967

Dittborn, J. M.; O'Connell, D. N. (1967). Behavioral sleep, physiological sleep and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 15, 181-188.

A SLEEP-INDUCTION PROCEDURE REQUIRING MANUAL RESPONSE TO A REPETITIVE AUDITORY SIGNAL WAS ADMINISTERED TO 52 SS WHO HAD CLEAR ALPHA ACTIVITY IN THEIR WAKING EEG AND WHOSE HYPNOTIZABILITY WAS KNOWN. THE OCCURRENCE OF SLEEP WAS DEFINED BY PHYSIOLOGICAL, BEHAVIORAL, AND SUBJECTIVE CRITERIA. NEITHER THE TENDENCY TO DEVELOP EEG SLEEP NOR THE ABILITY OF SOME SS TO RESPOND WHILE IN EEG SLEEP WAS RELATED TO HYPNOTIZABILITY. HYPNOTIZABILITY WAS RELATED TO A TYPE OF DISSOCIATION BETWEEN EEG SLEEP AND BOTH BEHAVIORAL AND SUBJECTIVE SLEEP SHOWN BY 5 SS, ALL HIGHLY HYPNOTIZABLE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Orne, Martin T. (1966). On the mechanisms of posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 2, 121-134.

Reviews experimental and clinical evidence about posthypnotic amnesia. 2 interpretations are contrasted which seem sharply opposed: (1) posthypnotic amnesia may be seen as essentially like any other hypnotically suggested experience. It can be considered as an explicitly or implicitly administered posthypnotic suggestion. (2) Amnesia can be viewed as a form of dissociation. 1 possible mechanism of such dissociation may be a basic difference of the structure of thought processes involved in hypnosis compared to those of normal waking experience. In this sense amnesia should occur independently of suggestion and be different in kind from most other hypnotic phenomena. The former mechanism may occur more frequently in experimental situations and the latter, in clinical contexts. (Spanish & German summaries) (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Field, Peter B. (1965). An inventory scale of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 13, 238-249. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 86)

An inventory of 300 items describing subjective experiences during hypnosis was administered to 102 students after they had wakened from hypnosis. The 38 items that correlated best with a standard measure of hypnotic susceptibility are proposed as an inventory measure of hypnotic depth. Items dealing with absorption and unawareness, automaticity and compulsion, and discontinuity from normal experience correlated best with the criterion, while items dealing with conscious motivation to enter hypnosis, feelings of surface compliance with suggestions, and unusual bodily sensations showed generally weaker relationships to the hypnotizability criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Klempner, Edith (1965). Past ego states emerging in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 132-144.

Patients with anxiety, conversion, or phobic reactions differ from those with obsessive-compulsive reactions in the type of visualization shown in hypnoanalytic regression or revivification. The former produce visualizations showing a well-rounded picture with logical progression of activity and few symbolic distortions. The latter, however, produce visualizations lacking a logical progression of activity and showing a somewhat disorganized and poorly-rounded picture. Symbolic distortions are frequent, often recurring intermittently. Case studies are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Klempner, Edith (1962). Projective phenomena in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 10 (3), 127-133. (Abstracted in Psychological Abstracts 63: 5228)

During hypnoanalysis patients who have been age-regressed may perceive themselves as experiencing childhood experiences and also as simultaneously watching these experiences from a distance. This 2nd projected personality may be in the guise of an adult, adolescent, child, or even an incorporeal being. In some patients it may occur with regularity, in others not at all. Representative case histories and possible dynamic mechanisms are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Bowers, Margaretta K. (1961). Hypnotic aspects of Haitian voodoo. International Journal of Clinical and Experimental Hypnosis, 9, 269-282.

The voodoo ritual is analyzed within the framework of hypnosis and hypnotically induced secondary personalities. The author contends that "If the hypnotic nature of voodoo and similar religious rites were better understood the problem of discarding the evil and nurturing the good in the cultural life of people would be facilitated." From *Psyc Abstracts* 36:04:4II69B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## **E RESEARCH**

### **EATING/DISORDERS/OBESITY**

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

**1997**

Johnson, David L. (1997). Weight loss for women: Studies of smokers and nonsmokers using hypnosis and multicomponent treatments with and without overt aversion. Psychological Reports, 80 (3, Pt 1), 931-933.

Study 1 compared 50 overweight adult female smokers (mean age 37.7 yrs) and 50 nonsmokers (mean age 41.2 yrs) in an hypnosis-based, weight-loss program. Smokers and nonsmokers achieved significant weight losses and decreases in Body Mass Index. Study 2 treated 100 women either in an hypnosis only (n = 50) or an overt aversion and hypnosis (n = 50) program. This multicomponent follow-up study replicated significant weight losses and declines in Body Mass Index. The overt aversion and hypnosis program yielded significantly lower posttreatment weights and a greater average number of pounds lost. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1996**

Kirsch, Irving (1996). Hypnosis in psychotherapy: Efficacy and mechanisms. Contemporary Hypnosis, 13 (2), 109-114.

Meta-analyses have established that different psychotherapies have different outcomes. Cognitive-behavioural therapies are significantly more effective than psychodynamic therapies, and their superiority increases when long-term follow-up is assessed. Hypnosis enhances the efficacy of both psychodynamic and cognitive-behavioural psychotherapy, and this effect is especially strong in long-term outcome

of treatment for obesity. The paucity of procedural differences between hypnotic and non-hypnotic treatments in many of the studies demonstrating a substantial advantage for hypnosis suggests that the effect depends on the use of the word 'hypnosis'. Hypnosis can be regarded as an empirically-validated, non-deceptive placebo, the effects of which are mediated by response expectancies.

Kirsch, Irving (1996). Hypnotic enhancement of cognitive-behavioral weight loss treatments--Another meta-reanalysis. Journal of Consulting and Clinical Psychology, 64 (3), 517-519.

In a 3rd meta-analysis of the effect of adding hypnosis to cognitive-behavioral treatments for weight reduction, additional data were obtained from authors of 2 studies, and computational inaccuracies in both previous meta-analyses were corrected. Averaged across posttreatment and follow-up assessment periods, the mean weight loss was 6.00 lbs. (2.72 kg) without hypnosis and 11.83 lbs. (5.37 kg) with hypnosis. The mean effect size of this difference was 0.66 SD. At the last assessment period, the mean weight loss was 6.03 lbs. (2.74 kg) without hypnosis and 14.88 lbs. (6.75 kg) with hypnosis. The effect size for this difference was 0.98 SD. Correlational analyses indicated that the benefits of hypnosis increased substantially over time ( $r=.74$ ).

Wickramasekera, Ian; Price, Daniel C. (1996, November). Morbid obesity, absorption, neuroticism, and the high risk model of threat perception. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Tampa, FL.

We studied seventy morbidly obese patients, candidates for gastric exclusion surgery. We found that their mean absorption score was significantly lower and that their mean neuroticism score significantly higher than a matched control group. These results are consistent with predictions from the High Risk Model of Threat Perception (Wickramasekera, 1979, 1988). People high in neuroticism are hypothesized to be hypersensitive to threat at a behavioral and biological level, and therefore, at greater risk for stress related psychobiological disorders. People low in absorption are hypothesized to have poor perception of psychosocial sources of threat have a more restricted range of psychological methods of coping with threat. Therefore, they may be at greater risk during stress of not recognizing psychosocial sources of threat of unconsciously using substances to self-soothe and of perceiving medical surgical solutions to weight gain as more credible than psychosocial therapy programs. We found that low absorption and high neuroticism as predicted by the HRMTP were significantly more prevalent among the morbidly obese seeking surgical therapy than a matched community control group.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

## NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

Kirsch, Irving; Montgomery, Guy; Sapirstein, Guy (1995). Hypnosis as an adjunct to cognitive behavioral psychotherapy: A meta-analysis. Journal of Consulting and Clinical Psychology, 63 (2), 214-220.

A meta-analysis was performed on 18 studies in which a cognitive- behavioral therapy was compared with the same therapy supplemented by hypnosis. The results indicated that the addition of hypnosis substantially enhanced treatment outcome, so that the average client receiving cognitive-behavioral hypnotherapy showed greater improvement than at least 70% of clients receiving nonhypnotic treatment. Effects seemed particularly pronounced for treatments of obesity, especially at long-term follow-up, indicating that unlike those in nonhypnotic treatment, clients to whom hypnotic inductions had been administered continued to lose weight after treatment ended. These results were particularly striking because of the few procedural differences between the hypnotic and nonhypnotic treatments.

1993

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

Saperstein, Guy; Montgomery, Guy; Kirsch, Irving (1993, August). Cognitive-behavioral hypnotherapy: A meta-analysis. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Meta-analysis was used to compare the effectiveness of cognitive-behavior therapy

(CBT) to that of cognitive-behavior therapy with hypnosis (CBHT). A review of the literature revealed 18 studies in which 20 hypnotic treatments were compared to similar non-hypnotic treatments and in which sufficient data were presented for the calculation of effect sizes. Effect sizes were weighted for sample size and then averaged. This resulted in a mean effect size of 1.37 standard deviation units, indicating that the average client receiving cognitive-behavioral hypnotherapy is better off than 90 percent of clients who receive the same treatment in a nonhypnotic context. Substantial variance in effect sizes was found, indicating the presence of a moderator variable. Further analyses indicated that this variance was limited to treatments in which obesity was the presenting problem. The mean effect size for the addition of hypnosis to treatments of obesity was larger ( $M = 1.98$ ) and more variable (variance = 4.10) than that for the addition of hypnosis to treatments for other presenting problems ( $M = .52$ ; variance = .06). Also, studies of clinical samples yielded larger effects ( $M = 1.72$ ) than analogue studies with college student samples ( $M = .07$ ). The effect of hypnosis was independent of whether relaxation training was included in the nonhypnotic treatment or whether the hypnotic treatment included suggestions that were not included in the nonhypnotic treatment. Consistent with response expectancy theory, these data indicate that the substantial positive effect obtained was due to labeling the treatment 'hypnosis,' rather than to any substantive change in clinical procedure. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

1992

Levitt, Eugene E. (1992, August). Hypnosis in the treatment of obesity. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The literature dealing with the hypnotherapy of overweight and weight control is comprehensively reviewed. In general, the more recent reports are methodologically more sophisticated than earlier ones. Specific techniques employed include direct and aversive suggestions, imagery, ego-enhancement, self-hypnosis and a variety of behavior modification tactics. Most hypnotherapy is carried out in groups and most subjects/patients have been female. Twenty reports providing group data summarized. All but one report weight reduction at close and at follow-up. Of eight reports using control groups, six found that the group treated by hypnotherapy lost significantly more weight than some or all of the control groups. Hypnosis with behavior modification appears to be the most effective approach. Analysis suggests that hypnosis effectuates behavioral techniques after the close of treatment. Eleven reports presenting correlations between weight loss and hypnotic susceptibility differ sharply depending upon the year of publication. Only one of seven reports published prior to 1982 found a relationship between weight loss and susceptibility. Three of four reports since 1985 found a positive relationship. It is concluded that hypnotherapy for weight control can be effective and that it is probably maximally effective with high susceptibility persons. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Rhue, Judith W.; Lynn, Steven Jay; Kvaal, Steven; Mare, Cornelia (1992, October). Hypnosuggestive procedures in the treatment of anorexia nervosa. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Much of this information can be applied to the treatment of bulimic clients. The incidence of eating disorders has increased, and hypnosis has been added to the arsenal of treatments. The literature is sparse, but there is general agreement that hypnosis is useful. See article in *Journal of Contemporary Hypnosis*.

Define one's role as a guide with this population. Define the hypnosis procedure as Self Hypnosis with this population. Use in vivo treatments for countering resistance to treatment.

Do not use hypnosis until weight is stabilized to a minimum acceptable level by a physician (possibly involving hospitalization). Premature use of hypnosis will panic an anorexic patient.

Use graded suggestions. -- Relax, feel happy and content -- Have a daydream or fantasy accompanied by feelings of relaxation and well being (which underscores the importance of fantasy in treatment) --Go to a favorite place where client feels happy (this is more positive on the affective valence; teaches them to use fantasy as a means of withdrawal from difficult feelings) -- Daydream or fantasize about a specific problem or conflict (any arena); can be open- ended and entirely projective; can suggest that you are part of the dream, there to reduce anxiety. Can provide rich material re client's dependency on you. -- Client can imagine in hypnosis that the therapist is providing advice or assistance. -- Consult inner advisor who is emotionally detached yet supportive -- View conflict from multiple perspectives. Some are resistant to viewing themselves from more than one vantage point. -- Imagine possible outcomes of problems or conflicts. Many are paralyzed by decisions. this challenges them to engage in creative problem solving by brain storming. These can be administered in conjunction with the inner advisor suggestions. -- Enact in fantasy an interpersonal problem/conflict that involves an antagonist, to dialogue with her own powerful angry self; this may precipitate cathartic expression. -- Role play interpersonal conflict in the session -- Other techniques like age regression, projecting on a screen -- Indirect suggestions to learn to care for the body and the self.

Treatment lasts 6 mos to 9 years. These suggestions serve as general guidelines.

#### 1991

Oettingen, Gabriele; Wadden, Thomas A. (1991). Expectation, fantasy, and weight loss: Is the impact of positive thinking always positive?. Cognitive Therapy and Research, 15 (2), 167-175.

Investigated the impact of expectation and fantasy on the weight losses of 25 obese women participating in a behavioral weight reduction program. Both expectations of reaching one's goal weight and spontaneous weight-related fantasies were measured at pretreatment before Ss began 1 year of weekly group treatment.

Consistent with the hypothesis that expectation and fantasy are different in quality, these variables predicted weight change in opposite directions. Optimistic expectations but negative fantasies favored weight loss. Ss who displayed pessimistic expectations combined with positive fantasies had the poorest treatment outcome. Expectation but not fantasy predicted program attendance. The effects of fantasy are discussed with regard to their potential impact on weight reduction therapy.

**1990**

**Demitrack, Mark A.; Putnam, Frank W.; Brewerton, Timothy D.; Brandt, Harry A.; et al. (1990). Relation of clinical variables to dissociative phenomena in eating disorders. American Journal of Psychiatry, 147 (9), 1184-1188.**

Compared 30 female patients (aged 16-39 yrs) with eating disorders with 30 age-matched normal female Ss, using the Dissociative Experiences Scale (E. M. Bernstein and F. W. Putnam; see PA, Vol 74:14407) and additional self-report measures such as the Beck Depression Inventory. The patients demonstrated significantly higher levels of dissociative psychopathology compared with controls. Furthermore, the presence of severe dissociative experience appeared to be specifically related to a propensity for self-mutilation and suicidal behavior. Findings are discussed in light of recent data suggesting that neurochemical systems shown to be abnormal in patients with eating disorders may be key pathophysiologic substrates for dissociative experience.

**Groth-Marnat, Gary; Schumaker, Jack F. (1990). Hypnotizability, attitudes toward eating, and concern with body size in a female college population. American Journal of Clinical Hypnosis, 32 (3), 194-200.**

In this study we investigated the relationship between hypnotizability and attitudes toward food intake. 102 female college students (mean age 21) completed the Eating Attitudes Test and the Goldfarb Fear-of-Fat Scale, and were assessed for hypnotizability on the Harvard. The results indicated that level of hypnotizability was related to attitudes toward food intake and the fear of becoming overweight. Findings support the thesis that hypnotizability may be one of a variety of predisposing factors in the development and maintenance of extreme attitudes toward eating and weight regulation. Implications for changing these attitudes are discussed.

**Vanderlindin, Johan; Vandereycken, Walter (1990). The use of hypnosis in the treatment of bulimia nervosa. International Journal of Clinical and Experimental Hypnosis, 38 (2), 101-111.**

#### **NOTES**

25 people who were highly hypnotizable were treated. Treatment consisted of three phases: introduction to hypnosis, addressing core issues, and ensuring long term results. The induction included focus on breathing, relaxation, and arm levitation. Subject was told to imagine that she is eating a meal, while concentrating and

tasting her food. She is then told to imagine a recent binge and to exaggerate all the negative consequences of bingeing (weight gain, low self-esteem) and all the positive consequences of binge-free life.

To address Subject's core issues of why bingeing started, the Subject is told to separate her ego from her bulimic past, and the therapist then tries to find out why the bulimic past entered the patients' life. The therapist then tries to 'negotiate' with the bulimic past and tries to help the patient find other ways to deal with the problems. Cognitive restructuring and hypnosis techniques are used.

The final phase, which entails a year of followup care, involves helping the patients to become independent from their past. Many bulimic patients are still dependent on their parents, and this may have caused their dependency on food. Therefore, the goal of hypnosis is to allow herself to become emotionally independent and to control her life.

It was estimated that 50% of patients completely recovered and 30% showed great improvement but 20% did not change at all.

1989

Ross, Colin A.; Heber, Sharon; Norton, G. Ron; Anderson, Geri (1989). Differences between multiple personality disorder and other diagnostic groups on structured interview. Journal of Nervous and Mental Disease, 177 (8), 487-491.

The Dissociative Disorders Interview Schedule was administered to 20 Ss with multiple personality disorder, 20 with schizophrenia, 20 with panic disorder, and 20 with eating disorders (mean ages 25.4-38.4 yrs). Findings show that multiple personality could be differentiated from the other groups on variables such as history of physical abuse, sexual abuse, substance abuse, sleepwalking, childhood imaginary playmates, secondary features of multiple personality, and extrasensory and supernatural experiences. Those with multiple personality also differed from the other groups on Diagnostic and Statistical Manual of Mental Disorders (DSM-III) criteria for multiple personality, psychogenic amnesia and psychogenic fugue. The groups did not differ on the number of Ss who had a major depressive episode.

1987

Baker, Elgan L.; Nash, Michael R. (1987). Applications of hypnosis in the treatment of anorexia nervosa. American Journal of Clinical Hypnosis, 29, 185-193.

Historic and current reports in the literature involving applications of hypnosis with anorectic patients are reviewed and integrated to explicate core aspects of hypnotic interventions in treating anorexia nervosa. A comprehensive hypnotherapeutic approach is delineated which emphasizes the use of hypnotic strategies to reduce tension, enhance self-control, support increased and realistic body awareness, alter distorted body image, and foster appropriate autonomy and individuation. Preliminary data are also reviewed which support the clinical efficacy of this approach.

1986

Cochrane, Gordon; Friesen, J. (1986). Hypnotherapy in weight loss treatment. Journal of Consulting and Clinical Psychology, 54, 489-492.

Investigated the effects of hypnosis in weight loss for 60 females, at least 20% overweight and not involved in other treatment. Six client variables (suggestibility, self-concept, quality of family origin, age of obesity onset, education level, and socioeconomic status) and a process variable of representational systems were analyzed in relation to weight loss. Treatment included group hypnosis with metaphors for ego-strengthening, decision making and motivation, ideomotor exploration in individual hypnosis, and group hypnosis with maintenance suggestions. There were two experimental groups (hypnosis with and without audiotapes) and a control group, assessed immediately after treatment and at 6-month follow-up. Hypnotizability, use of audiotapes, and the other five variables were not predictive of weight loss. But, hypnosis was more effective than a control group (17 vs. .5 pounds on follow-up).

Sands, Steven (1986, August). The use of hypnosis in establishing a holding environment to facilitate affect tolerance and integration in impulsive patients. Psychiatry, 49.

This paper is concerned with the use of hypnosis in establishing a facilitating and holding environment in the treatment of impulsive behavior across a range of diagnoses. The reason for this cross-diagnostic viewpoint is to underscore the common sources of such action and the needs to be met in its treatment. Illustrations from work with two patients are presented: One was a hypomanic and bulimic woman who was successful in her profession; the other was an underemployed and sometimes unemployed schizophrenic man. Both were inclined to self-defeating impulsive action---bulimia in the woman, assault in the man.

Andersen, M.S. (1985). Hypnotizability as a factor in the hypnotic treatment of obesity. International Journal of Clinical and Experimental Hypnosis, 33 (2), 150-159.

The study describes a program of time-limited, relatively uncontaminated hypnotherapy for the treatment of obesity, and explores relationships between degree of objectively measured hypnotizability (by the Stanford Hypnotic Susceptibility Scale, Form A of Weitzenhoffer and E. R. Hilgard, 1959) and success at weight reduction via hetero- and self-hypnosis. Of the 43 male and female adult outpatients of the Morton Prince Center for Hypnotherapy in New York City who entered the program, 30 Ss completed the orientation session, 8 weekly individual treatment sessions, and 12 weeks of follow-up, during which self-hypnosis was practiced. These Ss showed an average weight loss of 20.2 pounds. Results indicated a statistically significant positive association between degree of hypnotizability and success at weight reduction. High hypnotizable Ss were significantly more aided by the treatment program than either medium hypnotizable or low hypnotizable Ss.

**Bolocofsky, David N.; Spinler, Dwayne; Coulthard-Morris, Linda (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41 (1), 35-41.**

**109 17-67 year olds completed a behavioral treatment for weight management either with or without the addition of hypnosis. Results show that, at the end of the 9-week program, both interventions resulted in significant weight reduction. However, at 8-month and 2-year follow-ups, the hypnosis Ss showed significant additional weight loss, while those in the behavioral-treatment-only group exhibited little further change. More Ss who used hypnosis also achieved and maintained their personal weight goals. It is suggested that hypnosis may have been an effective motivator for Ss to continue practicing the more adaptive eating behaviors acquired during treatment. Findings support the utility of employing hypnosis as an adjunct to a behavioral weight management program. (25 ref)**

**Morris, Don M.; Nathan, Ronald G.; Goebel, Ronald A.; Blass, Norman H. (1985). Hypnoanesthesia in the morbidly obese. Journal of the American Medical Association, 253 (22), 3292-3294.**

**The advent of chemical anesthesia relegated hypnosis to an adjunctive role in patients requiring major operations. Anesthesia can be utilized with acceptable risk in the great majority of patients encountered in modern practice. But an occasional patient will present--such as one with morbid obesity--who needs a surgical procedure and who cannot be safely managed by conventional anesthetic techniques. This report describes our experience with such a patient and illustrates some of the advantages and disadvantages of hypnoanesthesia. The greatest disadvantage is that it is unpredictable. Close cooperation between the patient, hypnotist, anesthesiologist, and surgeon is critical. However, the technique may be utilized to remove very large lesions in selected patients. Hypnoanesthesia is an important alternative for some patients who cannot and should not be managed with conventional anesthetic techniques.**

**Pettinati, Helen M.; Horne, Robert L.; Staats, Julia M. (1985). Hypnotizability in patients with anorexia nervosa and bulimia. Archives of General Psychiatry, 42 (10), 1014-1016.**

**Examined the hypnotic capacity at hospital admission of 65 patients with anorexia nervosa and 21 with bulimia, as diagnosed by DSM-III criteria. Anorexics were divided into the subgroups of 19 abstainers and 46 purgers. Ss received 3 standardized hypnosis scales consisting of induction, suggestions, and multiple measures of hypnosis. Analyses showed that hypnotic capacity was significantly higher in bulimic patients than in anorexics or normal, age-matched controls. Anorexic Ss who purged had higher hypnotic capacity than the normal population, although as a group they were not as highly hypnotizable as Ss with bulimia. It is**

suggested that anorexic and bulimic patients with high hypnotic capacity may be able to reduce their distorted body image with the aid of hypnosis. (26 ref).

1984

Bushnell, John A. (1984). Hypnosis and single case experimental design: Some ruminations on a theme. Australian Journal of Clinical Hypnotherapy and Hypnosis, 12 (1), 1-8.

Attempts to study psychotherapeutic interventions have traditionally used a between-groups experimental design which has required large numbers of subjects in order to provide homogeneity of clinical conditions. The practical problems associated with such a method of research are such that rigorous evaluation of hypnosis has most often not been undertaken. Single case design, especially multiple baseline, offers an alternative research strategy which has significant advantages in hypnosis research, enabling proper account to be taken of ethical considerations whilst focussing on clinical rather than statistical significance. Furthermore, single case design enables variability to be interpreted as useful data rather than being lost as error; and it offers a strategy for establishing the existence of treatment effects due to interventions using hypnosis. The application of a multiple baseline research design within routine clinical practice is discussed in the case of a young woman with an unusual eating disorder.

#### NOTES

The patient "complained of regurgitating all food repeatedly after every meal. This occurred about eight times after breakfast, ten times after lunch, and up to 15 times following the evening meal" (p. 3). "The food was rechewed, swallowed and about 5 minutes later the pattern would repeat itself" (p. 3).

Pettinati, Helen M. (1984, October). Differential hypnotic response in anorexia nervosa and bulimia: An item analysis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Because bulimics are thought to be dissociative, congruent with their symptoms, it was predicted that they would score higher on the dissociative items of the hypnotizability scales. Previously published data shows:

N Mean Score College students 203 5.07

Bulimics 21 7.71\*\*

Anorexic Purgers 46 6.13\*

Anorexic Abstainers 19 5.00

\* & \*\* = higher than norms

Hilgard's 3 factors of hypnotizability scales were scored. Bulimics scored higher than norms on the cognitive dissociation factor but not on the motor and motor challenge factors, and purging anorectics also scored higher on this factor. The

cognitive dissociation factor consists of neither the easiest nor the most difficult items on Form C, so this doesn't represent item difficulty.

Item analysis: 1. Bulimics score higher on taste hallucination, arm rigidity, dream, age regression, arm immobilization, & hallucinated voice. 2. Purgers score higher on arm rigidity, dream, and arm immobilization 3. Abstainers evidenced no difference from norms.

1983

Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal.

1981

Goldstein, Y. (1981). The effect of demonstrating to a subject that she is in a hypnotic trance as a variable in hypnotic interventions with obese women. International Journal of Clinical and Experimental Hypnosis, 29 (1), 15-23.

In order to investigate the question of whether or not Ss experiencing a phenomenon during trance which would be very unlikely to occur outside of trance improves the efficacy of hypnotic treatment for obesity, a S pool of obese women was divided into 3 groups: a non-hypnotic behavior modification group, a hypnosis group without any special phenomenon structured into it, and a hypnosis group with such a phenomenon (hand levitation). Weight-loss data were collected 4 weeks and 6 months after the start of treatment. All treatments resulted in at least moderate weight loss. Statistically significant differences were found between the hypnosis-with-hand-levitation treatment effect and the other treatment effects. Possible reasons for the treatment effects and the differences obtained are discussed.

Wadden, Thomas A.; Flaxman, J. (1981). Hypnosis and weight loss: A preliminary study. International Journal of Clinical and Experimental Hypnosis, 29 (2), 162-173.

The purpose of this study was to determine both the efficacy and the active treatment components of a hypnotherapeutic program for weight loss. 30 Ss at least

10% over their ideal weight were randomly assigned to 1 of 3 conditions: (a) hypnosis, (b) covert modeling, or (c) relaxation-attention control. At the end of 7 weeks all of the groups showed weight losses comparable to those achieved by behaviorally oriented reduction programs, but there were no differential losses among the groups at post-treatment or at 6- and 16-week follow-up assessments. The findings suggest that the efficacy of hypnosis as a weight-reduction strategy is attributable to factors shared in common with a minimum treatment condition, including positive expectancy, weekly participation in a reduction program, relaxation training, and limited dietary counseling. Consistent with previous findings, no relationship was found between hypnotic suggestibility and weight loss. The need to examine both different treatment techniques and overweight populations is discussed.

1980

Bornstein, Philip H.; Devine, David A. (1980). Covert modeling-hypnosis in the treatment of obesity. Psychotherapy: Theory, Research and Practice, 17 (3), 272-276.

Investigated the efficacy of a covert modeling/hypnosis treatment package in the control of obesity. 48 overweight female volunteers (who had been administered the Harvard Group Scale of Hypnotic Susceptibility, Eating Patterns Questionnaire, and Rotter's Internal-External Locus of Control Scale) were randomly assigned to 1 of the following groups: (a) covert modeling/hypnosis, (b) covert modeling, (c) no-model scene control, and (d) minimal treatment (where Ss received a shortened version of the covert modeling/hypnosis procedure following an 8-wk no-treatment period.) Results indicate a significant effect for weight loss from pretreatment to follow-up across all groups combined. Proportion weight loss measures indicated significantly greater weight loss only for the covert modeling/hypnosis group as compared to the no-model controls. Implications for combining behavior therapy and hypnotic techniques are discussed. (30 ref).

Deyoub, P. L.; Wilkie, R. (1980). Suggestion with and without hypnotic induction in a weight reduction program. International Journal of Clinical and Experimental Hypnosis, 28 (4), 333-340.

Identical suggestions for the control of obesity were administered to a group receiving hypnotic induction and a group receiving task-motivational instructions. A no-treatment control group was also included. The only significant finding was greater weight loss by Ss in the task-motivational group than Ss in the control group. Much of the difference was attributed to weight gain of Ss in the control group. Within groups, highly suggestible Ss lost more weight in the hypnotic group, while suggestibility was unrelated to weight loss in the task-motivational group. The possibility that task-motivational and hypnotic Ss approached treatment with different mental sets and expectations was discussed. The role of hypnotizability in the hypnotic treatment of obesity was discussed.

1955

Hershman, Seymour (1955). Hypnosis in the treatment of obesity. Journal of Clinical and Experimental Hypnosis, 3 (3), 136-139.

#### NOTES

Three case histories are presented for patients treated for obesity using hypnotherapy. The procedure in hypnosis involved: (1) visualizing person on a stage who is unhappy, depressed, followed by a person who is happy, content; (2) discussing diet with indirect suggestions that adherence would lead to the happy, contented feelings and vice versa for non-adherence; (3) giving permissive suggestions regarding behavior change (e.g. "Perhaps it is only certain foods that should be distasteful and not the eating of 'allowed' foods" (p. 137). Patients were seen weekly for 4-6 weeks, then bi-weekly or monthly for several months, and then only occasionally. "The easier acceptance of the therapy in the hypnotic state cannot be too strongly emphasized. ... rapport is established more quickly and easily, and the feeling of participation on the part of the patient convinces him that the therapy will be successful" (p. 139).

#### EDUCATION

1998

Oster, M. I. (1998). A graduate school curriculum in clinical hypnosis. American Journal of Clinical Hypnosis, 41 (1), 65-74.

This paper describes a formal, integrated curriculum in clinical hypnosis that is offered through a psychology graduate school. An integrated program offers students and practicing professionals the opportunity to learn hypnosis in an environment that offers ongoing supervision and support of their long term development. Program development and recognition; program philosophy, objectives, and curriculum; and course description and content are described. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Walling, David P.; Baker, Jeffrey M.; Dott, Sharon G. (1998). Scope of hypnosis education in academia: Results of a national survey. International Journal of Clinical and Experimental Hypnosis, 46 (2), 150-156.

The present article examines the current status of hypnosis training and the attitudes of program chairs toward inclusion of such training in doctoral education. A brief survey on hypnosis training was sent to all psychology doctoral programs accredited by the American Psychological Association (n = 218) as well as 24 nonaccredited doctoral programs. Twenty-six percent of responding programs (n = 44/170) report offering either required or elective coursework in hypnosis. Of those programs offering a course in hypnosis, the mean semester credit hours earned was 3. Although many program directors support opportunities for hypnosis education in doctoral education, other constraints (e.g., available faculty, required coursework) limit its availability.

1996

Cheri (1996). Therapist sexual feelings in hypnotherapy: Managing therapeutic boundaries in hypnotic work. International Journal of Clinical and Experimental Hypnosis, 44 (1), 20-32.

This article elaborates ways that using hypnosis may create special vulnerability for the clinician, not only to experiencing sexual feelings toward patients but also to becoming confused about the meaning of these feelings and their relevance to treatment, as well as about the maintenance of appropriate patient-clinician boundaries. Special qualities of the hypnotic experience and relationship likely to generate erotic feelings and impulses in patients and clinicians alike are addressed. A clinical case example illustrates many possible meanings of therapist sexual feelings and the impulses to avoidance or acting out they may provoke. Clinically appropriate and inappropriate ways of managing boundaries in the presence of sexual arousal and of using sexual feelings to deepen clinical understanding and direct treatment interventions are discussed.

Walling, David P.; Baker, Jeffrey M.; Dott, Sharon G. (1996). A national survey of hypnosis training -- its status in psychiatric residency programs: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (3), 184-188.

Hypnosis training in psychiatric residency programs has not previously been well documented in the literature. This article examines the extent of such training in residency programs and the attitudes of residency directors to training and the use of hypnosis. A brief survey requesting information on hypnosis training was sent to all psychiatric residency directors in the United States. Sixty-three percent of responding program directors (n = 154) report offering either required or elective coursework in hypnosis. Of programs offering hypnosis training, the mean number of hours was 8, suggesting that many psychiatrists have only limited exposure to hypnosis during residency. The authors conclude that hypnosis training is widely variable within psychiatric residency programs and is dependent on the faculty and training director interests within individual programs.

Wark, David (1996). Teaching college students better learning skills using self-hypnosis. American Journal of Clinical Hypnosis, 38 (4), 277-287.

Reports the effects of self-hypnosis used by 51 college students enrolled in a 10-wk course on efficient learning skills. All Ss were administered the Creative Imagination Scale (CIS). Subsequently, they learned to enter and deepen alert self-hypnosis. They gave themselves personal suggestions and then studied in hypnosis. They reported their depth of hypnosis and satisfaction with each session. Grades were collected the quarter before, during and after the course. Satisfaction and depth data indicated the Ss were involved throughout the course. Statistical testing

showed that Ss who scored highest on the CIS had the lowest initial GPA, improved most during the course, and significantly increased their GPA in the quarter after.

**1994**

**Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

#### **NOTES**

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

**Case #1:** Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in

facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

Case #3: Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

Case #4: Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

Krippner, Stanley (1994, August). Improvement of academic skills for children and adolescents with hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Literature and research in this area are sparse, though there is clinical evidence that hypnosis is useful. My definition of hypnosis is a procedure facilitating a variety of structured goals or procedures in which a suggestion or motivation is enhanced by a mechanical device, another person, or oneself.

There are 3 areas of application in academics:

study habits

test taking

strengthening academic motivation

The hypnotist should know the specifics of academic achievement, because specific suggestions (e.g. "Imagine you are at desk focusing well for 20 minutes,") are better. Emphasis on the positive is better than negative. Use the words "imagination," "concentration," or "imagining pictures," rather than "hypnosis." I try to determine what they expect, based in part on what words they use.

In elementary school I focus on attitude and self esteem. I have them imagine reading a story, then how well they feel; that when they notice mistakes they won't be bothered because everyone makes mistakes.

For high school, I help them develop good habits for time motivation (e.g. suggestions to "make an outline to follow while you study"). At college level, I introduce self hypnosis. I make frequent use of mental imagery, at all levels--especially imagery rehearsal, in which the person is engaged in a particular activity. In the NSF report on accelerated learning techniques (a project sponsored by the Army), Lozonov's "suggestopedia" techniques were studied. This review indicated it might enhance training effectiveness and reduce training time.

I have observed the suggestopedia classes in Bulgaria and Hungary. Classes had a relaxed comfortable learning environment. Rather than individual learning, it was group learning. It included preliminary exercises, new material, and a review of what was learned. The first stage used 2/3 of the time. Then suggestions were given by the teacher to promote learning. The presentation phase took one third of the time. The method encourages students to make mental images of the material. In foreign language classes, people take on new roles.

1993

Kokoszka, Andrzej (1993). Occurrence of altered states of consciousness among students: Profoundly and superficially altered states in wakefulness. Imagination, Cognition and Personality, 12, 231-247.

In a questionnaire survey waking altered states of consciousness (ASC) are found to be common among 174 Polish students. The experience of Superficially Altered States of Consciousness (SACS) was reported by 96 percent of subjects and more than half of them had such experiences often. Whereas an experience of Profoundly Altered States of Consciousness (PASC) was confirmed by 75 percent and about one-third of them had them often. The comparison of the experiences accompanying the ASC indicates that SASC are characterized by disturbances in experiencing the reality and oneself combined with positive, pleasant feelings and with quietness. On

the other hand, PASC are accompanied by experiences related to an absolute, universal, eternal, and existential or religious matters. PASC are accompanied by extremely strong positive emotions of happiness, total love, etc. and are experienced as more rational than SASC, and with significantly less feelings of cognitive disturbances than in SASC. The comparison of circumstances of the ASC occurrence indicates that SASC occur in usual and common states and situation of everyday life, whereas PASC mainly in the context of religion and nature. The congruence of these findings with an integrated model of the main states of consciousness suggests a natural tendency for a cyclical occurrence of ASC, or more precisely, the differentiated waking states of consciousness.

LaClave, Linda J.; Kronenberger, William G.; Baker, Elgan L.; Morrow, Catherine (1993). Use of hypnosis following training in a psychiatry residency and psychology internship program: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41 (4), 265-271.

Despite growing numbers of internships and residencies offering training in hypnotherapy, no systematic attempt has been made to assess hypnotherapy beliefs and use among former trainees in these settings. This study investigated posttraining hypnotherapy use and effectiveness beliefs in a sample of 77 former psychiatry residents and psychology interns. Over 50% of the study sample had sought additional hypnotherapy training beyond the standard lectures and seminars, and almost 30% had attended external hypnotherapy workshops or presentations. Beliefs in hypnotherapy effectiveness were high, but use of hypnotherapy in clinical practice was very low. Former residents and interns who had received supervised training with patients, who had attended hypnosis workshops, and who had a colleague using hypnotherapy were more likely to use hypnotherapy following training.

1992

LaClave, Linda J.; Kronenberger, William G.; Baker, Elgan L. (1992, October). Use of hypnosis following training in a psychology internship and psychiatry residency program. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

Indiana University is embarking on a series of studies of training and characteristics of hypnotherapists.

### Study 1

Purpose: generate hypotheses, from retrospective analysis, to design prospective studies.

In 1962 11%; in 1975 27%; and in 1983 55% of psychology internship sites offered training in hypnosis. Methods of training in these sites included: lectures, supervised peer hypnosis, supervised patient hypnosis, and workshop or program attendance. Standardized curricula have been proposed, but outcome hasn't been evaluated. No study has investigated the long term effectiveness of program components.

This study looks at two outcomes: --Post training use --Post training effectiveness beliefs (how effective they believe hypnotherapy is)

It also looks at how the four training components relate to the two outcomes, and at professional variables (whether psychiatrist or psychologist, etc.).

Authors surveyed an 11 year retrospective. N = 77 respondents. Training is lectures that were strongly encouraged, and could elect the other components.

Number of patients seen in hypnotherapy since end of training 0-5 49 6-10 10 11-20 6 21-25 4 >25 7

**1991**

Daglish, Mark R. C.; Wright, Peter (1991). Opinions about hypnosis among medical and psychology students. Contemporary Hypnosis, 8, 51-55.

A survey was undertaken of opinions about hypnosis among first year medical and psychology students at the University of Edinburgh. Data are presented on the effects of self-estimated hypnotizability and sex, on opinions about hypnosis. The results are compared with those from similar studies conducted in Australia and the USA. Overall, the surveyed population showed a similar level of knowledge about hypnosis to that found among the general public.

**1990**

Evans, Frederick J. (1990). Behavioral responses during sleep. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and Cognition (pp. 77-87). Washington, DC: American Psychological Association.

**NOTES**

Subjects were 19 male student nurses who met a criterion of having EEG alpha density of at least 40% during an eyes closed, waking condition. They slept in the laboratory for two nights in succession, while being monitored by an EEG, and were told only that sleep cycles were being studied. Suggestions were presented while they were sleeping, e.g. "Whenever I say the word itch, your nose will feel itchy until you scratch it" "Whenever I say the word pillow, your pillow will feel uncomfortable until you move it." Then they were tested by Experimenter saying the cue word ("itch" or "pillow") during subsequent REM periods later that night and again on the next night. (The suggestions were not repeated on the second night; but two new suggestions were given on the second night when possible.)

After the Subjects awakened in the morning, they were interviewed to test their memory for the events that had occurred, and also cue words were presented in the context of a word association test to assess memory indirectly by observing behavioral and physiological responses. A more detailed inquiry was made after the second night.

The results were as follows. Ss responded to a mean of 21% of cue words administered. Ss continued to demonstrate REM sleep for at least 30 seconds for 71% of all cues administered, indicating that they were not aroused by the cue. When a suggestion was successfully completed (i.e., without eliciting alpha activity) it was not repeated. However, the cue words were tested in several subsequent REM

periods. Cue word testing occurred immediately (during the same REM period as the suggestion) on the same night, as well as in a later REM period, and during REM on Night 2 (after the suggestion had been given during Night 1).

Correct responses were given for 20% of immediate, 23% of delayed, and 23% of carry-over conditions. Ss did not remember the suggestion, verbal cues, or their responses when they awoke. Since Ss often responded to the cue the next night without repetition of the suggestion itself, the authors inferred amnesia rather than forgetting had occurred. Responses were not elicited by repeating the cue word in the waking state, but appeared to be specific to the sleep condition.

Six Ss returned five months later for a third night of testing. Four had shown carryover response on Night 2 to a Night 1 suggestion. When verbal cues were presented (without re-administering the suggestion) those 4 Ss responded, even though there was no intervening waking memory about the procedure or the suggestions. Some Ss responded even more frequently than during the original two nights; hypnotic depth did not seem to account for the increased responsivity. Experimenters attempted to reverse the amnesia observed during the waking condition by using hypnosis, age regression, and other hypnotic techniques, with some positive effect. The author speculates that perhaps the techniques originally used to probe morning recall were not sufficiently sensitive. He also raises the question of whether this waking state amnesia is related to the amnesia for night dreams when people awaken in the morning.

The relationship between hypnotizability and sleep suggestibility was analyzed. Hypnotizability was measured with the Harvard Group Scale, several weeks later, by Experimenters who were blind to the Ss' rate of responding to suggestions given during sleep. More hypnotizable Ss slept through the verbal stimuli more than low hypnotizable Ss; so they slept longer and more cues could be tested. Ss who responded most frequently to sleep-induced suggestions were more responsive to hypnosis. Analysis of response rate percentage (which controls for higher number of cues administered when Ss slept longer) showed that correlations between sleep suggestibility and hypnotizability were higher for percentage of delayed responses than for percentage of immediate responses.

Analysis by type of item on the hypnotizability scales suggested that the correlation with sleep suggestibility was due to the hallucinatory-reverie and the posthypnotic-dissociative clusters of hypnotic behavior, which are more difficult kinds of items. Correlations were significant for carry-over responses but not for immediate responses. These items represent phenomena experienced by Subjects who can be deeply hypnotized. The author reports that this relationship observed between hypnotizability and response to sleep-induced suggestions was not significant in a later study by Perry et al. (1978).

This author raises a question about why high hypnotizable subjects sleep better than low hypnotizables. The 6 Ss who were least susceptible accounted for 48% of all awakenings that occurred during the 2 experimental nights; the 6 Ss who were most hypnotizable accounted for only 26% of the awakenings ( $p < .01$ ).

Because sleep learning ("hypnopedia") has been extensively practiced in Russia and Eastern Europe, especially for language learning, the author investigated language learning with nine subjects. (Hoskovec, 1966, and Rubin, 1968, have reviewed the

hypnopedic literature, which suggests that only "suggestible" subjects respond; it is not clear whether "suggestible" refers to hypnotizable, or whether expectation of success is cultivated by information given in the waking state.) The nine Ss had responded to the suggestions at least twice while remaining asleep, had no waking recall of the suggestions, but were given pre-sleep instructions (increasing expectancy) that they would learn during sleep.

The verbal association material ("A is for apple; P is for palace;" etc.) was given during EEG sleep stages 2, 4, and REM. (Eight letter-word stimuli pairs were given, two per sleep stage whenever possible.) When they awakened, Ss were asked to check "any familiar word" on a list of 10 words beginning with the letter A, with the letter P, etc. So the probability was .10 for each of the eight lists that they might check one correct word by guessing. They also responded to two dummy lists containing letter-word pairs not used during sleep.

None of the dummy list words were checked, whereas 28% of the administered words were correctly checked; also, Ss selected the correct letter (without identifying the word and with instructions not to "guess") in an additional 17% of all lists. Words were rarely recalled from Stages 2 and 4, but Ss often recognized letters from those stages. False positives (incorrectly recalled words or letters) was almost never observed. Furthermore, no control Subjects (people who had not received a presleep set that they would recall) recalled any words correctly.

It was observed that whenever words presented during REM were later recalled, a transient slower frequency alpha (10.25 Hz vs. 9.64 Hz,  $p < .01$ ) had been evoked within 30 sec after the presentation of the stimuli during sleep.

Total recall of words correlated with the Harvard Group Scale of Hypnotic Susceptibility .69 and the Stanford individually administered scale .42, for the 7 Ss administered hypnotizability tests.

The author concludes that under optimal conditions, sleep learning of relatively easy material can occur with subsequent waking recall.

Harmon, Teresa M.; Hynan, Michael T.; Tyre, Timothy E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. Journal of Consulting and Clinical Psychology, 58, 525-530.

Studied the benefits of hypnotic analgesia as an adjunct to childbirth in 60 nulliparous women. Subjects were divided into high- and low-susceptibility groups before receiving six sessions of childbirth education and skill mastery using an ischemic pain task. Half of the subjects in each group received a hypnotic induction at the beginning of each session; the remaining control subjects received relaxation and breathing exercises typically used in childbirth education. Both hypnotic subjects and highly susceptible subjects reported reduced pain. Hypnotically prepared births had shorter Stage 1 labors, less medication, higher Apgar scores, and more frequent spontaneous deliveries than control subjects' births. Highly susceptible, hypnotically treated women had lower depression scores after birth than women in the other three groups. The authors believe that repeated skill mastery facilitated the effectiveness of hypnosis in the study.

Matheson, G.; Drever, J. M. (1990). Psychological preparation of the patient for breast reconstruction. Annals of Plastic Surgery, 24, 238-247.

#### NOTES

Reviews over 100 women who had undergone rectus abdominis musculocutaneous flap reconstruction, the psychological issues motivating the patient for surgery, and psychological problems to be considered by the surgeon. A method of psychological preparation that was used and a report on the evaluative study of the program is included, and a protocol and verbalization for hypnotic relaxation is included.

Ovens, H.; Talbot, Y.; Harris, F.; Newman, B. (1990). Hypnosis training enhances communication skills. Medical Teacher, 12 (3-4), 357-361.

1989

Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. American Journal of Clinical Hypnosis, 31, 173-180.

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego-strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

Spinhoven, Philip; Linssen, A. Corry (1989). Education and self-hypnosis in the management of low back pain: A component analysis. British Journal of Clinical Psychology, 28, 145-153.

Conducted a component analysis of a group program for chronic low back pain patients. 45 patients (aged 31-68 years) participated in the pain control course (PCC), consisting of education about pain and a training in self-hypnosis. A pain diary was used as a measure of pain intensity, up-time, and use of pain medication. Psychoneuroticism and depression were assessed using the Symptom Checklist-90 (SCL-90) scores. No evidence was found for a differential efficacy of education or self-hypnosis on pain diary and SCL-90 scores. Subjects showed significant changes on all measures except reported pain intensity. It is suggested that the PCC is a noninvasive, inexpensive means of treatment that could be used to teach even more severely disabled low back pain patients to cope more adequately with their pain problem.

1988

Pavia, M.; Stanley, R. O. (1988). Effect of defining induction as hypnosis or relaxation. Australian Journal of Clinical and Experimental Hypnosis, 16, 11-21.

Previous studies have shown that the perceived definition of an induction may sometimes affect the subject's responses to the induction. These variations in the effect of induction definition may be due to interactions between a subject's motivations and expectations of the induction technique and the way the induction is defined. These authors explored this interaction with groups of clinical and student subjects. Differing definitions of induction as 'hypnosis' or 'relaxation' did not result in significant differences in response among either group, though subjects in neither group were found to have high expectations of motivation (sic).

1986

Judd, Fiona K.; Burrows, Graham D.; Dennerstein, Lorraine (1986). Clinicians' perceptions of the adverse effects of hypnosis: A preliminary study. Australian Journal of Clinical and Experimental Hypnosis, 14, 49-60.

Questionnaires were sent to all members of the Australian Society of Hypnosis and responses obtained from 202 members and associate members who used hypnosis clinically. Respondents' experience in the use of hypnosis and the frequency of use of hypnosis as a treatment modality varied. Overall 43.5% of respondents reported adverse effects with one or more patients over the preceding year. Most adverse effects attributed to hypnosis were transient and included development of panic or extreme anxiety, development of excessive dependence and difficulty in terminating hypnosis. Exacerbation or precipitation of significant depression was an infrequent but serious adverse effect attributed to hypnosis. Other infrequent adverse effects included symptom substitution, acting out behaviour, fantasied sexual seduction, precipitation or worsening of psychotic illness or difficulties in the management of organic conditions. The difficulties were acknowledged of differentiating between the effects of hypnosis itself and other components of the therapeutic transaction, but the results of this survey suggested both that hypnosis be employed clinically by properly trained professionals and that further sensitive clinical research is needed in the area.

Rogers, Malcolm; Reich, Peter (1986). Psychological intervention with surgical patients: Evaluation outcome. Advances in Psychosomatic Medicine, 15, 23-50.

#### NOTES

The Notes are a direct quotation of the authors' Conclusions. "There is well documented evidence that psychological and behavioral preparation prior to surgery can effect post-operative recovery. In almost all instances, except when patients are characterized by avoidance or denial defenses predominantly, the outcome results have been positive. The effect of interventions have been most consistently positive in reducing length of hospitalization and post-operative pain, but a variety of other improvements in affect and physiologic stability have been shown. As others such as Auerbach have pointed out [76], in all but a handful of

studies different intervention approaches have been combined, making it impossible to sort out the specific effects of information, psychotherapeutic relationship, relaxation training, or suggestion given either with or without hypnosis. Indeed it is not only likely that each has had an effect, but there may also be synergistic effects.

"More recent investigations have begun to include measurements of personality differences between patients so that the nature of the intervention can be more specific and appropriate to the individual's coping style.

"The reduction in length of hospitalization alone (clearly shown to result from pre-operative psychologic preparation) argues forcefully on a cost benefit basis for the inclusions of careful pre-operative preparation. The reduction in pain is also of major importance, and may well reduce future avoidance behavior or post-traumatic disorders, although these latter potential outcomes have not been investigated. It should be kept in mind that there are also a number of studies which have failed to demonstrate the efficacy of psychological intervention on these outcome measures. Moreover, it is extremely difficult in studies of this nature to control adequately for the subtle effects on behavior of experimenter and subject expectation.

"A few points can be made about future strategies in this field. The evidence accumulated to date suggests that all patients undergoing surgery or certain difficult procedures be given the option of pre-operative psychological preparation. The preparation should emphasize what the patient will experience and when, and how to cope with it, i.e., how to move, or breathe, or relax. Rapidly evolving audiovisual capabilities and hospital televisions connected by cable to health education channels will routinely offer such preparation in the future. Patients could choose or not choose to watch (thereby protecting mechanisms of denial).

"Finally, future studies should focus on outcome measures uniquely important to a particular operation and also on longer term rehabilitation outcome measures. An example of the former might be post-operative sexual functioning after prostatectomy. A study by Zokar et al. [77] has shown that the likelihood of this post-operative function is correlated with not only the level of pre-operative anxiety and general 'life satisfaction', but also whether the patient received a pre-operative explanation of what to expect from the surgery" (pp. 45-46).

1985

Fellows, Brian J. (1985). Hypnosis teaching and research in British psychology departments: Current practice attitudes and concerns. British Journal of Experimental and Clinical Hypnosis, 2 (3), 151-156.

#### NOTES

The author mailed a questionnaire to 58 departments of psychology to determine the extent/nature of hypnosis teaching and research, and attitudes toward teaching and research on hypnosis. The author noted a general anxiety about teaching students how to do hypnosis (as contrasted with learning about hypnosis). "Some of the anxieties which departments have about the teaching of hypnosis seem to stem from some rather ancient and invalid conceptions about the nature of hypnosis and what it can do" (p. 153). The author also relates his personal experience teaching

undergraduates "something about the procedures and phenomena which have been traditionally associated with hypnosis" (p. 153). They may use one of the standard hypnotizability scales, study a particular hypnotic phenomenon such as ideomotor action or age regression, or study an empirical issue such as facilitation of recall. He reports not meeting with "any particular difficulties," but also that he has seen two problems: the student who is anxious about doing the procedure, and an occasional subject who reports the experience was unpleasant or disturbing--e.g. during age regression. He reports teaching students to handle these events in a normalizing manner. J. Holroyd

Stager, Gordon L.; Lundy, Richard M. (1985). Hypnosis and the learning and recall of visually presented material. International Journal of Clinical and Experimental Hypnosis, 33, 27-39.

To examine the effect of hypnosis on the learning and recall of visually presented material, high and low hypnotizable Ss were presented, under hypnotized or awake conditions, with a short, entertaining movie followed by questions about the movie. 2 week later Ss, hypnotized or awake, were again asked questions concerning the movie. The principal finding was that high hypnotizable Ss in the hypnotic induction condition increased accurate recall without increasing inaccurate recall. Neither hypnotizability nor hypnotic induction at learning affected recall. The major finding of the present study is that hypnosis during recall of previously learned material is facilitative, but that hypnosis during that previous learning is not.

1984

Channon, L. D. (1984). Some preconceptions about hypnosis among preclinical medical students: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 356-361.

372 preclinical medical students from the University of Sydney, Australia were surveyed concerning their beliefs about hypnosis and its medical use. Several "myths" concerning hypnosis emerged (e.g., hypnosis is a passive state, there are sex differences in hypnotizability, posthypnotic amnesia is inevitable, and there is automatic obedience to the hypnotist). Sex differences in expectations of hypnotizability were found. Relatively few physical problems were perceived as being amenable to treatment by hypnosis and the proportion of medical practitioners in the national professional hypnosis society was grossly underestimated.

Wideman, Margaret V.; Singer, Jerome E. (1984). The role of psychological mechanisms in preparation for childbirth. American Psychologist, 39, 1357-1371.

Psychoprophylactic (Lamaze) preparation for childbirth consists of six to eight classes held during the last trimester of pregnancy. These classes include instruction in the anatomy and physiology of gestation and parturition, respiration techniques, controlled neuromuscular relaxation, visual focusing, and the training of a labor

coach. Although the techniques are based upon psychological principles, they have remained largely unstudied by either psychologists or physicians. This article presents a brief history of the development of the training regimen and critically examines the few empirical studies that have been conducted. Because explanations for the efficacy of the preparation, if it exists, are equivocal, literature on the explicit components of the training--that is, information, respiration techniques, conditioned relaxation, cognitive restructuring, and social support--in situations other than child delivery are reviewed and their implications for the Lamaze method discussed. However, because there exist several, more implicit factors that may affect the type of child delivery a prepared woman experiences, the literature concerning social comparison, the effects of commitment and conformity, perceived control, and endorphin secretion are also discussed as they may apply to psychoprophylactic preparation. Problems associated with the study of childbirth preparation are presented, and suggestions for the direction of future research are made.

1983

Rodolfa, E. R.; Kraft, W. A.; Reilley, R. R.; Blackmore, S. H. (1983). The status of research and training in hypnosis at APA accredited clinical/counseling psychology internship sites: A national survey. International Journal of Clinical and Experimental Hypnosis, 31 (4), 284-292.

Although numerous psychologists reported gaining hypnosis skills during their internship experience, few investigations have assessed the characteristics of this training. The present survey of 123 APA accredited clinical/counseling internship sites was conducted in an attempt to describe the training currently available. Other variables investigated were hypnosis research at the sites and training directors' attitudes toward hypnosis. Results indicate that hypnosis training is growing and becoming more formalized; hypnosis research has experienced growth; and attitudes toward hypnosis continue to remain positive.

A procedure for training clinical graduate students in the psychoanalytic theory of the neuroses is presented. The procedure makes use of video tapes of experiments in which hypnotically implanted unconscious conflicts were used to drive a wide variety of psychopathology in the laboratory. In the procedure, the graduate students were asked to predict and rate Ss' psychopathology with foreknowledge of certain personality traits of Ss as well as foreknowledge of the nature of the conflicts. The training appeared to be an effective means of teaching them psychoanalytic theory, as well as helpful in enhancing their assessment skills.

1980

Reilley, R. R.; Parisher, D. W.; Carona, A.; Dobrovolsky, N. W. (1980). Modifying hypnotic susceptibility by practice and instruction. International Journal of Clinical and Experimental Hypnosis, 28 (1), 39-45.

Research was conducted to determine if hypnotic susceptibility could be increased by either having Ss practice hypnosis through repeated induction, or receive instruction about hypnosis. Ss were 37 college students divided into 3 groups. Group one experienced various hypnotic induction techniques, group two was given information about hypnosis through instruction, and group three was the control. The Stanford Hypnotic Susceptibility Scales, Forms A and B (Weitzenhoffer & Hilgard, 1959) were the pre- and posttest measures. Differences were found between both treatment groups and the control group, although no differences were found between the treatments. Repeated hypnotic induction and instruction about hypnosis proved useful techniques for increasing susceptibility. Results were not significantly related to initial level of anxiety.

The present study was undertaken to provide additional information on the effects of hypnosis on academic and test-taking skills. Previous research indicated inconclusive results with inadequate experimental design and statistical methodology. The present study used an experimental research design with appropriate statistical analysis. Ss were 93 college students and treatment was administered by pre-recorded cassette tapes over a 4-week period during regular class time. Tapes consisted of hypnotic and waking suggestions related to course content and general academic skills. Results indicated hypnotic and waking suggestions did not facilitate academic skill learning significantly more than class curriculum alone. Pre-post comparisons did indicate significant improvement by all groups on reading, writing, study skills, and spelling variables.

1978

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (1965) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

Schumann, John H.; Holroyd, Jean; Campbell, Russell N.; Ward, Frederick A. (1978). Improvement of pronunciation under hypnosis: A preliminary study. Language Learning, 28, 143-148.

This paper reports an experiment which was designed to determine whether foreign language pronunciation could be improved through hypnosis. Twenty subjects were first given the Harvard Group Scale of Hypnotizability to familiarize them with the state of hypnosis. In the second session each subject was individually tested on his/her ability to pronounce Thai words under three conditions: Baseline, Hypnosis, and Post- Hypnosis. For each experimental condition the subjects heard and repeated the stimulus items on one of three lists of 15 Thai words. The subjects' responses were later evaluated by a native Thai linguist. The results indicate that deeply hypnotized subjects (as defined by self-reported depth) performed significantly better than less well hypnotized subjects.

#### NOTES

"Guiora (1972) suggested that pronunciation of a foreign language is more difficult than vocabulary, syntax, and grammar skills because it requires modifying a basic method of self-identification, the way one sounds. He introduced a concept of language ego, analogous to body ego" (p. 143). During hypnosis subjects were evaluated for subjective estimate of hypnotic depth by asking them to "visualize themselves on a stairway in which the top (zero) represented their normal waking state and the bottom (ten) a very very deep relaxed state of hypnosis, and to report the number of the step on which they stood" (p. 146). Thus, "it was not assumed that administration of an induction assured a hypnotized subject, nor was it assumed that subjects rated highly hypnotizable were in a deep trance at the time Thai words were being spoken" (p. 146).

Shipley, R. H.; Butt, J. H.; Horowitz, B.; Farby, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

1976

**Gardner, G. Gail (1976). Attitudes of child health professionals toward hypnosis: Implications for training. International Journal of Clinical and Experimental Hypnosis, 24, 63-73.**

A survey of child health professionals -- pediatricians, pediatric nurses, child psychologists, and child psychiatrists -- revealed that they have generally positive attitudes toward hypnosis but little knowledge of its specific advantages or applications. Recommendations are made for designing training opportunities in hypnosis which might enhance the probability that the professional will actually use hypnosis or refer a child else where for hypnotherapy.

**Illovsky, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97.**

This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).

Interviewed 101 professionals who were alumni of a course in medical and dental hypnosis. 75% used some hypnotic technique, either formal or informal, in their practice. The predominant technique was direct and indirect hypnotic symptom removal. A wide range of indications was described, the most frequent of which were obesity, anxiety, pain and discomfort, and excessive smoking. Illustrative cases are included. Few doctors encountered either difficulties with colleagues or complications with patients. Of those doctors who did not use hypnosis, the major reasons mentioned were time, patient's unrealistic expectations and feelings of discomfort, lack of skill, and skepticism about hypnosis. The most striking finding was the efficacy of the course in causing enduring changes in the ongoing pattern of practice of a remarkably high percentage of the doctors. (German, French, & Spanish summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1970

Donk, Leonard J.; Vingoe, Frank J.; Hall, Roger A.; Doty, Richard (1970). The comparison of three suggestion techniques for increasing reading efficiency utilizing a counter-balanced research paradigm. International Journal of Clinical and Experimental Hypnosis, 18, 126-133.

Reports an experiment in which both Barber-type and alert-trance procedures significantly increased reading speed while maintaining comprehension when compared to a control group; a traditional hypnotic procedure followed by the specific suggestions failed to obtain these results. 32 volunteer undergraduates were randomly assigned to 4 groups in terms of a counterbalanced design. 2 groups were administered trance inductions (traditional and alert) followed by specific suggestions, a 3rd simply the suggestions, while the 4th served as control. Reading suggestions were to eliminate specific problems, increase speed, and increase or maintain comprehension. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Donk, Leonard J. (1968). Toward an increase in reading efficiency utilizing specific suggestions: A preliminary approach. International Journal of Clinical and Experimental Hypnosis, 16, 101-110.

REPORTS AN EXPERIMENT IN WHICH READING SPEED WAS SIGNIFICANTLY INCREASED AND COMPREHENSION MAINTAINED BY A TRADITIONAL HYPNOTIC INDUCTION FOLLOWED BY SPECIFIC SUGGESTIONS. 24 SS WERE SELECTED FROM AN UNDERGRADUATE CLASS ON THE BASIS OF PERFORMANCE ON A MODIFIED WEITZENHOFFER ABBREVIATED GROUP HYPNOSIS SCALE. SS WERE ASSIGNED TO 2 MAIN GROUPS IN TERMS OF A COUNTERBALANCED DESIGN. SUGGESTIONS TO ELIMINATE SPECIFIC READING PROBLEMS, INCREASE READING SPEED, AND MAINTAIN OR INCREASE COMPREHENSION WERE GIVEN AFTER A TRADITIONAL INDUCTION PROCEDURE. THE USE OF THIS RESEARCH DESIGN IN SUBSEQUENT RESEARCH ON HYPNOSIS AND LEARNING IS DISCUSSED. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Pedersen, Darhl M.; Cooper, Leslie M. (1965). Some personality correlates of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (3), 193-203.

The present research was directed principally toward determining the relationship of a number of personality variables to hypnotic susceptibility. The personality variables utilized were selected to cover the personality domain as broadly as possible. Hypnotic susceptibility was measured by the Stanford Hypnotic

Susceptibility Scale, Form A. A correlational analysis was completed for 30 Ss. This included (a) the correlations between each of the personality variables and hypnotic susceptibility and (b) the intercorrelations among all of the personality measures. It was found that the following variables correlated with hypnotic susceptibility at the 5% level of confidence: age (-.37), year in college (-.36), and missionary service (.37). Social class rating of father's occupation correlated significantly at the 1% level of confidence (.54). (29 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Moss, C. Scott; Logan, J. C.; Lynch, D. (1962). Present status of psychological research and training in hypnosis: A developing professional problem. American Psychologist, 17, 542-549. (Abstracted in American Journal of Clinical Hypnosis, 1963, 6, 82)

Anonymous questionnaires on training and research in hypnosis were returned by 54 of 55 psychology department chairmen with approved clinical psychology training programs and 39 of 85 American Medical Association approved medical schools. 8 psychology departments and 2 medical schools have courses in hypnosis. Unless the "psychological profession is more active in protecting its rights to research and clinical use of a methodology which is basically psychological, it may find itself legally excluded from the field." (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Fowler, William L. (1961). Hypnosis and learning. International Journal of Clinical and Experimental Hypnosis, 9, 223-232.

3 studies are reported in which hypnotic suggestion was used for the purpose of increasing the motivation and self-confidence of college students suffering reading difficulties. While the subjects reported a variety of benefits, objective tests provided no evidence that hypnosis did improve reading performance. From Psyc Abstracts 36:04:4II23F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Uhr, Leonard (1958). Learning under hypnosis: What do we know? what should we know?. Journal of Clinical and Experimental Hypnosis, 6 (3), 121-135.

## NOTES

The author reviews the research available on learning under hypnosis, as contrasted with recalling (under hypnosis) material previously learned in the waking state. Very few investigations have taken place, "and the vast majority are inconclusive or of only tangential interest" (p. 131). He gives a number of suggestions for improving the research designs, stressing that different aspects of hypnosis (depth, amnesia, type of suggestion) should be manipulated in order to maximize the possibility of

finding positive outcomes. "'Suggestion' or 'motivation' or 'attention' may well prove to be the crucial variable, the hypnotic state merely the condition that allows the full force of the operating factor to be felt" (p. 132).

**1956**

McCord, Hallack (1956). Hypnosis as an aid to the teaching of a severely mentally retarded teenage boy. Journal of Clinical and Experimental Hypnosis, 4 (1), 21-23. (Abstracted in Psychological Abstracts 57: 3729)

**NOTES**

A 16 year old boy with I.Q. measured at 55 was hypnotized for 20 minutes daily for one month. During each session he was given material to learn (multiplication tables, spelling words, reading recognition, and general information -- only one presented during each hypnosis session). "At the end of 90 days, the subject was still retaining almost 100 percent of all material presented except for the multiplication tables which showed about 50 percent loss" (p. 22). "As a result of routinely introduced hypnotic suggestions for well-being, happiness, desire to learn, and assurance of acceptance, Ben's motivation to learn in the classroom situation took a sharp surge upward. (It was for this reason that giving him parallel material in the normal state to be used to measure comparative learning rates promptly became scientifically unsound as a control in this study.)" (p. 22). Although he was not given material to study in between sessions, "it was known that he mentally reviewed the material while working and playing in the school program" (p. 23).

**1955**

Wald, Arthur; Kline, Milton V. (1955). A university training program in dental hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 183-187.

**NOTES**

The training program was a joint project of the American Hypnodontic Society and the Institute for Research of Long Island University.

"The program consists of three full semester courses: Introductory, Advanced, and a Clinical Practicum. Each course meets for a full 14 week semester and consists of 40 hours of instruction. Instructors in the program consist of dentists, psychologists, and physicians experienced with hypnosis and actively working in the psychological and medical fields pertinent to modern dental practice" (p. 184).

The article provides the syllabi for the introductory and advanced courses.

**1954**

Hammer, Emanuel Frederick (1954). Post-hypnotic suggestion and test performance. Journal of Clinical and Experimental Hypnosis, 2, 178-185.

**NOTES**

College students were tested in Normal and Post-hypnotic suggestion conditions, in balanced order (N-P-P-N, or P-N-N-P) but were actually hypnotized before the

Normal as well as the Post-hypnotic trials (i.e. without and with post-hypnotic suggestions, with suggestions for amnesia for the events in the hypnotic state).

"Summary. The purpose of this investigation was to determine whether or not post-hypnotic suggestion can improve some aspects of hypnotizable students' application and efficiency as applied to a number of selected performances connected directly or indirectly to schoolwork. Before the post-hypnotic testing periods, each subject was given post-hypnotic suggestions of ease, confidence, motivation, and increased ability. The study consisted of a comparison of normal and post-hypnotic performances of nine subjects in the areas of motor capacity, attention and perception, association, learning and memory, speed of reading comprehension, and application of abstract ability.

To the extent to which psychomotor speed and endurance, physical fatigue, span and duration of attention, clerical performance, speed of learning (as tested by Meaningful Syllable Lists and Digit Symbol Substitution), speed of association, mental alertness, concentration, mental efficiency, application of abstract number abilities, and speed of reading comprehension are related to schoolwork, the hypothesis is supported that post-hypnotic suggestion can be of aid in hypnotizable college students' schoolwork" (p. 184).

1953

Glasner, Samuel (1953). Research problems in the educational and social psychological applications of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (2), 42-48.

NOTES

The author reviews literature in which hypnosis is used as an experimental research method in two general areas: hypnosis in learning and recall, and hypnosis in social psychology. "In summary, the application of hypnosis to research in the fields of educational and social psychology is practically virgin territory. Imaginative investigators should be able to develop numerous interesting experiments in these two great areas" (p. 47).

EEG

1995

Barabasz, Arreed F.; Barabasz, Marianne; Jensen, Stacia (1995, November). Effects of hypnosis on cortical event-related potentials during visual and olfactory hypnotic hallucinations. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

Slotnick and London showed that different wording of suggestions led to very different results, which explains why our study on negative hallucinations and Spiegel's study had opposite results.

This study is still ongoing. Screened for highs who passed visual and olfactory hallucinations and lows who passed only motoric items on hypnotizability tests.

Trained Ss with eyes open induction, and lows had instructions to simulate hypnosis. (Used the eyeroll induction, eyes open.)

Did waking administration of alternating checkerboard pattern on computer screen. Then did eyes open hypnotic induction plus a depth check to make sure they were deep (assign number; then instructed raise a finger when you double it; then again, raise a finger when you double it). Then used checkerboard design again.

Obstructive visual hallucination - "imagine traveling through space, a dark nebula" (better than imagining you are blind. Lows had no difference in waking, obstructive hallucination, and negative hallucination. The highs did--looks like they had to see it before they couldn't see it. "The dark nebula envelopes you completely, and now you can see nothing."

De Pascalis, Vilfredo (1995, November). Psychophysiological correlates of hypnosis and hypnotic susceptibility. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

They recorded 40-Hz EEG temporal density (35-45 Hz band) from the left and right temporo-parietal-occipital scalp regions in four emotional conditions (gladness, happiness, fear, and anger). When measures were made in the waking state, for Highs, during positive emotions they found increase in left and right hemisphere activity compared with resting condition. During fear and anger there was reduction in the left hemisphere and an increase in the right, but for some subjects no left hemisphere change.

Low hypnotizables did not show large or reliable differences across emotions. With the hypnotic state, they found the trend was even greater for Highs.

Pribram, Karl H. (1995). Brain in perception: From Kohler's fields to Gabor's quanta of information. In Proceeding of the 39th Congress of German Society for Psychology (pp. 53-69).

#### NOTES

[The following material was taken from a paper provided by the author as a replacement for a presentation he made on the same topic at the Annual Meeting of the American Psychological Association, 1994, Los Angeles.]

Pribram presents the view that neuroelectric field theory (similar to theories proposed by Kohler and by Lashley earlier in this century) account for complexities observed in the relationship between awareness/perception and sensation. "Nerve impulse generation and transmission in neuronal circuits is but one of the important electrical characteristics of neural tissue. Another characteristic is the production of patterns of pre- and post-synaptic polarizations in axonal and dendritic arborizations. ... [which] are produced everywhere in the brain cortex when nerve impulses arrive at synapses as a result of the fact that the impulses become attenuated due to decreased fiber size resulting from the branching of axons" (p. 53). The polarizations develop a wave front.

Georg von Bekesy performed experiments on tactile perception that demonstrated the complex relationship between sensation and awareness. We often 'perceive' an

object as external to us, even though the immediate specific neural stimulation is of receptors and from there activity is transmitted to the neurons of the brain. Thus we 'see' an object as external to us, even though the light reflected from that object produces an image on our retina. The same kind of externalized projection occurs for hearing. Touch is ordinarily perceived as at the same location as the stimulation (i.e. in the body), except that the von Bekesy experiments demonstrated that touch could also be perceived at a distance, that is, outside the body, if conditions were appropriate.

In the von Bekesy experiments, a pair of vibrators were used to stimulate two fingers, with each vibrator actuated by the same series of clicks and with the delay of time between the clicks varied. "The interesting point in this experiment is that for the condition in which there is no time delay the vibrations are localized between the two fingers where no skin is present" (p. 55). When two vibrators are placed on the thighs, the experimental subject can, by moving the knees apart, experience the vibratory sensation localized in the open space between the knees! Such an externalization of tactile perception is observed in everyday life, as when in using a knife we seem to sense the edge of the knife in order to make the appropriate movements.

Following from von Bekesy's work, it seems that only some neural processes lead to awareness. "In fact, instrumental (often automatized) behavior and awareness are to a large extent opposed; the more efficient a performance, the less aware we become. ... for the neuroscientist, the question becomes: What kinds of neural activity allow awareness to be inversely related to automatized action?"

"Patterns of synaptodendritic polarizations and nerve impulses are two kinds of processes that function reciprocally. A simple hypothesis states that the more or less persistent designs of dendritic field polarization patterns are coordinate with awareness (Pribram, 1971, Chapter 6). This view carries the corollary that circuits of nerve impulses per se and the behavior they generate are unavailable to immediate awareness. Even the production of speech is 'unconscious' at the moment the words are spoken" (pp. 55-56).

Some additional information comes from the experimental work of Ben Libet (1966, 1994), in which direct stimulation of brain tissue in waking subjects yields reports of awareness (of a particular part of the body tingling or being in a certain position). However, the awareness occurs 0.5 to 5 seconds post-stimulus, indicating that "electrical stimulation must set up some state in the brain tissue, and only when that state has been attained does the patient become aware" (p. 56).

The evidence of electrical fields comes from using both high pass filters and low pass filters on the electrical activity generated by the brain and picked up on EEG. There are 'bursts' of spikes, and onset of the field effect precedes the initiation of spikes. "Just as depolarization of axon membranes is a necessary precursor of the generation of action potentials, so also is the local build up of synaptodendritic field potentials a precursor to the recruitment of action potentials in post synaptic neurons" (p. 57).

Maps of the receptive field of an axon can be developed (e.g. using Kuffler's procedure). However, stimulation outside of that receptive field can change that axon's response--a field effect "produced in a more extended field of potentials

occurring in neighboring synaptodendritic fields" (p. 58). In this investigation, the relationship between local field potentials of the rat somatosensory system (whisker stimulation) is studied using the Kuffler procedure. Whiskers were stimulated by rotating cylinders which varied in spacing of grooves and speed of rotation. The resulting variation in density of stimulation yielded a map or manifold of cortical bursts/spikes. Pribram's research fits the experimentally generated data to a theoretical model derived from signal processing theory, using "a rectangular window in the spatiotemporal domain to constrain the two dimensional sinusoidal signal" (p. 62). They noted that the manifolds obtained from somatosensory cortex recordings were similar to receptive field characteristics measured at the primary visual cortex, which "suggests that this process is ubiquitous in the cortical synaptodendritic network" (p. 63).

Referring to the Fourier theorem (that "the original pattern can be reconstituted, reconstructed, by performing the inverse transform" p. 65), the author notes that experimental data are more complex than would be predicted. The author suggests that it would be helpful to employ the Gabor uncertainty principle, in which Gabor (1946) described as a fundamental unit a 'quantum' of information. "Gabor became interested in describing a joint spacetime-spectral domain because he noted that there is a limit on the precision to which simultaneous measurement of spectral components and [space]time can be made. ... the Gabor relation describes the composition of a sensory channel, and the residual uncertainty defines the limits of channel processing span" (p. 65). The Gabor relationships are similar to those described in quantum physics by Heisenberg, so Gabor referred to a quantum of information, which he named a Logon.

The author describes his experimental results as exhibiting Gabor elementary functions, which "are composed in dendritic arborizations, receptive fields of the neurons from which we are recording. ... Each logon, i.e. each such receptive field module, is a channel. According to Gabor, the ensemble of such channels is a measure of the degrees of freedom, the number of distinguishable dimensions or features (e.g., spatial and temporal frequency, degrees of orientations, preferred direction, color). The minimum uncertainty relation expressed by Gabor elementary functions sets the limits on the information processing competence of each of these channels" (pp. 65-66).

In a Coda to this chapter, the author notes that there is a discrepancy between fields (composed of arrival and departure patterns of synapto-dendritic polarizations) and perceptual awareness which "occurs within spacetime coordinates." Discussion of the discrepancy may be found in Pribram and Carlton (1986). Holonomic brain theory in imaging and object perception. *Acta Psychologica*, 63, 175-210; and in Pribram (1991), Lecture 6 of *Brain and Perception*. Basically, there is top-down organization imposed by the cortical system on peripheral sensation/perception. "These various systems not only relate to one another in a hierarchical manner but that the higher order systems operate on lower order systems by interpenetrating. Thus, we ordinarily, immediately perceive named and categorized objects, not just sets of images (though we are capable of 'imaging' by suspending the higher order processes). There is abundant evidence of such top-down penetration in the visual, auditory and somatosensory neural systems" (p. 66).

**Ray, William J. (1995, November). EEG signatures of hypnotic susceptibility and hypnosis: It's what's up front that matters. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

## **NOTES**

**We have done three studies: a psychometric study, one in which we used traditional ways of looking at EEG, and more recent research.**

**Study I found that hypnotizability related to absorption, but not to tests of absent mindedness/cognitive failures, abuse/neglect, attachment, depression and anxiety, NEO Five Factor Test scales (Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness) or the Marlow Crown Social Desirability Scale. Also there was no relationship to Bernstein and Putnam's measure of dissociation, the DES. There is a hint of a relationship to the Openness Scale, actually.**

**Study II included a literature review on 3 questions: 1. Are there differential electrocortical differences between high and low susceptible individuals? 2. Are there electrocortical markers for the hypnotic state itself? 3. Are electrocortical differences found in the trance state mediated by hypnotic procedures?**

**Results of Study II are published in Graffin, Ray, & Lundy, 1995.**

**Study III investigated three questions: 1. Are there initial baseline psychophysiological differences between High and Low susceptible Ss? 2. Are there psychophysiological differences in baseline? 3. Are there behavioral differences on the challenge tasks during the Stanford-C?**

**The Pre-induction baseline followed by post-induction baseline are reported today. (They also administered tasks, not discussed here.)**

**Literature indicates that EEG theta is much higher for highs than lows, especially in frontal and temporal areas. This is a stable finding in a number of studies. There are also posterior differences, but they are not as significant. The differences in theta between highs and lows remains across different tasks (like imaging, spatial rotations, math). Whatever differences in theta exist when high and low hypnotizable subjects walk into the room, continue across tasks. The difference also is observable in alpha.**

**In the whole study we found no alpha differences and no hemisphere differences, but we did find theta differences.**

**We thought there would be less dimensionality as someone enters hypnosis. Dimensionality reflects EEG wave form (e.g. a sine wave is simple; more complex wave is multidimensional) and is analyzed with "chaos measures" [these notes may be poor regarding this issue]. But we didn't find less dimensionality as people entered hypnosis. So if dimensionality reflects brain state maybe people don't change state as they enter hypnosis.**

**Highs do show higher dimensionality vs lows, across all brain areas. What does this mean? It's as if Highs walk into the experiment in a more imagery mode than lows, and they continue that way throughout the whole experiment.**

**The differences found in baseline were all in theta. We compared the Standard Induction vs Self Induction on the EEG Theta variable: highs show more theta**

across the whole brain than lows, and it doesn't matter what type of induction is used.

De Pascalis gets me thinking about the role of attention in hypnosis. Following an induction, on 35-45 Hz band of EEG there is greater frontal activity for Lows whereas for Highs you see more activity posteriorly. The difference is on the rostral-caudal dimension rather than the lateral dimension.

1994

Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs) possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics. Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Crawford, Helen J. (1994). Brain systems involved in attention and disattention (hypnotic analgesia) to pain. In Pribram, Karl H. (Ed.), Origins: Brain and self organization (pp. 661-679). Hillsdale, NJ: Lawrence Erlbaum Associates.

Data are reviewed from regional cerebral blood flow, EEG, and somatosensory event-related potential (SERP; both scalp and intracranial) studies of attention to and disattention (hypnotic analgesia) of painful stimuli to provide further evidence for two neurophysiological systems of pain involving the cortex: (1) the epicritic, sensory system of pain associated with the parietal, posterior region, and (2) the protocritic, distress, comfort-discomfort system of pain associated with the far fronto-limbic region. Studies of neurophysiological changes accompanying suggested hypnotic analgesia support the hypothesis that the executive controller of the far frontal cortex, via the far fronto-limbic attentional system, acts as a gate against the ascent of painful stimuli into conscious awareness by 'directing' downward the inhibition of incoming somatosensory information coming from the thalamic region. In hypnotically responsive individuals who could eliminate the perception of pain, reviewed studies demonstrated increased regional cerebral blood

in the frontal and somatosensory regions, shifts in hemispheric dominance of EEG theta power, differential surface SERP topographical patterns in the anterior and posterior regions of the brain, and reduction of the intracranial SERP P160 waveform in the gyrus cingulus.

#### NOTES

Paradoxically, there may be physiological reactivity to pain stimuli while the hypnotized Subject reports they are not consciously aware of pain. Posner's proposal of two different attentional systems may account for why there is physiological reactivity concurrent with lack of awareness of pain. Posner suggested that the posterior brain is involved with engaging and disengaging attention while the anterior brain is involved in attention for action or effortful attention. "Thus, the posterior region is involved in space and time, the epicritic processes, whereas the anterior region is involved in comfort- discomfort, the protocritic processes (Pribram, 1991)" (p. 665).

In parallel, there appear to be two systems of pain involving the cortex, as revealed in positron emission tomography research. Also relevant is clinical data showing that "removal of the frontal or cingulate cortex in patients with intractable pain leads to the amelioration of distress while not eliminating sensory pain (Bouckoms, 1989)" (p. 665).

The author proposes a neuropsychophysiology of hypnotic analgesia based on Hilgard's (1986) neodissociation theory of hypnosis, together with Pribram and McGuinness' (1975, 1992) attention model. In this view, "Hilgard's executive control system is the far frontal cortex 'directing' the inhibition of incoming painful stimuli" (p. 666) after determining that the somatosensory signal is 'irrelevant.'

"Highly hypnotizable individuals ('highs') have greater attentional and disattentional abilities than low hypnotizable individuals ('lows'). ... Recent neuroimaging techniques (PET, SPECT, CBF) that assess regional brain metabolism have found no differences in waking conditions between low and highly hypnotizable individuals, but have consistently reported that only highs show increased cerebral blood flow during hypnosis, suggestive of enhanced cognitive effort (Crawford, Gur et al., 1993; Halama, 1989; Meyer, Diehl, Ulrich, & Meinig, 1989; Walter, 1992)" (p. 666).

The hippocampus appears to be involved as a gating mechanism in selective attention (Crowne, Konow, Drake & Pribram, 1972; Isaacson, 1982, Isaacson & Pribram, 1986; R. Miller, 1991; Pribram, 1991; Arnolds et al., 1980) This gating function may be promoted "through a cortico-hippocampal relay [that] transmits information by theta wave modulation and Hebbian synaptic modification so that there is selective disattention" (p. 667). The author suggests that hypnotic pain control may involve directing attention away from pain sensory signals.

Highly hypnotizable people generate more EEG theta than low hypnotizables whether they are hypnotized or not, and Crawford (1990) observed marked hemispheric shifts in theta when highs (but not lows) were attempting to control pain with hypnosis.

This paper reports on preliminary results of SERP studies of people given hypnotic analgesia suggestions to reduce electric shock stimulus evoked pain. The results

were analyzed individual by individual, because group data obscured pronounced shifts in SERP patterns (e.g. habituation rates differed among Subjects). For highs, the SERP tended to be reduced, and the lower amplitudes were observed as early as the N100-P200 components. This did not occur for low hypnotizables.

Different kinds of mechanisms may be operative for high hypnotizables, however. "In over half of the high hypnotizable subjects the far frontal region (Fp1, Fp2) showed strong arousal during attention to pain, but during hypnotic analgesia there was a flattening out of the SERPs to the point they are hard to measure. By contrast, the more posterior SERPs (including F3 and F4), while reduced in amplitude, were still evident. The other half of highs showed little SERP activity in the far frontal region in either attend or disattend conditions, but substantial reductions of SERPs at all locations during hypnotic analgesia" (p. 670). Additionally, some of the highs evidenced a contingent negative variation (CNV) or a late 400-500 msec negativity in the far frontal region, which author is inclined to interpret as "a preparation for a response or for an inhibition of a response" (p. 670).

Case studies of two patients with intracranial electrodes and scalp electrodes recording SERPs are presented in support of the experimental data. The two female patients were diagnosed with obsessive compulsive disorder; one was highly hypnotizable and one was not. They received 30 moderately painful stimuli to the left middle finger under sequential conditions: waking attention, hypnosis with analgesia suggestions, and hypnosis with attention instructions. The highly hypnotizable patient reported significantly less pain during suggested analgesia, and that reduction in pain was associated temporally with reduction of SERP at P160 in the gyrus cingulus (and at no other recording sites). The 'unhypnotizable' patient showed no SERP changes. As an aside, the author notes that "Subsequent to the hypnotic analgesia, when the pain was attended to again during waking this patient showed a significant enhancement of the same positivity wave at Fz, as if there was a rebound effect (something we have also observed in some of our SERP subjects at the BRAINS Center)" (p. 674).

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall

sequence of light changes that occurred during 60 sec when arm was in the cold water.

Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)

Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.

Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.

30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).

60 second pain scores: Showed same trend

There was no difference whatsoever for the lows.

Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).

Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.

## RESULTS

Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.

Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.

P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.

State and trait differences are apparent.

The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory

The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."

Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.

Ray, William J.; Moraga, R.; Faith, M. (1994, October). Psychometric and psychophysiological studies of hypnotizability and dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

In the last 5-6 years we see a beginning of a consistency in this type of research on EEG and hypnosis. Baseline EEG theta for high and low hypnotizable Ss was higher significantly in frontal and temporal areas; less significantly in parietal and occipital areas. It begins to look like a signature of hypnotizability. Our research will be published in the Journal of Abnormal Psychology next year.

In Japan they see theta as sustained attention; some aspects of theta relate to MAO and also to dopamine. Betsy Faith did the same research, replicating almost exactly. There are no differences between Highs and Lows in alpha or beta; but we find differences in theta (especially frontal, and in 40 Hz more posteriorly). It may not be L-R hemisphere difference as previously thought, but more a rostral-caudal dimension.

The signature to hypnotizability is more frontal theta at baseline. This may also relate to a drop in theta after induction, but those results are not so clear. Highs have a larger drop in theta from pre to post induction than is observed in the Lows.

We did a "chaos analysis" of EEG. There are three main measures, including dimensionality. Dimensionality is a measure of complexity. People demonstrate high dimensionality when asked to do tasks, low dimensionality in anesthesia.

High hypnotizable Ss start an induction with higher dimensionality than the Low hypnotizable Ss, and as we go through the induction they remain the same. So this measure shows individual differences but does not give evidence of a state (because it doesn't change).

Chaos dimensions for 2 mental math problems show lower dimensions in frontal compared to posterior areas; but for imagery [labeled on slide as positive and negative emotional tasks] the dimension is the same across areas.

For the dimension measures, lows look like they are doing mental math and highs look like they are doing imagery, in baseline.

**SECOND PART OF RESEARCH--DISSOCIATION.** For 100 years dissociation and hypnosis have been viewed as similar. Two dissociation scales were used - Putnam's DES and Reilly's scale. A factor analysis found four factors: 1. absorption or derealization 2. depersonalization 3. segment amnesia 4. in situ amnesia (Segment amnesia differs from in situ amnesia because you wake up to it at that moment in the in situ vs the segment case.)

We have 20-30 people who score very high on hypnotizability.

Colin Ross finds the same factors as our factors 1 and 2, but he finds only one amnesia factor where we find two.

The correlation between DES and Harvard ranges .05 to .18. Are the high hypnotizables related to high dissociatives, with others not related? A scatter plot did not reveal that.

FFT EEG bands during baseline for high and low dissociation Ss find no differences for high and low dissociative subjects. We conclude that dissociation and hypnosis are two orthogonal processes.

Now we are beginning to look at the pathways that lead one to become highly hypnotizable or dissociative.

#### COMMENTS FROM THE AUDIENCE:

Ian Wickramasekera: Have you introduced threat to high or low DES people?

Answer: High and Low DES people with happy and unhappy imagery tasks do the opposite, with the dimensionality measure. With emotionality you don't see stable baseline differences, you see reactivity differences.

A. Barabasz: I think the DES isn't a good measure of dissociation in hypnosis which is voluntary and not pathological.

D. Spiegel: Sabourin's study found more theta in left frontal during hypnosis, whereas you found less. Answer: That's why I don't know what to do about the state effects.

J. Crawford: Sabourin had Ss doing tasks, so they may have been more active than yours.

#### 1993

Dabic-Jeftic, Mirjana; Barnes, Graham (1993). Event-related potentials (P300) during cognitive processing in hypnotic and non-hypnotic conditions. Psychiatria Danubina, 5 (1-2), 47-61.

In this study authors investigated to find out if there were any specific changes of event related potentials in subjects before hypnosis, entering hypnosis, in deep hypnosis and leaving hypnosis, and to compare mental activities of subjects such as capability of correctly calculating and remembering the exact number of unexpected stimuli delivered by stimulator with their verbal or nonverbal reports during any of the conditions investigated. The methodology was of testing the cognitive evoked potentials elicited by auditory stimuli, using the oddball paradigm. Obtained results show that the most constant values of shortest latency and highest amplitudes of the cognitive waves, especially P300 were found during deep hypnosis. All five subjects in the investigation answered with the exact number of delivered target stimuli only after deep hypnosis. Conversely, in all other conditions their answers were approximate to the correct number of delivered target stimuli. (Author abstract.)

#### NOTES

In this experiment, 5 adult volunteers were told to attend to one of two tones delivered through headphones. The tones were randomly delivered but one occurred 85% of the time (the 'frequent, non-target tone') and the other occurred 15% of the time (the 'rare, target tone'). The subjects were to notice, remember, and count the target tone. Measures were taken during five periods: pre-hypnosis, entering hypnosis, deep hypnosis, leaving hypnosis, and post-hypnosis.

Some subjects had extensive hypnosis experience prior to the experiment; others had little.

The EEG P300 wave was sensitive to condition. Latency of P300 was significantly shorter in deep hypnosis compared with other periods. Higher amplitude of P300 also occurred during deep hypnosis compared with other periods. (Notes taken from secondary reference, Ericksonian Newsletter.)

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EEG was recorded monopolarly at frontal (F3, F4), central (C3, C4) and posterior (in the middle of O1-P3-T5 and O2-P4-T6 triangles) derivations during the hypnotic induction of the Stanford Hypnotic Clinical Scale (SHCS) and during performance following suggestions of hypnotic dream and age-regression as expressed in the before-mentioned scale. 10 low-hypnotizable and 9 highly-hypnotizable and right-handed female students participated in one experimental session. Evaluations were Fast-Fourier spectral analyses during the following conditions: waking-rest in eyes-open and eyes-closed condition; early, middle, and late phases of hypnotic induction; rest-hypnosis in eyes closed condition; hypnotic dream and age regression. After spectral analysis of 0 to 44 Hz, the mean spectral amplitude estimates across seven Hz bands (theta 1, 4-6 Hz, theta 2, 6-8 Hz; alpha 1, 8-10 Hz; alpha 2, 10-13 Hz; beta 1, 13-16 Hz; beta 2, 16-20 Hz; beta 3, 20-36 Hz) and the 40-Hz EEG band (36-44 Hz) for each experimental condition were extracted. In eyes-open and -closed conditions in waking and hypnosis highly-hypnotizable subjects produced a greater 40-Hz EEG amplitude than did low hypnotizable subjects at all frontal, central and posterior locations. In the early and middle hypnotic induction highly-hypnotizables displayed a greater amount of beta 3 than did low hypnotizables and this difference was even more pronounced in the left hemisphere. With posterior scalp recordings, during hypnotic dream and age regression, high hypnotizables displayed, as compared with the rest-hypnosis condition, a decrease in alpha 1 and alpha 2 amplitudes. This effect was absent for low hypnotizables. Beta 1, beta 2 and beta 3 amplitudes increased in the left hemisphere during age regression for high hypnotizable; low hypnotizables, in contrast, displayed hemispheric balance across imaginative tasks. High hypnotizables during the hypnotic dream also displayed in the right hemisphere a greater 40-Hz EEG amplitude as compared with the left hemisphere. This difference was even more evident for posterior recording sites. This hemispheric trend was not evidenced for low hypnotizable subjects. Theta power was never a predictor of hypnotic

susceptibility, 40-Hz EEG amplitude displayed a very high main effect ( $p < 0.004$ ) for hypnotizability in hypnotic conditions by displaying a greater 40-Hz EEG amplitude in high hypnotizables with respect to lows.

#### NOTES

In the Discussion section, the authors indicate that they have no idea why they didn't replicate results of other theta studies, including their own, except maybe due to complex interaction among personality, subject selection, situation-specific factors, and hypnotizability.

They observe that the alpha results conform with previous findings (p. 163). Beta bands were sensitive. Highs showed left-hemisphere prevalence in all beta bands during age regression; they also showed hemispheric balance in the hypnotic dream condition. Beta 3 amplitude was also greater among highs than lows. "among high hypnotizables, beta 3 amplitude in the early hypnotic condition was greater in the left hemisphere as compared to the right and as the hypnotic induction proceeded hemisphere balancing, with reduced beta 3 amplitude, was displayed. This result appears in agreement with the predictions of the neurophysiological model proposed by Gruzelier et al. (1984) and Gruzelier (1988) as well as with other studies in which beta rhythm was found to discriminate performances between high and low hypnotizables (e.g., Meszaros et al., 1986, 1989; Sabourin et al., 1990)" (p. 163-164). 40 Hz amplitude was higher in highs and increased in right hemisphere during the hypnotic dream, especially in posterior areas. "This pattern of hemispheric activation may be interpreted as an expression of the greater right-hemisphere activation and of the release of posterior cortical functions during the hypnotic dream and is compatible with the predictions of the Gruzelier model of hypnosis, however, the results obtained in this study for 40-Hz EEG amplitude failed to reveal an inhibition of the left-hemisphere activity with the progress of the hypnotic induction" (p. 164).

(They note that De Pascalis & Penna, 1990, agreed with the Gruzelier 1988 model: highs in early induction had increase of 40-Hz in both hemispheres, but as induction proceeded they had inhibition of left and increase in right hemisphere activity. In this current experiment, only beta 3 showed the hemispheric trend of Gruzelier's model. They cite other details of current study, p. 164, not consonant with Gruzelier.)

"The 40-Hz EEG rhythm, which according to Sheer (1976) is the physiological representation of focused arousal, appeared to discriminate between differential patterns of high and low hypnotizables. Both during hypnotic induction and during hypnotic dream and age regression highly hypnotizables exhibit greater 40-Hz EEG amplitude with respect to the lows. These findings support the validity of the assumption that hypnosis is characterized by a state of focused attention (Hilgard, 1965) and that 40-Hz EEG activity reflects differential attentional patterns among subjects high and low in hypnotizability. On the basis of these findings it would appear that 40-Hz EEG and beta 3 spectral amplitudes may prove to be useful measures of individual hypnotizability" (p. 164).

Gruzelier, John; Warren, Kristen (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. Psychological Medicine, 23, 93-101.

Individuals with high and low susceptibility to hypnosis were compared in a baseline condition and after instructions of hypnosis on tests of anterior left and right hemispheric functions of word fluency to letter categories, word fluency to semantic categories, design fluency and bilateral finger tapping dexterity. With hypnosis high susceptibles showed a reduction in word generation to letter categories, no significant change in word generation to semantic categories, an improvement in design fluency, and bilateral reductions in finger tapping dexterity. Low susceptibles showed the opposite changes except for the improvement in design fluency. These results, together with correlational results, were interpreted as evidence of central inhibitory processes, particularly of the left hemisphere, in response to instructions of hypnosis in high susceptibles.

#### NOTES

The authors discussion of their study includes the following statements. "The main result of the study was the differential influence of instructions of hypnosis on high and low susceptibles for word fluency to letter designated categories, as distinct from semantic categories, and design fluency" (p. 98).

"The absence of effects of hypnosis on word generation to semantic categories (left fronto-temporoparietal) versus letter categories (left frontal) has a bearing on evoked potential evidence (Gruzelier et al. 1987). Bilateral comparisons at temporal lobe and central locations showed that high susceptibles were characterized by asymmetric changes in evoked potential amplitude (N116 component) with hypnosis. Activity at the central electrodes was compatible with a left-to-right hemispheric shift of function, but this was not the case at the temporal electrodes. Instead of an inhibition of left temporal activity with hypnosis activation was maintained. Maintenance of activity in the left temporal lobe follows consideration of the fact that hypnosis requires sustained attention to the voice of the hypnotist, which is predominantly a left temporal function" (p. 99).

"The absence of differences in the pre-hypnotic condition between high and low susceptibles indicates that hemisphericity *per se* may not be a factor that characterizes susceptibility. The fact that lateral differences were found in some experiments (e.g. Gruzelier et al. 1984; Gruzelier & Brow, 1985) but not others (e.g. Cikurel & Gruzelier, 1990; McCormack & Gruzelier, 1993) may indicate that such effects, when apparent, were secondary to another factor such as cognitive flexibility as conceptualized by Crawford (1989)" (p. 99).

#### 1993

Jutai, Jeffrey; Gruzelier, John; Golds, John; Thomas, Martin (1993). Bilateral auditory-evoked potentials in conditions of hypnosis and focused attention. International Journal of Psychophysiology, 15, 167-176.

Brain event-related potentials (ERPs) evoked by auditory stimulation were used to study cerebral hemispheric activity during hypnosis. ERPs were recorded from bilateral central (C3 and C4) and temporal (T3 and T4) scalp locations in response to tone pips in 6 medium-high and 6 low-susceptible subjects in three conditions: baseline (tones only), hypnosis (tones plus hypnotic induction), and a focused attention control (tones plus a newspaper story read by the hypnotist). Task

asymmetries were individually adjusted for baseline asymmetries. Responses from central locations did not differentiate hypnosis from focused attention for either group. The same was true of temporal locations for the low-susceptible group. The predominant temporal lobe pattern for both conditions and groups was larger left than right responses. The exception was the hypnosis condition for the medium-high susceptible group where there was an increase in responses in the right temporal lobe.

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The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

Nishith, Pallavi; Barabasz, Areed F.; Barabasz, Marianne (1993, October). Effects of Alprazolam and hypnosis: EEG spectral decomposition and transient experience. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

We wanted to test Hilgard's neodissociation theory and Crawford's and my ideas about theta reflecting processing dissociation where environmental stimuli are ignored.

Hypothesis: highs would show greater EEG theta in hypnosis than lows when exposed to a suggestion to recreate alprazolam (trade name Xanax) effects.

We demonstrated hypnosis to groups, discussed it, administered the Harvard, took highs and lows and then tested them with Stanford C; got 20/group, matched for

age, gender, and handedness. Assigned 10/cell, in drug or placebo (double blind) conditions. Tested females to make sure they weren't pregnant. Ingested the placebo or drug, waited 1 hour; took 5' waking EEG while they were asked to focus on "feelings of relaxation brought on by the drug." Interviewed them (see our chapter in Fromm & Nash book) to determine their transient mood states during the 5' period, plus gave them POMS tension/anxiety questions.

Results of first study: analyzed for hypnotizability x placebo x drug condition. EEG Theta was reduced in hypnosis; hypnotic ability showed no effects. Highs maintained higher beta in alprazolam drug condition (vigilance).

Study 2 counterbalanced conditions: Waking Hypnosis Hypnosis with a suggestion to recreate alprazolam effects.

Used Ss who actually had taken Alprazolam participated in the experiment four days later; induction was a tape recorded version of the Stanford Clinical Scale. Suggestion: imagine taking a dose twice as high as you had before. EEG and transient experience data were collected as before. 2 x 3 Manova's were computed.

1. Theta was higher for highs than lows at  $p < .01$  for both the hypnosis and hypnosis with drug effects suggestion conditions. 2. Alpha - had the same findings as for theta. (and same results as in our Antarctica study). 3. Beta was significantly higher for both high and lows in waking vs hypnosis conditions at all but the T4 site where beta was highest in the two hypnosis conditions only for the highs. 4. POMS analysis: mean tension/anxiety scores were significantly lower for highs in both the alprazolam and hypnotic suggestion conditions.

Both highs and lows showed more theta in hypnotized than in waking conditions. Failure to find differences between groups differing in hypnotizability may be because highs were so good at creating the alprazolam effect that they may have desynchronized theta.

1992

Barinaga, Marcia (1992). Giving personal magnetism a whole new meaning. Science, 256, 967.

#### NOTES

Cited in Noetic Sciences Review, Autumn, 1992. This geobiologist has discovered that the human brain contains billions of tiny magnets--some 7 billion of them, each so small that their total weight is only one/millionth of an ounce. In magnetite-containing bacteria, the crystals are used as a compass needle which orients the bacteria with respect to the Earth's magnetic field. In birds, bees, and fish, where concentration of the mineral is a few orders of magnitude higher than he found in the human brain, it is used as a navigational aid. He plays down the possible connection to weak electromagnetic fields that supposedly cause cancer (unless fields could induce very weak electrical fields inside the cells, disrupting cellular function). Other possible interpretations: a means for cells to store excess iron, or part of a magnetic sensing system, or a vestigial system left over in evolution from when we were more directly connected with the earth's magnetic field and may have relied on it for navigation or migratory movement.

Miller, Scott D.; Triggiano, Patrick J. (1992). The psychophysiological investigation of multiple personality disorder: Review and update. American Journal of Clinical Hypnosis, 35, 47-61.

#### NOTES

A review and methodological critique. Updates Putnam, 1984. Currently, psychophysiologic differences reported in the literature include changes in cerebral electrical activity, cerebral blood flow, galvanic skin response, skin temperature, event-related potentials, neuroendocrine profiles, thyroid function, response to medication, perception, visual functioning, visual evoked potentials, and in voice, posture, and motor behavior. Reviews the new research on the psychophysiological investigation of MPD from published, unpublished, and ongoing studies, and attempts to place current findings into a conceptual framework. Authors note results from unpublished and ongoing studies and include a critical analysis of current research methodology as well as suggestions for future research.

#### 1991

Brown, Peter (1991). Ultradian rhythms of cerebral function and hypnosis. Contemporary Hypnosis, 8, 17-24.

As a consequence of his observations of the clinical work of Milton Erickson, Ernest Rossi has proposed an 'ultradian rhythm theory of hypnosis'. Rossi demonstrated that the spontaneous changes in cognition, affect and behaviour which occur as part of the ultradian cycle (which Erickson referred to as 'the common everyday trance') are similar to the changes which occur during hypnosis. A review of studies of the phasic changes in hemispheric function suggests that ultradian changes do parallel the changes found in hypnosis.

#### NOTES

Falling asleep and waking up are regulated by two separate mechanisms rather than being opposite poles of one mechanism (Winfree, 1980). Kleitman (1961) suggested a 90-min cycle, the basic rest-activity cycle (BRAC). In addition to physiological alterations, there are alterations in cognition, mood and behavior (Rossi & Cheek, 1988); vigilance (Okawa, Matousek & Petersen 1984); peripheral blood flow (Ramano & Gizdulich, 1980); respiratory amplitude (Horne & Whitehead, 1976); visual evoked potentials (Zimmerman, Gortelmeyer & Wiemann, 1983); pupillary diameter, stability and reactivity to light, and saccadic eye movements (Lavie & Kripke, 1981).

These diurnal variations may relate to hypnotic behavior. There is a recurring increase in daydream and fantasy, as well as visual imagery (Kripke & Sonnenschein, 1978). "There is evidence for a parallel recurring cognitive and emotional cycle with increased emotional responsiveness and a more subjective cognitive processing of information (Evans, 1972; Holloway, 1978; Overton, 1978; Thayer, 1987). Subjects appear to repeat the cycle approximately 16 times per day, with a range of 70-120 minutes. Kripke and Sonnenschein (1978) noted that the subjects were personally unaware of any repeating cycle in their mental lives" (p. 19).

The brainstem arousal mechanisms seem to be implicated in periodic changes in the EEG. Ultradian rhythms are "more easily detected under conditions of increased sleep need, reduced external performance demand and lowered motivation to focus externally (Broughton, 1985)" (p. 20). Sterman (1985) observed that the rhythm was most marked in resting state and disappears during complex visuomotor tasks. Relationship of EEG patterns to attentional patterns indicate there may be two different forms of attention, one for focused awareness (often thought to be associated with trance state) and the other a generalized vigilance (which would be reduced in hypnosis). Ultradian changes in consciousness reflected in the EEG may suggest increased internal absorption associated with visual imagery, a feature of the trance state.

"There has recently been a partial direct confirmation of Rossi's hypothesis. Aldrich and Bernstein (1987 [International Journal of Clinical and Experimental Hypnosis]) reported a bimodal distribution of Harvard Group Scale Hypnotic Susceptibility (HGSHS) scores when they are done at different times throughout the day. They note the parallel of the changes in HGSHS scores and the circadian variations in body temperature which suggest changes in hypnotic responsiveness coinciding with the fluctuations of physiological rhythms.

"Other support comes from some highly original work involving breathing rhythms. There are cyclic alterations in relative air flow between the left and right nostrils with an average period of 2-3 hours (Hasegawa & Kern, 1977). This nasal ultradian rhythm is correlated with an increase in contralateral cerebral hemispheric activity (Werntz, Bickford, Bloom & Shannahoff-Khalsa, 1981, 1983; Klein, Pilon, Prosser & Shannahoff-Khalsa, 1986). The alterations in hemispheric function do appear to be related to changes both in the style of cognition, particularly in an increase in vivid visual imagery, and in performance on specific tasks (Klein et al., 1986). Thus these studies support the notion of an ultradian rhythm of cerebral function which is associated with characteristic physical manifestations mediated by the autonomic nervous system. Whether or not these changes are directly related to the findings reported by Aldrich and Bernstein has yet to be established" (p. 21).

The authors conclude that "the most consistent evidence for ultradian rhythms is demonstrated by the mechanisms of the hypothalamic-limbic system and by brainstem mechanisms that regulate arousal and attention processes (Parmeggiani, 1987); neuroendocrine regulatory mechanisms (Follenius, Simon, Brandenberger & Lenzi, 1987) and autonomic nervous system function (Bossom, Natelson, Levin & Stokes, 1983; Gordon & Lavie, 1986). These studies also suggest an ongoing dynamic interaction between cortical and subcortical structures throughout the ultradian cycle (Parmeggiani, 1987), and suggest that these interactions may be of great significance in hypnosis" (p. 21).

Graffin, N. W. (1991, October). EEG concomitants of hypnotic susceptibility and hypnosis (Dissertation, Pennsylvania State University). Dissertation Abstracts International, 52 (4), 2296.

"Many previous studies of EEG and hypnosis were completed prior to development of spectral analysis and typically included data from a limited number of electrode sites. The categorization of subjects as high and low hypnotizables was often done inappropriately, and disparate findings were obtained. In this study, subjects scoring 10 or more and 3 or less on the Stanford Hypnotic Susceptibility Scale, Form C were defined as high and low respectively. EEG was monitored during resting baseline, mental arithmetic, and mental spatial rotation, and before, during, and after hypnotic induction. EEG was recorded monopolarly at frontal (F3,F4), parietal (P3,P4), temporal (T3,T4), and occipital (O1,O2) derivations, and data were fast Fourier analyzed. Mental arithmetic and mental spatial rotation did not produce differential hemispheric activation. High hypnotizables had greater frontal and temporal theta at baseline than lows. All subjects showed increases in parietal and occipital theta during hypnotic induction. During prehypnotic induction baseline, highs had greater parietal and occipital theta than lows, but this difference was smaller after induction. Baseline temporal alpha was greater for highs than lows, but after hypnotic induction, all subjects had less alpha at all sites than before induction. Increases in alpha at all sites for all subjects occurred during hypnotic induction. Beta activity was unrelated to susceptibility but was greater in waking than in hypnotic states for all subjects at all sites. Increases in alpha at all sites for all subjects occurred during hypnotic induction. The theta activity observed suggests that high hypnotizables have a greater capacity for selective attention and imagery and that during hypnosis all subjects experience enhancement of these abilities. The alpha results may suggest an increase in the focusing of subjects on internal processes during hypnosis and greater scanning of the environment after induction" (p. 2296).

Lubar, J. F.; Gordon, D. M.; Harrist, R. S.; Nash, M. R.; Mann, C. A.; Lacy, J. E. (1991). EEG correlates of hypnotic susceptibility based upon fast Fourier power spectral analysis. Biofeedback and Self-regulation, 16, 75-85.

Examined whether there were differences between high and low hypnotic susceptible subjects based upon fast Fourier power spectral analysis of the EEG recorded both before and during hypnotic tasks. Significant differences were obtained based upon EEG recording electrode location, EEG frequency within six different frequency domains, and hypnotic tasks. However, no main effect differences were obtained based upon hypnotic susceptibility. In contrast to some evoked potential studies in which a few differences have been obtained based on hypnotic susceptibility, the lack of any EEG differences in this study even when positive and negative hallucination tasks were employed may have implications for the role of the neocortex in mediating hypnotic phenomena.

#### NOTES

When this study was presented at the annual meeting of the Society for Clinical and Experimental Hypnosis in 1988, in Ashville, the authors remarked that, "Since EEG comes from cortex, the results might be due to subcortical levels. Therefore one should look at cerebral blood flow and metabolism."

1990

Badia, Pietro (1990). Memories in sleep: Old and new. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and cognition (pp. 67-76). Washington, DC: American Psychological Association.

#### NOTES

Reviews literature. Conclusion: First, with reinforcement for responding, control of learned behavior can be maintained reliably by stimuli presented during sleep. Second, when stimuli are presented 4 min or more apart, behavioral control results in little or no change in sleep structure, in daytime sleepiness, or in perceptions of sleep quality. Neither perceived wakefulness nor wakefulness as it is scored on the sleep record are necessary for responding, although stimulus/response events typically result in brief EEG or EMG change. Third, within-subject, within-night variance in responsiveness is complexly related to time of night, sleep stage, and REM/NREM cycle.

De Pascalis, Vilfredo; Penna, Pietronilla M. (1990). 40-Hz EEG activity during hypnotic induction and hypnotic testing. International Journal of Clinical and Experimental Hypnosis, 38 (2), 125-138.

The present study evaluates changes in left and right 40-Hz EEG production for 19 high and 20 low hypnotizable female Ss during the hypnotic induction and the administration of the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of the Weitzenhoffer and Hilgard (1962). Scalp recorded 40-Hz EEG density was obtained from the middle of the O1-P3-T5 and O1-P4-T6 triangles. As the hypnotic induction proceeded, high hypnotizable Ss exhibited a shift to greater right-hemisphere activity as compared to a waking-state restcondition. In contrast, low hypnotizable Ss, showed a reduction in left- and right-hemisphere activity. No differences between groups for SHSS:C ideomotor items were observed. A main effect for Hypnotizability among SHSS:C imaginative items was found. A Hypnotizability x Hemisphere x Trial interaction was found for both sensory distortion and imaginative SHSS:C items. A comparison was made between low versus high hypnotizable Ss of 40-Hz EEG activity while they passed the same item. The results of these comparisons indicate that differences in brain activity might be partially related to the differences between experiencing a hypnotic suggestion or failing to do so. Significant relationships between 40-Hz EEG production and hypnotizability and 40-Hz EEG production and level of amnesia were also found.

Edmonston, William E., Jr.; Moscovitz, Harry C. (1990). Hypnosis and lateralized brain functions. International Journal of Clinical and Experimental Hypnosis, 38, 70-84.

Bilateral EEG measures were obtained on 16 high hypnotizable Ss (scores of >8 on the Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962), while performing hemisphere-specific tasks during hypnosis and a no-

hypnosis control condition. Conditions and tasks were presented in counterbalanced order, and Ss served as their own controls. The data call into question the right hemisphere activation interpretation of lateralized brain function during hypnosis; rather, the data suggest a lack of task appropriate activity during hypnosis. The failure to attend to baseline activity measurements and the use of ratios to evaluate interhemispheric lateralization may contribute to potential misinterpretations of data. It is critical that activity changes of the separate hemispheres be taken into account in the interpretative process.

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189.

## NOTES

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

## DISCUSSION

The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

abourin, M. E.; Cutcomb, S. D.; Crawford, H. J.; Pribram, K. (1990). EEG correlates of hypnotic susceptibility and hypnotic trance: Spectral analysis and coherence. International Journal of Psychophysiology, 10, 125-142.

EEG was recorded during waking rest, hypnosis (rest, arm immobilization, mosquito hallucination, hypnotic dream), and waking rest. Twelve very low and 12 very highly hypnotizability subjects participated. Evaluations were fast-Fourier spectral analysis, EEG coherence between selected derivations, and maximum spectral power within EEG bands. In eyes-open and eyes-closed conditions in waking and hypnosis, highly hypnotizability subjects generated substantially more mean theta power than did low-hypnotizable subjects at all occipital, central, and frontal locations in almost all conditions of waking and hypnosis, with a larger difference in frontal locations. Both low and high hypnotizables showed increased mean theta power in hypnosis, suggesting an intensification of attentional processes and imagery enhancement. Mean alpha power was never a predictor of hypnotic susceptibility. Interactions with hypnotic susceptibility showed that highly susceptible subjects had more beta activity in the left than in the right hemisphere, whereas low-susceptible subjects showed only weak asymmetry. No main effects for or interactions between waking/hypnosis and hypnotic level were found for coherence between derivations or maximum spectral power within theta, alpha, and beta EEG bands

1989

Bick, C. H. (1989). An EEG-mapping study of 'laughing': Coherence and brain dominances. International Journal of Neuroscience, 47, 31-40.

Laughter is triggered by pleasurable psychoemotional stimuli and may have healing potential. According to split-brain studies, psychoemotional stimuli are bound up with emotional activity in the right side of the brain. This suggested the idea of studying laughter generated by different sources with regard to electrical brain activity in the right and left hemispheres. This study first used subjects in normal consciousness and with laughter under hypnosis to study the neurophysiological processes connected with laughter.

De Pascalis, Vilfredo; Marucci, Francesco S.; Penna, Pietronilla M. (1989). 40-Hz EEG asymmetry during recall of emotional events in waking and hypnosis: Differences between low and high hypnotizables. International Journal of Psychophysiology, 7, 85-96.

#### NOTES

Sixteen high and thirteen low hypnotizability women, who had participated in our previous study (De Pascalis et al., 1987), were enrolled in a hypnotic session. After the hypnotic induction they were requested to recollect 2 positive and 2 negative personal life experiences. IN our previous study subjects performed similar tasks in a waking-state. Hypnotizability was evaluated the first time with the HGSHS and, a second time, individually, with the Stanford C. The State Trait Anxiety Inventory, Maudsley Personality Inventory, and Tellegen Absorption Scale were administered.

Upper-trapezius electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 35-45 Hz band were recorded. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EEG amplitude and the left and right hemisphere 40-Hz EEG densities were obtained.

The data collected in hypnosis were compared with those in the waking-state. High hypnotizables, while they were in hypnosis, showed an increase of 40-Hz EEG density during emotional recall compared with rest periods. In contrast, low hypnotizables, after hypnotic induction, showed no density during emotional recall compared with rest periods. In contrast, low hypnotizables, after hypnotic induction, showed no density change during tasks compared to the rest conditions. Different hemispheric trends were found between groups. Highs showed an increase of 40-Hz EEG density over both hemispheres during positive emotions and a density increase in the right and a density reduction in the left during negative ones. This hemispheric trend was found in waking and hypnotic conditions although in the hypnotic condition more pronounced hemispheric patterns were observed. The Tellegen Absorption Scale was found positively related to hypnotizability and with the level of 40-Hz density increase on the right hemisphere during emotional tasks. High hypnotizables, with respect to the lows, were able to access affects more readily. They also showed a greater hemispheric specificity in waking and hypnotic conditions.

Spiegel, David; Bierre, Pierre; Rootenberg, John (1989). Hypnotic alteration of somatosensory perception. American Journal of Psychiatry, 146, 749-754.

The effects of hypnotic alterations of perception on amplitude of somatosensory event-related potentials were studied in 10 highly hypnotizable (HH) Subjects and 10 Subjects with low hypnotizability. The HH Subjects showed significant decreases in amplitude of the P100 and P300 waveform components during a hypnotic hallucination that blocked perception of the stimulus. When hypnosis was used to intensify attention to the stimulus, there was an increase in P100 amplitude. Findings are consistent with observations that HH individuals can reduce or eliminate pain by using purely cognitive methods such as hypnosis. Together with data from the visual system, these results suggest a neurophysiological basis for hypnotic sensory alteration.

#### NOTES

Four conditions were presented in random order to each Subject. Normal Attention - subjects were instructed to button-press each time they felt the target stimulus. Passive Attention - subjects were instructed to attend to the stimuli but not button-press. Hypnotic Attention - subjects received a hypnotic induction (eye closure and arm levitation, which provided behavioral confirmation; then instructed to attend carefully to the stimuli, which they were told to experience as 'pleasant and interesting,' and button-press in response to targets. Hypnotic Obstructive Hallucination - hypnotic induction exercise was followed by the hypnotic suggestion of a local anesthetic, such as novocaine, spreading from fingers to hand to forearm

on the stimulated limb; then instructed to make the limb cold, tingling, and numb; then told to button-press if they felt any of the target stimuli.

Experimenter was blind to hypnotizability scores.

Results were that the Highs showed significant decreases in P100 (45%) and P300 (38%) amplitudes during a hypnotic hallucination which blocked perception of the stimulus, but an increase (35%) in P100 amplitude when hypnosis was used to intensify attention to the stimulus. The authors view this as cognitive flexibility akin to the clinical situation in which high hypnotizables reduce or completely eliminate pain. They consider this evidence (along with earlier findings on similar blocking of perception in the visual system) of a neurophysiological basis for hypnotic sensory alteration.

1988

Aravindakshan, K. K.; Jenner, F. A.; Souster, L. P. (1988). A study of the effects of hypnotic regression on the auditory evoked response. International Journal of Clinical and Experimental Hypnosis, 36, 89-95.

Hypnotic regression in 6 hypnotizable Ss experienced in regression was studied by means of the auditory evoked response (AER). AER latency and amplitude is affected by arousal, attention, stimulus strength, and age. Ss aged between 27 and 61 years were regressed to the age of 7-9 years, and AERs were compared among three states of consciousness: normal awareness, hypnotic relaxation, and hypnotic regression. There was no change in AER morphology in the direction of that seen in children. Thus, age regression is not seen as a reversion to an earlier stage of neurological development but perhaps as role playing which is spontaneous and uninhibited, with the benefit of innocent belief in its accuracy.

NOTES

Raikov (1982) regressed 2 experienced Ss, comparing his results with those of actors acting as children and low hypnotizable subjects; he claimed to be able to reproduce neonatal reflexes in the highly hypnotizable Ss but not in the actors and low hypnotizable subjects.

AER's were used "because latency of the major waves and amplitude of the response is affected by level of arousal and attention..., strength of the stimulus, and, more importantly for this study, by age.... Surwillo (1981) noted that peak latencies of AERs were 16-21 msec longer in children aged 9-13 than in adults..." (p. 90)

DISCUSSION

Changes in the intensity of light stimulation can cause significant shifts in the amplitude and latency of the visual evoked response, but neither the amplitude nor the latency have been changed by suggested alterations in stimulus intensity during hypnosis (Andreassi, Balinsky, Gallichio, de Simone, & Mellers, 1976; Beck & Barolin, 1965; Beck, Dustman, & Beier, 1966; Zakrzewski & Szelenberger, 1981). Similarly, significant changes were seldom found in the AER with suggested variations of sound intensity during hypnosis (Amadeo & Yanovski, 1975) and in somatosensory responses to electrical stimuli applied to the fingers with suggested

anesthesia during hypnosis (Halliday & Mason, 1964). Deehan and Robertson (1980) were able to abolish the AER completely during hypnosis, but their stimuli were very different from that used in the present study.

"In all such studies, hypnosis and suggestions were aimed at changing the intensity of the stimulus to S's awareness, while the actual intensity of the stimulus was unaltered. In the present study, the authors attempted to find whether the morphology of the AER in children could be reproduced by age regression, without altering the nature or intensity of the stimulus in its delivery.... Like previous investigators, the present authors noticed that the tracings were cleaner and easier to produce during hypnosis (see Figure 1), although the changes in neurological development observed by Raikov (1982) were not evident" (pp. 93-94).

De Pascalis, Vilfredo; Silveri, Alessandra; Palumbo, Giovanni (1988). EEG asymmetry during covert mental activity and its relationship with hypnotizability. International Journal of Clinical and Experimental Hypnosis, 36, 38-52.

Parietal-occipital EEG was recorded bilaterally while 20 high and 20 low hypnotizable Ss performed, in the eyes-closed condition, 2 covert right-hemisphere tasks (visual long-term memory and fantasy) and 2 covert left-hemisphere tasks (multiplication and verbal long-term memory). Ss were not, however, hypnotized during any aspect of the psychophysiological testing. After each task, Ss rated orally their degree of involvement in the tasks. The integrated amplitude alpha, the alpha density, and the alpha ratio as a measure of hemispheric asymmetry, were evaluated. Finally, the proportion of relatively greater right activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks was used as index of hemispheric specificity. The high hypnotizable Ss showed significantly higher alpha amplitude than the low hypnotizables; the alpha amplitude was correlated with hypnotizability, while the alpha density was not. The alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than the same amplitude during left-hemisphere tasks, while no significant differences related to task-type were detected in the left hemisphere. The pattern of task-effect on alpha ratio scores was the same as that on alpha amplitudes. Verbal and multiplication ratings were related to the alpha ratio, imaginative- visual memory ratings were not. No differences in hemispheric specificity between high and low hypnotizable Ss were found to exist, and no relationship between hypnotizability and hemispheric specificity was observed.

#### NOTES

The authors review the literature on differences between the two hemispheres' involvement during hemisphere-specialized tasks. The ratio between left- and right-hemisphere alpha amplitudes has been shown to be a reliable measure of hemisphere lateralization as a function of task demands (Amochaev & Salamy, 1979).

They also review the literature on EEG asymmetry and hypnotizability. Most investigations used tasks with a problem solving component, whereas this study

used "a covert numeric task and other covert self-generated tasks in which the range of cognitive activities resembled natural thinking" (p. 40).

Purposes of this research were "to investigate whether (a) the amount of alpha in EEG is correlated with hypnotizability, (b) high hypnotizable Ss would reveal higher hemispheric specificities during covert mental tasks than low hypnotizable Ss, and (c) verbal-numeric tasks involve more left-hemisphere activation and imaginative-visual tasks more right-hemisphere activation" (p. 40).

The subjects were 40 women (from an original pool of 71), aged 19-23, with no previous experience using hypnosis. To minimize the possible effects of expectation, hypnosis was not mentioned in the invitation to participate in research. All subjects were tested first with the Harvard Group Scale of Hypnotic Susceptibility, then with the Stanford Scale of Hypnotic Susceptibility (SHSS:C). The SHSS:C was used to select 20 high hypnotizables (defined as having a score 1 standard deviation above the group mean of 6.51) and 20 low hypnotizables (with scores 1 standard deviation below the group mean). The mean score for highs was 10.05 (S.D. = .88) and mean score for lows was 2.75 (S.D. = 1.49).

Although subjects were selected on the basis of their measured hypnotizability, hypnosis was not used during the investigation's psychophysiological testing. However, they were required to relax and keep eyes closed during trials on the tasks. After each trial, the subjects rated their involvement in the task.

Tasks used for this research were: 1. Visual long-term memory. Ss were asked to recall from memory pictures, places, faces, or visual scenes that were in a movie, but not scenes with a negative content. 2. Fantasy. Ss were requested to fantasize about something new that they like (nothing from past experience, and nothing sexual). 3. Multiplication. Ss were asked to multiply 2 serially, as,  $2 \times 2 = 4$ ,  $x 2 = 8$ , etc., and to do it verbally without visual representation. 4. Verbal long-term memory. Ss were requested to think of some poem, speech, or other verbal material that they could recall from memory, and to repeat it mentally, to themselves.

Results can be summarized as follows.

Hypnotizability correlated .38 and .35 with right alpha amplitude and left alpha amplitude during baseline (statistically significant).

There was a significant association between alpha density and hypnotizability, when the group was divided at the median on density. (Alpha density = the time periods in which the alpha was present over the 6-second epochs accumulated during each 1-minute period which preceded the tasks). This association may be seen in the Table that follows:

SHSS:C Alpha Density Low High

+ 6 13

- 14 7

Chi Square = 3.61,  $p < .05$

There was a significant interaction between type of task (verbal-numeric, imaginative-visual memory) and hemisphere, which was attributable to changes in alpha amplitudes in right hemisphere, according to tasks. "Alpha amplitude of the right hemisphere during right-hemisphere tasks was significantly lower than during left-hemisphere tasks, while no significant differences were detected in the left

hemisphere as a result of the differences between left- and right-hemisphere tasks" (p. 44)

Alpha ratio = (Right-hemisphere alpha - Left-hemisphere alpha) / (Right-hemisphere alpha + Left-hemisphere alpha) exhibited the same pattern as for alpha amplitudes. The ANOVA 2 (high/low) x 2 (right tasks/left tasks) repeated measures on alpha ratio revealed a significant main effect for tasks, and a significant interaction between right-left tasks and hypnotizability. "During right-hemisphere tasks there were no significant differences ( $p < .5$ ) [sic] in alpha ratio between high and low hypnotizable groups, while during the multiplication task, the low hypnotizable Ss evidenced a higher mean alpha ratio ( $p < .05$ ) than the high hypnotizable group (.08 & .04, respectively); identical ratios were found during verbal tasks" (p. 45).

Task involvement was expected to be positively related with left-hemisphere tasks, but negatively related to right-hemisphere tasks (i.e. greater subjective involvement in the task would be associated with more negative alpha ratios, showing a bias towards right-hemisphere activation. "Verbal ratings were substantially related to alpha ratios ( $\rho = 0.82$ ;  $p < .01$ ), and multiplication ratings moderately related to alpha ratios ( $\rho = 0.31$ ;  $p < .05$ ); visual memory and fantasy ratings were not related to alpha ratios ( $r = -.04$  &  $r = -.18$ , respectively)" (p. 45).

Hemispheric specificity was defined as the proportion of greater relative right-hemisphere activation periods during right-hemisphere tasks minus the analogous proportion during left-hemisphere tasks. The authors did an analysis to "verify whether the task rating moderates the hemispheric specificity (i.e., the level of subjective involvement in a task is related to the level of hemispheric lateralization, while S is carrying it out)" (p. 46). They concluded that hypnotizability (SHSS:C) is not significantly related to Ss' hemispheric specificity.

In the discussion, the authors present a Table summarizing the results of similar investigations. They mention that the alpha-hypnotizability relationship may depend on which alpha variable is taken into account, or whether eyes-open/closed is varied. They conclude that the different methodological procedures render any comparison of results across studies very difficult.

They note that there was a significant correlation between alpha amplitude and hypnotizability even though Ss did not know in advance that hypnosis would be part of the experiment (the hypothesis proposed by Dumas, 1977, to account for this type of correlation). "One possible explanation of these data might lie in a different level of arousal in the high and low hypnotizable Ss: the high hypnotizable Ss might have been simply more relaxed than the lows.

"Nevertheless, his explanation must be taken with caution. The study of Paskewitz and M. T. Orne (1973), in fact, pointed out that in dark-adapted Ss, the relaxation condition does not produce increases of alpha activity. In a further study, contrary to previous reports, M. T. Orne and Paskewitz (1974) also found that a reduction in alpha activity is not a necessary consequence of apprehension or heightened arousal. Thus, it is not yet clear whether a decrease in anxiety tends to cause an increase in alpha density and vice versa" (p. 48).

Lorig, Tyler S.; Schwartz, Gary E. (1988-89). EEG activity during relaxation and focal imagery. Imagination, Cognition and Personality, 8, 201-208.

EEG activity was recorded in nine volunteer subjects while they engaged in eight cognitive tasks. The tasks involved mental arithmetic, relaxation imagery, food imagery and imagery related to "neutral" stimuli (bicycle and automobile). Period analysis of the EEG indicated significant differences in EEG factor activity related to tension and anxiety for the subtraction, relaxation and food imagery trials. Imagery of heaviness and the subject's favorite dessert produced EEG factor activity most characteristic of relaxation. Results of this study are discussed in terms of the relation of odor to food imagery and the ecological validity of the use of food imagery in relaxation training.

#### NOTES

Lorig, in a comparison of spectral and period analysis techniques, found that period analysis had greater sensitivity to task-related EEG effects. More recently, Lorig and Schwartz applied factor analysis to EEG period data and found that the factors identified tended to show greater homogeneity and correspondence to self-report than the traditional EEG bands of alpha, theta and beta. Period analysis reduces data to a histogram of the number of waves of various frequencies which occur during each 10 second data collection epoch for each task.

As is evident from Finding 1, the 8 tasks tend to stratify into two groups which either increase or decrease in Factor 1/theta activity over time. Those tasks which decrease over time seem to be performance or practice-related and include Serial subtraction of threes, of sevens, relaxation imagery of heaviness (HVY) and instructions to concentrate on the word "one" as they inhaled and exhaled (BCON). These tasks may change little in their cognitive demands on the subjects over time. The other tasks (imagery of their first bicycle, imagery of their earliest ride in a car, imagery of their favorite main course, imagery of their favorite dessert) may be more evocative to the Ss since they were asked to recall events from their personal experience. The recall of some of these experiences may kindle the subsequent recall of other events and account for the increases in theta and Factor 1. It is also possible that theta and Factor 1 are attention- related. Thus, as the S participates in a task which changes little over time, attention is diminished. If, however, the task continues to evoke other personally relevant events, attention will be maintained and may even increase over time. If this later hypothesis is correct, the Favorite Dessert task may be of use clinically since it produces EEG patterns associated with less tension and anxiety and also less boredom. This task also produced self-reports of greater happiness ( $p = .0001$ ) and was not different from relaxation imagery of heaviness and instructions to concentrate on the word 'one' as they inhaled and exhaled in self reports of relaxation, tension or calm.

The results of this study indicate that imagery of food, especially one's favorite dessert, has relaxation effects apparent in EEG and self-report. These effects may indicate that food-related odorants exert their relaxation effects by producing imagery of food. Such effects should not be surprising given the early history of

systematic desensitization training in which food was often used as a competing stimulus for anxiety-provoking stimuli.

Spiegel, David; Barabasz, Arreed F. (1988). Effects of hypnotic instructions on P300 event-related-potential amplitudes: Research and clinical applications. American Journal of Clinical Hypnosis, 31, 22-27.

Apparently conflicting findings in two recent studies of the effects of hypnotic hallucination on the P300 component of cortical event-related potentials are examined. In one study, Barabasz and Lonsdale (1983) found an increase in P300 amplitude in response to hypnotic anosmia instructions. However, Spiegel, Cutcomb, Ren, and Pribram (1985) obtained a decrease in P300 amplitude after instructing high hypnotizables that an imaginary cardboard box blocked their view of the stimulus generator. These differences are reconciled on the basis of differences in the hypnotic instructions given. The former study employed language which emphasized negation ("You will not smell anything at all"), while the latter had subjects focus on a competing obstructive hallucination. The anosmia subjects were surprised when they smelled anything at all, leading to an enhanced P300 response, while the subjects in the visual study were so absorbed in the hallucinated obstruction that perception of the stimulus was reduced. Clinical implications of these two studies are examined.

1987

De Pascalis, Vilfredo; Marucci, Francesco; Penna, Pietronilla M.; Pessa, Eliano (1987). Hemispheric activity of 40 Hz EEG during recall of emotional events: Differences between low and high hypnotizables. International Journal of Psychophysiology, 5, 167-180.

This study evaluates individual differences in hypnotizability as reflected in waking-state hemispheric engagement during recollection of 3 positively and 3 negatively valenced personal life events. The State-Trait Anxiety Inventory, Maudsley Personality Inventory, Tellegen Absorption Scale and Harvard Group Scale of Hypnotic Susceptibility (Form A) were administered. Electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 40-Hz band were recorded during rest and task conditions in 22 high and 21 low hypnotizable women. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EMG amplitude and both hemisphere 40-Hz EEG densities were obtained. A 40-Hz EEG ratio, as a measure of hemispheric asymmetry, and a hemispheric specificity index were also computed. High hypnotizables showed significantly lower 40-Hz EEG density than low hypnotizables in all experimental conditions. The relationship between lateralization of 40-Hz EEG and emotional processing was moderated by hypnotizability. High hypnotizables, with respect to rest condition, showed an increase of density over both left and right hemispheres during two of the three positive emotional tasks, while they showed a depressed activity over the left and an increased activity over the right during negative emotional tasks. Low hypnotizables, on the other hand,

did not exhibit differential hemispheric patterns that could be attributed to different emotional valences. The high group showed greater hemispheric specificity in the predicted direction than the low group. High subjects exhibited greater ratings of absorptive ability and emotional feeling than low subjects. Anxiety and EMG levels did not differ between groups. EMG was dependent on the type of emotion which showed greater activity in the negative emotion condition compared with the positive one.

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126. Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

#### NOTES

Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the

number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

1886

De Pascalis, Vilfredo; Palumbo, Giovanni (1986). EEG alpha asymmetry: Task difficulty and hypnotizability. Perceptual and Motor Skills, 62, 139-150.

Parieto-occipital EEG alpha was recorded bilaterally, while 20 high- and 20 low-hypnotizable women performed one left-hemisphere and one right-hemisphere task of low difficulty and two other comparable tasks of high difficulty. Every task was performed twice, once with eyes open and once with eyes closed. All subjects were right-handed. The tasks were originally selected to be of high and low difficulty. The subjective rating of task-difficulty was also evaluated. The integrated amplitude alpha and the alpha ratio ( $R - L / R + L$ ) were the dependent variables. The highly hypnotizable women showed significantly higher alpha amplitude in eyes-closed condition than the low scorers; this difference disappeared during task performance and in the eyes-open condition. The left- tasks showed lower alpha amplitude in both hemispheres than right-tasks and baseline. The right-hemisphere alpha amplitude was lower than left in all experimental conditions. On tasks of high and low difficulty there was different hemispheric behavior on right and left tasks. Performance reflecting the right and left hemispheres in the low-difficulty condition showed no changes between baseline, right- and left-tasks, while under high difficulty there was a decrease in alpha amplitude in the right and even more marked decrease in the left hemisphere during left-tasks. The pattern of task effects for ratio scores was the same as for alpha amplitude, however, despite the analysis of alpha scores, an interaction of hypnotizability x task-difficulty was detected. The highly hypnotizable women showed less negative alpha ratio during a task of low difficulty than during tasks of high difficulty; the reverse was true for the low-hypnotizable women. Finally, the highly hypnotizable subjects showed less subjective difficulty during performance than the low scorers.

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant

increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

## NOTES

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

**Experimental Protocol:** 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia; arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of Clinical and Experimental Hypnosis*) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved

over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

" In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), *Biofeedback: Behavioral medicine.* New York: Grune & Stratton, Pp. 147-165.

Serman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), *Biofeedback: Behavioral medicine.* New York: Plenum, 1977, Pp. 167-200.

Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.

## NOTES

Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.

Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical

(primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).

With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.

Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and

motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses.

The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from thalamus; low level of awareness as in twilight sleep or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus reticular activating system influences; associated with increased inhibitory thalamic and septal-hippocampal impulses radiating upward to the cortex.

In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit.

The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory septal-hippocampal complex which generates theta-wave activity, thus accounting for the close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1 sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even

though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self- concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

" ... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103).

The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

## 1985

Banyai, Eva I.; Meszaros, Istvan; Csokay, Laszlo (1985). Interaction between hypnotist and subject: A social psychophysiological approach (preliminary report). In Waxman, David; Misra, Prem C.; Gibson, Michael; Basker, M. Anthony (Ed.), Modern trends in hypnosis (pp. 97-108). New York: Plenum Press.

There is a vast amount of literature demonstrating that hypnotic susceptibility is a stable personality trait. In the course of our practice of teaching beginners to hypnotize, however, it occurred to us that hypnotists without sufficient previous training frequently measured a lower level of hypnotic susceptibility than the true score. It has to be emphasized that hypnosis is a special altered state of consciousness which develops as a result of an interaction between a hypnotist and a subject. The failure of beginners to induce hypnosis could be explained by considering an insufficient participation of the hypnotist in this interaction. The purpose of the present study was to analyze the necessary and sufficient subjective,

behavioral and physiological alterations in both participants of the hypnotic interaction. During successful and unsuccessful hypnotic inductions the subjective experiences, behavioral manifestations and physiological indicators including respiration, ECG, EMG, EOG, GSR and bilateral fronto- occipital EEG leads, were recorded simultaneously in the hypnotists and the hypnotized subjects. The results indicate that hypnotic induction is successful if a mutual "tuning" of the other person occurs not only on the subjective and behavioral levels, but first of all on the psychophysiological level.

Spiegel, David; Cutcomb, Steven; Ren, Chuan; Pribram, Karl (1985). Hypnotic hallucination alters evoked potentials. Journal of Abnormal Psychology, 94 (3), 249-255.

Brain electrical potentials evoked by visual stimulation were analyzed to study the neurophysiological mechanism associated with hypnotic hallucination. The visual evoked responses of 6 high- and 6 low-hypnotizable subjects were compared in three hypnotic conditions: stimulus enhancement, stimulus diminution, and stimulus elimination (obstructive hallucination). High-hypnotizable individuals demonstrated significant suppression of the later components of the evoked response (N1 and P3) while experiencing obstructive hallucinations, indicating a change in information processing. This effect was significantly greater in the right, as compared to the left, occipital region.

#### NOTES

In the stimulus enhancement condition, Ss were told that one of two colored stimuli would appear unusually bright and interesting. In the stimulus diminution condition, Ss were told that the alternate color stimulus would appear drab, dull, uninteresting. In the obstructive hallucination condition, Ss were told to visualize a box that blocked their view of the TV monitor, making it impossible to see anything on the TV screen. The stimuli were 8 cm x 8 cm squares (colored gratings) presented 1 meter in front of S: 50% were blue vertical gratings, 50% were pink horizontal gratings.

Ss were told to press a button in response to any stimulus they happened to see; hence all stimuli were potential targets. To control for the effect of motor potentials when they pressed the button, a button-pressing/passive-attention control group was added. Only results significant beyond this control group were attributed to a hypnotic hallucination effect. A second control group of medium level hypnotizable Ss were required to (a) button press after each stimulus presentation and (b) attend passively to the TV monitor screen without button pressing. "Thus, we had three control conditions: (a) for attentional demands, comparing the performance of high hypnotizables in the obstructive hallucination versus the hypnotic stimulus enhancement condition, (b) for hypnotizability, in comparing the high hypnotizables in the obstructive hallucination condition versus the low hypnotizables in the same condition, and (c) for button-pressing behavior, comparing the performance of the high hypnotizables to that of control subjects in press versus no-press conditions" (p. 250).

In their discussion, the authors state, "Our results are consistent with the hypothesis that an hypnotic instruction of obstructive hallucination among high- hypnotizable

subjects is accompanied by a decrease in the amplitude of the P3 component of the evoked response throughout the brain, and of the N2 and P3 components in the occipital region. This dampening of amplitude is particularly notable among high hypnotizables in the right, as compared with the left, occipital area, suggesting greater inhibition of scalp-recorded response to a visual stimulus in the right hemisphere.

"These data show that while experiencing an obstructive hallucination blocking the stimulus, high-hypnotizable subjects demonstrate a change in the information-processing components of the evoked response (Baribeau-Braun, Picton, & Gosselin, 1983), rather than primarily in channel selection, which is reflected more by P1 and N1 (Ford, Roth, Dirk, & Kopell, 1978; Hillyard & Picton, 1979). Although there were differences at P1 and N1 between high and low hypnotizables, they were not significantly greater than those observed in the press/no-press control group. These observations make it possible to address several alternative explanations for the findings, such as the possibility of differences in nonspecific arousal leading to a differential preparation (Naatanen, 1969), which should be reflected primarily in changes in the early components, as would any differences in pupil size. Drowsiness or inattention in this condition should be associated with an increase, rather than a decrease, in response amplitudes (Schacter, 1976). The possibility that high hypnotizables might have defocused their view of the monitor (Schulman-Galambos, & Galambos, 1978) is made less likely by the fact that defocusing is accompanied by increases in P1 latency (Sokol & Moskowitz, 1981), whereas there were no P1 latency differences in the obstructive hallucination condition" (p. 254).

1984

Cocores, James A.; Bender, Andrew L.; McBride, Eugene (1984). Multiple personality, seizure disorder, and the electroencephalogram. Journal of Nervous and Mental Disease, 172, 436-438.

Used the EEG to study multiple personality in a 48-yr-old ambidextrous male admitted for alcohol detoxification and individual psychotherapy. Despite conflicting reports in the literature, no changes in the EEG were found that could not be ascribed to the normal changes seen in transitions from various states of alertness. The problems of differentiating multiple personality as a psychiatric entity in itself from those cases arising as a result of chronic partial or partial-complex epilepsy are discussed.

Gott, Peggy S.; Hughes, Everett C.; Whipple, Katherine (1984). Voluntary control of two lateralized conscious states: Validation by electrical and behavioral studies. Neuropsychologia, 22 (1), 65-72.

A subject is described who can voluntarily select and hold either of two qualitatively different states of consciousness. Evidence is presented which confirmed differential left or right hemisphere dominance in each state. Asymmetries of EEG alpha and task performance scores indicated a state-dependent shift in functional lateralization. Evoked response studies showed directional changes in rate of interhemispheric transmission correlated with state-related hemisphere dominance.

These findings demonstrated the capability for voluntary endogenous control of cerebral dominance under natural conditions.

#### NOTES

A personal communication (letter) from Gott indicates the S switches from one state to the other by visualizing her surroundings and imagining what it would look like in the other state. Immediately she finds herself in that other state. Her drawings demonstrate that her perspective must differ in the two states.

La Briola, Flora; Karlin, Robert; Goldstein, L. (1984, October). Quantitated EEG changes from prehypnotic to hypnotic periods. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Hemisphere EEG activation was measured before and during hypnosis, while Ss did tasks described as right-hemisphere (nonverbal) and left hemisphere (verbal). Highs shifted to relatively more task specificity as they went from prehypnosis into hypnosis, with a shift to right hemisphere as they went from prehypnosis to hypnosis periods. This is not due to relaxation, as both highs and lows relax. And the shift occurs not only on verbal-nonverbal tasks but on analgesia studies also.

Versions of this paper were presented at the 93rd Annual Meeting of the American Psychological Association, Toronto, Canada, 1984, at the Annual Meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX, 1984, and at the 6th International Symposium on Clinical Neurophysiological Aspects of Psychiatric Conditions, Izmir, Turkey, 1985.

#### 1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.

Nash, John (1983). Negative visual hallucination and concomitant changes in cortical event-related potentials (Dissertation, University of California, Santa Barbara). Dissertation Abstracts International, 45 (2), 716-B. (Order No. DA 8411224)

The purpose of this investigation was to examine the effects of negative visual hallucination (NVH) on cortical event-related potentials (ERPs), and to compare these effects with those of selectively attending to and ignoring stimuli. Five highly hypnotically susceptible subjects, four female and one male, were trained to block from subjective experience, i.e., negatively hallucinate, a ring of strobe-illuminated circles surrounding a central, independently strobe-illuminated circle. This stimulus array was modeled after part of the Titchener-Ebbinghaus circle illusion, since previous research had shown that subjects could attenuate the effects of the optical illusion via NVH of the outer, illusion-producing circles. "Analysis of the ERP data revealed amplitude and latency changes in various ERP components across the three experimental conditions (Attend, Ignore, NVH) for the four female subjects, a negative result which is explained in motivational terms. "The most noteworthy finding was the selection of the P3 amplitude variable at C2 by stepwise discriminant analysis for the four females, and the fact that this amplitude systematically decreased across conditions from largest in Attend to smallest in NVH. A variety of individual patterns were observed in terms of other ERP components which allowed discrimination (successful classification) among the three conditions. The results suggest that both Ignoring and NVH of a stimulus result in a decrease in the subjective certainty of perception of the stimulus. Individual differences in patterns of ERP changes are interpreted in terms of differing strategies for execution of the experimental instructions. The results support the view that NVH instructions produce distinctive ERP effects and that NVH generally can be viewed as an extreme level of ignoring" (p. 716).

1982

Barabasz, Arreed F. (1982). Restricted environmental stimulation and the enhancement of hypnotizability: Pain, EEG alpha, skin conductance and temperature responses. International Journal of Clinical and Experimental Hypnosis, 30, 147-166.

Restricted environmental stimulation procedures were used with 10 Ss. The Stanford Hypnotic Clinical Scale: Adult, modified to include a posthypnotic suggestion for an analgesic reaction, and pain threshold and tolerance tests were administered prior to restricted environmental stimulation technique (REST), immediately after REST, and 10-14 days later. Occipital EEG alpha, skin conductance, and peripheral, core, and chamber temperature data were collected prior to, during, and after REST. A control group of 10 Ss was used to assess the effects of repeated hypnosis upon susceptibility scores and demand characteristics of the experiment. Multivariate analysis of variance results showed SHCS and pain tolerance scores to be significantly enhanced for Ss exposed to REST immediately after and 10-14 days later. Orne's (1959) postexperimental inquiry technique did not reveal experimental demand characteristics which might account for the results. EEG alpha density increased significantly in REST, but the increase was not progressive during the REST period. The maintenance of hypnotizability and pain tolerance at follow-up failed to support Reyher's (1965) theory of brain function and

behavioral regulation. E. R. Hilgard's (1977) neodissociation interpretation combined with J. R. Hilgard's (1974, 1979) imaginative involvement findings is viewed as a possible explanation.

Blum, Gerald S.; Nash, John K. (1982). EEG correlates of posthypnotically controlled degrees of cognitive arousal. Memory and Cognition, 10, 475-478.

Experimental control over five degrees of cognitive (as opposed to organismic) arousal has been developed by hypnotic programming techniques. Previously these posthypnotic manipulations have been applied to the investigation of diverse topics such as visual discrimination, performance on the Stroop test, selective concentration on color versus form of consonants, and cognitive "reverberation." The present study explored EEG correlates of the five degrees of cognitive arousal in a task requiring participants to visualize objects for one-minute periods while lying on a couch with eyes closed. Analysis of data from the occipital area in left and right hemispheres revealed that the highest degree of arousal was accompanied by larger amplitudes of alpha and beta power and smaller amplitudes of theta. This pattern of results was similar in both hemispheres, although more marked in the left. The findings, which provide an independent source of support for validity of the hypnotic programming, are discussed in relation to EEG literature on cognitive activity.

#### NOTES

Hypnosis doesn't enhance imagery. It provides the conditions under which mental alertness may be manipulated, and very clear imagery is associated with the alert condition whereas blurry imagery is associated with the lowest cognitive arousal condition. The other impression comes from clinical work, i.e. that hypnosis enhances imagery. This article is an example of hypnosis used in other research--see last page.

Cutcomb, Steven Donald (1982, May). Studies in the brain correlates of human cognitive function (Dissertation, Stanford University). Dissertation Abstracts International, 42 (11), 4609-4610-B.

Three studies in the electrophysical correlates of human cognitive function are described. In study one, colored gratings were presented tachistoscopically to humans in two selective attention paradigms based upon the design of Hansen and Hillyard (1980), and Hillyard, Hink, Schwent, and Picton (1973). Visual event-related potential (ERP) data from Fz, Cz, Pz, T5, T6, O1, and O2, and behavioral responses were collected, and averaged ERPs were subjected to feature extraction (P1, N1, P2, N2, and P3 amplitudes and latencies) as well as a principle components factor analysis. Both analyses revealed a significantly larger N2 component in the visual ERP, peaking at 310 msec and maximally frontally, during attending to task-relevant (attended-channel) stimuli. The P3 component was significantly larger in response to all attended-channel stimuli. In study two, the task was repeated using a group of six high and six low susceptible subjects during hypnosis. ERPs from Fz, Cz, Pz, O1, and O2, and behavioral responses were recorded during the task, and during a hypnotic suggestion of a negative hallucination (obstructed view of the

stimulus monitor) while the stimuli were presented. The averaged ERP data was subjected to feature extraction followed by analyses of variance. No inter-group differences were found in the ERPs during the selective attention tasks. "During the obstructed view suggestion, the lows showed a normal visual ERP, while the highs had a visual ERP with a significantly diminished P1, P2, N2, and P3 component amplitude at O1 and O2. These results are evidence for an altered brain response during the obstructed view suggestion in high susceptible hypnotized subjects. "In study three, EEG were recorded from twelve high and twelve low susceptible hypnotic subjects (frontal, central, occipital) during baseline and hypnotized conditions. Data were transformed to normalized theta and alpha-band power spectral averages for each group. No significant inter-group alpha differences were found. Highs had significantly more relative theta energy frontally. During hypnotic tasks, the highs showed higher relative theta power at all leads. These results are consistent with the trait conception of hypnotic susceptibility" (pp. 4609-4610).

Larbig, W.; Elbert, T.; Lutzenberger W.; Rockstroh, B.; Schnerr, G.; Birbaumer, N. (1982). EEG and slow brain potentials during anticipation and control of painful stimulation. Electroencephalography and Clinical Neurophysiology, 53, 298-309.

Cerebral responses in anticipation of painful stimulation and while coping with it were investigated in a 'fakir' and 12 male volunteers. Experiment 1 consisted of 3 periods of 40 trials each. During period 1, subjects heard one of two acoustic warning stimuli of 6 sec duration signaling that either an aversive noise or a neutral tone would be presented at S1 offset. During period 2, subjects were asked to use any technique for coping with pain that they had ever found to be successful. During period 3, the neutral S2 was presented simultaneously with a weak electric shock and the aversive noise was presented simultaneously with a strong, painful shock, again under pain coping instructions. EEG activity within the theta band increased in anticipation of aversive events. Theta peak was most prominent in the fakir's EEG. A negative slow potential shift during the S1-S2 interval was generally more pronounced in anticipation of the aversive events than the neutral ones, even though no overt motor response was required. Negativity tended to increase across the three periods, opposite to the usually observed diminution. In Experiment 2, all subjects self-administered 21 strong shock-noise presentations. The fakir again showed more theta power and more pronounced EEG negativity after stimulus delivery compared with control subjects. Contrary to the controls, self-administration of shocks evoked a larger skin conductance response in the fakir than warned external application.

#### NOTES

A published case study by Pelletier (1977) reported EEG theta enhancement during pain control states, which were maintained by EEG feedback of alpha and theta bands. That author concluded that EEG theta was necessary for the control of pain psychologically.

The authors of this article measured slow brain potentials (SBPs) and vertical eye movements (VEMs). Principal components analysis of the EEG wave forms found

three components: theta (4-5.6 c/sec), alpha band (9-10 c/sec) and high frequencies (above 14.4 c/sec) plus harmonics loading in frequencies of 3.2-4.5 c/sec, 7.5-9, and above 15 c/sec.

Alpha "decreased over periods in the parietal record and was virtually absent in the fakir's EEG during period 3" (p. 301). The fakir had a lot of non-sinusoidal, especially square wave, activity.

"Very pronounced negativity was recorded preceding the aversive S2, greater than under neutral stimulus conditions .... This difference was most pronounced at the vertex ... The late negativity increased over periods in control subjects ... especially in anticipation of the aversive S2 ... . This contrasts with the usually observed decrease of SBP components over trials. As is shown in Figure 2, the PCA [principal components analysis] yielded two components for the 2.0 sec S2 interval, a positive deflection, which can be assigned to the P300 complex (here not reported), and a negative deflection, labeled post- imperative negative variation. ... This negative component increased over periods, being more pronounced in response to the aversive stimulation ... with increasing differentiation over period ..." (p. 302-303).

The fakir undertook an elaborate self hypnosis or trance induction to achieve analgesia that he had previously demonstrated in the laboratory (thrusting 4 unsterilized metal spikes into his abdomen, tongue, and neck without bleeding). This included "long- continued fixation on a point above the eye-brows. Blank facial expression, staring eyes, and a very low rate of eye-blinks indicated a trance-like state (periods without eye-blinks more than 30 min)" (p. 299). During the experiment itself, the fakir showed few ocular movements during the second and third periods. He also demonstrated large skin conductance responses, recorded from the second phalanges of the index and middle fingers of the left hand, to the aversive S1.

Experiment 2 was designed to emulate the self-administered aversive stimulation that the fakir routinely undertook, by having the volunteer Ss hold a switch that they pressed twice/minute, giving themselves a mild shock and an aversive noise. (These were the same aversive stimuli as were used in Experiment 1.) There were 21 self-paced button presses.

Three additional measures were taken: 1. Bereitschaftspotential (BP) - the mean negative shift during the 0.3 sec interval prior to the motor response of pressing the switch 2. Postimperative component (PINV) - the mean negative shift 0.9 to 1.9 sec after stimulus onset, i.e. elicited by closing the microswitch 3. Skin conductance response (SCR) - maximum change in skin conductance level during five second interval after the motor response of pressing the switch.

The fakir, but not the control Ss, showed a pronounced precentral PINV on each single trial of Experiment 2. He also showed pronounced SCRs (indicating autonomic arousal), which was even greater than the SCRs of control Ss. His subjective pain rating was 1 in Experiment 1 (compared with 6.4 for controls) but 8 during Experiment 2 (compared with 5.7 for controls), on a scale of 1 to 10 maximum. Thus the fakir's pain increased from Experiment 1 to 2, while for many volunteer Ss it decreased 2 or 3 points. When interviewed, he said that "intention and motor commands prevented the fakir from getting into 'trance' satisfactorily. Consequently, he reported to have experienced the aversive stimuli as more painful

than in experiment 1. Thus it might be that the observed PINV indicates the noncontingency between the demand for coping and the failure to cope or the discrepancy between expected control and presently experienced control" (p. 307). In their Discussion, the authors speculate that control of pain such as can be achieved by the fakir may involve dissociation of higher (possibly thalamic and cortical) and lower (reticular formation) arousal structures. Their observation of slow brain potentials (theta) recorded in anticipation of painful or aversive stimuli is in agreement with earlier published studies. However their observation of increasing negativity in anticipation of aversive stimuli is in contrast to previous research findings, in which diminution of negativity is generally observed. Both the fakir and subjects showed a post-stimulus negative shift in response to the S2; this has been "observed in normal subjects under conditions of change from controllable to uncontrollable aversive stimuli... and/or from obvious response-consequence contingencies to unpredictable control over the S2... PINVs were associated with an unexpected change in contingency or the inability to resolve ambiguity. Since a relationship was found between PINV amplitude and subjective ratings or experienced aversiveness of the painful stimulation, it may be speculated that obvious failure in coping with pain (i.e. more experienced pain) together with the requirement to cope (induced by instructions and experimental setting, giving rise to increased expectancy for control), produced a PINV (and probably feelings of uncontrollability together with a state of reactance and frustration) in the present experiments. In accordance with this point of view, it is of particular interest that only the fakir showed a more pronounced PINV in experiment 2, in which subjects delivered the painful stimuli to themselves. A postexperimental interview revealed that intention and motor commands prevented the fakir from getting into 'trance' satisfactorily" (p. 307).

1981

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.

#### NOTES

Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus

circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.

**Experiment 1.** Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.

The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15, 16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.

The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.

Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments.

In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more

successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

**Experiment 2.** The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

**Results.** "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a consistency of responses over experimental sessions that were widely separated in time, making conscious or unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous

hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

N.B. None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136.

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6 seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

NOTES

Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory. The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum. ...

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is

associated with altered states of consciousness (Tebeis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that hypnosis has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical pain were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

Karlin, Robert; Goldstein, Leonide; Cohen, Allen (1981, October). A shift to the right: EEG during hypnotic induction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Portland, OR.

Bilateral electroencephalographic activity was recorded from temporal and occipital sites during a resting baseline and hypnotic induction periods. Results indicated that highly hypnotizable subjects showed a shift to greater right hemisphere activation when the hypnotic induction period was compared to the resting baseline period. This was not the case for the less hypnotizable subjects. This study replicates the recent findings of MacLeod-Morgan (1982).

1980

Barabasz, Arreed F. (1980). EEG alpha, skin conductance and hypnotizability in Antarctica. International Journal of Clinical and Experimental Hypnosis, 63-74.

On the basis of alternative hypotheses in the literature, 9 invited Ss undergoing wintering-over isolation at Scott Base, Antarctica, were tested for EEG alpha and hypnotizability. 8-channels of EEG, bipolar skin conductance (SC) and hypnotizability data were collected at Scott Base prior to and following the wintering-over isolation. Significant increases in alpha density and hypnotizability were found in Ss following isolation. The previously reported relationship between

simple eyes closed alpha density and hypnotizability was not found prior to isolation; however, this correlation approached significance following isolation. The possible influence of psychophysiological arousability on baseline EEG alpha records was considered. Correction of EEG records using SC indices of arousal resulted in a significant correlation between EEG alpha and hypnotizability following isolation. A tendency toward significance was evident in the pre-isolation, SC corrected, correlation. The significant influence of environment on EEG alpha and hypnotizability is discussed as is the use of SC arousal indices to enhance EEG alpha/hypnotizability correlations.

**Karlin, Robert; Morgan, Donald; Goldstein, Leonide (1980). Hypnotic analgesia: A preliminary investigation of quantitated hemispheric EEG and attentional correlates. Journal of Abnormal Psychology, 39 (4), 591-594.**

The effects of hypnotically induced analgesia were studied in six subjects rated as moderately hypnotizable and five subjects rated as highly hypnotizable. Subjective pain reports and electroencephalographic (EEG) activation were recorded during 1-minute periods of cold-pressor stimulation. Both groups of subjects reported decreased pain during hypnosis, but the decrease was greater for the highly hypnotizable group. During hypnotic analgesia, immersion of either the right or the left hand in ice water was correlated with contralateral EEG activation for moderately hypnotizable but not for highly hypnotizable subjects ( $p < .05$ ). Lack of contralateral shift was correlated for the whole sample ( $p < .05$ ) and within groups ( $p = .05$ ) with success on an attentional task related by previous research to hypnotizability as well as with reports of reduced pain ( $p < .05$ ).

#### NOTES

A previous study shows hypnotizability predicts ability to allocate attention selectively (to selectively increase and decrease the salience of stimuli. This study shows hypnotizability also is related to ability to control cortical activation from a pain stimulus, so that pain is not [subjectively] experienced. The test of ability to attend selectively (in waking state) correlated with the [expected contralateral] cortical activation .58. Thus highs have attentional skills not as evident among mediums or lows. Whether these are amplified by hypnosis is another question.

**Rizzo, Paolo Andrea; Amabile, Giuseppe; Fiumara, Romano; Caporali, Manlio; Pierelli, Francesco; Spadaro, Maria; Zanasi, Marco; Morocutti, Cristoforo (1980). Brain slow potentials and hypnosis. Biological Psychiatry, 499-506.**

#### SUMMARY

Contingent negative variation behavior was studied in 12 voluntary normal subjects in basal conditions and in the hypnotic trance state under different emotional suggestions. A CNV voltage decrease and the appearance of a PINV were observed in the hypnotic state. Furthermore 12 nonhypnotizable control subjects were tested under the same experimental conditions and no CNV modification was found" (p. 505).

1978

Lehrer, Paul M. (1978). Psychophysiological effects of progressive relaxation in anxiety neurotic patients and of progressive relaxation and alpha feedback in nonpatients. Journal of Consulting and Clinical Psychology, 46 (3), 389-404.

Gave 10 anxiety neurotic patients 4 sessions of individual instruction in progressive relaxation; 10 patients served as waiting list controls. 10 nonpatients were assigned to each of the same conditions, and an additional 10 nonpatients were given 4 sessions of alpha feedback. Nonpatients showed more psychophysiological habituation over sessions than patients in response to hearing 5 very loud tones and to a reaction time task. Patients, however, showed greater physiological response to relaxation than did nonpatients. After relaxation, the autonomic responses of the patients resembled those of the nonpatients. The effects of relaxation were more pronounced in measures of physiological reactivity than in measures of physiological activity. Defensive reflexes yielded to orienting reflexes more readily in nonpatients than in patients. There was also a tendency for progressive relaxation to generalize to autonomic functions more than alpha feedback.

Parwatarikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

1977

Crosson, B.; Meinz, R.; Laur, E.; Williams, D.; Andreychuk, T. (1977). EEG alpha training, hypnotic susceptibility, and baseline techniques. International Journal of Clinical and Experimental Hypnosis, 25, 348-360.

3 alpha feedback sessions of 40 minutes were administered after a similar baseline period without feedback to 12 Ss high in hypnotic susceptibility and 12 Ss low in hypnotic susceptibility. Hypnotic susceptibility was not a significant dimension in alpha feedback training and previously reported relationship between alpha density and hypnotic susceptibility were not generally found. Evidence did support the efficacy of the current baseline procedure over others more commonly used. The possibility under certain conditions of there being a relationship between hypnotic susceptibility and alpha density and theoretical considerations in recording baseline are discussed.

Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

Pelletier, K. R.; Peper, E. (1977). Developing a biofeedback model: Alpha EEG feedback as a means for pain control. International Journal of Clinical and Experimental Hypnosis, 25, 361-371.

3 adept meditators voluntarily inserted steel needles into their bodies while physiological measures (EEG, EMG, GSR, EKG, and respiration) were recorded. Although each adept used a different passive attention technique, none reported pain. During the insertion, 2 of the 3 Ss increased their alpha EEG activity. The role of alpha EEG and its relationship to pain control is discussed.

#### NOTES

The three adepts studied were: (1) RCT, a 34 yr old Ecuadorian who had "demonstrated control over pain by placing bicycle spokes through his body, being suspended from hooks inserted under his shoulder blades, and walking through fire -- all without reported pain or observed damage to his skin;" (2) JSL, a 31 yr old Korean karate expert, who "suspended a 25-pound bucket of water from a

sharpened spoke placed through a fold of skin on his forearm;" and (3) JS, a 50-yr old Dutch meditator who had "demonstrated pain and bleeding control" (pp. 363-365). "RCT, JSL, and JS each remarked that pain is principally fear of and attention to pain, and they maintained that anyone can learn to control pain through relaxation and passive attention" (p. 367). Both JS and RCT had increased alpha EEG activity during piercing, whereas JSL showed no increase. The authors suggest that "the karate expert practiced a very focused meditation, during which he mentally saw and felt the ki energy as a point, while RCT and JS employed passive attention and did not attend to the body stimuli. Thus, it is possible for physiological measurements to reflect strategies used in dissociation of pain perception, and that the quality of pain perception is altered if S is at either extreme of focused or unfocused conscious attention" (p. 368). "We hypothesize that, for nonadepts, alpha EEG training without alpha blocking to stimuli could become a distraction technique whereby S again could learn self-control and competence as he becomes more successful in controlling his EEG" (p. 369).

1976

Cooper, Leslie M.; London, Perry (1976). Children's hypnotic susceptibility, personality, and EEG patterns. International Journal of Clinical and Experimental Hypnosis, 24, 140-148.

19 boys and 16 girls, aged 7 to 16, were given the EEG and then the Children's Hypnotic Susceptibility Scale, while a parent watched. About 1 week later, after some separate tests and interviews, each child was given a puzzle to solve in the parent's presence, while Es recorded offers and requests for help. Hypnotic susceptibility was positively correlated with the alpha duration with eyes open, but not with eyes closed. Both susceptibility and alpha duration tended to be negatively correlated with age. Highly susceptible children tended to wait longer than low susceptibles before asking parents for help with the puzzle, and their parents tended to be more strict, anxious, and impatient than did the parents of low susceptible children.

London, Perry (1976). Kidding around with hypnosis. International Journal of Clinical and Experimental Hypnosis, 24 (2), 105-121.

This paper reviews a long term research project relating hypnotic susceptibility to performance and personality variables. Several experiments indicated that people who are low in hypnotic susceptibility try harder than high susceptibles for maximum performances on strength, endurance, psychomotor coordination, and cognitive tests, though high susceptibles are generally more pleased with their own performances. Other experiments indicated that people of high hypnotic susceptibility have slower brain-wave patterns under relaxed, nonhypnotic conditions, than do low susceptibles. These findings, together with a third set of findings on the developmental character of hypnotic susceptibility, led to the theory that hypnotic susceptibility and brain-wave patterns are both inversely correlated with achievement motivation and with its developmental roots in childhood independence training. An elaborate research program was initiated to investigate the hypothesized relationships.

1975

Melzack, Ronald; Perry, Campbell (1975). Self-regulation of pain: The use of alpha-feedback and hypnotic training for the control of chronic pain. Experimental Neurology, 46, 452-469.

Patients suffering chronic pain of pathological origin received alpha- feedback training methods in association with prior hypnotic training. Changes in the intensity and quality of pain were measured with the McGill Pain Questionnaire. The combined procedures produced a substantial decrease in pain (by 33% or greater) in 58% of the patients during the training sessions. Both the sensory and affective dimensions of the pain were diminished. The EEG records indicated that the majority of patients learned to increase their alpha output during the training sessions. In contrast, patients who received the alpha training alone reported no decreases in pain even though they showed increases in alpha output. Patients who received hypnotic training alone also produced increased EEG alpha during the training sessions and showed substantial (though not statistically significant) decreases in pain. The results demonstrate that chronic, pathological pain can be reduced in a significant number of patients by means of a combination of alpha-feedback training, hypnotic training, and placebo effects. It is concluded, however, that the contribution of the alpha training procedure to pain relief is not due to increased EEG alpha as such but, rather, to the distraction of attention, suggestion, relaxation, and sense of control over pain which are an integral part of the procedure.

**NOTES**

The study employed 24 patients with variety of pains, divided into 3 groups randomly:

hypnosis alpha/biofeedback combined procedures - the only group which decreased group mean of pain significantly.

Hypnosis - 50% of patients showed decrease in pain Combined Treatment - 50% " " " " " Alpha/biofeedback - None " " " " " "

All patients demonstrated higher alpha levels; the authors inferred it was due to relaxation, distraction, a sense of control over pain, or direct suggestion itself.

1975

Saletu, B.; Saletu, M.; Brown, M.; Stern, J.; Sletten, I.; Ulett, G. (1975). Hypno-analgesia and acupuncture analgesia: A neurophysiological reality?. Neuropsychobiology, 1, 218-242.

The effects of hypnosis, acupuncture and analgesic drugs on the subjective experience of pain and on objective neurophysiological parameters were investigated. Pain was produced by brief electric stimuli on the wrist. Pain challengers were: hypnosis (induced by two different video tapes), acupuncture (at specific and unspecific loci, with and without electrical stimulation of the needles),

morphine and ketamine. Evaluation of clinical parameters included the subjective experience of pain intensity, blood pressure, pulse, temperature, psychosomatic symptoms and side effects. Neurophysiological parameters consisted of the quantitatively analyzed EEG and somatosensory evoked potential (SEP). Pain was significantly reduced by hypnosis, morphine and ketamine, but not during the control session. Of the four acupuncture techniques, only electro-acupuncture at specific loci significantly decreased pain. The EEG changes during hypnosis were dependent on the wording of the suggestion and were characterized by an increase of slow and a decrease of fast waves. Acupuncture induced just the opposite changes, which were most significant when needles were inserted at traditional specific sites and stimulated electrically. The evoked potential findings suggested that ketamine attenuates pain in the thalamo-cortical pathways, while hypnosis, acupuncture and morphine induce analgesia at the later CNS stage of stimulus processing. Finally some clinical-neurophysiological correlations were explored.

1974

London, Perry; Cooper, Leslie M.; Engstrom, D. R. (1974). Increasing hypnotic susceptibility by brain wave feedback. Journal of Abnormal Psychology, 83 (5), 554-560.

Presents a reanalysis of earlier studies by D. R. Engstrom et al (1970) as well as additional findings which show that successful training to increase alpha rhythm duration raises people's hypnotic susceptibility. Ss in the previous studies were 30 volunteers who had low to moderate hypnotic susceptibility and low alpha production. It was found, subsequent to publication, that some Ss had had previous exposure to alpha training. When they were eliminated in reanalysis, the previous findings were still confirmed; alpha training was more effective for experimental than for control Ss, and hypnotic susceptibility accordingly increased more among experimentals than among controls. In addition, base-rate alpha production in each training session was correlated with feedback alpha output among experimental Ss but not among controls. (24 ref) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1972

Kratochvil, Stanislav; Macdonald, Hugh (1972). Sleep in hypnosis: A pilot EEG study. American Journal of Clinical Hypnosis, 15 (1), 29-37.

Six highly susceptible Ss were hypnotized and allowed to sleep in the laboratory during the night. Hypnotic rapport was tested after each of two awakenings, and simple suggestions were also administered in different stages of sleep. After awakening, hypnotic rapport was still present. In sleep, the Ss did not react to suggestions in stages 3 and 4. They sometimes reacted in stage 2, but usually woke up either during listening or during responding to the suggestion. In stage REM the Ss usually responded well to the suggestions; they sometimes woke up and sometimes not. The results are taken as a proof that hypnosis can continue after periods of sleep which occur during hypnosis. The question whether hypnosis and sleep can occur simultaneously or only alternately is discussed.

ATTEMPTED TO CONFIRM THE FINDINGS OF A. G. HAMMER AND W. J. ARKINS (SEE 39:1) OF SIGNIFICANTLY GREATER IMPROVEMENT IN HYPNOTIC PERFORMANCE AS A RESULT OF 11-CPS INTERMITTENT PHOTIC STIMULATION THAN WITH FREQUENCIES OUTSIDE THE RANGE OF EEG ALPHA ACTIVITY. USING THE BRAIN WAVE SYNCHRONIZER, 3 GROUPS OF SS WERE GIVEN STIMULATION AT 5, 11, AND 30 CPS. TESTS OF HYPNOTIC PERFORMANCE WERE MADE DURING AND IMMEDIATELY AFTER STIMULATION, AND A WEEK OR MORE LATER. NO EVIDENCE OF FREQUENCY-SPECIFIC EFFECT WAS OBTAINED, AND THE ORIGINAL FINDING WAS NOT CONFIRMED. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Dittborn, J. M.; O'Connell, D. N. (1967). Behavioral sleep, physiological sleep and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 15, 181-188.

A SLEEP-INDUCTION PROCEDURE REQUIRING MANUAL RESPONSE TO A REPETITIVE AUDITORY SIGNAL WAS ADMINISTERED TO 52 SS WHO HAD CLEAR ALPHA ACTIVITY IN THEIR WAKING EEG AND WHOSE HYPNOTIZABILITY WAS KNOWN. THE OCCURRENCE OF SLEEP WAS DEFINED BY PHYSIOLOGICAL, BEHAVIORAL, AND SUBJECTIVE CRITERIA. NEITHER THE TENDENCY TO DEVELOP EEG SLEEP NOR THE ABILITY OF SOME SS TO RESPOND WHILE IN EEG SLEEP WAS RELATED TO HYPNOTIZABILITY. HYPNOTIZABILITY WAS RELATED TO A TYPE OF DISSOCIATION BETWEEN EEG SLEEP AND BOTH BEHAVIORAL AND SUBJECTIVE SLEEP SHOWN BY 5 SS, ALL HIGHLY HYPNOTIZABLE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Domhoff, Bill (1964). Night dreams and hypnotic dreams: Is there evidence that they are different?. International Journal of Clinical and Experimental Hypnosis, 12, 3, 159-168.

The evidence against equating night dreams and hypnotic dreams is reviewed in the light of 2 developments in dream research--Dement and Kleitman's (1957a; 1957b) physiological and behavioral indicators of dreaming and Hall's (1951; 1963) quantitative studies of dream content. It is concluded that: the equivalence of the EEG patterns of the hypnotic trance and the "dream" stage of sleep (Stage I) cannot be ruled out; the psychologically-important question of content differences between night and hypnotic dreams has never been examined in a controlled, quantitative manner. (48 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Diamant, J.; Dufek, M.; Hoskovec, J.; Kristof, M.; Pekarek, V.; Roth, B.; Velek, M. (1960). An electroencephalographic study of the waking state and hypnosis with particular reference to subclinical manifestations of sleep activity. International Journal of Clinical and Experimental Hypnosis, 8, 199-212.

(Author's Conclusions) EEG records have been investigated in 10 patients in a waking state and under hypnosis. It was shown that no differences existed between these two states in terms of EEG. EEG signs of decreased wakefulness can be demonstrated in some of the patients, but these were also present without hypnosis. This latter effect appears to be subclinical sleep activity (Roth), frequently seen particularly in neurosis. Reactibility to external stimuli under hypnosis was also, in most cases, equivalent to reactions in the waking state. The authors incline to the view that EEG data does not support the concept that the nature of hypnosis and sleep is qualitatively the same.

Roberts, Donald R. (1960). An electrophysiological theory of hypnosis. International Journal of Clinical and Experimental Hypnosis, 8, 43-55.

It is theorized that general hypnosis is brought about by an electrical blockage between the brain stem reticular formation and the specific-sensory, parasensory, and coordinate neuronal channels; the selective activity of brain rhythms of the delta frequency is proposed as a possible mechanism of inhibition. (50 ref.) From Psyc Abstracts 36:02:2II43R. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1959

Kroger, William S.; Schneider, Sidney A. (1959). An electronic aid for hypnotic induction: A preliminary report. International Journal of Clinical and Experimental Hypnosis, 7, 93-98.

#### NOTES

The BWS or brain wave synchronizer is "an instrument specifically designed to induce various levels of hypnosis by subliminal and photic stimulation of the brain waves" (p. 93). It was developed after noticing that radar operators on ships sometimes fell into deep hypnotic states while watching signals on a radar screen. It has been used with 2500 subjects, 200 of whom were receiving pre-natal training for childbirth under hypnosis.

"For the first five minutes there is a gradual increase in the number of subjects who enter deep hypnosis. At this level, a figure of 50% reach the deep state" (p. 95).

The instructions given were, "Concentrate on the center of the instrument. When your eyes become tired and heavy, as they will, just let them close and feel yourself going deeper and deeper into a relaxed state." It is acknowledged that this procedure worked when Ss expected to experience hypnosis; the rate of deep hypnosis increased as the expectancy of hypnosis increased. "Deep hypnosis in individual inductions reached 80% under the following conditions:

A. Synchronizer on 5 minutes

B. Expectation Level of 50 [on a scale in which 100 represented having seen demonstrations of conventional hypnosis and an explanation of what the instrument would do]" (p. 97).

## **EFFORT/ENDURANCE**

**1999**

**Kirsch, Irving; Burgess, Cheryl A.; Braffman, Wayne (1999). Attentional resources in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 47 (3), 175-191.**

Theories of hypnotic responding differ regarding attentional processes. Predictions derived from neodissociation, dissociation control, response set, and ironic process theory were tested by administering suggestions with and without cognitive load to high suggestible participants and low suggestible simulators. Cognitive load interfered with responses to ideomotor and cognitive suggestions but not with responses to challenge suggestions. The effect of cognitive load on suggested amnesia depended on the assessment of that response. Although cognitive load decreased recall on the amnesia trial, it did so even more on recall trials before the amnesia suggestion was given and after it was canceled. These data indicate that attentional effort is required for both recall and memory suppression. Under conditions of low cognitive load, simulators displayed less recall than did nonsimulating participants during suggested amnesia, and they reported smaller subjective responses to ideomotor and challenge suggestions.

**1998**

**King, Brenda J.; Council, James R. (1998). Intentionality during hypnosis: An ironic process analysis. International Journal of Clinical and Experimental Hypnosis, 46 (3), 295-313.**

Two studies were completed to test whether responding to hypnotic suggestions requires intentional effort. Hypnotic suggestions for amnesia were used as an analog of thought suppression, and Wegner's model of ironic processing was applied to hypnotic responding. In the first study, participants were required to maintain suggested amnesia while performing a cancellation task with and without a cognitive load. The second study required suppression of thoughts of a favorite car, once with "blank-mind" instructions and then with a suggestion for amnesia. The results of these studies indicate that dissociated control theory provides the best explanation for hypnotic responding in one subset of highly hypnotizable participants, whereas more intentional responding provides the best explanation for others.

## **NOTES**

"In a well-known study, Wegner (1994) asked participants not to think of a white bear. This led participants to think of white bears, whereas there had been no such

thoughts prior to the request. Wegner suggested that such ironic effects stem from two complementary processes involved in the self-control of mental states. The first is an effortful operating process that seeks to maintain the desired state of mind (free of white bears). The second is an automatic and effortless monitoring process that searches for evidence of failure of intentional control (points out any white bear thoughts), so that corrective action can be taken. According to Wegner, a cognitive load will increase ironic effects, because reduced cognitive capacity may allow the monitoring process to supplant the operating process and make the person more sensitive to mental processes that are opposite of those that are intended" (p. 297).

1992

Mittleman, K. D.; Doubt, T. J.; Gravitz, Melvin A. (1992). Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water. Aviation, Space & Environmental Medicine, 63, 689-695.

The efficacy of self-induced posthypnotic suggestion to improve thermogenic responses to head-out immersion in 25 degrees C water was evaluated in 12 males. An online computerized system permitted the change in body heat storage to be used as the independent variable and immersion time as the dependent variable. Two one- hour hypnotic training sessions were used. There were no differences in rates of heat production, heat loss, mean skin temperature, or rectal temperature between control and hypnotic immersions. Individual hypnotic susceptibility scores did not correlation with changes in thermal status. Ratings of perceived exertion during exercise were similar for both immersions, but perceived sensation of cold was lower during the second rest period of the hypnotic immersion. Three subjects used images of warm environments during their hypnotic immersion and lost heat at a faster rate than during control immersions. These results indicate that brief hypnotic training did not enhance the thermogenic response to cool water immersion.

1986

Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027

"Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic

involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic indices as dependent variables. These analyses were performed on the original sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

1980

Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.

In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.

55 male Ss were assigned to 5 groups: control, hypnosis alone, motivation alone, low susceptible hypnosis with motivation, or high susceptible hypnosis with motivation. Ss performed 2 runs on a treadmill to their maximum capacity, as measured by oxygen consumption, blood lactate concentration, and respiratory quotient. Groups involving hypnosis performed in the posthypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum

ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.

1964

Levitt, Eugene E.; Brady, J. P. (1964). Muscular endurance under hypnosis and in the motivated waking state. International Journal of Clinical and Experimental Hypnosis, 12, 21-27.

8 female Ss scoring at least 10 on the Stanford Hypnotic Susceptibility Scale were required to hold a weight in the outstretched hand in 3 states: (a) under hypnosis, (b) under hypnosis with the upper arm and shoulder anesthetized hypnotically, and (c) in the waking state with motivation provided by a verbal exhortation and monetary payment. Order of performance in the 3 states was varied. No significant differences among states were found. The interaction between states and orders was significant, but it appears more likely to be the result of intersubject variability rather than of position or fatigue effects. Ss' expectancies and estimates of performance time, obtained postexperimentally, did not appear to be related to performance itself. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## EGO/EGO-STRENGTHENING

2002

Ginandes, Carol (2002). Extended, strategic therapy for recalcitrant mind/body healing: An integrative model.. American Journal of Clinical Hypnosis, 45 (2), 91-102.

The development of the power therapies, behavioral medicine, and short term interventions have reported such success even with trauma cases that it is relevant to question the justification for lengthy psychotherapy. Yet some patients with complex mind/body conditions impervious to medical treatment/hypnosis may require extended, multi-modal, integrative therapy. This paper details a single complex case of paruresis as a prototype for illustrating a holographic treatment model for recalcitrant conditions: Component features of the proposed model presented include: 1) the sequential utilization of hypnotherapeutic and analytic approaches; 2) uncovering work providing access to the somatic ego state associated with the illness condition; 3) the extended treatment time frame required for deep psycho-physiological change; and 4) the stages of counter-transference expectably evoked by such patients (e.g. urgency, exuberant optimism, frustration, discouragement), and the transformation of such reactions to achieve maximum therapeutic efficacy.

## NOTES

Paruresis is a social phobia involving urinary retention and "thought to affect some 17 million or 7% of the American population" (p. 92). Also known as "bashful bladder."

McNeal, Shirley A. (2002). A character in search of character: Narcissistic personality disorder and ego state therapy. American Journal of Clinical Hypnosis, 45 (3), 233-243.

The individual diagnosed with narcissistic personality disorder presents with grandiosity, extreme self-involvement, and lack of interest in and empathy for others. This paper reviews current theories concerning the development and treatment of this disorder, and presents a case study in which ego state therapy was successfully utilized and integrated into hypnotically facilitated psychotherapy with a 48-year-old man diagnosed with narcissistic personality disorder. The ego state model of treatment is described and demonstrated with case material. Initially ego states that reveal the grandiosity are accessed. As therapy progresses, ego states that hold the underlying feelings of emptiness, rage, and depression are able to emerge. With further treatment, transformation and maturation of the ego states occur, reflecting the changes in internal structure and dynamics as well as improvement in external interpersonal relationships. Issues concerning ego state therapy as utilized with personality disorders are discussed and contrasted with more traditional methods of treatment. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1999

Daniel, Sheryll (1999). The healthy patient: Empowering women in their encounters with the health care system. American Journal of Clinical Hypnosis, 42 (2), 108-114.

Many women's expectancies when they assume the role of patient include the experiences of regression, helplessness, passivity and fear. This paper describes techniques for interrupting this negative set and for facilitating the development of a self-efficacious state in which the woman experiences herself as an active and informed participant in her encounters with medical personnel.

1995

Ganaway, George K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. International Journal of Clinical and Experimental Hypnosis, 43 (2), 127-144.

It is contended that prevailing exogenous trauma theory provides in most cases neither a sufficient nor a necessary explanation for the current large number of diagnosed cases of dissociative identity disorder (multiple personality disorder) and related dissociative syndromes purported to have arisen as a response to severe early childhood physical and sexual abuse. Relevant aspects of instinctual drive theory, ego psychology, object relations theory, self psychology, social psychological

theory, sociocultural influences, and experimental hypnosis findings are drawn on to demonstrate the importance of adopting a more integrative theoretical perspective in the diagnosis and treatment of severe dissociative syndromes. Further cooperative experimental and clinical research on the etiology, prevalence, and clinical manifestations of the group of dissociative disorders is strongly encouraged.

Guyer, Charles G. II; Van Patten, Isaac T. (1995). The treatment of incest offenders -- a hypnotic approach: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 266-273.

Incest has become more prominent in public awareness over the past 15 years. The major focus of this interest has been on the incest survivor. The incest offender has received less attention. A hypnotic approach to treating incest offenders is outlined that involves a seven-stage approach. A case example is presented and future research directions suggested.

1993

Watkins, Helen H. (1993). Ego-State therapy: An overview. American Journal of Clinical Hypnosis, 35, 232-240.

Ego-state therapy is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between the various "ego states" that constitute a "family of self" within a single individual. Although covert ego states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist. Any of the behavioral, cognitive, analytic, or humanistic techniques may then be employed in a kind of internal diplomacy. Some 20 years experience with this approach has demonstrated that complex psychodynamic problems can often be resolved in a relatively short time compared to more traditional analytic therapies.

1992

Frederick, Claire C.; Phillips, Maggie (1992). The use of hypnotic age progressions as interventions with acute psychosomatic conditions. American Journal of Clinical Hypnosis, 35 (2), 89-98.

Age progression as a hypnotherapeutic technique is mentioned infrequently in the literature when compared with its counterpart, age regression. In this paper we explore the use of progressions, or 'views of the future,' as prognostic indicators of therapeutic progress and as valuable tools for ego strengthening and for the integration of clinical material. Age progressions vary in the types of suggestions given and can be used to promote growth on multiple levels, facilitating treatment goals and deepening the working-through process. We present six cases in which we used different types of age progressions, and we discuss the significance of the progressions used in each case, within the context of relevant clinical material. We conclude from our observations that the use of hypnotic progressions can be a

sustaining, valuable aspect of hypnotherapy, particularly in providing an index of the current direction and progression of the therapy process itself. - Journal abstract.

**Goodman, Linda; Holroyd, Jean (1992). Ego receptivity and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 40 (2), 63-67.**

Ego receptivity has been described as important for the psychotherapy process and as a characteristic of hypnosis (Deikman, 1974; Dosamantes-Alperson, 1979; Fromm, 1979). Receptivity also has been associated with a measure of absorption (Tellegen, 1981). In the first pilot study with 6 dance/movement therapy students, higher observer ratings of receptivity were associated with greater hypnotizability ( $r = .79$ ,  $df = 4$ ,  $p < .05$ , 2-tailed test). In the second pilot study, the correlation was replicated ( $r = .51$ ,  $df = 12$ ,  $p = .06$ , 2-tailed test) with 14 dance/movement therapy students. In the second pilot study, receptivity did not correlate with absorption. Receptivity and absorption, however, accounted for 54% of hypnotizability population variance in a step-wise multiple regression. Receptivity accounted for a unique part of the variance after the effects of absorption were removed. It was concluded that receptivity should be explored as a potential predictor of hypnotizability, and that a reliable scaled measure of receptivity should be developed.

#### NOTES

Receptivity was rated by dance instructor on the following scale. "TABLE 1 Criteria for Ranking Ss on Receptivity A. Individuals were rated high if they could consistently do the following most of the time:

1. If they moved with emotional involvement.
  2. If they could readily verbally describe their movement experience in terms of sensations or feelings.
  3. If they were able to image while moving. That is, their movement experience could be transformed into representational visual images.
  4. In their describing their movement experience verbally, if they readily alluded to the images which were generated from their body movement.
  5. If they could relate their movement experiences to other contexts outside of the therapeutic one.
  6. If they could develop a working alliance with the therapist (based on students' capacity to risk experiencing self with increased emotional depth).
- B. Individuals were rated low, if they were not able to do the above most of the time. C. Individuals were rated in the mid-range if they were able to do the above some of the time" (p. 65).

#### 1991

**Stanton, Harry E. (1991). The reduction in secretarial stress. Contemporary Hypnosis, 8, 45-50.**

30 secretaries from a large business firm were matched on their stress thermometer scores and one member of each pair was allocated at random to either an experimental group or a control group which discussed stress management procedures. The experimental group had two treatment sessions in which they learnt a technique of induction, deepening and ego-enhancement which included (1) physical relaxation; (2) mental calmness; (3) disposal of unwanted mental and physical 'rubbish'; (4) removal of a negative barrier; and (5) enjoyment of a special place. The stress thermometer was administered on two further occasions, one immediately after completion of the second training session and one as a follow-up 2 months later. In addition, on these two occasions, subjects completed anecdotal reports, recording their impressions of the experiment. After completion of this first stage of the study, control group secretaries experienced the same two treatment sessions as had the experimental group. Results indicated that stress level was significantly lower both immediately after treatment and at the two-month follow-up.

1989

Peebles, M. J. (1989). Through a glass darkly: The psychoanalytic use of hypnosis with post-traumatic stress disorder. International Journal of Clinical and Experimental Hypnosis, 37, 192-206.

A severe case of post-traumatic stress disorder stemming from consciousness (with auditory and pain perception) during surgery was treated with 8 sessions of hypnosis. Abreaction and revivification used alone initially retraumatized the patient, and her symptoms worsened. Ego-mastery techniques were then added; emphasis was placed on the role of the therapist as a new object presence to be internalized in restructuring the traumatic memory; memory consolidation and working-through techniques were instituted. The patient's symptoms abated and her condition remitted. The similarities between hypnotic and analytic work are highlighted. In addition, the case material provides a clinical example of the existence and potential traumatic effects of conscious awareness during surgery.

1988

Hines, Larry; Handler, Leonard (1988, November). Hypnotizability and ego functions. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Researchers employed Bellak's Ego Functions Test (based on the clinical interview). Ss were 47 students and 1 non-student, some of whom had previously experienced hypnosis. They were all volunteers. Studied 12 ego functions. Used plateau hypnotizability which was defined as no improvement in Stanford Hypnotic Susceptibility Scale Form C after two hypnotic inductions; if they did not reach a plateau by Session 4, the highest score was used. Stanford Hypnotic Susceptibility Scale scores ranged 4-12. High 10-12, Medium 6-9, Low 4-5.  $\bar{x}=9.04$ ,  $SD=2.21$ .

On the Bellak Test, High 12-13, Medium 10-11 (average functioning.), Low 1-9. Range 5-13; widest range was in Adaptive Regression in Service of Ego Highest Mean = reality testing Lowest Mean = ARISE Majority fell into the medium range on all 12 ego functions measured.

A significant difference was found between High and Low hypnotizables on the following ego functions. [N.B. There may be transcription errors in the figures that follow.] 1. ARISE  $p < .02$   $r = .31$  Highs have greater ability to experience pleasure in regression. 2. Stimulus Barrier  $p < .003$  Highs are more flexible in their ability to separate from stimuli in their environment, Lows experienced stimulus overload. 3. Autonomous Functioning  $p < .01$  Primary acct./ in attention, learning, memory, motor function. 4. Objective Relativity  $p < .07$  5. Regulating control of drive  $p < .06$  Multiple regression accounted for 33% of variance in 12 ego functions. Stimulus Barrier alone accounted for 14% ( $p < .005$ ); ARISE accounted for 5% ( $p < .01$ ). 47% of Ss were High hypnotizables, 42% were in the Medium range.

Koe, G. Gerald; Oldridge, O. A. (1988). The effect of hypnotically induced suggestions on reading performance. International Journal of Clinical and Experimental Hypnosis, 36, 275-283.

52 volunteer Ss, 19 years or older, at U. of British Columbia, were hypnotized and given post hypnotic achievement and esteem suggestions to investigate the influence of these suggestions on reading performance as measured by the total score on the Nelson-Denny Reading Test (Nelson & Denny, 1960). Differences among groups were compared using a hierarchical regression approximation of analysis of covariance. Hypnotizable Ss scored higher than un hypnotizable Ss. Other-esteem suggestions were found to improve reading performance.

Young, W. C. (1988). Psychodynamics and dissociation: All that switches is not split. Dissociation, 1, 33-38.

Contrasts the roles of splitting and dissociation in multiple personality disorder. It is proposed that dissociation is a unique defensive process that serves to protect the patient from the overwhelming effects of severe trauma and that multiple personality disorder need not call upon splitting as its central defensive process. Fantasies of restitution may be incorporated into the dissociative defense. Psychological, physiological, and behavioral models all are of use, making it likely that ultimately dissociation will be understood along multiple lines of study.

1987

Baker, Elgan L. (1987). The state of the art of clinical hypnosis. International Journal of Clinical and Experimental Hypnosis, 35 (4), 203-214.

This paper reviews the contemporary status of clinical hypnosis in light of the current emphasis on briefer, pragmatic forms of therapy and consumer demands to demonstrate effectiveness. Conceptual shifts and an expansion of clinical applications are related to changes in hypnotic strategies and technique. Suggestions

for future avenues of clinical research are outlined and the importance of the continued integration of scientific rigor, empirical clarity, and clinical acumen and sensitivity is emphasized.

**1986**

Markus, Hazel; Nurius, Paula (1986). Possible selves. *American Psychologist*, **41** (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self-relevant form, meaning, organization, and direction to these dynamics. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self-distortion, and the relationship between the self-concept and behavior

**1983**

Baker, Elgan L. (1983). Resistance in hypnotherapy of primitive states: Its meaning and management. *International Journal of Clinical and Experimental Hypnosis*, **31** (2), 82-89.

This paper examines various aspects of resistance that become manifest in hypnotherapy with borderline, narcissistic, and psychotic patients. Specific clinical presentations are described and contrasted with forms of resistance encountered in work with neurotic patients. An ego psychology theoretical perspective is presented to conceptualize these more primitive resistance phenomena in terms of transference issues and dynamics relating to separation/attachment conflicts, and specific suggestions for management are outlined. 2 case examples are presented to demonstrate both conceptual and technical aspects of this approach.

**1980**

Hurley, John D. (1980). Differential effects of hypnosis, biofeedback training, and trophotropic responses on anxiety, ego strength, and locus of control. *Journal of Clinical Psychology*, **36** (2), 503-507.

Pretested 60 college students on three scales: the IPAT Anxiety Scale, the Barron Ego-strength scale, and the Rotter I-E scale. The Ss then were assigned randomly to one of four treatment groups designated: hypnotic treatment, biofeedback treatment, trophotropic treatment, and control. Three of these groups met separately for 60 minutes once a week for 8 weeks. The control group did not meet

during this time. During the sessions, each group was trained in a different technique for self-regulation. At the end of the 8-week period the scales were readministered to all groups. A series of covariance analyses indicated that hypnosis was a more effective self-regulatory technique for lowering anxiety levels when compared to biofeedback or trophotropic response procedures. With regard to increasing ego strength, both the hypnotic training group and the biofeedback training group proved to be significant. No significant difference was found between the experimental and control groups on the I-E scores.

1979

Watkins, John G.; Watkins, Helen H. (1979-80). Ego states and hidden observers. Journal of Altered States of Consciousness, 5 (1), 3-17.

Hilgard and Hilgard discovered that subjects who had been rendered hypnotically deaf, or whose hand had been anesthetized under hypnosis, were hearing and sensing the pain at levels below the threshold of normal awareness. They described this phenomena as a cognitive structural state and termed it "the hidden observer." Federn theorized that the ego is subdivided into segments (organized patterns of behavior and experience) which are semi-autonomous in normal individuals, and which are manifested as completely separate entities (multiple personalities) when the internal boundaries between such parts are rigid and impermeable. He termed these entities "ego states." When activated under hypnosis each ego state experiences its self as subject (I) and the other states as objects (he, she, or it). We have discovered in hypnoanalytic therapy that these ego states act like "covert" multiple personalities, and that clashes between them often create anxiety and psychosomatic symptoms. Ego-state therapy thus becomes a kind of family or group therapy aimed at resolving conflicts between the various ego states which constitute "a family of self" within a single individual. Two studies are reported here to investigate the possibility that Hilgard's "hidden observers" are the same phenomena as these "ego states." The data derived appear to support such a hypothesis. Consideration is given to the possible influence of suggestion and operator variables.

1978

Kir-Stimon, W. (1978). Hypnosis as a tool for termination of therapy. International Journal of Clinical and Experimental Hypnosis, 26 (3), 134-142.

Cases are presented with varied induction methods to illustrate the use of hypnosis as a final step in psychotherapy. In each situation, therapy had been clinically active without hypnosis. Problems in termination revolved around patients' fear of taking the ultimate step in controlling their own lives. Hypnosis helped to provide a bridge between previous and current self-concept and an acceptance of individual creativity. Discussion focuses on the use of hypnosis as an adjunct in overcoming anxiety in the ego's relation to the umwelt rather than for initiating rapport or working through transference. Hypnosis then becomes a positive factor in

enhancing self-mastery and autonomy as well as in handling resistance to the full utilization of ego strength.

1977

Fromm, Erika (1977). An ego-psychological theory of altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 372-387.

In this paper a new ego-psychological theory is proposed for the understanding of altered states of consciousness. The dichotomies of primary and secondary process, ego activity and ego receptivity, and automatization and de-automatization of ego functions in daydreaming, in the inspirational phase of creativity, in hypnosis, in psychedelic states, and in meditation are discussed; so are the roles of fantasy, imagery, and various forms of attention.

#### NOTES

The author provides a table titled "Typology of Waking State and Several Altered States of Consciousness by Attention Mode." The states listed in the table are: Waking, normally alert, and concentrated; Waking, fascinated, entranced; Free association; Daydreaming; Dreaming; Psychedelic drugs; Hypnosis; Self-hypnosis; Biofeedback; Transcendental meditation; Concentrative meditation; Satipatthana [mindfulness of body, feelings, mind, and mental events]; Classical vipasyana [Clear intuitive insight into physical and mental phenomena as they arise and disappear, seeing them for what they actually are]. She summarizes, "In general, the present author strongly feels that the advantage of hypnotherapy over therapy in the waking state is that hypnosis allows the therapist to help patients work with more primary process thinking, more fantasy, more imagery, more ego receptivity than they would employ in the waking state" (p. 385). "What helps the therapy is not the depth itself; it is that in the hypnotic state there is greater mobility, a greater ability to dip into the unconscious and to bring the unconscious material back into the waking state of consciousness" (p. 385).

Stanton, Harry E. (1977). The utilization of suggestions derived from rational-emotive therapy. International Journal of Clinical and Experimental Hypnosis, 25 (1), 18-26.

A series of positive suggestions derived from Ellis' rational-emotive therapy were compared with Hartland's "ego-strengthening" technique in terms of patients' belief in their efficacy. Both pre- and post-treatment ratings were collected. Patients tended to approach treatment with a positive feeling that the treatment would help them with their problem and this belief was strengthened after the 10 therapy sessions had been completed. Further ratings taken 6 months later indicated that patients' belief in the value of the suggestive therapy had not decreased over time.

3 groups of hospitalized chronic schizophrenic patients received "the taped hypnotic treatment" twice a week for 4 weeks. The treatment differed for each of the 3

groups of 18 patients, but neither the patients nor the nursing staff were informed of this difference. The first group was exposed to music only, the second group was given music with superimposed hypnotic suggestions, and the third group heard music with superimposed hypnotic suggestions for improving self-confidence. The staff filled in an evaluation form about the patient's health beforehand, immediately afterward, and then 1 month after the treatment program. No difference between the groups was found if the comparison was based only upon the directions of the changes. However, twice as many positive changes as negative ones were observable in every group after the control period. If the changes noted are restricted only to those attaining the statistically significant ( $p < .05$ ) level, the majority of positive ones was more evident. From this point of view, the reactions of the groups to the treatments were also different. Improvement appeared directly after the treatment of the Music and Self-confidence groups, but was not evident during the observation time 1 month later. In the Relaxing group, there was, on the contrary, only slight improvement directly after the treatment, but 1 month later during the follow-up observation time, the improvement was considerable. Thus, while encouraging hypnotic suggestions proved on the follow-up to be ineffective, hypnosis appeared to have a real influence when only relaxing suggestions were used.

1976

Lavoie, Germain; Sabourin, Michel; Ally, Gilles; Langlois, Jacques (1976). Hypnotizability as a function of adaptive regression among chronic psychotic patients. International Journal of Clinical and Experimental Hypnosis, 24, 238-257.

The Rorschach and the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) were administered to a sample of 56 chronic psychotic patients, mainly schizophrenics ( $N = 48$ ). Verbatim transcriptions of tape-recorded Rorschach protocols were scored according to the Holt system (Holt et al., 1963), which provides an index of adaptive regression. Experimental procedures were conducted single blind. With one exception, all the patients high on SHSS:A were among those obtaining a higher adaptive regression index, while 50% of those obtaining higher adaptive regression index were high on SHSS:A. A systematic investigation of ego functions was proposed for a better understanding of this asymmetry, although the results already gave ostensible positive support to the Gill and Brenman (1959) theory, and to the theory of ego autonomy.

Levin, L. A.; Harrison, R. H. (1976). Hypnosis and regression in the service of the ego. International Journal of Clinical and Experimental Hypnosis, 24, 400-418.

28 highly hypnotizable female Ss were selected to test the hypothesis that hypnosis is characterized by regression in the service of the ego (adaptive regression). 2 tasks, producing a hypnotic dream and telling a TAT story, were administered individually under hypnotic and normal waking conditions. Scoring for adaptive regression yielded 2 factors, one for the regressive aspects of the fantasies produced, the other for cognitive mastery of those fantasies. An increase in primary process thinking was found in hypnosis, particularly in the hypnotic dream. There was a

relationship between S's capacity for adaptive regression and the amount of adaptive regression found in hypnosis. Although facilitating regression from secondary to more primary process thinking, hypnosis does not inherently provide mechanisms by which primary process manifestations can be utilized adaptively by the ego. Such mechanisms are ego functions which tend to be amplified by hypnosis only in Ss who demonstrate good capacity for adaptive regression.

1975

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

Borderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1971

Kihlstrom, J. F.; Edmonston, W. E., Jr. (1971). Alterations in consciousness in neutral hypnosis: Distortions in semantic space. American Journal of Clinical Hypnosis, 13, 243-248.

30 highly hypnotizable Ss were equally divided into three groups, equated for age, sex and hypnotic susceptibility. A semantic differential scale was administered to each S in waking, individual sessions. An oral form of the same scale was administered during: (a) hypnosis (E), (b) waking -- post hypnosis (C1), and (c)

waking -- no hypnosis (C2). All groups showed significant change between administrations of the scale; E showed more change than C1, and the latter more than C2. Ratings of "My Self" changed toward the negative pole in the evaluative factor. Results were interpreted as indicating a distortion in semantic space and an alteration in ego-state occurring spontaneously with hypnosis.

1970

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

#### NOTES

The authors used High hypnotizables (SHSS>9) in this investigation.

1967

Van der Walde, P. H. (1967). Trance states and ego psychology. International Journal of Clinical and Experimental Hypnosis, 15 (3), 95-105.

ANALYZES THE BASIC CHARACTERISTICS OF HYPNOSIS, WHICH COMPRISE INDIVIDUAL, INTERPERSONAL, AND CULTURAL VARIABLES. THESE ELEMENTS ARE UTILIZED IN A TRANSCULTURAL COMPARISON TO DEMONSTRATE THAT TRANCE PHENOMENA ARE GOAL-ORIENTED BEHAVIORS WHICH ARE EXPRESSED BY INDIVIDUALS WITHIN A GIVEN CULTURE BY METHODS WHICH ARE CULTURALLY SANCTIONED FOR ACHIEVING THOSE ENDS. THE DIFFERENCES BETWEEN TRANCE STATES CAN BE UNDERSTOOD TO REPRESENT CULTURAL VARIANTS OF SIMILAR PSYCHOLOGICAL MECHANISMS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Scott, E. M. (1966). Group therapy for schizophrenic alcoholics in a state-operated outpatient clinic: With hypnosis as an integrated adjunct. International Journal of Clinical and Experimental Hypnosis, 3, 232-242.

Because Alcoholics Anonymous has been so unsuccessful with the schizophrenic alcoholic, no therapeutic modalities structured to fit this population have reached the literature. For 3 yr. specific therapeutic techniques, among them hypnosis, have been employed, and the results appear to be rather encouraging. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Klempner, Edith (1965). Past ego states emerging in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 132-144.

Patients with anxiety, conversion, or phobic reactions differ from those with obsessive-compulsive reactions in the type of visualization shown in hypnoanalytic regression or revivification. The former produce visualizations showing a well-rounded picture with logical progression of activity and few symbolic distortions. The latter, however, produce visualizations lacking a logical progression of activity and showing a somewhat disorganized and poorly-rounded picture. Symbolic distortions are frequent, often recurring intermittently. Case studies are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

#### NOTES

Author's Summary: "Insight occurs on different levels of psychological awareness and with varying degrees of curative effect. The complex interplay between psychodynamic factors and therapeutic situations does not permit any accurate predictability of either the patient's level of insight at any one moment or of his readiness to assimilate deep disclosures. Psychoanalytic theory sheds the greatest light upon these phenomena as well as upon the analogous aspects in hypnotherapy. The hypnotic state is peculiarly suited to overcome resistance and to utilize consequent insight with great effectiveness. Progress in hypnotherapeutic technique has evolved an approach that assures the assimilation of crucial revelations at a pace in accordance with the strength of the ego to tolerate the resultant anxiety" (p. 145).

#### ELECTRICAL STIMULATION

1988

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1988). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. Pain, 75 (1), 85-92.

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in

all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

Abstract from National Library of Medicine, PubMed

Borgens, Richard B. (1988). Stimulation of neuronal regeneration and development by steady electrical fields. In Waxman, S. G. (Ed.), Functional recovery in neurological disease (47, pp. 547-564). New York: Raven Press.

#### NOTES

At the end of the review, author notes that a combination of electromyography and computer modeling of agonist-antagonist, flexor-extensor muscle contraction patterns in the functional body parts of hemiparetic patients, artificially imposed on the paralyzed portions of the body using repetitive electrical stimulation to effect more normal movement, sometimes leads to functional recovery. Such recovery has been observed in some chronic cases of paralysis associated with head injury, stroke, and cerebral palsy. These clinical observations challenge the way we should view paralysis in general. Perhaps there are many redundant pathways in the CNS that will support certain kinds of functional return in the absence of the original pathways destroyed by trauma. Perhaps CNS-associated paralysis is a problem, at least in part, of too much competing signal in spared pathways, not one of impoverished signal. Can use of these neuronal pathways be entrained or retrained? Is the return of function in patients who experience repetitive functional electrical stimulation due to a reorganization within the CNS? These are exciting questions whose answers will possibly lead to our ability to further modify the plasticity of the brain and spinal cord.

[This would fit with the inhibition model of hypnosis, and with the high theta power findings during hypnosis, the implication being that hypnosis facilitates filtering out non-essential competing stimuli.]

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 96-106.

**In an earlier study, DeBenedittis and Sironi (1986) demonstrated that during depth EEG studies, electrophysiological correlates of hypnotic behavior emphasize the role of the limbic system in mediating the trance experience. In the case of a young man who was affected by medically resistant temporal lobe epilepsy and who was a potential candidate for surgical treatment, diagnostic depth EEG in hypnotic and non- hypnotic conditions offered a unique opportunity to stimulate limbic structures. This permitted an evaluation of the subjective and behavioral responses, as well as of the electrophysiological correlates. During hypnosis, repeated stimulations of the left and the right amygdala produced arousal from the hypnotic state each time, whereas the stimulation of other cerebral structures (e.g., temporal neocortex, Ammon's horn) or pseudostimulations were ineffective on the hypnotic state. These data represent the first experimental, controlled evidence of the amygdala's effects on the arousal from the hypnotic state in man, thus suggesting that hypnotic behavior is mediated, at least in part, by a dynamic balance of antagonizing effects of discrete limbic structures--the amygdala and the hippocampus.**

#### **NOTES**

**The patient was a 30-year-old man who had suffered from medically resistant psychomotor temporal lobe epilepsy since age 7; a diagnostic EEG showed right temporal seizure focus, concomitant with independent, contralateral, temporal spiking abnormalities. Hypnotizability was measured at 6 on the SHSS:C; the patient was given two training sessions in hypnosis, with suggestions for "dissociation, rehearsal and reframing of spontaneous seizure events, desensitization of their negative emotional impact, and amnesia" (p. 99).**

**Electrodes were implanted in deep cerebral structures (amygdala, Ammon's horn) and corresponding superficial areas of temporal cortex, with confirmation of placement by X-ray. Two weeks later the patient's brain was stimulated on two consecutive days, first in the waking state (Session 1) and then in hypnosis (Session 2). (Antiepileptic medication was discontinued three days before the stimulation sessions.) False (placebo) stimulations were randomly provided along with the true stimulations.**

**The false (placebo) stimulations did not result in subjective or behavioral changes in either the waking or the hypnosis condition.**

**In the waking condition, a psychomotor seizure was produced by stimulation of Right amygdala and Left Ammon's horn; stimulation of Left amygdala evoked only the aura patient usually had before a seizure, or a brief lapse of consciousness. Stimulating the temporal neocortex did not evoke seizure activity.**

**In the hypnosis condition, arousal from hypnosis into the waking condition occurred with stimulation of amygdala (either Right or Left). Stimulation of the temporal neocortex or of the Right Ammon's horn did not arouse the patient. Stimulation of Left Ammon's horn led to abortive seizures, such that it could not be determined whether the hypnotic state had been interrupted. Stimulating the Right amygdala "triggered a psychomotor attack similar to that recorded during the waking stimulation, but with reduced emotional involvement" (p. 100). For the Left**

Ammon's horn, "waking stimulation always induced clinical seizures with prolonged after-discharge, whereas hypnotic stimulation evoked only abortive seizures, without after-discharge" (p. 100).

In their Discussion, the authors note that animal experimental literature suggests that stimulation of the cortico-medial amygdala facilitates arousal functions, of the baso- lateral amygdala diminishes arousal and produces sleep, and lesions of the amygdala lead to 'amygdala hangover' (Weiskrantz, 1956). "The animal with amygdala destruction appears tame and placid, with reduced social reactivity, insensitive to environmental changes and reluctant to initiate new behavior, unless highly motivated (Isaacson, 1976)" (p. 101-102).

In contrast, the animal research on hippocampus suggests it is involved in inhibitory functions (Isaacson, 1976), and may be the 'internal inhibitor' theorized by Pavlov (1955) to be responsible for animal hypnosis. With lesions, animals are more willing to undertake new behaviors, less inactive, less distractible during goal-oriented behavior (Isaacson, 1976). "Moreover, normal hippocampograms show typical, slow (theta) synchronous activity opposed to the arousal desynchronized activity of the electroencephalogram. During hypnosis, desynchronization of the normal, slow activity of the hippocampal Ammon's horn has been registered as compared with the waking hippocampogram, opposite to the slow synchronous activity of the amygdala" (p. 102).

The authors note that their results are at variance with the finding by Crasilneck et al. (1956) that their patient, during brain surgery for an epileptogenic focus, aroused from hypnosis each time they stimulated the hippocampus. They explain the discrepancy as due to the fact that the hippocampus was not simply stimulated, but in fact there was 'coagulation' of a hippocampal vessel each time. Quoting from Crasilneck et al. "'The patient did not complain of pain during this [brain] excision [in hypnosis] except on one noteworthy occasion, when a blood vessel of the hippocampal region was being coagulated. The patient suddenly awoke from the hypnotic trance ... She was immediately rehypnotized. ... The surgeon then purposefully 'restimulated' the same region of the hippocampus. Once again, the patient abruptly awakened from trance... [p. 1607].'"To the present authors, the description appears misleading and responsible for subsequent misinterpretation of the observation. Because on the first occasion the hypnotic arousal effect followed 'coagulation' of the hippocampal region, it may be assumed that 'restimulation' is a misnomer for repeated coagulation. From this it may be inferred that the arousal effect observed by Crasilneck et al. (1956) could probably be ascribed to a hippocampal microlesion rather than to hippocampal stimulation. This could explain the apparent discrepancy" (p. 104).

1974

Bloom, Richard F. (1974). Validation of suggestion-induced stress.

#### NOTES

Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code

5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1961

McCartney, James L. (1961). A half century of personal experience with hypnosis. International Journal of Clinical and Experimental Hypnosis, 9, 23-33.

#### NOTES

(Author's Summary and Conclusions). "After fifty years of experience with hypnosis, it is evident that it is not a superficial and careless technic but should be utilized only by capable, trained physicians, as are the other complex and difficult medical technics. ... In order to induce hypnosis, the patient must be perfectly willing to be hypnotized, he must have confidence in the practitioner, and he must concentrate on doing exactly as he is told. In selected cases, drugs or electrical impulses may be used for the initial induction of hypnotic sleep, but if hypnotherapy is to be continued, the physician must keep in contact with the patient by repeated suggestions. The technic used should fit the individual patient, but in most cases, verbal suggestions are all that is necessary to bring about dissociation. Hypnosis may be used to facilitate the beginning of mental catharsis, the establishment of transference, and may be easily instituted following narcosynthesis, electroshock therapy, minimum stimulus, or Sedac. Suggested activity under hypnosis may be carried out at a designated time, place, and manner after awakening. This is a result of autosuggestion and may be mistaken for psychopathic behavior. Such suggestions may be instituted by television, movies, radio, telephone, or recorded or written instruction. Hypnosis may be used to plant suggestions; if misused, it may create an obsessive-compulsive neurosis, while when properly used, it may overcome many functional symptoms and may be used to supplement other forms of psychotherapy" (p. 32).

19954

Thaheld, Feri Herndon (1954). Nonconclusive electrostimulation under narcotic hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 175-177.

## NOTES

Hypnosis was used in an attempt to reduce the side effects of nonconvulsive electrostimulation in a single subject. Subject was given 2 gr of nembutal, followed by hypnotic induction, then repeated suggestions that the "subject could feel no pain and that therefore as a result of this there could not be any physical response at all to this very harmless and quite painless treatment which was being administered" (p. 176).

Subject had 42 treatments (unidirectional, modulated, spiked current averaging 5-9 ma, through electrodes placed above the ears, for usually 3 minutes but sometimes 5-8 minutes) over 3 wk period. Ordinarily in such a situation pain would be experienced, with physiological changes (dilation of pupils, increase in pulse rate, flushing of skin, perspiration, some contraction of muscles) and emotional outbursts observed. In this subject, "none of the usual side reactions were found to be present and the further use of posthypnotic suggestions eliminated any after-effects or complications which might have arisen" (p. 176).

The author discussed the possibility that trance depth was facilitated by the pyramiding action of layering one set of suggestions on top of another, something like Vot's fractionation technique (in which subject is repeatedly hypnotized and de-hypnotized with suggestions of increasing depth).

## ELECTROMYOGRAM (EMG)

1997

Jasiukaitis, Paul; Nouriani, Bitā; Hugdahl, Kenneth; Spiegel, David (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere?. International Journal of Clinical and Experimental Hypnosis, 45 (2), 158-177.

Research and theory over the past couple decades have suggested that the right cerebral hemisphere might be the focus of brain activity during hypnosis. Recent evidence from electrodermal responding, visual event-related potentials, and Stroop interference, however, can make a case for a role of the left hemisphere in some hypnotic phenomena. Although hemispheric activation on hypnotic challenge may depend in large part on the kind of task the challenge might involve, several general aspects of hypnosis might be more appropriately seen as left-rather than right-hemisphere brain functions. Among these are concentrated attentional focus and the role of language in the establishment of hypnotic reality. A left-hemisphere theory of hypnosis is discussed in light of recent findings and theories about a left-hemisphere basis for synthetic or generational capabilities (Corballis, 1991) and a neuro-evolutionary model of a left-hemisphere dopaminergic activation system for the implementation of predetermined motor programs (Tucker & Williamson, 1984). -- Journal Abstract

1996

DeBenedittis, Giuseppe De (1996). Hypnosis and spasmodic torticollis -- report of four cases: A brief communication. International Journal of Clinical and Experimental Hypnosis, 44 (4), 292-306.

**Dystonia and particularly spasmodic torticollis are neuromuscular disorders that are extremely resistant to most therapies (physical, medical, or surgical). Torticollis is a unilateral spasm of the neck muscles, particularly of the sternocleidomastoid, that produces violent, tonic turning of the head to one side. The etiology remains uncertain, although the role of psychogenic factors has been emphasized. This article reviews the literature and reports four cases of spasmodic torticollis treated successfully with hypnosis. In all four cases, psychogenic causes were involved. Postural hypnosis (i.e., hypnosis in the standing position) was employed to counteract and minimize muscle spasms due to postural reflexes. A hypnobeavioral approach was adopted along with hypnotic strategies that included hierarchical desensitization, sensory-imaging conditioning, ego-boosting suggestions, and hypnosis-facilitated differential muscle retraining. In two cases, a combined hypnosis and electromyographic-biofeedback approach was used to equilibrate and retrain affected neck muscles. Although the hypnotherapeutic process took several months to induce and stabilize significant changes, outcome results were good to excellent in all cases, with marked reduction of the torticollis and the hypertrophy of the neck muscles as well as a reduced interference of symptoms in daily living. -- Journal Abstract**

**1992**

**Zitman, Frans G.; Van Dyck, Richard; Spinhoven, Philip; Linszen, A. Corrie G. (1992). Hypnosis and autogenic training in the treatment of tension headaches: A two-phase constructive design study with follow-up. Journal of Psychosomatic Research, 36, 219-228.**

**Tension headaches can form a chronic (very long duration) condition. EMG biofeedback, relaxation training and analgesia by hypnotic suggestion can reduce the pain. So far, no differences have been demonstrated between the effects of various psychological treatments. In a constructively designed study, we firstly compared an abbreviated form of autogenic training to a form of hypnotherapy (future oriented hypnotic imagery) which was not presented as hypnosis and secondly we compared both treatments to the same future oriented hypnotic imagery, but this time explicitly presented as hypnosis. The three treatments were equally effective at post-treatment, but after a 6- month follow-up period, the future oriented hypnotic imagery which had been explicitly presented as hypnosis was superior to autogenic training. Contrary to common belief, it could be demonstrated that the therapists were as effective with the treatment modality they preferred as with the treatment modality they felt to be less remedial.**

#### **NOTES**

**An earlier review by these authors found that EMG biofeedback and relaxation training were equally effective with headache [Zitman, 1983, Biofeedback and chronic pain, In Advances in Pain Research and Therapy (Edit by Bonica, Lindblom, Iggo) V. 5, pp 794-809. N. Y.: Raven Press]. Other authors also found that hypnotic suggestion, EMG biofeedback and EMG biofeedback plus progressive**

relaxation training were equally effective [Schlutter, Golden, Blume, 1980, A comparison of treatments for prefrontal muscle contraction headache. *Br J. Med Psychol*, 53, 47-52.]. The authors raise the question whether any treatment element or perhaps combination of elements can enhance a basic relaxation training procedure, with respect to chronic headache.

The first phase of this research compared autogenic training (AT) and future oriented hypnotic imagery (FI) which was not labeled as hypnosis. Results were the same for both groups, and were reported earlier [van Dyck, Zitman, Linssen et al. *International Journal of Clinical and Experimental Hypnosis*, 1991, 39, 6-23]. The current study added a third group which received future oriented hypnotic imagery but also was told that they were getting hypnosis (FI-H). Thus the AT and FI groups were 'historical' comparison groups for the FI-H group in this study.

Patients were described as having headache complaints of at least 6 months (76% had been suffering for >2 years), were over 18 years old, had no drug dependence and no psychiatric disorder, and no previous therapy with autogenic training or hypnosis; no other treatment during the project; fluent in Dutch.

The autogenic training consisted of six exercises learned in a fixed order. The FI method, in which the hypnotized patient imagines himself in a future, pain-free, situation, had been described by Milton Erickson [1954, Pseudo-orientation in time as a hypnotherapeutic procedure. *JCEH*, 2, 261-283]. For that future situation the investigators used descriptions that the patients provided. Both kinds of intervention taught patients muscular and mental relaxation. Both methods required home practice of the technique, using audio cassettes.

In order to substantiate the labeling of the hypnotic procedure as hypnotic future oriented imagery (FI-H) "hand levitation induction was employed during session two with the purpose of inducing positive expectancies concerning hypnosis as a procedure capable of changing ordinary experiences in an unexpected way [17]. This hand levitation procedure, however, was not presented on tape. Except for the labeling as hypnosis and the hand levitation induction, the hypnotic future oriented imagery procedure was identical to the future oriented imagery procedure in the first phase" (p. 221).

Treatment lasted for 8 weeks and provided 2 1/2 hours of therapist and 24 1/2 hours of home training with taped instructions. The outcome measures included: 1. Budzinsky-type headache index (mean daily sum of intensity rating for each hour of headache activity recorded during 3 separate days of the week of an assessment session) 2. State Anxiety 3. Zung-type Self-rating Depression Scale 4. Perceived credibility of treatment (4 Question's developed by Borkovec & Nau using a visual analogue scale) 5. Neuroticism from the CPI

## RESULTS

Of 96 patients who agreed to participate, 17 dropped out before the post-treatment assessment. Of the remaining 79, 28 completed AT treatment, 27 FI, and 24 FI-H. Sixty-six attended the follow-up assessment; there were no dropouts from the FI-H, and the drop-outs were equally divided between the AT and FI condition. The headache index scores were logarithmically transformed because the distribution was positively skewed.

Using ANOVA, in terms of post-treatment scores, there were no significant main effects for therapist or treatment, nor were there any significant interaction effects when analyzing headache index, state anxiety, and depression. There was a significant main effect for Time for three outcome measures: headache index score, state anxiety, and depression.

Post-treatment, neither amount of medication used nor subjective estimates of headaches differed by treatment or by therapist. However, over time there were beneficial results for both treatment groups. "Patients rated their headaches as significantly reduced compared to pre-treatment (a mean pain reduction of 40%). ...they had significantly reduced their use of analgesic medication (a mean decrease of 14%)" (p. 224).

Using ANOVA, in terms of follow-up scores, again there were no significant main effects for Treatment or Therapist on the outcome measures of headache index, state anxiety, or depression. There now were three time periods (pre-, post-, and follow-up), and once again there was significant main effect for Time for headache index (though not for state anxiety). That is, people benefitted over the time of the treatment and follow-up. Moreover, there was a significant interaction effect between Therapy and Time on the headache index measure. "A posteriori contrasts revealed that the patients from the FI-H condition showed a greater reduction in their headaches between pre-treatment and follow-up than patients from the AT condition" (p. 225).

The authors write in their Discussion, "Our data indicate that at least in tension headache patients, defining a procedure explicitly as hypnotherapy may not lead to greater effects at post-treatment, but does lead to longer lasting effects" (p. 226).

"The paucity of differences between the three conditions may be a consequence of the study design: the small number of patients and the large SD may have prevented the detection of more differences in effect between the three conditions" (p. 226).

"Other critical remarks are related to the difference in headache reduction at follow-up between AT and FI-H. Firstly, the differences at follow-up were found only with respect to the headache index and not with respect to the subjective estimate of the pain. Secondly, in defining future oriented hypnotic imagery explicitly as hypnosis, we hoped to enhance the efficacy via increased credibility. We found increased efficacy, but we did not find enhanced credibility. Therefore, the differences in effect at follow-up must have another cause. The different effects at follow-up could be linked to the fact that the FI-H condition was the only one without drop-outs. This absence of drop-outs was due to a new research assistant who tried extraordinarily hard to make the patients return for follow-up. By doing so, she may have prevented the patients who gained much from the treatment from dropping out as well as those who gained little" (p. 226-227).

"In this study, despite the differences in therapists' preferences, both therapists were equally effective with all three treatments. This is an intriguing finding which goes against the belief commonly held by clinicians that therapists are more effective with the type of therapy they prefer" (p. 227).

"The effects were modest, but it must be kept in mind that most of our patients referred by a neurologist were chronic headache sufferers (76% had been suffering

for > 2 yr). In such a group of patients even small effects are important, especially when these effects are long-lasting" (p. 227).

**1991**

**Mauer, D. R. (1991, October). A comparison of cognitive-behavioral and hypnotic techniques in the management of electromyography pain (Dissertation, University of Iowa). Dissertation Abstracts International, 53 (4), 1070-B. (Order No. DA 9217180)**

Compared a cognitive behavioral technique that included providing specific sensory and procedural information combined with relaxation with a hypnotic technique (relaxation with guided imagery) and a control group for management of acute EMG pain and anxiety. Pain and anxiety ratings were gathered from 45 EMG patients and observers for both nerve conduction and needle electrode components of the EMG exam. It was found that only the hypnosis group significantly reduced pain and anxiety during the needle electrode portion of the procedure. Patients with unexplained or functional symptoms reported more EMG pain and anxiety than patients who had an organically based disease. Because having had a prior EMG seemed to have an effect on the efficacy of treatment, the data were reexamined. Results determined that inexperienced EMG patients who were treated had less pain and anxiety than patients who experienced EMG before, but inexperienced control patients had an increase in pain and anxiety over experienced patients" (p. 1070).

**1990**

**Sturgis, Laura M.; Coe, William C. (1990). Physiological responsiveness during hypnosis. International Journal of Clinical and Experimental Hypnosis, 38, 196-207.**

Four physiological measures - electromyogram, respiration rate, heart rate, and skin conductance - were recorded for 11 high and 11 low hypnotizability Ss. It was hypothesized (a) that physiological responsiveness during hypnosis would vary depending on the nature of the task instructions, and (b) that high hypnotizability Ss would show more physiological responsiveness than low hypnotizability Ss. The first hypothesis was substantiated across all 4 measures. Only heart rate levels supported the second hypothesis. The results are discussed as they relate to the 1 hypotheses and to future research.

**1988**

**Pagano, Robert R.; Akots, Normund J.; Wall, Thomas W. (1988). Hypnosis, cerebral laterality and relaxation. International Journal of Clinical and Experimental Hypnosis, 36, 350-358.**

This study attempted to determine if hypnosis produces a shift towards more dominant right hemisphere functioning and if this increased dominance can be adequately explained by general somatic relaxation rather than being due to some other aspect of the hypnotic process. 14 right-handed, medium to highly hypnotizability Ss performed a dichotic listening task while in a prehypnosis,

hypnosis, and post-hypnosis repeated measures design. Throughout the experiment, somatic relaxation was monitored physiologically by recording heart rate, respiration rate, and frontalis EMG. The results showed a highly significant shift toward a greater left ear advantage during hypnosis. There was no change in EMG. Respiration rate increased during the hypnosis condition and remained at an increased rate during the posthypnosis condition. Heart rate decreased during the hypnosis condition and remained at a decreased rate or decreased further during the posthypnosis condition. These results replicate and extend those reported by Frumkin, Ripley, and Cox (1978) and do not support the view that changes in general somatic relaxation can adequately account for this hypnotic effect.

## NOTES

Frumkin et al. (1978) presented syllables simultaneously to two ears of subjects, requiring them to state which syllable they heard most clearly (e.g. 'Ka' vs 'Ga'). They found a right ear advantage (REA) during waking conditions, which shifted toward a left ear advantage (LEA) during hypnosis. Their interpretation was that hypnosis results in more right cerebral hemisphere involvement. Two recent investigations did not find the shift in ear with advantage (H. J. Crawford, K. Crawford, & Koperski, 1983; Levine, Kurtz, & Lauter, 1984) but they were not actual replications of the Frumkin et al. (1978) investigation. This study is a replication of Frumkin et al., and is designed to learn whether relaxation could account for the results.

Subjects were 14 volunteer students of medium to high hypnotizability (Stanford Hypnotic Clinical Scale: Adult scores of 3-5). The dichotic listening tape has been used in other research at Haskins Laboratories (Yale University), and was developed by Dr. Terry Halwes. "Each run of the tape consisted of 96 dichotic pairs presented in 4 groups of 24. Six syllables from the English stop consonants k, g, p, d, b, and t preceded and followed by the vowel a, composed the pairs" (p. 352). The experimenters also recorded heart rate (HR), respiration rate (RR), and EMG.

There were two sessions for each subject: (1) screening and measuring hypnotizability with SHCS: Adult, (2) dichotic listening task within three conditions: pre- hypnosis, hypnosis, and posthypnosis. Table 1 (not shown here) gives for each S the SHCS score and the Laterality Quotient for each of the three conditions.

## RESULTS

Laterality quotients were computed for each S by the formula  $(R - L / R + L) \times 100$ , where R = right ear score and L = left ear score. A positive score indicates a predominate REA, and a negative score indicates a predominate LEA" (p. 353).

The analysis by ANOVA for repeated measures indicated that there was a significant shift to LEA during hypnosis; the means were 11.34 prehypnosis, 3.17 hypnosis, 8.93 posthypnosis. All 14 subjects demonstrated this directional shift. Heart rate decreased between prehypnosis (70.4 beats/minute) and hypnosis (67.8) and remained lower (67.9) during posthypnosis. However respiration significantly increased during hypnosis, from 13.5 breaths/minute prehypnosis to 16.2 for hypnosis and 15.2 for posthypnosis. There were no significant changes for EMG.

Self-reported depth of hypnosis remained the same for the first and second sessions. In their Discussion, the authors interpret the shift toward greater LEA during hypnosis (and return to greater REA posthypnosis) as greater right hemisphere involvement, confirming Frumkin et al. They noted that the changes were not due to increased error in the right ear, but to identification of more syllables in the left ear. Several experimental design differences could account for why this study and Frumkin obtained the shift and two other investigations did not. These investigators and Frumkin used a competing response paradigm (requiring that subjects identify which syllable is heard more clearly) and the other two studies did not.

"In evaluating the possible confound of general somatic relaxation with hypnosis per se, the physiological data provide salient information. Davidson & Schwartz (1976) have discussed the limitations in evaluating the relaxation response as a unitary concept and have recommended looking at patterns of multiple physiological measures. Failing this, the best single measure is HR (Davidson & Schwartz, 1976)" (p. 356). In this case, HR decreased over the three conditions, remaining low in posthypnosis when laterality shifted back to REA. If the cerebral shift were due to relaxation, presumably there would not have been low HR during posthypnosis.

The authors note the lack of convergence in physiological measures (EMG showing no change, RR increasing during hypnosis and remaining high, HR decreasing during hypnosis and remaining low). Lack of convergence is typical in physiological studies of the relaxation response (Davidson & Schwartz, 1976). "However, whether the three physiological measures are considered as an overall pattern in determining level of somatic relaxation or whether HR is considered alone, increased somatic relaxation due to hypnosis cannot adequately account for both the shift toward more dominant right hemisphere activity in the hypnosis condition and the shift back to more dominant left hemisphere activity during the posthypnosis condition" (p. 356).

The authors acknowledge that the absence of either a low hypnotizable subject group or a relaxation control group suggests caution in interpretation of the results.

1987

De Pascalis, Vilfredo; Marucci, Francesco; Penna, Pietronilla M.; Pessa, Eliano (1987). Hemispheric activity of 40 Hz EEG during recall of emotional events: Differences between low and high hypnotizables. International Journal of Psychophysiology, 5, 167-180.

This study evaluates individual differences in hypnotizability as reflected in waking-state hemispheric engagement during recollection of 3 positively and 3 negatively valenced personal life events. The State-Trait Anxiety Inventory, Maudsley Personality Inventory, Tellegen Absorption Scale and Harvard Group Scale of Hypnotic Susceptibility (Form A) were administered. Electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 40-Hz band were recorded during rest and task conditions in 22 high and 21 low hypnotizable women. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EMG amplitude and both

hemisphere 40-Hz EEG densities were obtained. A 40-Hz EEG ratio, as a measure of hemispheric asymmetry, and a hemispheric specificity index were also computed. High hypnotizables showed significantly lower 40-Hz EEG density than low hypnotizables in all experimental conditions. The relationship between lateralization of 40-Hz EEG and emotional processing was moderated by hypnotizability. High hypnotizables, with respect to rest condition, showed an increase of density over both left and right hemispheres during two of the three positive emotional tasks, while they showed a depressed activity over the left and an increased activity over the right during negative emotional tasks. Low hypnotizables, on the other hand, did not exhibit differential hemispheric patterns that could be attributed to different emotional valences. The high group showed greater hemispheric specificity in the predicted direction than the low group. High subjects exhibited greater ratings of absorptive ability and emotional feeling than low subjects. Anxiety and EMG levels did not differ between groups. EMG was dependent on the type of emotion which showed greater activity in the negative emotion condition compared with the positive one.

1986

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

]1985

Miller, Lorence S.; Cross, Herbert J. (1985). Hypnotic susceptibility, hypnosis, and EMG biofeedback in the reduction of frontalis muscle tension. International Journal of Clinical and Experimental Hypnosis, 33, 258-272.

Biofeedback and hypnosis have been used in the treatment of similar disorders. While each has been useful, it is unclear whether they involve similar or conflicting processes. Bowers & Kelly (1979) have hypothesized that high hypnotizable Ss are more likely to benefit from hypnosis and similar procedures, than moderate and low hypnotizable individuals. In contrast, Qualls & Sheehan (1979, 1981 a, b, c) have argued that hypnosis and biofeedback involve antithetical abilities. In the present

study, high, moderate, and low hypnotizable individuals (N = 60) were randomly assigned to either EMG biofeedback or hypnosis conditions and instructed to relax. It was found that the mean percent reduction in frontalis muscle tension over the last 5 trials was significantly greater for the high hypnotizable Ss during hypnosis than the moderate and low hypnotizable Ss. The moderate and low hypnotizable Ss demonstrated greater reductions in frontalis muscle tension during EMG biofeedback than during hypnosis. These findings are partly supportive of the predictions of Qualls and Sheehan that hypnosis and biofeedback involve antithetical processes.

#### NOTES

Qualls and Sheehan (1979, 1981a) "have hypothesized that biofeedback and hypnosis abilities involve antithetical or antagonistic cognitive processes. Specifically, they argued that the biofeedback signal interferes with the natural ability of high absorption Ss to 'direct their attention in an effortless manner toward subjective, imaginal experience [1981a, p. 33],' by forcing them to attend to the external environment. In contrast, low absorption Ss, as well as moderate hypnotizable Ss, possess inadequate abilities to direct their attention in such an effortless and absorbing manner towards inner, subjective experiences, and therefore, the biofeedback signal better enables them to focus their attention. While the pattern of EMG results among the high, moderate, and low hypnotizable Ss ... was somewhat consistent with these predictions, the self-report data did not reveal differences in Ss' awareness of the biofeedback signal or hypnotic suggestions. In addition, there was only a trend for the high hypnotizable Subjects to report less effort in attempting to relax. It is, therefore, unclear whether the explanations postulated by Qualls and Sheehan (1979, 1981a) for the differences found in this study are valid" (p. 269).

Subjective relaxation response results were complex. Ss were asked how relaxed they were during the experimental session in comparison to the previous hypnosis sessions (screening tests). Biofeedback Ss rated the experimental session less favorably than hypnosis Ss. Ss were asked to what degree the feedback (or hypnotic suggestions) helped them to relax; there were significant main effects for treatment and trait, as well as a significant trait x sex interaction. Hypnosis Ss reported that this procedure was more helpful than was reported by the biofeedback Ss. Newman-Keuls comparison revealed that the main effect for trait was due to the high hypnotizable Ss reporting more help from the procedures than the low hypnotizable Ss, and moderate hypnotizable Ss. The Trait x Sex interaction was the result of the high hypnotizable female Ss indicating more help from either relaxation procedure, than was reported by the low hypnotizable male Ss and moderate hypnotizable female Ss and the high hypnotizable male Ss indicated that the procedures were significantly more helpful than was reported by the low hypnotizable male Ss.

Schlesinger, Jay Lawrence (1985). Hypnotizability in relation to success in learning biofeedback training: Attentional involvement (Dissertation, Adelphi University). Dissertation Abstracts International, 45 (n8-B), 2701. (Order No. DA 8424937)

## NOTES

This study investigated the role of attentional focus in the relationship between hypnotizability and success in learning two types of biofeedback training. 40 female college students, aged 18-25, were measured for hypnotic responsiveness, and given one session of EMG biofeedback and one session of temperature biofeedback. For the biofeedback training, 20 Ss received written instructions designed to establish a passive, non-volitional attentional focus on the feedback signal, and 20 received written instructions intended to establish an active, volitional attentional focus on the feedback signal.

"It was hypothesized that level of hypnotizability would be positively related to success in learning EMG and temperature biofeedback training for the Ss given passive, non-volitional attentional instructions, while level of hypnotizability would be negatively related to success in learning biofeedback training for the Ss given active, volitional attentional instructions. It was also hypothesized that higher hypnotizables would perform better with temperature biofeedback than with EMG biofeedback, and that lower hypnotizables would perform better with EMG biofeedback than with temperature biofeedback.

"The hypotheses were not supported, nor was any overall relationship between level of hypnotizability and success in learning biofeedback demonstrated. There was support to suggest that an active, volitional attentional focus on the biofeedback signal was most adequately maintained by the 20 Ss given the active volitional instructions. Clinical implications of these findings and directions for future research were discussed" (p. 2701).

### 1983

Radtke, H. Lorraine.; Spanos, Nicholas P.; Armstrong, L. A.; Dillman, N.; Boisvenue, M. E. (1983). Effects of electromyographic feedback and progressive relaxation training on hypnotic susceptibility: Disconfirming results. International Journal of Clinical and Experimental Hypnosis, 31 (2), 98-106.

The efficacy of relaxation training in modifying hypnotic susceptibility was investigated. Following 2 pretests of hypnotic susceptibility, 24 Ss who scored 7 or below on both tests were randomly assigned to 1 of 2 relaxation training groups (EMG-biofeedback or progressive relaxation) or a no-treatment control group. Relaxation training was conducted over 10 20-minute sessions and was monitored by measurement of frontalis EMG. All Ss were then administered a posttest of hypnotic susceptibility. Hypnotic susceptibility did not increase significantly from pretest to posttest. Moreover, change in frontalis EMG was unrelated to change in susceptibility. These results fail to confirm earlier work conducted by Wickramasekera (1972, 1973, 1977).

### 1982

Credidio, Steven G. (1982). Comparative effectiveness of patterned biofeedback vs meditation training on EMG and skin temperature changes. Behaviour Research and Therapy, 20, 233-241.

Examined whether a low arousal, relaxation pattern of frontalis EMG decreases and peripheral skin temperature increases could be attained more effectively through biofeedback or meditation training. 30 21-59 yr old females were randomly assigned to 1 of 3 groups: patterned biofeedback, clinically standardized meditation, or control. Prior to training, Ss were administered the Eysenck Personality Inventory. Each S was seen weekly for 7 sessions. Subjective experiences and time spent practicing at home were also recorded. Results indicate that the meditation group showed significantly lower EMG levels at the end of treatment than did the control group. The biofeedback group had difficulty in patterning the 2 feedback signals simultaneously. Extraverts in the control group had the highest EMG levels. The most positive subjective reports came from Ss in the meditation group. It is suggested that meditation offers a viable alternative as a relaxation procedure, requiring little time to learn and devoid of any performance criteria levels.

Holroyd, Jean; Nuechterlein, Keith; Shapiro, David; Ward, Frederick (1982). Individual differences in hypnotizability and effectiveness of hypnosis or biofeedback. International Journal of Clinical and Experimental Hypnosis, 30 (4), 45-65.

8 high and 8 low hypnotizable Ss used biofeedback and hypnosis to lower blood pressure in one session and forehead EMG activity in another session. Results were analyzed by repeated measures analyses of covariance using baseline physiological level on the dependent variable as the covariate. Electromyographic level was reduced more immediately by biofeedback than by hypnosis. When the task was to lower blood pressure, blood pressure and skin conductance were more effectively reduced by hypnosis than by biofeedback, considering only the first half of each session to eliminate within-session transfer effects. Hypnotizability did not predict overall outcome. Factors which may have prevented demonstrating a clearer relationship between hypnotizability and success using biofeedback or hypnosis are discussed. State and trait anxiety, cognitive strategies used during the tasks, and self-reported hypnotic depth are examined for correlates of successful performance.

Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)

Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and

showed that voluntary and involuntary Ss did not differ in response to the contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).

**1981**

**Cott, A.; et al. (1981). The long-term therapeutic significance of the addition of electromyographic biofeedback to relaxation training in the treatment of tension headaches. Behavior Therapy, 12, 556-559.**

Eight tension headache sufferers seeking traditional medical treatment from a neurologist participated in either a therapist-delivered relaxation training (RT) condition or an RT plus EMG feedback condition. Mean hours of pain/day, headache severity, and medication ingestion were significantly lower in both groups following treatment. Results were maintained at a 1-year follow-up for hours of pain/day and medication ingestion. Findings thus indicate no benefit of adding EMG feedback to relaxation training.

**Tellegen, Auke (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on 'Role of the feedback signal in electromyograph biofeedback: the relevance of attention' by Qualls and Sheehan. Journal of Experimental Psychology: General, 110, 217-226.**

High and Low Absorption Ss differ in set rather than in capability for attending to external or internal stimuli, as Qualls and Sheehan suggest. Trait x Treatment interaction for Absorption illustrates concept of personality dispositions being inherently interactive functional units. Provides a content analysis of Absorption scale (subscales) and relates absorption to other constructs in psychology. "It is not the internal versus external focus per se that play a decisive role but the subject's experiential versus instrumental set. For example, with two treatment levels, one would expect to obtain an Absorption x Treatment interaction even if both treatment conditions required an external attentional focus, as long as they contrasted an experiential and an instrumental set" (pp 223-224).

**1979**

**Quall, Penelope J.; Sheehan, Peter W. (1979). Capacity for absorption and relaxation during electromyograph biofeedback and no-feedback conditions. Journal of Abnormal Psychology, 88 (6), 652-662.**

The present research examined the relation between absorption capacity and relaxation during electromyograph biofeedback and no-feedback (instructions only) conditions. Sixteen high absorption and 16 low absorption female subjects underwent a biofeedback and no-feedback session with the order of conditions counterbalanced. For high absorption subjects in the first session, EMG reductions

were greater during no- feedback than during biofeedback, although the performance of biofeedback subjects improved in the second session. For low absorption subjects, no differences in EMG reductions were apparent across experimental conditions. Postexperimental self-report data demonstrated differences between absorption groups in subjects' state of arousal and quality of consciousness. It was concluded that for subjects with high capacity for absorbed attention, experimental conditions that allow for a withdrawal from the external environment are most conducive to relaxation, whereas for subjects with limited capacity for absorbed attention, conditions such as biofeedback that place an attentional demand on subjects may be preferable.

**1978**

Acosta, Frank X.; Yamamoto, Joe; Wilcox, Stuart A. (1978). Application of electromyographic biofeedback to the relaxation training of schizophrenic, neurotic, and tension headache patients. Journal of Consulting and Clinical Psychology, 46 (2), 383-384.

This study examined the effects of electromyographic (EMG) biofeedback on tension reduction by schizophrenic, neurotic, and tension headache patients. Fourteen patients participated voluntarily in at least 10 weekly EMG biofeedback sessions at a public outpatient clinic. All had complained of chronic tension. Patients showed significant decreases in their muscle tension levels with successive biofeedback training sessions. No significant differences were found between the schizophrenic, neurotic, and tension headache groups. A further contribution was the finding that patients with diverse socioeconomic and educational levels benefitted similarly from EMG biofeedback training.

Counts, D. Kenneth; Hollandsworth, James G., Jr.; Alcorn, John D. (1978). Use of electromyographic biofeedback and cue-controlled relaxation in the treatment of test anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 990-996.

The effect of using electromyographic (EMG) biofeedback to increase the efficacy of cue-controlled relaxation training in the treatment of test anxiety was studied. Forty college undergraduates scoring in the upper third on a self-report measure of test anxiety were randomly assigned to one of four treatment conditions - EMG-assisted cue- controlled relaxation, cue-controlled relaxation alone, attention-placebo relaxation, and no-treatment control. Pre-post self-report measures of test anxiety, state anxiety, and trait anxiety were obtained. In addition, a performance measure in the form of a mental abilities test was administered. Subjects from the three relaxation groups received six 45- minute individual sessions over a period of 2 weeks. All treatments were conducted using audiotape recordings. The results indicate that cue-controlled relaxation is effective in increasing test performance for test anxious subjects, that EMG biofeedback does not contribute to the effectiveness of this procedure, and that self-report measures of anxiety are susceptible to a placebo effect.

Parwatikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, **3**, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

1975

Alexander, A. Barney (1975). An experimental test of assumptions relating to the use of electromyographic biofeedback as a general relaxation technique. Psychophysiology, 656-662.

Twenty-eight normal adults participated in an experimental test of two assumptions underlying the use of electromyographic (EMG) biofeedback as a general relaxation training technique: 1) that trained EMG reduction in one muscle generalizes to untrained muscles; and 2) that subjective feelings of relaxation are related to EMG reduction. An experimental group received 5 sessions, during the middle 3 of which EMG biofeedback training was offered on the frontalis muscle. Throughout all sessions, EMG recordings were also taken from the forearm and lower leg, and rating of subjective relaxation feelings were obtained at regular intervals. A control group, matched with the experimental group on baseline frontalis EMG, received 5 similar sessions without feedback. Employing a maximum p of .05, the results revealed no evidence of generalization of EMG reduction from the frontalis to the untrained sites, nor any tendency for successful frontalis EMG reduction to result in increased feelings of relaxation beyond what was obtainable from relaxing without the benefit of training. The results were interpreted as suggesting the EMG

biofeedback cannot yet be accepted as a viable general relaxation training technique.

**Andrews, Reagan H., Jr. (1975). Placebo effects in EMG biofeedback (Dissertation). Dissertation Abstracts International, 36, 1424.**

Differential instructions were employed in a negative placebo model to alter expectancies of success in achieving criterion frontalis EMG voltage levels in 30 female subjects. The negative placebo model dictated that all subjects receive true feedback during both of two 10-minute experimental trials. On one of the two trials they were informed that feedback would be accurate, and on the other trial, that feedback would be accurate only 50% of the trial period. Data was collected for 20 subjects in a 2 X 2 Latin Square design, while 10 subjects were designated control subjects and received high-success expectancy instructions on both experimental trials. Pre-trial measures included administration of a standard hypnotic susceptibility scale and a pre-test subjective questionnaire. Dependent variable was the time from onset of feedback to 70% reduction of resting EMG levels of the frontalis. Significant differences were found between high and low-expectancy trials for experimental subjects. Effects were strongest on the first experimental trial and tended to diminish on the following trial. Correlation of hypnotic susceptibility scores with response latencies was not significant, but subjects' impression of their degree of relaxation during susceptibility scale administration was significantly correlated with criterion latencies. Importance of subject expectancies, instrumentation standards and implications for future studies in the biofeedback area were discussed" (p. 1424).

**1973**

**Wickramasekera, Ian (1973). Effects of electromyograph feedback on hypnotic susceptibility: More preliminary data. Journal of Abnormal Psychology, 82 (1), 74-77.**

The purpose of this double-blind study was to determine if taped verbal relaxation instructions and response-contingent electromyographic feedback training would increase suggestibility or hypnotic susceptibility over that obtained with instructions and false or noncontingent feedback, The present data appear to confirm the hypothesis

**1954**

**Malmo, Robert B.; Boag, Thomas J.; Raginsky, Bernard B. (1954). Electromyographic study of hypnotic deafness. Journal of Clinical and Experimental Hypnosis, 2 (4), 305-317.**

**NOTES**

**Summary and Conclusions.** The main purpose of the present study was to investigate the question of similarities and differences between hysterical deafness, previously studied, and hypnotically induced deafness. The study was designed to

repeat the objective physiological tests previously carried out with a case of 'total hysterical deafness.' There was also the more general aim of securing objective data to enrich our general understanding of hypnosis.

"Similarities between hysteria and hypnosis which we observed may be listed as follows: (a) Significantly reduced motor reaction (exclusive of blink) to strong auditory stimulation in the deaf state. (b) Complete hearing loss in the hysteric and in one of the hypnotic subjects, even with strong auditory stimulation (i.e., denial of any auditory sensation). (c) With elicitation of strong startle reaction to the first stimulus in the deaf state, much smaller reaction to the next stimulus than would have been predicted on the basis of habituation. (d) Suggestion of substitution of somesthetic for auditory sensations in all subjects (although this was much less definite in the hypnotic subjects than the hysteric).

"The most outstanding dissimilarity lay in the absence of emotional reaction when 'hypnotic defense against sound' was broken through, in contrast to marked affective reaction in the hysterical subject under these conditions.

"The question of inhibitory mechanisms in hysteria and hypnosis was discussed" (pp. 316-317).

## **ELECTROSLEEP**

**1993**

Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical processes of the brain and performance. International Journal of Psychophysiology, 14, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

## **EMERGENCY MEDICINE**

**1992**

Frederick, Claire C.; Phillips, Maggie (1992). The use of hypnotic age progressions as interventions with acute psychosomatic conditions. American Journal of Clinical Hypnosis, 35 (2), 89-98.

Age progression as a hypnotherapeutic technique is mentioned infrequently in the literature when compared with its counterpart, age regression. In this paper we explore the use of progressions, or 'views of the future,' as prognostic indicators of therapeutic progress and as valuable tools for ego strengthening and for the integration of clinical material. Age progressions vary in the types of suggestions given and can be used to promote growth on multiple levels, facilitating treatment goals and deepening the working-through process. We present six cases in which we used different types of age progressions, and we discuss the significance of the progressions used in each case, within the context of relevant clinical material. We conclude from our observations that the use of hypnotic progressions can be a sustaining, valuable aspect of hypnotherapy, particularly in providing an index of the current direction and progression of the therapy process itself. - Journal abstract.

1990

Hartmann, Walter; Golden, Gail A. (1990). A "magic" aid for hypnosis and suggestion in crisis management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (3), 157-161.

#### NOTES

Mentions use of the stone talisman in several kinds of cases: case of an 8-year-old girl who fell at school and broke her ankle; a case of mother and child in an automobile crash; patients with presurgery anxiety; case of suicidal rumination of a patient in ongoing psychotherapy; case of post-mastectomy fear of attending follow-up clinic. The "magic" tool is intended to help patient in carrying out suggestions. "The tool and its transfer appear to help meet the commonly observed need for something tangible in complex situations--the need for ritual to symbolize and embody our perceptions and understandings of difficult and abstract processes" (p. 159). J. Holroyd

1989

Bierman, Steven F. (1989). Hypnosis in the emergency department. American Journal of Emergency Medicine, 7, 238-242.

Five cases are presented wherein hypnosis was used by the emergency physician either as the primary mode of treatment or as an adjuvant to standard medical care. Common hypnotic phenomena (e.g. anesthesia, analgesia), as well as novel effects, are reported. The technique used for trance induction and utilization is briefly outlined, and criteria are set forth for the bedside recognition of hypnotic trance.

Venn, Jonathan (1988). Hypnotic intervention with accident victims during the acute phase of posttraumatic adjustment. American Journal of Clinical Hypnosis, 31, 114-117.

Victims of accidents or other trauma often experience acute symptoms of confusion, disorganization, and intrusive memories. Victims can be extremely suggestible

during their initial adjustment, and they readily comply with suggestions to enter hypnosis. Reframing and other hypnotic interventions can be useful in managing acute symptoms and may facilitate long-term adjustment. A case is presented in which hypnosis was successfully used with a man who was acutely distressed after accidentally killing a pedestrian. Whether the heightened suggestibility experienced during acute posttraumatic adjustment entails an increase in hypnotizability is an interesting topic for future research, and one which has theoretical import.

1986

Kohen, D. P. (1986). Applications of relaxation/mental imagery (self-hypnosis) in pediatric emergencies. International Journal of Clinical and Experimental Hypnosis, 34 (4), 283-294.

Problems for which children come to Emergency Rooms are anxiety-producing for children and parents, whether or not these problems are perceived as "true" emergencies by health care professionals. Fear and pain are important factors in the response to such situations. Self-hypnosis (relaxation/mental imagery) is a useful adjunct for rapid reduction of anxiety and discomfort in pediatric emergency situations; it can serve to diminish fear, improve self-control, and alter the perception of discomfort. Hypnosis can also enhance development of a sense of mastery in the injured or ill child. 6 case examples are described which illustrate the variety of specific clinical applications and hypnotherapeutic approaches.

1981

Kleinhauz, Moris; Beran, B. (1981). Misuses of hypnosis: A medical emergency and its treatment. International Journal of Clinical and Experimental Hypnosis, 29 (2), 148-161.

Hypnosis is an intense interpersonal relationship requiring 2-way respect and involvement. Inadequate understanding of this dynamic relationship, and a consequent inability to cope with its potential dangers, may result in posthypnotic trauma. Unless treated carefully by a hypnotherapist who is experienced in both the techniques of dehypnotization and the utilization of psychotherapy, such traumas may persist for a very long time. In this paper, one striking case illustrates mishandling of the hypnotic event and immediate posthypnotic treatment and details the procedure by which successful treatment was eventually determined.

1972

Hodge, James R. (1972). Hypnosis as a deterrent to suicide. American Journal of Clinical Hypnosis, 15 (1), 20-24.

A method that has been found successful in temporarily deterring suicide attempts is to give the post-hypnotic suggestion that the patient will not be able to carry out an actual suicide attempt until he has discussed it with the psychiatrist, in advance of the attempt, and in the psychiatrist's office, and further, that the patient will

agree to enter a trance at any time the psychiatrist insists, even though the patient may not wish to do so. The rationale for this approach is that, (a) A temporary deterrent is often all that is necessary to prevent a given suicide attempt, (b) Hypnosis can have only a temporary deterring effect on suicide, (c) A direct and permanent confrontation that he can never commit suicide would be bound to fail and would not promote therapy of the personality, and (d) It gives the patient an alternative to suicide.

1972

Weitzenhoffer, A. M. (1972). Open-ended distance hypnotherapy. American Journal of Clinical Hypnosis, 14 (4), 236-248.

Distance hypnosis and hypnotherapy, i.e., via the telephone or the postal service, is not new, having been mentioned a number of times in the scientific literature of the late 19th Century. However, despite its actual as well as potential usefulness, distance hypnotherapy appears to have remained relatively unknown and unused. This article presents the detailed modus operandi of the technique and a number of illustrative cases.

1959

Hodge, James R. (1959). The management of dissociative reactions with hypnosis. International Journal of Clinical and Experimental Hypnosis, 7 (4), 217-221. (Abstracted in Psychological Abstracts 61:920)

## NOTES

### Conclusions

A case report is given of an unusual type of dissociative reaction, and treatment by a variety of hypnotic techniques is described. A distinction is made between the emergency and long term aspects of treatment by hypnosis, and emphasis is laid upon understanding the symptom and avoiding a too rapid challenge of the symptom. Special mention is made of the technique of predicting the future of the symptom" (p. 221).

"The patient was a 19 year old white Marine who became subject to hysterical seizures in which he acted the part of his own dog which had died several years before. The attacks occurred at irregular intervals; but when the patient was first seen they were occurring about twice weekly. During these seizures, which came on without warning, the patient would get down on all fours, bark and growl like a dog, attack ward personnel, paw at the floor, and respond to simple commands like those given to a dog such as 'Down, boy' or 'Play dead'. He would become motorically hyperactive and sometimes pound his head against the floor or walls. The really dangerous act which he performed, however, was to attempt to gouge out his own eyes with his hands; and for this reason cuff restraints had to be applied during each attack. There were no methods, until hypnosis was tried, which could control or terminate these attacks, which usually lasted from 30 to 60 minutes" (p. 217).

1955

Rosen, Harold (1955). Regression hypnotherapeutically induced as an emergency measure in a suicidally depressed patient. Journal of Clinical and Experimental Hypnosis, 3 (1), 58-70.

## NOTES

After cautioning that regressive techniques are only to be undertaken by very experienced therapists, the author states in conclusion, "However, if the therapist have a thorough grounding in dynamic psychiatry, he may as an emergency measure, through the adjunctive use of hypnotic techniques of the type described in this article even induce regressive phenomena in the potentially homicidal or suicidal psychotic patient, in order that they may be integrated and utilized in the service of the ego, at first by blotting out ego-boundaries between patient and therapist, so that later on during the course of the therapeutic process these self-same ego-boundaries may be re-defined and re-constituted on a more mature emotional level and with much healthier personality functioning.

## EMOTION/MOOD

### 1995

Crawford, Helen J.; Kapelis, Lia; Harrison, David W. (1995). Visual field asymmetry in facial affect perception: Moderating effects of hypnosis, hypnotic susceptibility level, absorption, and sustained attentional abilities. International Journal of Neuroscience, 82 (n1-2), 11-23.

Effects of hypnotic level, affect valence and cerebral asymmetry on reaction time (RT) in the discrimination of Ekman and Friesent (1978) stimuli of angry and happy faces were studied in counterbalanced conditions of waking and hypnosis. Assessed previously on two hypnotic susceptibility scales (Harvard Group Scale of Hypnotic Susceptibility; Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C)], non-depressed subjects were 16 low (0-4 SHSS:C) and 17 highly (10-12 SHSS:C) hypnotizable, right-handed college students. Subjects were required to identify affect of faces, presented tachistoscopically to left (LVF) or right (RVF) visual fields, by using a forced-choice RT paradigm. Highs were significantly faster than lows in angry and happy affect recognition. Hypnosis had no significant effects. For highs only, angry emotional valence was identified faster when presented to the right hemisphere (RVF), but there were no significant hemispheric effects for happy emotional valence. For lows there were no hemispheric differences. Gender was a nonsignificant factor. Significant correlations showed that faster reaction times to angry and happy stimuli, in both LVF and RVF in waking and hypnosis, were obtained by subjects who reported more deeply absorbed and extremely focused and sustained attention on the Tellegen (1982) Absorption Scale and a subscale of the Differential Attentional Processes Inventory (Grumbles & Crawford, 1981). Vividness of Visual Imagery Questionnaire (Marks, 1973) and Affect Intensity Measure (Larsen, 1985), in general, did not correlate with RTs. The potential role of the fronto-limbic attentional system in the recognition of external visual sensory affect is discussed.

1994

Ray, William J.; Moraga, R.; Faith, M. (1994, October). Psychometric and psychophysiological studies of hypnotizability and dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

1:

In the last 5-6 years we see a beginning of a consistency in this type of research on EEG and hypnosis. Baseline EEG theta for high and low hypnotizable Ss was higher significantly in frontal and temporal areas; less significantly in parietal and occipital areas. It begins to look like a signature of hypnotizability. Our research will be published in the Journal of Abnormal Psychology next year.

In Japan they see theta as sustained attention; some aspects of theta relate to MAO and also to dopamine. Betsy Faith did the same research, replicating almost exactly. There are no differences between Highs and Lows in alpha or beta; but we find differences in theta (especially frontal, and in 40 Hz more posteriorly). It may not be L-R hemisphere difference as previously thought, but more a rostral-caudal dimension.

The signature to hypnotizability is more frontal theta at baseline. This may also relate to a drop in theta after induction, but those results are not so clear. Highs have a larger drop in theta from pre to post induction than is observed in the Lows. We did a "chaos analysis" of EEG. There are three main measures, including dimensionality. Dimensionality is a measure of complexity. People demonstrate high dimensionality when asked to do tasks, low dimensionality in anesthesia.

High hypnotizable Ss start an induction with higher dimensionality than the Low hypnotizable Ss, and as we go through the induction they remain the same. So this measure shows individual differences but does not give evidence of a state (because it doesn't change).

Chaos dimensions for 2 mental math problems show lower dimensions in frontal compared to posterior areas; but for imagery [labeled on slide as positive and negative emotional tasks] the dimension is the same across areas.

For the dimension measures, lows look like they are doing mental math and highs look like they are doing imagery, in baseline.

**SECOND PART OF RESEARCH--DISSOCIATION.** For 100 years dissociation and hypnosis have been viewed as similar. Two dissociation scales were used - Putnam's DES and Reilly's scale. A factor analysis found four factors: 1. absorption or derealization 2. depersonalization 3. segment amnesia 4. in situ amnesia (Segment amnesia differs from in situ amnesia because you wake up to it at that moment in the in situ vs the segment case.)

We have 20-30 people who score very high on hypnotizability.

Colin Ross finds the same factors as our factors 1 and 2, but he finds only one amnesia factor where we find two.

The correlation between DES and Harvard ranges .05 to .18. Are the high hypnotizables related to high dissociatives, with others not related? A scatter plot did not reveal that.

FFT EEG bands during baseline for high and low dissociation Ss find no differences for high and low dissociative subjects. We conclude that dissociation and hypnosis are two orthogonal processes.

Now we are beginning to look at the pathways that lead one to become highly hypnotizable or dissociative.

**COMMENTS FROM THE AUDIENCE:**

**Ian Wickramasekera:** Have you introduced threat to high or low DES people?

**Answer:** High and Low DES people with happy and unhappy imagery tasks do the opposite, with the dimensionality measure. With emotionality you don't see stable baseline differences, you see reactivity differences.

**A. Barabasz:** I think the DES isn't a good measure of dissociation in hypnosis which is voluntary and not pathological.

**D. Spiegel:** Sabourin's study found more theta in left frontal during hypnosis, whereas you found less. **Answer:** That's why I don't know what to do about the state effects.

**J. Crawford:** Sabourin had Ss doing tasks, so they may have been more active than yours.

**1993**

**Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.**

This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.

**Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.**

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional

style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

## NOTES

1:

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the \_subjective sense\_ of \_altered state\_ --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.

Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are \_discrete states of consciousness\_ in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that

the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Bindler, Paul (1992, October). Hypnosis and Psychotherapy: The clinical utility of altered states of consciousness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

Author assesses state, especially attentional changes, with Multidimensional Consciousness Scale (receptivity, arousal, .... etc.)

Clinical management of anxiety is goal. Cites Nash as characterizing anxiety disorders with cognitive/affective characteristics similar to hypnotized state. Wickramasekera's model has people high in neuroticism and high in hypnotizable being hypersensitive to stress, with physiological hyperarousal. Lows have alexithymia, may be unresponsive to symbolic events but very responsive to concrete events; poor verbalization of alexithymics leads to somatization.

Author focuses on relaxation and anxiety reduction. Suggests that Crawford's attention model (highs better able to shift cognitive and attentional strategies) is useful.

Instructions facilitate focusing attention inward so external stimuli become irrelevant. Therapist helps patient focus attention on the link between cognitions and tension.

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

1992

Kihlstrom, John F.; Barnhardt, Terrence M.; Tataryn, Douglas J. (1992). The psychological unconscious. American Psychologist, 47, 788-791.

In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.

Mare, Cornelia; Lynn, Steven Jay; Segal, David; Sivec, Harry; Marsden, Kim; Myers, Bryan (1992, October). The 'dream hidden observer': A real-simulator comparison. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

In previous research, after the Stanford Scale Form C dream suggestion, the authors gave the suggestion to the Ss that "in hypnosis you can discover part of the unconscious mind that is aware of new thoughts, images, that might be related or might not be related to your dream; let your index finger lift when that happens." There were strong demand effects observed in those Ss.

94% of highs and 78% of mediums passed the hidden observer test, with more personal and more primary process material produced in the hidden observer

condition. All Ss recalled their suggested dreams after awakening, but only 1/3 recalled their hidden observer. The authors think it was because Ss thought the hidden observer was "unconscious."

Authors compared highs with low simulators in the present study. Michael Nash says two things differentiate highs: more primary process thinking, and more affect availability in hypnosis. In this study, if high hypnotizables' dreams have more of these, it would support the psychoanalytic model.

N = 18 Highs who passed 9 Harvard Scale suggestions; 18 lows passed 3 or fewer suggestions. Simulating instructions were from Orne, 1977.

Hypnotists were blind to the hypotheses and to the hypnotizability of Ss. This differs from the first study in two ways: (1) instructions to Ss (here they were more like Hilgard's original suggestions), and (2) more probing about dream content before receiving the hidden observer instructions.

We did a 5-point scale on bizarre content, on different thoughts after the experience, and on additional content. Primary process was measured by Bizarre Content and by Shifts in Time or Location. Did ANOVA on 2 primary process and 3 affect measures. Many other analyses also were used. Even under multiple probes, most Ss passed hidden observer test. (In both groups only 1 didn't pass the hidden observer test.) So it is a very reliable suggestion, suggesting that hidden observer instructions are a very credible metaphor (for clinical practice).

The 2 groups were comparable on rates of reporting more personally revealing information in the hidden observer condition: so this suggestion could be useful to get additional information from patients.

The results supported one hypothesis: dream reports were associated with more primary process thinking. This was more true of highs than lows. Results supported the view that primary process is not attributed to role playing because the blending of dream and hidden observer responses occurred in the high hypnotizables; more novel content was found in the highs.

No support was found for the hypothesis that more affect is produced under these conditions.

Though simulators were unable to role-play the primary process thinking of highs, they may have been vigilant and may have suppressed primary process thinking.

Perry, Campbell (1992, October). J. Phillip Sutcliff's contributions to the field of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

Sutcliff did research that led him to conclude that the high hypnotizable was deluded rather than truly perceiving things, and he said the high is simply strongly emotionally invested in the suggested belief.

Putnam, Frank W. (1992). Using hypnosis for therapeutic abreactions. Psychiatric Medicine, 10, 51-65.

Abreaction, the dramatic reliving of traumatic events under hypnosis, is a powerful therapeutic intervention useful in the treatment of victims of trauma. First

systematically applied in World War I, abreaction coupled with psychotherapeutic processing of the recovered material is increasingly being used with victims of child abuse and chronic PTSD. Abreactions are helpful in recovering dissociated or repressed traumatic material, reconnecting missing affect with recalled material and for transforming traumatic memories. Although abreactions can be induced with medications, hypnosis is the method of choice except in acute situations where it is not possible to establish rapport. A variety of hypnotic techniques for the induction and management of abreaction are discussed, together with the indications and contraindications for their use.

**1991**

**Brown, Peter (1991). Ultradian rhythms of cerebral function and hypnosis. Contemporary Hypnosis, 8, 17-24.**

As a consequence of his observations of the clinical work of Milton Erickson, Ernest Rossi has proposed an 'ultradian rhythm theory of hypnosis'. Rossi demonstrated that the spontaneous changes in cognition, affect and behaviour which occur as part of the ultradian cycle (which Erickson referred to as 'the common everyday trance') are similar to the changes which occur during hypnosis. A review of studies of the phasic changes in hemispheric function suggests that ultradian changes do parallel the changes found in hypnosis.

**NOTES**

**1:**

Falling asleep and waking up are regulated by two separate mechanisms rather than being opposite poles of one mechanism (Winfrey, 1980). Kleitman (1961) suggested a 90-min cycle, the basic rest-activity cycle (BRAC). In addition to physiological alterations, there are alterations in cognition, mood and behavior (Rossi & Cheek, 1988); vigilance (Okawa, Matousek & Petersen 1984); peripheral blood flow (Ramano & Gizdulich, 1980); respiratory amplitude (Horne & Whitehead, 1976); visual evoked potentials (Zimmerman, Gortelmeyer & Wiemann, 1983); pupillary diameter, stability and reactivity to light, and saccadic eye movements (Lavie & Kripke, 1981).

These diurnal variations may relate to hypnotic behavior. There is a recurring increase in daydream and fantasy, as well as visual imagery (Kripke & Sonnenschein, 1978). "There is evidence for a parallel recurring cognitive and emotional cycle with increased emotional responsiveness and a more subjective cognitive processing of information (Evans, 1972; Holloway, 1978; Overton, 1978; Thayer, 1987). Subjects appear to repeat the cycle approximately 16 times per day, with a range of 70-120 minutes. Kripke and Sonnenschein (1978) noted that the subjects were personally unaware of any repeating cycle in their mental lives" (p. 19).

The brainstem arousal mechanisms seem to be implicated in periodic changes in the EEG. Ultradian rhythms are "more easily detected under conditions of increased sleep need, reduced external performance demand and lowered motivation to focus externally (Broughton, 1985)" (p. 20). Sterman (1985) observed that the rhythm was most marked in resting state and disappears during complex visuomotor tasks.

Relationship of EEG patterns to attentional patterns indicate there may be two different forms of attention, one for focused awareness (often thought to be associated with trance state) and the other a generalized vigilance (which would be reduced in hypnosis). Ultradian changes in consciousness reflected in the EEG may suggest increased internal absorption associated with visual imagery, a feature of the trance state.

"There has recently been a partial direct confirmation of Rossi's hypothesis. Aldrich and Bernstein (1987 [International Journal of Clinical and Experimental Hypnosis]) reported a bimodal distribution of Harvard Group Scale Hypnotic Susceptibility (HGSHS) scores when they are done at different times throughout the day. They note the parallel of the changes in HGSHS scores and the circadian variations in body temperature which suggest changes in hypnotic responsiveness coinciding with the fluctuations of physiological rhythms.

"Other support comes from some highly original work involving breathing rhythms. There are cyclic alterations in relative air flow between the left and right nostrils with an average period of 2-3 hours (Hasegawa & Kern, 1977). This nasal ultradian rhythm is correlated with an increase in contralateral cerebral hemispheric activity (Werntz, Bickford, Bloom & Shannahoff-Khalsa, 1981, 1983; Klein, Pilon, Prosser & Shannahoff-Khalsa, 1986). The alterations in hemispheric function do appear to be related to changes both in the style of cognition, particularly in an increase in vivid visual imagery, and in performance on specific tasks (Klein et al., 1986). Thus these studies support the notion of an ultradian rhythm of cerebral function which is associated with characteristic physical manifestations mediated by the autonomic nervous system. Whether or not these changes are directly related to the findings reported by Aldrich and Bernstein has yet to be established" (p. 21).

The authors conclude that "the most consistent evidence for ultradian rhythms is demonstrated by the mechanisms of the hypothalamic-limbic system and by brain-stem mechanisms that regulate arousal and attention processes (Parmeggiani, 1987); neuroendocrine regulatory mechanisms (Follenius, Simon, Brandenberger & Lenzi, 1987) and autonomic nervous system function (Bossom, Natelson, Levin & Stokes, 1983; Gordon & Lavie, 1986). These studies also suggest an ongoing dynamic interaction between cortical and subcortical structures throughout the ultradian cycle (Parmeggiani, 1987), and suggest that these interactions may be of great significance in hypnosis" (p. 21).

Cornell, William F.; Olio, Karen A. (1991). Integrating affect in treatment with adult survivors of physical and sexual abuse. American Journal of Orthopsychiatry, 61 (1), 59-69.

Presents a theoretical and technical model for affectively centered treatment of adults abused as children, focusing on the function of denial and dissociation as central defense mechanisms. The concept is introduced of working at an "affective edge." At this experiential point, a client can maintain both cognitive understanding and emotional and bodily awareness without triggering denial and dissociation. This approach fosters careful monitoring of the client's functioning both during and

between therapeutic sessions. The proposed therapeutic approach uses noninvasive touch and body-centered techniques. Focus is on integrating affect and on the importance of the therapeutic relationship.

DeKoninck, J.; Brunette, R. (1991). Presleep suggestion related to a phobic object: Successful manipulation of reported dream affect. *Journal of General Psychology*, 118, 185-200.

When compared with subjects who received presleep suggestions for negative affect, subjects who received positive affect suggestions had significantly higher levels of positive emotions in their dreams, rated their own dreams as more pleasant, and had significantly lower levels of anxiety, sadness, and aggression. This supports the hypothesis that presleep suggestion can be an effective technique in influencing the affective dimension of the dream.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. *American Journal of Clinical Hypnosis*, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

#### NOTES

1:

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional

reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Pekala, Ronald J. (1991). Hypnotic types: Evidence from a cluster analysis of phenomenal experience. Contemporary Hypnosis, 8, 95-104.

The phenomenological experiences of very-low and very-high, and low, medium and high susceptible individuals were cluster analyzed, attempting to determine if individuals of differing levels of hypnotic susceptibility report experiencing different types of phenomenological experience during hypnosis. Phenomenological

experience was assessed by means of a self-report questionnaire called the Phenomenology of Consciousness Inventory (PCI); it allows for quantification of 12 dimensions of phenomenological experience. K-means cluster analysis yielded two relatively distinct clusters of individuals for both low/very-low and high/very-high susceptible individuals. These results suggest at least two types of very-low/low and very-high/high susceptible individuals as determined by their reported experiences during hypnosis.

## NOTES

1:

The author notes that Sheehan and McConkey (1982) found three types of highs: concentrative, independent, and constructive. Spanos, Lush & Gwynn, 1989, found two groups of lows--one capable of learning hypnotic skills and the other less so.

In this study the author did two cluster analyses: (1) Harvard lows (0-1) and highs (11-12), and (2) all subjects divided into lows, mediums and highs, with cluster analyses performed separately for these three groups.

In the first analysis, there were two groups of very low hypnotizable subjects distinguished on the basis of altered state of awareness and rationality; and two very high groups, distinguished on the basis of imagery and positive affect.

One group of very lows reported "little alteration in altered state and altered experience and almost complete volitional control, self-awareness, rationality and memory" (p. 98) and were called 'classic very lows' because they were like refractory subjects in their self reports. The other group of very lows reported "moderate alterations in altered state and altered experience, and major decrements in volitional control, self-awareness, rationality and memory" (p. 98) and were called 'pseudo very lows' because their reports were a little like medium or high hypnotizables.

One group of very high hypnotizables had "great alterations in state of consciousness and moderate altered experiences; a loss of control, self awareness, rationality and memory; and little vivid imagery" (p. 98) and were called 'classic very highs' because their reported experience was like that of somnambules. The other type of highs were called 'fantasy very highs' because they had "moderate alteration in consciousness and experience, a great deal of vivid imagery, moderate positive affect, and only mild-to-moderate losses in rationality and memory" (p. 100).

When low, medium, and high susceptible subjects' PCIs had separate cluster analyses, the lows had three clusters: classic, dialoging, and pseudo lows. The dialoging group was between the other two in their experiencing yet reported a great deal of internal dialogue. Among the highs, the same two clusters appeared as for the very highs.

Among the mediums there were two groups: high mediums who reported a significant drop in volitional control, self-awareness, rationality, memory, and internal dialogue, and an alteration in state of awareness; and low mediums who had milder changes.

Comparing results to Sheehan and McConkey (1982), the classic highs may correspond to their concentrative type and the fantasy highs to their independent type, because the latter generated imagery without a request to do so.

Regarding the pseudo-lows, "it is intriguing that there appear to be some individuals who make little response on the behaviorally oriented Harvard Scale, and yet report some phenomenological alterations. Are they individuals for whom hypnosis may be somewhat more effective even though they are not that hypnotizable (as measured by the 'direct' Harvard Scale) or could they be Spanos's (Spanos et al., 1989) 'trainable' low susceptibles?" (p. 102).

Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.

Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.

#### NOTES

1:

Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).

This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).

The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that

are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."

Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid (n = 8) or invalid (n = 8). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, Cortex, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobesigns or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

1991

Radtke, H. Lorraine; Stam, Henderikus J. (1991). The relationship between absorption, openness to experience, anhedonia, and susceptibility. International Journal of Clinical and Experimental Hypnosis, 39, 39-56.

Examination of the absorption (Tellegen Absorption Scale [TAS] of Tellegen & Atkinson, 1974), openness to experience (OTE Inventory of Costa & McCrae, 1978), and anhedonia (ANH Scales of L. J. Chapman, J. P. Chapman, & Raulin, 1976) scales suggested that they might be conceptually related. Given the reliable relationship between TAS and hypnotic susceptibility, the authors were interested in studying OTE and ANH as possible personality correlates of hypnotic susceptibility. 2 studies, 1 involving a community sample and the other a sample of university students, were conducted to assess the relationships between the TAS, OTE, and ANH scales and hypnotic susceptibility. As predicted, in Study 1 (community sample) the TAS and OTE inventories were positively correlated with one another and both were negatively correlated with the ANH scale. This pattern of correlations was replicated in Study 2 (university sample), but only TAS correlated significantly with hypnotic susceptibility. Factor analyses further confirmed these findings. It was concluded that the conceptual relationship among the TAS and the OTE and ANH scales resides in some dimension other than hypnotic susceptibility.

NOTES

1:

Two studies used Tellegen Absorption Scale (TAS), Costa & McCrae's (1978) Openness to Experience Inventory (OTE), and Chapman, Chapman, & Raulin's (1976) Anhedonia scales (ANH). One involved a community sample, the other involved university students.

OTE and TAS  $r = .42$  and  $.62$

TAS and HGSHS:A  $r = .22$  ( $p < .10$ ) in one study "Thus, while there is a significant overlap in variability between TAS and the other person variables, the variance shared between TAS and hypnotic susceptibility is unique to those two measures. Further research is needed to determine the role of expectancies in contributing to this pattern of findings and the extent to which item overlap may be responsible for

the observed correlations (Nicholls et al., 1982). Inspection of the items included in the three scales indicated that only TAS assesses involvement in experiences; items on the ANH and OTE instruments focus on interest or willingness to engage in various experiences" (p. 51).

"Notably, the correlations between TAS and the 2 subjective indices of hypnotic susceptibility, SUB and O-I, were slightly stronger than the correlations between TAS and the two indices reflecting overt behavior (OBJ and HGSHS:A scores). This pattern of relationships is consistent with recent arguments that objective indices alone do not fully capture the hypnotic experience (e.g., Spanos et al., 1983).

"Interestingly, the correlations among the three personality scales tended to be stronger in Study 1 where a community sample was assessed in a nonhypnotic context than in Study 2 where a sample of university undergraduates was assessed in a hypnotic context. The two samples differed significantly on all three scales both in terms of mean level and variability, indicating possible ceiling effects and restricted range problems in the university sample. Given that almost all of the research on hypnotic susceptibility and its correlates has been conducted on university students, these findings point to the utility of obtaining research participants from a greater cross-section of the population" (pp. 51- 52).

"Of particular importance, these results indicate that the relationships among TAS and the OTE and ANH scales do not depend upon the hypnotic context and are not the product of expectancies generated by the anticipation of being hypnotized. Nevertheless, the conceptual relationship among the three scales resides in some dimension that is unrelated to hypnotic susceptibility. At this point, we can only speculate as to what this dimension might be. One possibility is that TAS and the OTE and ANH scales reflect an openness to various experiences; what absorption and hypnotic susceptibility uniquely share is the willingness to become involved in imaginal and sensory experiences" (p. 52).

**Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.**

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

**1990**

**Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. American Journal of Clinical Hypnosis, 32, 201-207.**

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales.

#### NOTES

1:

The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items related to modifications of regulatory control, changes in self-monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10-point scale. The items related to the experience of disturbances in identity, memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202- 203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205).

"All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.

## NOTES

1:

This chapter is a reprint of an article published in the American Journal of Clinical Hypnosis in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Martin, Maryanne (1990). On the induction of mood. Clinical Psychology Review, 10, 669-697

## NOTES

1:

Increasing interest in the relation between emotion and cognition has led to the development of a range of laboratory methods for inducing temporary mood states. Sixteen such techniques are reviewed and compared on a range of factors including success rate, the possibility of demand effects, the intensity of the induced mood, and the range of different moods that can be induced. Three different cognitive models (self- schema theory, semantic network theory, and fragmentation theory) which have been successfully used to describe long-term mood states, such as clinical depression, are elaborated to describe the process of temporary mood induction. Finally, the use of mood induction is contrasted with alternative methods (such as the study of patients suffering from depression) for investigating emotion.

1989

Bick, C. H. (1989). An EEG-mapping study of 'laughing': Coherence and brain dominances. International Journal of Neuroscience, 47, 31-40.

Laughter is triggered by pleasurable psychoemotional stimuli and may have healing potential. According to split-brain studies, psychoemotional stimuli are bound up with emotional activity in the right side of the brain. This suggested the idea of studying laughter generated by different sources with regard to electrical brain activity in the right and left hemispheres. This study first used subjects in normal consciousness and with laughter under hypnosis to study the neurophysiological processes connected with laughter.

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic emotions and physical sensations: A real-simulating analysis. International Journal of Clinical and Experimental Hypnosis, 37, 305-319.

Real hypnotizable Ss and simulating unhypnotizable Ss were administered a suggestion for either happiness, emotional neutrality, or sadness. The emotion was assessed through subjective and behavioral measures taken once before, twice during, and once after the emotion. Findings indicated that emotionally congruent changes occurred in both self-report and performance measures. Ss' physical sensations during the emotion were assessed on a 34-item self-report scale. It was demonstrated that Ss in the happy versus sad conditions reported different physical sensations; in particular, they reported different facial sensations. The responses of real hypnotizable subjects, however, were essentially paralleled by those of simulating unhypnotizable subjects. Therefore, the possibility exists that hypnotized subjects may have been responding on the basis of social demands. The findings are discussed in terms of the effects of the emotion suggestions, and the implications of real and simulating Ss displaying similar affective responses.

## NOTES

1:

Used the real-simulating model in an attempt to eliminate the possibility that hypnotized Subjects in previous studies may have been responding to the demand characteristics of the situation. Used both subjective and behavioral measures. Self-

report happiness and sadness, of emotion intensity; behavioral performance measure of speech rate, indexed by counting speed (which has been shown to distinguish between happiness and sadness). Used 34-item self-report Physical Sensations Scale based on Pennebaker, J. W. *The psychology of physical symptoms*. New York: Springer-Verlag, 1982.

They cite Weiss, et al (1987) who focused on the onset latency, and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure.

1989

Cooper, Nancy A.; Clum, George A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. *Behavior Therapy*, 20 (3), 381-391.

14 Vietnam veterans suffering from posttraumatic stress disorder (PTSD) were assigned either to standard treatment (control group), or standard treatment plus imaginal flooding (experimental group). The 2 groups were closely matched on medications and combat roles and tours of duty were comparable. Experimental Ss received up to 14 sessions of flooding for a maximum of one and one-half hours per session. Self-report measures were administered at pre-treatment, post-treatment, and at 3-mo follow-up. These measures included the Behavioral Avoidance Test, the Beck Depression Inventory, and a Modified Vietnam Experiences Questionnaire. Results indicate that flooding increased the effectiveness of usual treatment, particularly in such areas as re-experiencing symptoms and sleep disturbances. However, flooding had no effect on level of depression, trait anxiety, and violence-proneness.

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. *Cognition and Emotion*, 3 (1), 1-26.

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. *Imagination, Cognition and Personality*, 9 (4), 303-320.

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low,

low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

#### NOTES

1:

This paper is based on the presentation at SCEH in Ashville, 1988.

Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

#### NOTES

This paper is based on a paper presented to Division 30, Psychological Hypnosis, at annual meeting of the American Psychological Association, Aug 1987.

Sansom, Deborah; Rachman, S. (1989). The effect of induced mood on fear reduction. British Journal of Clinical Psychology, 28 (3), 227-238.

Investigated the effect on fear reduction in a laboratory study of fearful people. A musical mood-induction technique was utilized to induce either a happy mood or a sad mood in 84 female undergraduates who were fearful of spiders or snakes. Following the mood induction, Ss' fears were reduced by participant modeling. Measures of subjective fear and self-efficacy were taken before and after mood

induction, after modeling, and 4 weeks later. Compared to the induced sad-mood condition, induced happiness was followed by a decrease in subjective fear and greater self-efficacy. No difference was found in the length of time taken to reduce fear for happy and sad Ss. Fear reduction during a sad mood was associated with greater return of fear than fear reduction during a happy mood.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Suler, John R. (1989). Mental imagery in psychoanalytic treatment. Psychoanalytic Psychology, 6, 343-366.

Mental imagery techniques may facilitate the therapeutic process by stimulating patients' insight into unconscious dynamics, by helping them uncover and master warded-off affect, and by enhancing the clinician's empathic contact and access to countertransference. The history of imagery techniques in the psychoanalytic movement and the effect of these techniques on the traditional psychoanalytic method are reviewed. A conceptual framework based on the theory of primary and secondary process suggests spontaneity, experiential scope, associative elaboration, and object impact as four dimensions for the clinical evaluation of imagery experience.

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic

subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

Brink, Nicholas E. (1988-89). Using imagery as a planning and treatment guide in therapy. Imagination, Cognition and Personality, 8, 187-200.

Procedures and case studies of how imagery can provide a means to redefine the problem, an agenda for therapy, information for determining the appropriate interventions, a criteria for evaluating progress, and the appropriate time for termination are presented. Images are evoked using one of several imagery situations. These images may converge on the common dynamic pattern clarifying the problem, represent different aspects of the problem, or represent different problems, depending upon the hypnotic suggestion used in evoking the images. The emerging pattern(s) provide the agenda for therapy. Emotional energy in imagery work is used to determine the appropriate timing and content for the therapeutic interventions. Emotional release provides a means of evaluating progress. When each of the items on the agenda are resolved with an emotional release the time for termination is near at hand. Therapy begins by evoking a minimum of three images using one of several situations, including time regression, seeing behind doors on a hallway, or going down in an elevator. These images may represent different aspects of the problem, different problems, or, by using the affect bridge, may converge on a common dynamic pattern clarifying the nature of a single problem.

Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

## NOTES

1:

Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared

to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Nash, Michael R. (1988). Hypnosis as a window on regression. Bulletin of the Menninger Clinic, 52, 383-403.

Examines the empirical evidence for temporal and topographic regression during hypnosis--which Freud explicitly defined as regressive. A review of more than 100 studies spanning 60 years of research found no convincing evidence that developmentally previous psychological structures are reinstated during hypnosis (temporal regression). In contrast, there is evidence that hypnosis enables subjects to elicit more imagistic, primary process, and affect-laden material (topographic regression). The author recommends a careful reexamination of two core assumptions underlying the concept of temporal regression: (1) that early structures in human development are imperishable, and (2) that regression necessarily involves reinstatement of infantile psychological structures.

Nathanson, Donald L. (1988). Affect, affective resonance and a new theory for hypnosis. Psychopathology, 21, 126-137.

Suggests new theory of hypnosis based on recent experimental and theoretical work on emotion that shows neurological systems (including structural effectors and chemical mediators affecting specific sites of action). Tomkins' nine innate affects are organizers of the other moieties, genetically determined prewritten subcortical programs that convert quantitative stimuli into qualitative experience. Emotion in the adult involves subtle and complex combinations of innate affect with associations to previous experiences of affect provided by neocortical mechanisms. The infant initially expresses affect in an all-or-none fashion, while the caregiver, usually mother, acts as an external modulator of infantile affect display. All the techniques by which the mother learns to achieve affect mutualization and interaffectivity are analogues of what later may be seen as the techniques of

hypnotic induction. Hypnosis may be viewed as the intentional alteration of neocortical cognition made possible by the state of primitive interaffectivity achieved when the hypnotic operator enters the central assembly system of the adult by techniques reminiscent of maternal modulation of infantile affect display.

Robins, Clive J. (1988). Development of experimental mood induction procedures for testing personality-event interaction models of depression. Journal of Clinical Psychology, 44 (6), 958-963.

Developed 2 mood induction procedures for use in testing personality- event interaction hypotheses with regard to the onset of depressed mood of clinical depression. In these inductions, Ss listened to audiotapes depicting either a series of social rejections or achievement failures and were instructed to imagine themselves as the main character. Both tapes were found to produce a strong increase in reported depressed affect in 119 normal undergraduates. These effects were large in comparison to those elicited by commonly used mood induction procedures. Women reported greater mood shifts than men in response to both tapes. It is concluded that the present procedures have the advantage of content specificity, which permits test of personality-event interaction hypotheses.

Singer, Jefferson A.; Salovey, Peter (1988). Mood and memory: Evaluating the network theory of affect. Clinical Psychology Review, 8 (2), 211-251.

Discusses G. H. Bower's (see PA, Vol 66:11724) Network Theory of Affect, which specified 4 ways in which mood can have an observable effect on memory: (a) Memory is facilitated when mood state at learning matches mood state at recall; (b) material with affective tone that is congruent with current mood is most easily retrieved from memory; (c) material with affective tone that is congruent with current mood is most easily learned; and (d) affectively intense material is learned best. Empirical literature that addresses each of these predictions by looking at studies that manipulate mood in the laboratory as well as those that utilize occurring moods is discussed. Each prediction was supported, although congruency during learning (Prediction "c") yielded the most consistent findings.

Van Der Hart, O. (1988). An imaginary leave-taking ritual in mourning therapy. International Journal of Clinical and Experimental Hypnosis, 36 (2), 63-69.

One form of mourning therapy is the therapeutic leave-taking ritual, the essence of which is that by parting with symbols connected with the deceased, patients take their leave of the deceased and can start a new life of their own. In the case described in the present paper, the patient performed such a ritual in her imagination while under hypnosis. Her extreme grief response is explained in terms of Janet's theory of emotions. It is emphasized that successfully performing the ritual necessarily involved a change in attitude towards the deceased, and it is argued that the specific characteristics of hypnosis--involuntariness and

effortlessness--add an extra dimension to guided imagery approaches to unresolved mourning.

1987

Boswell, Louis K. (1987). Abstract imaging: Abstract imaging as a mode of personality analysis and adjustment. Medical Hypnoanalysis Journal, 2, 175-179.

Describes the use of abstract imaging during hypnosis to circumvent defense mechanisms and arrive at the initial sensitizing event behind a patient's emotional problems. Case examples illustrate how abstract imaging is also used to explore how the patient relates to the world on a conscious level and forms an idealized self-image to work toward.

De Pascalis, Vilfredo; Marucci, Francesco; Penna, Pietronilla M.; Pessa, Eliano (1987). Hemispheric activity of 40 Hz EEG during recall of emotional events: Differences between low and high hypnotizables. International Journal of Psychophysiology, 5, 167-180.

This study evaluates individual differences in hypnotizability as reflected in waking-state hemispheric engagement during recollection of 3 positively and 3 negatively valenced personal life events. The State-Trait Anxiety Inventory, Maudsley Personality Inventory, Tellegen Absorption Scale and Harvard Group Scale of Hypnotic Susceptibility (Form A) were administered. Electromyogram (EMG) and bilateral electroencephalogram (EEG) activities within the 40-Hz band were recorded during rest and task conditions in 22 high and 21 low hypnotizable women. Self-report rating scores for vividness of visual imagery and emotional feeling of the material recalled were evaluated. The 40-Hz EMG amplitude and both hemisphere 40-Hz EEG densities were obtained. A 40-Hz EEG ratio, as a measure of hemispheric asymmetry, and a hemispheric specificity index were also computed. High hypnotizables showed significantly lower 40-Hz EEG density than low hypnotizables in all experimental conditions. The relationship between lateralization of 40-Hz EEG and emotional processing was moderated by hypnotizability. High hypnotizables, with respect to rest condition, showed an increase of density over both left and right hemispheres during two of the three positive emotional tasks, while they showed a depressed activity over the left and an increased activity over the right during negative emotional tasks. Low hypnotizables, on the other hand, did not exhibit differential hemispheric patterns that could be attributed to different emotional valences. The high group showed greater hemispheric specificity in the predicted direction than the low group. High subjects exhibited greater ratings of absorptive ability and emotional feeling than low subjects. Anxiety and EMG levels did not differ between groups. EMG was dependent on the type of emotion which showed greater activity in the negative emotion condition compared with the positive one.

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rapport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

#### NOTES

1:

Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (O1-O2). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

1986

Cerny, M. (1986). Hypnosuggestive interventions in emotional stress and in stress disorders. Activitas Nervosa Superior, 2, 141-143.

This paper represents a review of results using the PSA technique (Posthypnotic Suggestion evoked by Autostimulation) as a means of protection against stress. The best results were obtained in Ss with high susceptibility. This fact limits the practical use of the PSA method. However, this method can serve as a model approach in another more exact study of psychophysiological self-regulatory mechanisms in relation to coping with stress.

Holroyd, Jean (1986). Hypnosis applications in psychological research. Imagination, Cognition and Personality, 5, 103-115.

It is proposed that hypnosis leads to altered cognition, affect, or motivation as reflected by changes in 1) reality orientation, 2) attention and awareness, 3) imagery, 4) dissociation, 5) suggestibility, and 6) mind-body interaction. Hypnosis may be used as an experimental method to effect such cognitive, affective and motivational changes in order to pursue research in learning, personality, physiological, and social psychology. Examples of possible applications of hypnosis are provided. The influence of individual differences in hypnotic responsivity on research also is discussed.

NOTES

1:

The author concludes, "Contributions of hypnosis to research in psychology may have been diminished by the confusion inherent in searching for main effects while giving insufficient attention to interaction effects between personality variables and experimental manipulations. As psychology becomes more cognitive in orientation, the phenomena of hypnosis may seem less bizarre and more amenable to inclusion in psychological research. However great care must be taken not to confuse the contributions of hypnosis with the contributions of the hypnotically responsive personality" (p. 109).

Madigan, R. J.; Bollenbach, A. K. (1986). The effects of induced mood on irrational thoughts and views of the world. Cognitive Therapy and Research, 10 (5), 547-562.

Sixty college students participated in an experiment concerning the influence of somatic mood induction statements on measurements of irrationality as defined by Ellis. Subjects were randomly assigned to depression, elation, and neutral mood

induction groups. There were significant differences between groups on mood and irrationality. Results are discussed in terms of the Ellis and Beck cognitive models of depression, the Isen cognitive loop model, and the relationship between irrationality and depression. This study added irrational thinking as defined by Ellis to the growing list of cognitions that have been manipulated by mood, and it supports a body of findings that demonstrate the reciprocal influence of cognition and mood in depression. The study also has implications for the Beck and Ellis hypothesis that cognitions are the dominant causes of depression.

Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027)

Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic indices as dependent variables. These analyses were performed on the original sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

**Strosahl, K. D. (1986). Imagery assessment by self report: A multidimensional analysis of clinical imagery. Cognitive Therapy and Research, 187-199.**

**Conducted 2 studies to test the theory that emotive-abstract, sensory modality, and control imagery are functionally distinct abilities and that emotive-abstract imagery and image control are directly related to the quality of in-therapy imagery. In Study 1, 199 undergraduates completed self-report measures of sensory modality, molar imagery, and image control and completed an analog clinical visualization task. In Study 2, 53 undergraduate test-anxious covert behavior therapy participants completed the self-report battery and provided ratings of in-therapy image clarity. Results suggest that emotive/abstract imagery, sensory modality imagery, and image control are factorially distinguishable abilities. A cross-sample factor analysis revealed some instability; however, a theoretically consistent pattern of results emerged. Regression analyses demonstrated that emotive-abstract imagery abilities were the best predictors of performance on the analog task, whereas both image control and emotive imagery were related to the clarity of in-therapy imagery. Results illustrate the qualitative difference between low- and high-order image processes and the possible interaction between emotive imagery and image control.**

**1985**

**Brown, Daniel P. (1985). Hypnosis as an adjunct to the psychotherapy of the severely disturbed patient: An affective development approach. International Journal of Clinical and Experimental Hypnosis, 33 (4), 281-301.**

**An affective development approach to the psychotherapy of severely disturbed patients is presented. A review of nonhypnotic psychotherapies of such patients is given, and contemporary trends in psychoanalytic-developmental approaches to the treatment of severe disturbances are described. These approaches are designed to foster structuralization of the ego. A primary deficit in severe disturbance, however, lies in the awareness of the visceral changes accompanying genuine affective experience and the related subjective sense of aliveness. Related deficits occur in affective expression and tolerance. Target symptoms (e.g., hallucinations and disordered thinking) are secondary phenomena. Hypnosis can be used as an adjunct to psychotherapy for severely disturbed patients who are in a stable therapeutic relationship and who are also hypnotizable. During trance such patients are able to focus on internal events without distraction so as to enhance their awareness of visceral changes normally out of their awareness and to link these with images and memories. They are taught to develop a sense of aliveness and genuine affective experience. Target symptoms may diminish. Several case illustrations are given along with a theoretical discussion of the stages of affective development.**

**Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.**

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Frauman, David; Rhue, Judith (1985). Hypnotic age regression and the importance of assessing interpersonally relevant affect. International Journal of Clinical and Experimental Hypnosis, 33, 224-235.

The present study was undertaken to replicate an earlier experiment and to clarify which factors in this previous experiment (Nash, Johnson, & Tipton, 1979) were responsible for the obtained child-like behaviors of hypnotically regressed Ss. As in the previous study, 3 characteristics of the transitional object relationship (spontaneity, specificity, and intensity) were used as the primary criteria to investigate the effects of hypnotic age regression when Ss were regressed to age 3 and placed in 3 home situations. While in the previous study E suggested separation anxiety and isolation during the 3 home situations (mother-absent condition), the present study deleted all references to anxiety and isolation, and replaced them with suggestions of security and maternal proximity (mother-present condition). As expected, the mother-present versus mother-absent conditions led to similar hypnotized- simulating differences. In further accord with predictions, hypnotized Ss and simulating Ss requested a transitional object infrequently in the presence of mother. The importance of using dependent measures which index affective processes germane to interpersonal affect-laden experience is discussed.

Nichols, Michael P.; Efran, Jay S. (1985). Catharsis in psychotherapy: A new perspective. Psychotherapy, 22 (1), 46-58.

Contemporary thinking about catharsis in psychotherapy is still dominated by Breuer and Freud's work with the cathartic method. Psychoanalysts take the fact that Freud abandoned catharsis as evidence of its ineffectiveness, while the emotive therapies developed in the 1960s returned to Freud's earliest view that neurosis results from repressed affect and can be cured by cathartic uncovering. Emotional memories continue to be thought of as foreign bodies lodged in the human psyche and requiring purgation. Unfortunately, this view divorces people from responsibility for their conduct and encourages a fractionation of human experience into feeling, thought, and action. In the current presentation, emotion is construed instead as a class of blocked or partially blocked actions, and in terms of a two-stage adaptational process. Implications of this view for psychotherapeutic practice are proposed, emphasizing richer self-expression and fuller appreciation of the consequences of responsible vs. disclaimed actions.

Carlson, Eric T. (1984, October/1986). The history of dissociation until 1880. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 7-30). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

## NOTES

1:

Provides summary of the history of associationism. Refers to Beddoes' essays (1802-03) which state that (1) emotions play a significant role in strengthening associations, and a study of emotions would be the 'chief secret for unriddling the inconsistencies of dreams,' and (2) variations could occur in associations (from very strong to very weak).

In the 19th century there was an ongoing debate about the role of the reflex in the nervous system, about how high up it could function, and whether it could still take place if it reached areas that subserved consciousness. Dr. William Carpenter postulated three levels: (1) excitomotor reflex (spinal, and maybe lower brain), (2) sensorimotor or consensual (midbrain) which was unconscious, (3) ideomotor (cerebral) - based on evidence from hypnosis in which volition appeared suspended and the subject became 'a mere thinking automaton' whose flow of ideas resulted from external suggestions only. The ideomotor response could be unconscious.

In the 1830's and 40's Thomas Laycock brought Associationism together with the concept of reflex. "By bringing the reflex into 'cerebral processes,' he proposed a model that made fast and automatic responses possible in the realm of ideas. Automatic thinking, speaking, writing, and more complex actions became topics of increasing interest to psychologists later in the century. As early as 1868, Prosper Despine had been speaking of 'psychological automatisms.' Laycock proclaimed most of these responses as being unconscious, that ideas could be charged with varying amounts of energy, and that ideas could act as causes of human disturbances, both psychological and physiological" (pp. 25- 26).

1860's - 90's saw the rise of hypnotism, with Eugene Azam using it in surgery and psychiatry; Durand de Gros's book on Braid; Liebeault publishing a book; Bernheim launching his career; Charcot shifting interest from organic neurological conditions to functional conditions; and Charcot teaching both Janet and Freud.

The author notes that "in July 1880, a bright and educated young woman of 20 started to nurse her dying father. Like the shamans before her, she had to grapple with the spectre of death and in her own fashion, she developed a creative illness. Her symptoms were myriad, but many had to do with changes in her consciousness (including 'absences,' clear-cut trances) and splits in her memory, including the loss of an entire language. At one point her current personality disappeared and another took its place: in this case it was herself but existing a year before in a state in which she lived without any apparent awareness of what had happened to her in the interim. It is this case of Anna O. and her doctor, Josef Breuer, which became important to the next epoch in our review and who had so much to do in inspiring the studies that followed" pp. 27-28.

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott (1984). The direct hypnotic suggestion of altered mind/body perception. American Journal of Clinical Hypnosis, 27, 95-102.

Attentional and emotional shifts are examined following a hypnotically suggested out-of-body experience (OBE). Two hypotheses were tested: 1) that the OBE is maintained by blocking the perception of body-relevant stimulation at a sensory level; 2) that a hypnotically produced OBE is an emotionally neutral or even pleasant experience. Fourteen hypnotic subjects and 15 simulating Ss were administered a standardized induction followed by suggestions for an OBE. Geometric figures were then presented to the body but not to the "awareness." Although hypnotic Ss reported that they could not see the information, they still correctly "guess" the identity of the figures beyond chance levels. Thus, body-relevant information was obviously not blocked at a sensory level, but was kept out of awareness by some other mechanism. In addition, a significantly greater number of hypnotized than simulating Ss reported the OBE to be troubling and unpleasant, despite explicit suggestions for a positive experience. The potentially disturbing nature of OBEs and ways to minimize risk of negative affect are discussed.

Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

Putnam, Frank W. (1984, October/1986). The scientific investigation of multiple personality. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 109-126). New

York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

## NOTES

1:

Scientific study of multiple personality disorder (MPD) began with single cases. As of yet, there is no study of incidence in the general population ( though Bliss, in 1983 American Journal of Clinical Hypnosis, has begun study of incidence in defined psychiatric populations). Some find symptoms overlap with borderline personality (Clary et al., 1984; Kluft, 1984; Horevitz & Braun, 1984). Others with temporal lobe epilepsy (Mesulam, 1981; Schenck & Bear, 1981). Until Kluft (1984) defined criteria for "fusion," no standard existed for successful treatment. Virtually all researchers agree that childhood trauma is antecedent. "The research questions that investigators find the most intriguing, however, are the mind/body issues raised by the alternate personalities." p. 114 "The relatively large number of reports of physiologic changes across alternate personalities compared to the total number of reported cases in the literature suggests that indeed something unusual is happening with these patients" pp. 114-115.

Models of Multiple Personality Disorder: 1. trance state 2. temporal lobe dysfunction 3. state dependent learning

Schare, Mitchell L.; Lisman, Stephen A.; Spear, Norman E. (1984). The effects of mood variation on state-dependent retention. Cognitive Therapy and Research, 8 (4), 387-407.

Examined the notion that when the affective states accompanying learning and remembering are the same, information will be retained better than when they differ. In 3 experiments, with 198 undergraduates, self-statements developed by E. Velten (1968) were used to influence Ss to feel somewhat depressed or elated or to experience no mood change. A 2 x 2 experimental design, incorporating a single word list and varying the mood conditions present during learning and later testing, was used in each of the 1st 2 experiments, neither of which revealed state dependence. However, a significant effect was found in Exp II, which employed an interference paradigm. In terms of free recall, items learned and tested under the same mood were recalled with 30% greater accuracy than items learned and tested under different moods. Methodological issues and clinical implications of these findings are discussed, and it is suggested that behavior change in therapy is most likely to be implemented during heightened affective arousal that simulates characteristics of the actual problem behavior. (48 ref)

1981

Bower, Gordon H. (1981). Mood and memory. American Psychologist, 129-148.

This article describes experiments in which happy or sad moods were induced in subjects by hypnotic suggestion to investigate the influence of emotions on memory and thinking. One result was that subjects exhibited mood-state-dependent memory

in recall of word lists, personal experiences recorded in a daily diary, and childhood experiences; people recalled a greater percentage of those experiences that were affectively congruent with the mood they were in during recall. Second, emotion powerfully influenced such cognitive processes as free associations, imaginative fantasies, social perceptions, and snap judgments about others' personalities (e.g., angry subjects generated angry associates, told hostile stories, and were prone to find fault with others). Third, when the feeling-tone of a narrative agreed with the reader's emotion, the salience and memorability of events in that narrative were increased. Thus, sad readers attended more to sad material, identified with a sad character from a story, and recalled more about that character. An associative network theory is proposed to account for these several results. In this theory, an emotion serves as a memory unit that can enter into associations with coincident events. Activation of this emotion unit aids retrieval of events associated with it; it also primes emotional themata for use in free association, fantasies, and perceptual categorization.

Howarth, Edgar; Schokman-Gates, Kar-La (1981). Self-report multiple mood instruments. British Journal of Psychology, 72, 421-441.

## NOTES

1:

### Mood and hypnotizability

Zuckerman, Persky, & Lind (1967; *Journal of Consulting Psychology*) used the Zuckerman-Lubin MAACL to test the hypothesis that affect states just prior to hypnosis induction are related to subsequent hypnotizability, while affect traits are not so related (P. 464). The mood states of subjects in two treatment conditions (either small and highly motivated groups or large and less motivated groups) were measured just before trance induction, while the MMPI affect-trait measures were administered afterwards. The MAACL hostility scale was found to have a significant negative correlation with hypnotizability, but the affect-trait measures were unrelated.

In an attempt to determine the 'real relationships between personality traits and hypnotizability, Silver (1973) tested 40 male students on the Byrne (1964) Repression- Sensitization Scale, and in a following session the Wessman-Ricks PFS and a short form of the Nowlis MACL. Hypnotizability was also assessed using the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). While repression was not found to be related to hypnotizability, mood was, both on the PFS and the MACL, with bright affective states being positively related and dark states showing the opposite relationship. (Factor analysis revealed that the Nowlis measured emotional energy or buoyancy overall, whereas the Wessman-Ricks measured life satisfaction). Silver (1974) found that the surgency scale of the Nowlis MACL predicted hypnotizability as well or better than the MACL's overall mood index. This suggest (sic) that, although the overall mood may determine one's susceptibility to hypnotic induction, those who are in a surgent mood will be the ones most readily hypnotized.

1980

Case, David B.; Fogel, David H.; Pollack, Albert A. (1980). Intrahypnotic and long-term effects of self-hypnosis on blood pressure in mild hypertension. International Journal of Clinical and Experimental Hypnosis, 28, 27-38.

Self-hypnosis using the method of Spiegel (1974) was evaluated in 15 patients with labile or mild essential hypertension who were equally hypnotizable and adhered to a regimen of 6-10 daily exercises for a 4-month period. During the hypnotic state, there were consistent rises in both systolic and diastolic pressures in hypnotizable patients, but not in non-hypnotizable controls. Similar but smaller changes were also observed in normotensive subjects. Pressure rose immediately with hypnosis and subsided gradually over 15 minutes. However, the long-term effects of the daily practice of self-hypnosis were variable: ambulatory diastolic pressure fell in 5 patients, was unchanged in 7 patients, and rose in 3 patients. The changes in blood pressure could not be specifically attributed to the daily practice of self-hypnosis; however, all patients experienced improvement in well-being, mood, and behavior patterns during the 4-month period. The study indicates that self-hypnosis can produce changes in behavior and mood which may be beneficial to cardiovascular health, although paradoxically, the act of hypnosis by this technique is pressor. Aside from its therapeutic potential, self-hypnosis may provide useful information about central mechanisms of blood pressure regulation.

Rizzo, Paolo Andrea; Amabile, Giuseppe; Fiumara, Romano; Caporali, Manlio; Pierelli, Francesco; Spadaro, Maria; Zanasi, Marco; Morocutti, Cristoforo (1980). Brain slow potentials and hypnosis. Biological Psychiatry, 499-506.

#### SUMMARY

Contingent negative variation behavior was studied in 12 voluntary normal subjects in basal conditions and in the hypnotic trance state under different emotional suggestions. A CNV voltage decrease and the appearance of a PINV were observed in the hypnotic state. Furthermore 12 nonhypnotizable control subjects were tested under the same experimental conditions and no CNV modification was found" (p. 505).

Stam, Henderikus J.; Radtke-Bodorik, Lorraine; Spanos, Nicholas P. (1980). Repression and hypnotic amnesia: A failure to replicate and an alternative formulation. Journal of Abnormal Psychology, 89 (4), 551-559.

In an attempt to replicate and extend a study by S. R. Clemes, 2 groups of 10 undergraduate hypnotic Ss learned a list of 18 words and were given an amnesia suggestion telling them they would be able to remember only 10 of these words. Half of the list words were critical (i.e., considered to be related to repressed conflictual material) and half were neutral (unrelated to conflictual material) as determined by Ss' responses to a word association test. Experimental Ss received their own critical and neutral words and yoked control Ss received the critical and neutral words of experimental Ss. Neither the experimental nor the yoked control group exhibited

selective amnesia in favor of critical words, thus constituting a failure to replicate Clemes's result. However, variables affecting the degree to which words were initially learned (e.g., imagery value, serial position) predicted their resistance to amnesia. These findings are inconsistent with a repression hypothesis but congruent with an inattention hypothesis of suggested amnesia. (41 ref).

1977

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

Novaco, Raymond W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. Journal of Consulting and Clinical Psychology, 45 (4), 600-8.

Clinical interventions for anger disorders have been scarcely addressed in both theory and research in psychotherapy. The continued development of a cognitive behavior therapy approach to anger management is presented along with the results of its application to a hospitalized depressive with severe anger problems. The treatment approach follows a procedure called "stress inoculation," which consists of three basic stages: cognitive preparation, skill acquisition and rehearsal, and application practice. The relationship between anger and depression is discussed.

1976

Coe, William C.; Baugher, R. J.; Krimm, W. R.; Smith, J. A. (1976). A further examination of selective recall following hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 13-21.

29 Ss were tested for posthypnotic amnesia on SHSS:C. They rated each item for emotional tone (pleasant-unpleasant) and judged whether or not they had passed or failed it. There was some support for the notion that failed items are judged more

unpleasant than passed items, but the emotional tone of an item was not related to its being recalled posthypnotically. There were minimal findings to suggest that Ss recall items which stand out in their experience. Discrepancies with earlier findings and the possible role of processes associated with normal memory are discussed.

1974

Galin, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583.

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanisms for at least some instances of repression and an anatomical locus for the unconscious mental contents.

1970

Podolnick, Edward E.; Field, Peter B. (1970). Emotional involvement, oral anxiety, and hypnosis. International Journal of Clinical and Experimental Hypnosis, 18 (3), 194-210.

48 undergraduates were randomly assigned to either a high or low emotional arousal manipulation and then underwent a tape-recorded hypnotic induction and test of depth. The high-arousal group was exposed to infantile oral objects and were led to believe that they would have to suck on them as part of a physiological psychology experiment in which the cutaneous sensitivity of the human mouth was being mapped. The low-arousal group believed they only had to blow on whistles or pipes. While both groups were anticipating these experiences, hypnosis was induced. Ss in the high-arousal group were significantly more hypnotizable ( $p < .001$ ) than their counterparts in the low-arousal group. Ss in the high-arousal group were significantly less anxious after hypnosis than they were before hypnosis, while the low-arousal Ss did not show a reduction in anxiety. The groups did not differ on several background personality tests given as checks on the randomization. (Spanish & German summaries) (22 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

**Paul, Gordon L. (1969). Extraversion, emotionality, and physiological response to relaxation training and hypnotic suggestion. International Journal of Clinical and Experimental Hypnosis, 17, 89-98.**

**Examined the possible predictive relationship of extraversion and emotionality, singly and combined into H. J. Eysenck's (see 35:5) 4-fold classification, for differential cognitive and physiological responsiveness to relaxation training, hypnotic suggestion, and a self-relaxation control procedure, and to the degree of inhibition of the physiological response to stressful imagery resulting from the treatment procedures. 60 unselected female Ss, covering the full range on both personality scales, participated in 2 experimental sessions, 1 wk. apart. Nonsignificant relationships were found between the personality characteristics and the previously reported individual or combined response to treatment procedures. (Spanish & German summaries) (22 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Reyher, Joseph; Smeltzer, William (1968). Uncovering properties of visual imagery and verbal association. Journal of Abnormal Psychology.**

**21 young males were asked to 'image' or to 'associate' to 10 words from each of 3 categories representing sex, hostility, and family relationships. Imagery was found to produce heightened GSR activity, more primary process, more direct representation of drives, and less effective defense. The superiority of visual imagery over verbal association as an uncovering technique was attributed to the relative ease with which unconscious processes can influence imagery**

**1965**

**Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.**

**Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.**

**Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.**

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Davison, Gerald C. (1965, June). Anxiety under total curarization: Implications for the role of muscular relaxation in the desensitization of neurotic fears. [Paper] Presented at the annual meeting of the Western Psychological Association, Honolulu.

#### NOTES

I began by describing the Jacobson-Wolpe position on the use of deep muscular relaxation as an anxiety-inhibitor: these writers assume that the considerable reduction in proprioceptive feedback from muscles which are in a relaxed state is incompatible with a state of anxiety. Then I mentioned the evidence that at least modern neuromuscular blocking-agents operate solely at the myoneural junction, with no direct central effects. I went on to discuss the various studies which have used paralytic drugs, primarily d- tubocurarine chloride, to show the learning of fear-responses under complete striate muscle paralysis: the fact that these animals are able to acquire classically-conditioned fear-responses under curare was taken as evidence inconsistent with the views of Jacobson and Wolpe. Several studies were then reviewed which purport to furnish confirmatory evidence for the Jacobson position: these studies showed considerable central depression during curare paralysis. I re-interpreted these studies in the light of the over-riding importance of exteroceptive stimulation, stressing that the animals in the curare learning experiments were likewise deprived of proprioceptive feedback and yet were hardly non- anxious: the important difference was that the animals in the conditioning experiments were stimulated frequently from the environment while curarized, this stimulation maintaining an alert, often anxious state. Finally, two hypotheses were put forward as to why training in muscular relaxation does, in fact, inhibit anxiety: the one suggested that relaxing one's muscles generates strong positive affect states, which in turn inhibit anxiety; the other hypothesis called attention to the fact that the states of muscular relaxation under curare versus under self-induced relaxation differ in the important respect that only with self-induced relaxation is there a reduction in efferent activity--perhaps this elimination of efferents, rather than afferents, inhibits anxiety.

1962

English, O. Spurgeon (1962). Some dynamic concepts of human emotions in relation to hypnosis. American Journal of Clinical Hypnosis, 4, 135-140.

**NOTES**

**1:**

He describes characteristics of the human personality as having a need for being dependent, tendency to obey or cooperate, need to avoid pain, tendency toward retreating into solitude and silence away from the stimuli of every day living, wish to avoid tension or anxiety; and therefore having a need to regress, in hypnosis.

**1960**

Rosenberg, Milton J.; Hovland, Carl I.; McGuire, William J.; Abelson, Robert P.; Brehm, Jack W. (1960). An analysis of affective-cognitive consistency. In Hovland, Carl I.; Rosenberg, Milton J. (Ed.), Attitude organization and change (pp. 15-64). New Haven, CT: Yale University Press.

**NOTES**

**1:**

It was ... predicted that a strong and irreversible alteration of an attitudinal affect would eventuate in reorganization of the person's associated cognitions." In two experiments, deeply hypnotized subjects were commanded to feel differently toward an attitude object than they normally did. Examination of the subjects' attitudes indicated extensive changes in cognitive structure, making it consistent with the newly held affects. The changes in cognitive structure were shown to persist as long as the reversed affect persisted. Evidence bearing on the preferred modes of cognitive reorganization was discussed.

Schneck, Jerome M. (1960). Special aspects of hypnotic regression and revivification. International Journal of Clinical and Experimental Hypnosis, 8, 37-42.

**NOTES**

**1:**

Author's Summary: "This report delineates a type of hypnotic revivification without the usually expected dramatic behavioral attributes and use of the present tense in verbalization. On the contrary, motor involvement is at a minimum, manifestations of acting out are devoid of dramatic channels, yet emotion is intense and verbalization is absent. Awareness of the existence of such revivification in the hypnotic setting is important for adequate understanding by the therapist and incorporation into hypnotherapeutic or hypnoanalytic procedure. Considerable alteration of temporal and spatial orientations take place and should be appreciated fully. The revivification under discussion was observed in hypnotic settings involving regressions to preverbal age levels. These observations permitted better recognition of similar occurrences for later age periods. Revivification without verbalization may be disclosed subsequently by the patient in spontaneous comments or explored by the therapist when it has been suspected. The discussion of this phenomenon has centered on the hypnoanalysis of a fifty-four year old woman. The ingredients have been encountered often with others. Additional details pertaining to the revivifications have been described. The psychodynamic implications of the above-mentioned patient's reference to her hypnotic involvements as "vivification" events owing to intensity of the emotional components, have been outlined and linked to previously presented views on emotional insight preceding intellectual insight. The

transference elements in revivifications have been given attention and shown to be consistent with a proposed concept of dynamic hypnotic age regression in contrast to chronological hypnotic age regression. The data presented have been correlated with views of a hypnotic-waking state continuum" (p. 41).

1958

Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

#### Summary

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).

1956

Solovey, Galina; Milechnin, Anatol (1956). Concerning a theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 4, 37-45.

#### NOTES

"The essential attributes of the hypnotic condition may be understood to derive from three sources:

- 1) The hypnotic emotional state per se
- 2) The resultant motivation of the 'subject' to comply with the desires of the 'operator' (reinstating a child-like responsiveness).
- 3) The RETROGRESSION to an earlier form of psychological functioning that takes place under a hypnotic state of growing intensity" (p. 43).

"Although the retrogressive process is a general response to emotions and probably exists in some toxic states as well, it has a remarkable feature in the hypnotic state: THE COALESCENCE OF MOTIVATION AND RETROGRESSION, which exists in hypnotized people, permits a peculiar manipulation of the retrogressed condition. The peculiar responsiveness of the subject may be tested and molded by means of propositions which act as suggestions. In this manner, the so-called HYPNOTIC PHENOMENA are elicited" (p. 44).

1955

Hart, Hornell (1955). Measuring some results of autohypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 229-242.

NOTES

1:

The author developed self ratings for mood (euphoria-dysphoria) and alertness-fatigue, which were administered to college students in neutral conditions and after self-hypnosis conditions. The self hypnosis, or "auto-conditioning" usually involved deep relaxation self suggestions followed by other suggestions. The suggestions involved using the word 'you' to be able to re-instate the autoconditioning more and more effectively; suggestions for attitude change (e.g. that 'No matter what comes, we will grapple with it courageously'); and euphoria auto-suggestions (e.g. that 'you will come out of this deep relaxation, feeling rested, alert, cheerful and courageous'). In both single session experiments, as with a class of nurses who experienced an 8 minute auto-conditioning procedure, and in experiments extending over time, depression decreased. He noted that "for various reasons, the students who participated in autoconditioning experiments between February and May, 1955, were in many respects less successful than some of the previous experimental groups had been" (p. 235).

Increased alertness and diminished fatigue was also observed.

Many students chose to give themselves suggestions to correct the habit of procrastination. Two-thirds of the participants reported complete success, up to the level specified, and only one of 43 experiments on correcting procrastination was a "flat failure."

Stokvis, Berthold (1955). Hypnosis and psychoanalytic method. Journal of Clinical and Experimental Hypnosis, 3, 253-255. (Abstracted in Psychological Abstracts, 57: 1157)

NOTES

1:

The author distinguishes between hypnosis/psychoanalysis and 'hypno-analysis' which Hadfield previously described as a combination of hypnotic catharsis and re-educative suggestions.

At the Leyden Clinic the author uses one of several methods to "apply hypnosis together with the utilization of psychoanalytic principles. ... [It] consists in a cathartic-analytic treatment of the patient in the waking state, while endeavouring to re-enact repressed psycho-traumatic events of the past, in the hypnotic state. The experiences in question are subsequently discussed with the patient and elucidated" (p. 253).

1953

Beigel, Hugo B. (1953). Hypnosis as an instrument in psychological experimentation. Journal of Clinical and Experimental Hypnosis, 1, 13-17. (Abstracted in Psychological Abstracts, 53: 6385)

Author's Summary - In this paper various areas of psychological research were pointed out in which experimentation with hypnotized subjects has been or could be

employed to advantage. It is held that there are several problems which offer no point of attack unless hypnosis is used and several others which, in view of their complexity, cannot be effectually approached by the classic method of experimentation. Specifically mentioned were the areas of thinking, learning, perception, apperception, imagination, and emotion, in which the hypnotic experiment proves valuable when either amnesia for preceding experiences, isolation from concomitant influences, or the introduction of an as-if situation is necessary. While it is undeniable that some of the experiments cited need improvement if their results are to be considered reliable -- a remediable shortcoming they share with most first experiments -- it is also evident that the use of hypnosis in experiments offers an approach to some areas that have thus far been inaccessible. Needless to say, hypnosis should not be used when similar results can be as readily obtained by the customary experimental method, but as Gidro-Frank and Bull (10) state, our scant knowledge of the nature of the hypnotic state should not bar it from use as a scientific tool. Still the only one available technique to solve a problem. It must be added, however, that the experimenter must be thoroughly familiar with the technique but also to their physical and mental health.

Guze, Henry (1953). Posture, postural redintegration and hypnotherapy. Journal of Clinical and Experimental Hypnosis, 1, 76-82. (Abstracted in Psychological Abstracts 53: 6559)

**SUMMARY**The use of postural analysis, and directives regarding posture and their importance in hypnotherapy are discussed. Theoretically, it is indicated that a chronic postural condition may act to elicit an emotional state with which it was originally associated. Such an emotional condition may have caused the posture in the first place, and then established a feed-back relationship with it. The breaking of feed-back mechanisms of this kind depends largely upon postural change when a chronic situation is established in the absence of realistic cause for the emotion. Posture may also act redintegratively, when directly suggested, in rearousing traumatic memories. Several clinical cases are reported.

## **ENURESIS**

**1993**

Banerjee, Sanjay; Srivastav, Anita; Palan, Bhupendra M. (1993). Hypnosis and self-hypnosis in the management of nocturnal enuresis: A comparative study with imipramine therapy. American Journal of Clinical Hypnosis, 36, 113-119.

Various therapeutic modalities have been used for treating enuresis due to the lack of a single identifiable cause. We carried out a comparative study of imipramine and direct hypnotic suggestions with imagery used for the management of functional nocturnal enuresis. Enuretic children, ranging in age from 5 to 16 years, underwent 3 months of therapy with imipramine (N = 25) or hypnosis (N = 25). After termination of the active treatment, the hypnosis group continued practicing self-hypnosis daily during the follow-up period of another 6 months. Of the patients

treated with imipramine, 76% had a positive response (all dry beds); for patients treated with hypnotic strategies, 72% responded positively. At the 9-month follow-up, 68% of patients in the hypnosis group maintained a positive response, whereas only 24% of the imipramine group did. Hypnosis and self-hypnosis strategies were found to be less effective in younger children (5-7 years old) compared to imipramine treatment. The treatment response was not related to the hypnotic responsivity of the patient in either group.

1987

Olness, Karen N.; Libbey, Patricia (1987). Unrecognized biologic bases of behavioral symptoms in patients referred for hypnotherapy. American Journal of Clinical Hypnosis, 30, 1-8.

Twenty patients referred for hypnotherapy had organic conditions which explained their symptoms. Each had been evaluated previously by physicians. Eleven had also been in psychotherapy; two of these had been hospitalized on child psychiatry inpatient units. Presenting symptoms included five with nocturnal enuresis, four each with headaches and recurrent abdominal pain, three with recurrent headaches, two with anxiety, and one each with sleep problems and tics. Diagnoses included hyperthyroidism, diabetes, diastometamyelia, partial oxalotranscarbamyase deficiency, sinusitis, carbon monoxide poisoning, vitamin overdose, food allergy, amebiasis, constipation, urinary tract infection, paroxysmal atrial tachycardia, and seizures. Each child had complete remission of symptoms with treatment of his/her underlying disease. Morbidity related to delayed diagnoses included parental anxiety and guilt, child anxiety, growth delays, family financial difficulties, loss of parental work time, loss of school days, and loss of confidence in child health professionals by families.

ERICKKSON

1999

Rodriguez Sanchez, Rodriguez Rodriguez, Santana Mariqo, Piqueras Hernandez, Alvarez Ramirez (1999). Current tendencies and future directions of hypnosis in Cuba. Newsletter of the Erickson Foundation, Vol 2, 6.

Reviews the history of hypnosis in Cuba and the main tendencies and trends. There were no influences from Ericksonian hypnosis till recently when the first group of Ericksonians came to teach for the first time in Manzanillo, Granma Medicine University. The main approach is still the so called traditional hypnosis in which there is a development mainly in surgery and in some medical conditions. There are some strong places: Santiago de Cuba, where HipnoSantiago Hypnosis Workshop is held regularly, Manzanillo, where there is a Hypnosis Research group with publications in the country and abroad and experience in teaching hypnosis. The Hypnosis Society is located in Habana.

The group from Manzanillo is working in a Clinic Project with such themes as hypnoanesthesia in major surgery, models of groups learning under hypnosis, and some other therapies.

## NOTES

1:

List of Manzanillo's Research group main papers:

Learning under very deep hypnosis. In *Neurology Magazine*, Spain

Current tendencies of Hypnosis in Cuba. In *Newsletter of Erickson Foundation USA*

Breaking hypnosis myths. Communication at the University Forum.

Main Philosophical, Physiological and Methodological Problems in Hypnosis Research. In University Forum

States of consciousness and hypnosis. In *Multimed Magazine*, Cuba.

Memory tests and hypnosis. Psychology Thesis.

Autonomic System and Hypnosis. Psychology Thesis (Master degree)

Hypnosis as the only anaesthetic procedure in major surgery. (Thesis)

Wilson, R. Reid (1999, August). Brief strategic treatment of panic disorder and OCD. [Paper] Presented at the annual meeting of the American Psychological Association, Boston, Massachusetts.

The symptoms, prevalence, and social/economic costs of Panic Disorder, Obsessive-Compulsive Disorder, and other anxiety disorders are reviewed. Cognitive-behavioral therapy (CBT) has demonstrated efficacy for these disorders. Ericksonian and strategic principles of therapy have a number of points of contact with CBT. Taking Panic Disorder and OCD as illustrative models, this paper demonstrates how Ericksonian methods can be fruitfully combined with CBT. Examples include paradoxical intervention, hypnosis and visual rehearsal, reframing, the fractional approach, and pattern disruption.

1997

Fourie, D. P. (1997). 'Indirect' suggestion in hypnosis: Theoretical and experimental issues. Psychological Reports, 80 (3, Pt 2), 1255-1266.

"Indirect" suggestion is conceptualized in two distinct ways in the literature. From an Ericksonian perspective "indirect" suggestions are theoretically approached as suggestions which can circumvent the censorship of consciousness to reach the "unconscious" where they can activate dormant potentials. In contrast, from a research perspective "indirect" suggestion is operationally defined as a technique. Based on Ericksonian theory, it was claimed that "indirect" suggestion was more effective than traditional, "direct" suggestion. However, this claim could not be empirically substantiated. In this paper it is shown that the theoretical claim is based on questionable assumptions about the existence of the "unconscious" as a reified entity and about the direct and lineal influence of certain suggestions on this entity. Also, it is argued that traditional research strategies which emphasize strict

controls are unable to verify or unambiguously refute the Ericksonian claim because these strategies are biased toward "direct" suggestion. Finally, the paper provides a different, contextual perspective on "indirect" suggestion, thereby placing the theoretical and experimental issues in a different context of meaning. [PubMed Abstract]

1996

Rosenbaum, Robert & Dyckman, John (1996). No self? No problem! Actualizing empty self in psychotherapy . In Hoyt , Michael F. (Ed.), Constructive therapies (2, pp. 238-274). New York NY: Guilford.

In this book chapter, Rosenbaum and Dyckman (1996) argue that \_self has no permanently fixed, defining, \_thing-like\_ characteristics\_ (p. 270). They thus dispute the classical notion--commensurate with the position of \_philosophical realism\_ -- that the self is a substance, with fixed qualities and measurable qualities. The authors refer to this classical self as a \_full\_ self, contained inside the skin and delimited by its participation in linear time. Instead, they propose an \_empty self,\_ not to be construed as a void, but as a fluid, connected, relational self that overflows the traditional boundaries of the skin and is open to greater possibilities for change. To support their view of an empty self, the authors include several case examples of working with hypnosis and strategic/narrative therapy with clients experiencing a variety of psychological and physical symptoms. The authors further contend that \_self is not unitary, but the product of multiple drafts\_ (p. 248)[Editor note: See Dennett, 1991, in this database]. In the narrative-constructivist tradition, they argue, \_if we speak in terms of multiple contextual selves for us all...[then, people diagnosed with MPD/DID] are not so \_different\_ from the rest of us\_ (p. 249). The chapter draws from western & Buddhist philosophy, strategic/systemic and narrative therapies, Ericksonian hypnosis, and, cognitive science theories regarding memory, consciousness, embodiment, and language, to support their alternative view of, and treatment for, the \_self.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1993

Lynn, Steven Jay; Neufeld, Victor; Mare, Cornelia (1993). Direct versus indirect suggestions: A conceptual and methodological review. International Journal of Clinical and Experimental Hypnosis, 31, 124-152.

The article reviews the literature on the effects of direct versus indirect hypnotic suggestions. A conceptual and methodological analysis of direct versus indirect suggestions is also provided. Three conclusions follow from the review: (a) Contrary to views of Ericksonian hypnotists, suggestion style has little effect on objective responding to hypnotic test items; (b) studies of clinical- and laboratory-induced pain and other measures of subjective experience have yielded contradictory results- however, the best controlled studies have not indicated that indirect suggestions are superior to direct suggestions; and (c) there is insufficient evidence to conclude that hypnotizability level and suggestion wording interact, such that low hypnotizable subjects are particularly responsive to indirect suggestions. Methodological and conceptual problems in defining and studying hypnotic communications, the lack of rigorous experimental controls, and research issues and directions are highlighted.

#### NOTES

1:

Although this article is primarily concerned with the nature of suggestion, the review also mentions several studies comparing hypnosis with other interventions for pain, in passing:

Crowley (1980)

Snow (1979)

Omer, Darnel, Silberman, Shuval, & Palti (1988)

Stern (1982)

Bassman (1983)

"Like the clinical studies using the RIA [Rapid Induction Analgesia], pain studies that did not use the RIA lack appropriate control groups: Neither Bassman's (1983) nor Stern's (1982) research explicitly compared direct and indirect suggestions. What our review does suggest is that studies (e.g., Crowley, 1980; Snow, 1979; Van Gorp et al., 1985) that imposed the greatest degree of methodological control yielded the outcomes least favorable to the hypothesis that indirect suggestions are effective and account for the pain relief achieved, above and beyond factors common to placebo treatments" (p. 132).

"Lynn and his colleagues' studies indicate that whereas indirect suggestions enhance archaic representations of the hypnotist, direct suggestions facilitate involvement in the events of hypnosis, as measured by subjective involvement and involuntariness" (p. 136).

1992

Kirmayer, Laurence J. (1992). Social constructions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 40 (4), 276-300.

Both clinical and experimental views of hypnosis are social constructions that reflect the biases and interests of practitioners and scientists. Each perspective offers useful

metaphors for hypnosis. Underlying clinical uses of the term hypnosis are states of mind associated with imaginative reverie and automatic behavior based on procedural knowledge. Social discourse and narratives shape hypnotic experience, but they are themselves influenced by mechanisms of attention and automaticity. Study of hypnosis must proceed on both social and psychological fronts to account for the experience and clinical efficacy of hypnosis.

#### NOTES

1:

In accord with Coe, Sarbin, and other social-psychological theorists, I will argue that hypnosis, like all higher mental phenomena, is fundamentally social in nature. To accept this, however, does not obviate the role of distinctive processes of attention, imagery, and imagination. Hypnosis is a socially constructed context and ritual for evoking imaginative enactment and involuntary of "automatic" modes of experience and behavior. Contemporary social-psychological theorists have failed to sufficiently explore the nature of enactment. A satisfactory account of hypnosis must go much deeper into the cognitive and social construction of experience; only then can involuntary behavior be properly distinguished from self-deception and self-authorship from cultural construction" (p. 277).

1991

Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.

#### NOTES

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Goran, D. K. (1991, February). The effects of hypnosis and hypnotizability testing on chronic pain (Dissertation, Case Western Reserve University). Dissertation Abstracts International, 52 (8), 4466-4467.

This study evaluated the effectiveness of Ericksonian-oriented hypnosis in the treatment of chronic pain and the value of the Stanford Scale of Hypnotic Susceptibility in preselecting pain patients for hypnosis. Chronic pain patients were

assigned to one of three treatments: a one-hour session of Ericksonian hypnosis with suggestions for pain control, suggestions with no hypnotic induction, or an interview about their pain condition. It was discovered that during the treatment hour hypnosis was more successful in reducing both pain and emotional distress than was suggestion alone, and both were superior to the interview control treatment. Of particular interest, those patients who were not given the Stanford Scale of Hypnotic Susceptibility until the end of the study improved more than those who were tested with it prior to treatment. Scores on the Stanford Scale did not correlate with improvements in pain or distress. Thus, it is possible that formal hypnotic susceptibility testing may be detrimental to a pain patient's chances of being successfully treated with hypnosis" (pp. 4466-4467).

Shutty, Michael S.; Sheras, Peter (1991). Brief strategic psychotherapy with chronic pain patients: Reframing and problem resolution. Psychotherapy.

There is currently a paucity of literature concerned with the delivery of psychological services to chronic pain patients in an outpatient setting where patient contact is limited to one or two consultations. Yet, the role of psychological consultation to patients with pain problems has expanded greatly in the past decade. This article describes the application of brief strategic interventions that can promote behavior change in patients who have not adhered to medical recommendations for conservative treatment of chronic pain. Strategic interventions embody a here-and-now problem-solving perspective that facilitates integration of medical and psychological treatment goals for pain patients.

#### NOTES

1:

Pain is a significant problem for many people--8% of the general population (Von Korff, Dworkin & Le Resche, 1990), accounting for most of the money paid for health care, compensation, and early retirement (Anderson, 1981). Linton (1986) reported that only 35-45% of chronic low back pain patients can work a year after pain treatment, and Gallon (1989) reported that 2/3 of chronic low back pain patients did not show improvement 4-6 years after a pain management program.

In the past, outpatient treatment has included diagnosis and short-term treatment, but now they are providing more physical therapy, vocational retraining, and psychotherapy. Behavioral treatments focus on reducing pain behavior, use of medication, exercise, and stress management. They are labor intensive and the authors state that they are not readily adapted to outpatient settings.

Among psychological treatments would be included 'brief strategic therapy' which has a here-an-now problem-solving focus and clearly specified behavioral or attitude change goals. This type of therapy has been associated with Milton Erickson's hypnotherapy strategies. It has been described by Fisch et al. (1982) and Watzlawick et al. (1974). Erickson and these other therapists stress altering the patient's frame of reference (reframing) in order to provide an opportunity for change. Brief strategic therapy includes such things as paradoxical intention, negative practice, and symptom prescription.

The authors note that since complete pain relief is not a realistic goal for chronic pain, it is important to focus on teaching patients better coping skills. They note that Rybstein-Blinchik (1979) and Rybstein-Blinchik & Grzesiak (1979) have demonstrated that reformulation of the pain experience (reframing) is beneficial for chronic pain patients. In their research, pain patients were taught to somatize (focus on specific sensations), divert attention (think of important events in their lives) or reframe their experience (reinterpret it in cognitive terms inconsistent with pain complaint, e.g. as numbness or warmth). Those who were taught reframing reported that their pain was less intense, and they exhibited fewer pain behaviors. This is taken as supportive for using cognitive interventions that teach patients to reinterpret pain, rather than focusing on its somatic sensations or diverting attention.

1990

O'Hanlon, W. H.; Hexum, A. L. (1990). An uncommon casebook: The complete clinical work of Milton H. Erickson, M.D.. New York: W. W. Norton & Co.. (Reviewed by Elgan Baker, *American Journal of Clinical Hypnosis*, 34, 137)

NOTES

1:

According to the review by Elgan, cases are organized into sections by the presenting problems of the patients treated and include a wide range of psychopathology. Each case is given an identifying number for ease of cross-referencing and is presented in a standard form: case summary, presenting problem, age group, modality of treatment, problem duration, treatment length, result of treatment, follow-up (if available), a summary of techniques used, and sources for the case description.

Sherman, S. J.; Lynn, S. J. (1990). Social-psychological principles in Milton Erickson's psychotherapy. *British Journal of Experimental and Clinical Hypnosis*, 7, 37-46.

In this article we will suggest that social-psychological principles may be used to understand M. H. Erickson's psychotherapeutic approach. In addition to using an array of indirect suggestive approaches, Erickson exploited clients' reactance, increased their perceptions of control and mastery, altered the accessibility of thoughts and memories, and modified thoughts and behaviours. To accomplish these therapeutic goals, Erickson used the following techniques: seeding, priming, confusion, script enactment, framing, explanation, and perspective modification.

1988

NOTES

1:

This is the introduction to a special issue of *International Journal of Clinical and Experimental Hypnosis*, which is devoted to the contributions of Milton Erickson. "The conclusions of these analyses are sometimes surprising. The usual understanding of Erickson's work and the hallmarks of the Ericksonian tradition emphasize such parameters as indirect suggestion; naturalistic or permissive trance

induction; confusional strategies; 'unconscious learning'; and the focal use of metaphor, analogy, anecdote, and storytelling. These authors suggest, however, that Erickson's work frequently did not entail the use of hypnotic trance in any conventional sense and attribute many of the crucial variables in his therapeutic work to a variety of nonhypnotic phenomena" (p. 126).

Several consistent themes emerge, which Baker refers to as perhaps the "essence" of Erickson's contributions: "(a) the charismatic power of Erickson's personal presentation and style; (b) the marked influence of social variables; (c) consideration of primitive, unconscious relationship variables; (d) the evocative use of language, symbolism, and nuances of communication; (e) the ingenious tailoring of therapeutic interventions to the perceived uniqueness of each patient; and (f) the central influence of nonhypnotic variables rooted in social learning and cognitive-behavioral paradigms" (p. 126).

**Diamond, Michael Jay (1988). Accessing archaic involvement: Toward unraveling the mystery of Erickson's hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 141-156.**

The "essence" underlying Milton Erickson's unique style and uncommon technical maneuvers inheres in his uncommon skill at eliciting patients' archaic involvement. Archaic involvement, as characterized by perspectiveless overevaluation, is explicated and America's beloved tale, *The Wonderful Wizard of Oz*, is used to evoke further perspectives. The importance of such regressive object-representations are noted. Erickson's uncanny ability to access archaic involvement and thereby profoundly influence his client is analyzed in terms of his: (a) relationship style; (b) therapeutic "persona"; (c) theoretical orientation; and (d) specific micro-techniques and interventions. Clinical findings derived from a case transcript and videotaped work are employed throughout to substantiate the argument that Erickson fosters regressive interpersonal shifts. Implications of this skill are discussed, and further avenues for investigation are suggested.

#### NOTES

1:

Shor (1959, 1962, 1979) introduced the concepts of archaic involvement, trance (fading of the generalized reality orientation or altered state of consciousness) and nonconscious involvement (or fulfillment of the role of hypnotic subject, dissociated role taking) to account for experienced hypnotic depth. Shor (1979) defined archaic involvement as "'the extent to which at any given moment in time there are archaic, primitive modes of relating to the hypnotist that echo back to the love relationships of early life [p. 126]' (p. 143)."

Archaic involvement develops as a hypnotist actively encourages the subject to regard the hypnotist with the role of parent, teacher, guru. Charismatic authority, protector, etc. Erickson fostered these attitudes in his patients, and his apparent magical expertise can be attributed to his ability to tap into these archaic ties, which are 'ubiquitous.' "Freud (1919/1955) long ago noted that human beings' irresolution and craving for authority should never be underestimated. Fenichel (1945) stressed the universal yearning for 'omnipotent beings whose help, comfort, and protection

he could depend on [ p. 491].' Kaiser (1965) considered the 'universal psychopathology' of attempting to create in real life the fantasy of fusion. Still others (Kohut, 1971, 1977; Kriegman & Solomon, 1985; Newman, 1983) suggested that the motivation to yield to or to create such charismatic leaders stems from the desire to lose all boundaries and become lost within a greater whole--an experience elsewhere termed a fusional or symbiotic alliance (Diamond, 1987). This 'search for oneness' (cf. Silverman, Lachman, & Milich, 1982) is engaged by charismatic leaders as we become enticed by our own archaic wishes to avoid uncertainty, ambivalence, and the complexities of maturation, perhaps even creating such leaders to save us from ourselves" (p. 145). There remains the question of how archaic involvement facilitates or impedes psychotherapy.

In addition to archaic involvement, Erickson's behavior as a hypnotherapist during the later years of his career stressed the evocation of nonconscious role-playing, while underplaying the evocation of the trance dimension. He relied on his reputation and interventional skills, stressing 'naturally occurring trance' of everyday life. (In his earlier years he spent more time on developing profoundly altered states of consciousness.)

"Erickson's therapeutic 'persona' and style of engaging were consistently parental and authoritative, albeit frequently permissive, supportive, flexible, and benevolent. He always remained in control and typically insisted that his orders be carried out strictly and without question (Hilgard, 1984). ... Archaic wishes are further gratified by Erickson's gentle and soothing parental tone and stance, while control is maintained as he invites his patient to 'enjoy being irritable with me'" (pp. 147-148). To further psychotherapeutic goals, he sometimes assumed the role of surrogate parent, in hypnosis, to supply the patient with needed (childhood) experiences, as in the famous case referred to as the 'February Man.'

Erickson's implicit theory of an autonomous and omnipotent unconscious further encouraged "more primitive modes of perceiving and construing consensual and historical reality" (p. 148). "For example, he tells his patient in the Lustig (1975) videotape that: 'Your unconscious knows all about it; it will inform the conscious mind when it is ready to know'" (p. 149).

Regarding his technical maneuvers (intonation, wording, nonverbal communication, indirect suggestion, metaphor, and anecdote), "contrary to popular belief, he frequently spent long periods of time thinking about and planning his interventions (Hammond, 1986). In addition to using these patterns to evoke both patient resources and archaic alliances, he adopted an exceptionally confident manner, even when prescribing unusual assignments (McCue, 1984). Thus, patient faith and positive expectation in the efficacy of his interventions were maximized" (p. 149).

Erickson's pacing of his speech was slow, at the same rate as President Reagan's speeches. He was tone deaf, which may have contributed to the arrhythmia and unusual intonation observed in his speech. He used the patient's language, typically, which "undoubtedly provides a narcissistically gratifying identification with a hypnotist felt to be inside one's own psychic system (Diamond, 1987)" (p. 150). When he would say to patients, "My voice will go with you," he was inviting a "bodily-level incorporation" (p. 150). When he created mental confusion through his maneuvers, he increased the likelihood that the patient would "respond to

subsequent direction in order to bind anxiety" (p. 150). "Thus, an archaic object relationship is recapitulated by an invoked regression to earlier, primary phases of cognitive processing, and in turn, Erickson provides a safe, 'holding environment' (cf. Winnicott, 1965) for his now regressed patient" (p. 150).

Erickson used what Watzlawick (1978) has called 'the language of change'--puns, metaphors, indirect communication, analogies. He finessed the defensive functions of secondary processes (Kalt, 1986) by allying himself with the patient's secondary processes, as when he used anecdotes and teaching tales in the role of a 'Dutch uncle' giving advice. The teaching tales usually affirmed basic American values (common sense, pragmatism, self-sufficiency, resiliency, achievement; Diamond, 1983). However, this kindly grandfather approach "recreates an archaic relational situation wherein adult-level defenses and secondary processes are realigned while Erickson the storyteller permits expression and oftentimes symbolic gratification of instinctual drives. This archaic recapitulation occurs as a result of the relaxing of defenses through metaphorical communication (cf. Schafer, 1983), in addition to the revival of opportunities for mastery within this safe and often enchanting context (cf. Bettelheim, 1977)" (p. 151).

The author concludes by addressing clinical issues pertaining to an Ericksonian approach that relies on archaic involvement. "An essential question for clinicians concerns the long-term effects on the patient of the therapist's fostering such regressive involvement. There are both pluses and minuses of therapeutic relationships which maximize archaic involvement. Consequently, we need to empirically determine the efficacy of Ericksonian interventions both in offering short-term relief from suffering, and in potentiating developmental maturation in the long run. Not only must we ascertain how much archaic involvement is required for lasting change, but what is done with the regressive involvement (i.e., is it merely evoked, managed, utilized, or ultimately worked through?) is critical in assessing the value of Erickson's contribution" (p. 152).

Edgette, John H. (1988). 'Dangerous to self and others': The management of acute psychosis using Ericksonian techniques of hypnosis and hypnotherapy. In Lankton, Stephen R.; Zeig, Jeffrey K. (Ed.), Ericksonian Monographs: No. 3. Treatment of special populations with Ericksonian approaches (pp. 96-103). New York: Brunner/Mazel.

#### NOTES

1:

Edgette shows how several agitated psychotics were hypnotized using an Ericksonian approach. His inductions were bold attempts to introduce hypnosis in a setting where drugs and restraints are often the only available tools. He offers some ideas concerning the myth that hypnosis will not work with such a population.

Hammond, D. Corydon (1988). 'Will the real Milton Erickson please stand up?'. International Journal of Clinical and Experimental Hypnosis, 36, 173-181.

Disciples of Erickson are overaccentuating some aspects of his work and are thereby neglecting others. Current training predominantly focuses on indirection, confusion,

esoteric metaphors, paradox, and magical expectations of instant success via superficial trances. Therapists are sometimes encouraged to simply go into trance themselves and "trust the unconscious," instead of following Erickson's model of hard work and careful treatment planning. It is time for a new law in the field of hypnosis: the Law of Parsimony. Interviews with numerous long-time associates of Erickson present him as being much more diverse in his approach. Erickson's true legacy is eclectic hypnotherapy, not a dogmatic and restrictive cultism.

## NOTES

1:

This article appeared in a special issue of the journal devoted to an evaluation of the contributions of Milton H. Erickson, who had died eight years earlier. The author begins with a statement that he has deep respect for Erickson's work and ideas, but wishes to deal with many myths that have evolved regarding Erickson's therapy approach. He notes several factors that have contributed to current confusion: 1. Few clinicians are sufficiently skillful to use the panoply of techniques employed by Erickson, so they gravitate to a few with which they feel comfortable. 2. Some of Erickson's techniques are unique, thereby drawing special attention. 3. The Erickson observed in seminars in his senior years was very different from the man during mid-life, in terms of therapy style.

The author devotes considerable attention to discussing two techniques critically: indirection, and interspersal of suggestions within metaphors (multiple-level communication). These were developed to bypass resistance, but Erickson himself did not use them if the hypnotic Subject was receptive. The author also takes issue with followers' assumption that Erickson worked spontaneously, without planning his interventions.

(1) Indirect suggestion. Erickson reportedly told a long-time student and associate, Herbert Lustig, "if a person were desirous of changing and accepting of the therapist's input, then direct suggestions were the most efficient form of treatment" (p. 176). The author indicates that there are numerous examples in his collected works of Erickson giving suggestions "with compelling, progressive, rapid, emphatic, insistent intensity ... [Erickson, 1980c, Vol II, p. 281]." Several examples are cited in this article, e.g. "Now listen to me. These are the things you must do. Do them you must, and without fail [Erickson, 1980, Vol. IV, p. 359]" (p. 175). Erickson's use of direct suggestions was substantiated by another long-term associate, Kay Thompson, who is quoted as saying, "Many of the patients who came to Erickson did not have a need for indirection. They were ready and able to utilize trance. ... Sometimes people need the excuse of being ordered to do what they wanted to do, and Erickson complied with that need in a totally intimidating and authoritarian fashion. I would venture to say that his indirect therapy was successful principally because of his extensive work with direct therapy" (p. 176).

(2) Metaphors as suggestions. Regarding the use of metaphors (into which suggestions are imbedded), the author quotes other Erickson colleagues (e.g. Robert Person, Florence Sharp) in support of the position that contemporary followers of Erickson overemphasize his use of them. Many of his stories were not even meant to be metaphors. He seemed to fill in time with stories to allow patients time for deepening or to integrate previous material. "Metaphors were not the core of his

therapy and every comment by Erickson did not have three levels of meaning. Pearson said, Erickson 'told me within the last year before he died that one of the things that disgusted him was that so many people in trying to imitate him with embedded metaphor and parables were hiding behind that obscurity. He was very careful in what he told and why he told them.'

"When Erickson did use metaphors, they were generally not stories constructed on the spot (Erickson, 1983, p. 78), and they usually had obvious relevance rather than being so highly indirect as to be incomprehensible. In fact, most long-term associates recalled Erickson frequently using bridging associations, making direct connections between metaphoric stories and patient problems, rather than refusing to answer patient questions about the possible meanings" (pp. 177-178).

(3) Treatment Planning. Many contemporary followers of Erickson assume that he advocated simply going into a trance themselves and "trusting the unconscious." However, "Erickson himself said, 'I have found that I often spend more time analyzing a patient's resistance--going over and over it, phrasing and rephrasing what I could say in response--than I spend with the patient during the actual interview [Erickson, 1983, p. 245]. Over and over again, after a patient has left your office, you ought to review in detail every item of behavior. You ought to make notations of the types of behavior, and then perhaps even practice out loud to yourself so that you learn how to phrase your remarks [p. 240]. I think you all ought to write out your suggestions and then carefully analyze them to see what they really mean [p. 242]. When a patient comes into my office [for a scheduled appointment], I usually have a rather clear idea of what I want to do' [p. 125].

"It was this compulsive preparation and writing and rewriting of suggestions for over 40 years that allowed him at the end of his life to have the appearance of spontaneity. He could trust his unconscious after putting something into it" (p. 178). "Late in his life, Erickson instructed Rossi (cited in Erickson & Rossi, 1979): 'I want you to notice how connected everything is even though it's all impromptu. It is a language I've learned, a careful study. ... Because I learned it carefully, I can speak it easily [p. 295].' His widow and many others emphasized his time consuming, compulsive preparation" (pp. 178-179).

The author notes that Erickson also took a considerable amount of time in training patients to use trance before doing hypnotherapy with them. He quotes Ernest Rossi as writing, "'Erickson rarely gives therapeutic suggestions until the trance has developed for at least 20 minutes, and this only after hours of previous hypnotic training' [Erickson, 1980, p. 89, Vol III]."

The references cited in this paper are usually one of the volumes of Erickson, M. H. (E. L. Rossi, Ed.) *The collected papers of Milton H. Erickson on hypnosis*, published in New York by Irvington Publishers, 1980.

**Hilgard, Ernest R. (1988). Milton Erickson as playwright and director. International Journal of Clinical and Experimental Hypnosis, 36, 128-140.**

Milton Erickson in his therapeutic practice can be characterized as a playwright who plans a little play for each patient and then leads that patient to accept and enact the assigned role. This arrangement permits him to be authoritarian as

playwright and director by providing the staging and the strategy, while the patient then provides the tactics by carrying out the assignment in his or her own way. Several examples are given from published cases. The first is a case of enuresis in both husband and wife, selected because in this instance no mention is made of hypnosis as Erickson sets the circumstances and gives direct orders for carrying out the instructions. 3 pairs of cases are described to indicate how differently Erickson has treated cases with similar symptoms. Finally, 1 case is discussed more extensively because the treatment extended over a 6-year period. Its interpretation shows how difficult it is to distinguish what belongs to the strategic drama and what to hypnosis. All cases had successful outcomes.

## NOTES

1:

The essence of Erickson's therapy lay in the unexpectedness of his comments or instructions, the shock element, the surprises, and the tasks that he assigned the patient to carry out in the real space-time world or in fantasy. There was often doubt whether other than light hypnosis was involved" (p. 129).

As an example, Hilgard reports on a published case in which both the husband and wife had enuresis and Erickson treated them in a very authoritarian fashion. Erickson told them that he "would make a bargain with them: If they got well, they would not have to pay; if they did not benefit from the therapy, they would have to take full financial responsibility for the time he gave to them. He obtained their promise that they would do what he told them, and then he proceeded to tell them: 'This is what you are to do.' He then laid out the scenario. The most important part was that they were to take fluids frequently, drink a glass of water 2 hours before going to bed, and then lock the bathroom door. At bedtime, they were to get into their pajamas, kneel side by side on the bed and deliberately and jointly wet the bed. Wetting the bed would then be over for the night, and they could sleep through the night in the wet bed. They must do this every night for 2 weeks; on the Sunday night to follow, they may lie down and sleep in a dry bed. If the bed is wet the next morning, they will have to kneel and wet the bed each night for another 3 weeks.

"You have your instructions. There is to be no discussion and no debating between you about this, just silence. There is to be only obedience, and you know \_and will know what to do\_. I will see you again in five weeks' time. You will then give me a full and amazing account. Goodbye! [Volume IV, 1954, p. 100, emphasis in original].

"When they reported--cured after the first 2 weeks--they asked whether Erickson had used hypnosis. He dodged their question by saying that they were entitled to full credit for what they accomplished" (p. 130).

Hilgard makes the point that Erickson's authoritarianism might seem to contradict claims made that he had a high degree of respect for patients, their autonomy, and their responsibility for solving their own problems. "There need be no contradiction, if it is recognized that the planned behavior may not in itself be the cure, but may only be the occasion that leads to patient to reorient and solve the personal problems that led to the seeking of therapy. Another way of putting this is that the \_strategy\_--that is, the plot of the drama--was entirely Erickson's, although the \_tactics\_--that is, beyond the fixed actions required by him, how the part was played--were left to the resources of the patient. This is not the permissiveness of

Rogers (1951) with respect to the patient's responsibility for his or her own life, nor does it have the freedom of expression of Moreno's (1946) spontaneity theater" (p. 131).

Kirmayer, Laurence J. (1988). Word magic and the rhetoric of common sense: Erickson's metaphors for mind. International Journal of Clinical and Experimental Hypnosis, 36 (3), 157-172.

Milton Erickson did not produce a systematic theory of psychotherapy. His talent was as a storyteller, inventing metaphors and more extended healing fictions for his patients. A great many of Erickson's cases did not involve hypnosis in any conventional sense of the term. He used a wide range of persuasive rhetorical forms to encourage behavioral change in his patients. Nevertheless, taken together his work represents a significant shift in paradigm from prevailing schools of psychotherapy. Erickson captured the power of word magic in the language of common sense. This coupling of magical power with folk psychology accounts for much of his current popularity. Attempts to experimentally test his techniques are likely to be unsuccessful because these techniques were unique inventions tailored to the individual idiosyncrasies of patient and context. Although regularities in his work can be found, Erickson's most important contributions are not techniques but changes in the values or ethos under which psychotherapy is conducted.

#### NOTES

1:

This paper focuses Erickson's implicit models of mind and the values they carry. "It is here that Erickson made his most significant contribution to the general practice of psychotherapy . Erickson avoided systematization. His writing is unusually anecdotal, even for psychotherapy (Erickson, 1980; Vol IV, passim). Erickson's writing format consists of 'thin' case descriptions, freely recycled in parable or homiletic form to serve his immediate rhetorical purpose. ... For Erickson, flexibility and eclecticism were not signs of a lack of coherence but a spirited rejection of rigid dogma that needlessly limited therapeutic possibilities" (pp. 158-59).

Erickson used language of the common man rather than a technical vocabulary, even when speaking of 'hypnosis' or 'trance' or 'the unconscious.' He called his approach 'naturalistic' and viewed hypnotic phenomena as an extension of normal experience and behavior. His common sense descriptions of events and techniques are easily understood in general terms. "Erickson took magic and dressed it in the familiar clothes of common sense. Some of his less critical followers, however, seem intent on taking common sense and dressing it in the cloak of magic" (p. 163).

Erickson used metaphors as a way of actively involving the patient in conceptual, affective, and sensory qualities of experiences, i.e. as a "tool for thought" (p. 164).

In attempting to understand Erickson's psychotherapy, one must note his "elastic use of the word 'hypnosis.' Sometimes Erickson uses the term narrowly with a focus on the elicitation of trance or dissociative phenomena, but more often he uses it broadly to mean any state of absorption" (p. 165). For him, this was "\_a state of special awareness characterized by a receptiveness to ideas\_" [Erickson, 1985, p. 223, emphasis in original]. By this he does not mean exclusively the classic

suggestion effect where motor acts are experienced as involuntary (Evans, 1967). ... The hypnotic subject exhibits a "\_special willingness to examine ideas for their inherent values\_" [p. 224, emphasis in original]. ... For Erickson, any move in the direction of increased absorption is an instance of hypnosis. Dissociation accounts for a great deal but not all of hypnotic behavior" (p. 165). That is why he used the word hypnosis to describe heightened attention that might occur when someone is surprised. But in fact, his published cases include many other kinds of interventions, such as reframing, symptom prescription, etc.--forms of influence and persuasion used by many therapists who do not consider themselves working with hypnosis. Erickson also emphasized that hypnosis enables one to work with 'the unconscious.' "Ordinarily, we view our consciousness as the causal agent of doing while our unconscious is the place where things just 'happen to us.' Erickson reversed this attribution, emphasizing the unconscious as the agent of active control working for the benefit of the patient while consciousness adopts the attitude of 'wait and see.' This leads consciousness into reverie--the state where images and events move of their own accord, animated by emotion, before the 'passive audience' of consciousness" (p. 167). So Erickson viewed hypnosis as liberating the unconscious. There was healing potential in helping the ego to relinquish "rigid control over the creative and benevolent processes of the unconscious" (p. 168). From this theoretical position, the patient and therapist are seen as allies and psychotherapy is a collaboration; there is no need for the Freudian concepts of resistance and defense. "Erickson's metaphors for hypnotherapy link it with normal processes of learning and imagining. His image of the unconscious as a storehouse of creative potential supports a non-pathologized view of man amid all his troubles and craziness. In contrast to psychiatry's current preoccupation with nosology, and the emphasis of psychoanalysis on the dimensions of human frailty, Erickson adopted a non-pathologizing attitude. He did not deny his patient's difficulties but neither was he excessively fascinated by them. He recognized that healing depends not on cataloguing deficiency but on fully mobilizing the person's intelligence, imagination, and integrity. This message of therapeutic optimism was balanced by his own example of the benefits and limitations of hypnotherapeutic practice" (p. 170).

McCue, Peter A.; McCue, Elspeth C. (1988). Literalness: An unsuggested (spontaneous) item of hypnotic behavior? A brief communication. International Journal of Clinical and Experimental Hypnosis, 36, 192-197.

Milton Erickson claimed that the large majority of hypnotized individuals respond in a peculiarly literal way to questions/requests such as, "Would you mind telling me your name?" and he viewed this behavior as a manifestation of the 'hypnotic state.' In the present study, numerous Ss were exposed to hypnotic induction procedures and tested for literalness. Since it is possible that Erickson obtained literal responses by inadvertent cueing, some of these Ss were asked questions in a 'distorted' manner that was thought likely to elicit literal responses. A minority of the latter Ss gave literal responses, but with Ss who were asked questions in a normal manner, no clear-cut literal responses of the type described by Erickson were noted.

Omer, H.; Darnel, A.; Silberman, N.; Shuval, D.; Palti, T. (1988). The use of hypnotic-relaxation cassettes in a gynecologic-obstetric ward. In Lankton, S. R.; Zeig, J. K. (Ed.), Research, comparisons and medical applications of Ericksonian techniques (pp. 28-36). New York: Brunner-Mazel.

#### NOTES

1:

They did three studies in which they gave women having gynecologic procedures tapes with a Rapid Induction Analgesia hypnosis experience.

STUDY 1. Women heard tapes before a painful Fallopian tube procedure (salpingography). The patients reported less pain, tension, anxiety, and fear than control patients. (N.B. Physicians' ratings did not show that difference.)

STUDY 2. Women practiced with the tapes at home before labor and delivery. One day after delivery, there was no difference in pain report or experience report between treated and control patients.

STUDY 3. Women used the tapes during labor. They reported worse pain and labor experiences than the control patients.

The authors conclude that their research does not support the hypothesis that Rapid Induction Analgesia is useful for acute pain.

Spinhoven, Philip; Baak, Diana; Van Dyck, Richard; Vermeulen, Peter (1988). The effectiveness of an authoritative versus permissive style of hypnotic communication. International Journal of Clinical and Experimental Hypnosis, 36, 182-191.

The differential effectiveness of an authoritative versus permissive style of hypnotic communication was investigated, with locus of control as a moderator variable. 44 Ss received in counterbalanced order both the more authoritatively worded Harvard Group Scale of Hypnotic Susceptibility, Form A and the Wexler-Alman Indirect Hypnotic Susceptibility Scale (WAIHS), which is a more permissive scale with the same item content as HGSHS:A. Permissively worded suggestions did not enhance the level of hypnotic responsiveness. Locus of control did not predict the response level on one of the scales. Unexpectedly, significantly more female Ss preferred the WAIHS, and more male Ss preferred HGSHS:A. It is concluded that Ss' characteristics (i.e., hypnotizability) are more important for hypnotic responsiveness than variations in style of hypnotic communication or scale preference."

Lynn, Steven Jay; Neufeld, Victor; Matyi, Cindy L. (1987). Inductions versus suggestions: Effects of direct and indirect wording on hypnotic responding and experience. Journal of Abnormal Psychology, 96 (1), 76-79.

This study examined the effects of direct wording (authoritative language, specific responses) versus indirect wording (permissive language, choice of responses) of hypnotic inductions and suggestions in measures of behavioral and subjective responding. Subjects experienced suggestion-related involuntariness and suggested effects to a greater degree in response to direct-word suggestions (Harvard Group

Scale of Hypnotic Susceptibility; Form A; Shor & Orne, 1962) than in response to indirect-worded suggestions (Alman-Wexler Indirect Hypnotic Susceptibility Scale; Pratt, Wood, & Alman, 1984). No difference in behavioral responding was observed. Furthermore, induction wording did not have an effect on these measures, nor did the wording of the induction and the wording of the suggestion types interact with each other. Female subjects attributed less of their responsiveness to their own efforts when they received direct suggestions, and male subjects were less likely to attribute their responsivity to the hypnotist's ability when they received indirect suggestions. Rapport with the hypnotist did not vary as a function of induction or suggestion wording.

1986

Woolson, Donald A. (1986). An experimental comparison of direct and Ericksonian hypnotic induction procedures and the relationship to secondary suggestibility. American Journal of Clinical Hypnosis, 29 (1), 23-28.

Recent studies reporting the disparate effects of direct and indirect suggestion upon hypnotized subjects have indicated that standardized, direct hypnotic susceptibility tests may not accurately predict the suggestibility of subjects exposed to an indirectly worded, albeit similar, test. Historically, primary suggestibility correlates highly with hypnotizability, while secondary suggestibility does not and has been reported to be a subject's response to indirect suggestion. In this study 56 volunteers for self-hypnosis training were first tested for secondary/indirect suggestibility, then each singly received either a direct standardardized [sic] induction or an Ericksonian (indirect) version. While susceptibility scores between groups were close, a greater number of the Ericksonian group subjects were rated as medium or highly susceptible. This occurred regardless of their type of suggestibility. Also, the Ericksonian group subjects appeared to be less aware of their depth of trance, as judged by a comparison of their susceptibility scores and their self-report depth scores. - Journal Abstract

Yapko, Michael D. (1986). What is Ericksonian hypnosis?. In Zilbergeld, B.; Edelstien, M. G.; Araoz, D. L. (Ed.), Hypnosis - questions & answers (pp. 223-231). New York: Norton.

#### NOTES

1:

Author presents the principles of Ericksonian hypnosis (the Utilization Approach) as:

- "1. Each person is unique. ...
2. The client's experience is valid for him. ...
3. Each person relates to ongoing experience from his own frame of reference. ...
4. Join the client at the client's frame of reference. ...
5. The unconscious mind is rich in resources, positive in nature, and patterned from experience. ...
6. Trance is naturalistic. ..." (pp. 224-225).

1985

Stone, Jennifer A.; Lundy, Richard M. (1985). Behavioral compliance with direct and indirect body movement suggestions. Journal of Abnormal Psychology, 94 (3), 256-263.

Investigated the effectiveness of 2 types of suggestions in eliciting body movement by presenting 96 high-, medium-, and low-susceptible undergraduates, in hypnotic or nonhypnotic conditions, with either of 2 series of body movement suggestions. The indirect suggestions were designed to represent the approach of M. H. Erickson (see PA, vol 60:11116 and 12262) and resulted in greater compliance in the hypnotic condition. Direct suggestions resulted in greater compliance in the nonhypnotic condition. Susceptibility to hypnosis was related to compliance in the hypnosis condition, but no interactions were found between susceptibility and type of suggestion. Sense of volition in responding was unrelated to the major findings. Discussion of the results includes a call for the accurate reporting of the wording of hypnotic suggestions in future research.

1984

Nugent, William R.; Carden, Nick A.; Montgomery, Daniel J. (1984). Utilizing the creative unconscious in the treatment of hypodermic phobias and sleep disturbance. American Journal of Clinical Hypnosis, 26 (3), 201-205.

An Ericksonian hypnotherapeutic procedure is designed to access and direct creative unconscious processes toward the creation and implementation of satisfactory solutions to recurrent problem behaviors. The use of the procedure is described in 3 cases. Two of the cases involve treatment of severe hypodermic needle phobias. The third case involves use of the procedure in treatment of a somnambulistic sleep disturbance. Possible curative forces tapped by the procedure, suggestions for its continued use, and suggestions for further investigation of the procedure are also discussed.

NOTES

1:

The procedure involved: 1. Pretrance discussion of unconscious mental processes 2. Hypnosis, followed by "Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that [desired therapeutic outcome], and as soon as your unconscious knows that you will [desired therapeutic outcome] it can signal by [appropriate ideomotor signal]" 3. Post-ratification.

Example: "'Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that you remain comfortably awake and alert anytime you receive an injection in the future, and as soon as your unconscious knows you will remain comfortably awake and alert when receiving an injection it can signal by lifting your right hand into the air off the chair.' This suggestion was [their] communicative effort to access and direct unconscious processes to the creation and implementation of altered behavioral responses to injections. Three minutes after the suggestion, B's right hand lifted jerkily into the

air. She was then awakened and experienced a complete amnesia for the trance period" (p. 203).

"[They] then carried out a procedure to ratify the therapeutic change. This process presumably further develops expectancy of change, confirms change at the unconscious level, and puts doubt into any conscious beliefs contrary to positive change. This step is standardly carried out as was done with B. [They] had B sit with her hands resting on the arms of the chair. [They] told her they would ask her unconscious mind a question that only it would know the answer to. It could answer 'yes' to the question by lifting her left hand, 'no' by lifting her right hand, and 'I don't know' or 'I don't want to answer' by lifting both hands. Then the question was asked, 'In the future, will B remain comfortably awake and alert anytime she receives an injection or a blood test?' After a few minutes her left hand jerked momentarily into the air. After some discussion about the ideomotor response and her trance experience they dismissed her with the prescription to 'await the surprising results'" (p. 203).

The authors cite as a source for their work two books: Erickson, Rossi, and Rossi, *Hypnotic Realities*, 1976, pp. 226-230; also Erickson & Rossi, *Hypnotherapy*, 1979.

**1983**

Bassman, S. (1983). The effects of indirect hypnosis, relaxation and homework on the primary and secondary psychological symptoms of women with muscle contraction headache (Dissertation). Dissertation Abstracts International, 44, 1950-B.

**NOTES**

**1:**

Compared the effects of indirect hypnosis (e.g., metaphors, stories, vague suggestions, and implied directives) on muscle contraction headaches with a relaxation and a no-treatment control condition. Both hypnosis and relaxation conditions reduced symptoms more than did the no-treatment condition. Unlike relaxation, indirect hypnosis did not reduce the intensity and duration of headaches, although it did reduce the amount of medication and also benefitted sleep.

**1979**

Snow, Lorraine L. (1979). The relationship between 'rapid induction' and placebo analgesia, hypnotic susceptibility, and chronic pain intensity (Dissertation, University of Rhode Island). Dissertation Abstracts International, 40 (n2-B), 937.

**NOTES**

**1:**

Found that the RIA [Rapid Induction Analgesia] was no more effective than oral placebo analgesia in relieving the pain of 30 paraplegics suffering from chronic pain syndrome. Although Snow found that the RIA was unrelated to hypnotizability when the effect of chronic pain experience was controlled, Crowley (1980) did find that hypnotizability was related to multiple chronic pain indices.

**1977**

Beahrs, J. O. (1977). Integrating Erickson's approach. American Journal of Clinical Hypnosis, 20, 55-68.

More than any other psychotherapist, Milton Erickson epitomizes the flexibility needed to do most skillfully what he feels is necessary for any psychotherapy: first, meet the patient at the patient's level and gain rapport; second, modify the patient's productions and gain control; third, use this control to help the patient change in a desirable direction. Several adjectives often used and misused to describe Erickson are discussed; how they sometimes apply, sometimes do not. His concepts of hypnosis and the unconscious are briefly set forth. Four major and seemingly divergent frameworks for formulating and treating human behavior are presented. My thesis is that, semantics considered, they may often be saying the same thing. The semantics is yet of vital importance, as each framework carries its own different all-important pragmatic implications for how one should work. Erickson is again notable in his uncanny ability to function within all of these modes, and possibly others, with great skill, and the flexibility which allows him to adapt totally to each patient's own individualized system. Finally, a personal experience of my own is recounted, with a speculative hint on how it might shed some light on the mechanism of how this amazing psychotherapist might do his magic.

**1976**

Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, **18**, 153-171.

The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.

Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it! American Psychologist, **29**, 785-795.

**1971**

Beahrs, J. O. (1971). The hypnotic psychotherapy of Milton H. Erickson. American Journal of Clinical Hypnosis, **14**, 73-90.

The principles of hypnosis and suggestion permeate most of Milton Erickson's psychotherapy, although formal trance induction is used in less than ten percent. Characteristic of Erickson's style is his indirect manner of phrasing suggestions or interpretations. They come not as outside impositions, but as subtle manipulations leading the patient to institute constructive behavior from within, often without full conscious awareness. Usually Erickson first attempts to meet the patient at the patient's level, thereby gaining rapport. As trust is developed, he modifies the patient's productions by covert suggestions, thereby gaining control. In this manner, he is able to convert a chaotic psychotic hallucination into an orderly hypnotic one,

or the desperate cries of a terminal cancer patient into hypnotic anesthesia. As interpreted here, Erickson's therapeutic approaches can be divided into three categories. First are techniques resembling modern behavior therapy, with frequent use of desensitization. Second, uncovering or abreactive techniques are only rarely used for rigidly resistant and severe symptom patterns. With these, extreme care is taken to protect against too rapid a disclosure to conscious awareness. Third and most important, are techniques enabling the patient to shift or displace large amounts of emotional cathexis from his original problem to some new constructive outlets, usually involving the development of trusting interpersonal relationships. These techniques are the cornerstone of Erickson's therapeutic technique.

**1964**

Erickson, Milton H. (1964). The confusion technique in hypnosis. American Journal of Clinical Hypnosis, 6, 183-207.

**NOTES**

**1:**

The confusion technique is "a play on words or communications of some sort that introduces progressively an element of confusion into the question of what is meant, thereby leading to an inhibition of responses called for but not allowed to be manifested and hence to an accumulating need to respond. ... [Added to the play on words] are the modification of seemingly contradictory, or irrelevant unrelated concepts, non sequiturs and ideas, variously communicated, and each of which out of context is a simple reasonable assertion, meaningful and complete in itself. In context, such communications given in a meaningfully emphatic manner become a medley of seemingly valid and somehow related ideas that leads the subject to try to combine them into a single totality of significance conducive to a response, literally compelling a response. But the rapidity of the communications inhibits any true understanding, thereby precluding responses and resulting in a state of confusion and frustration. This compels a need for some clear and understandable idea. As this state develops, one offers a clearly definite easily comprehensible idea which is seized upon immediately and serves to arouse certain associations in the subject's mind. The medley is then continued and another comprehensible idea is offered, enhancing the associations of the previous clear understanding. And in the process, one throws in irrelevancies and non sequiturs as if of pertinent value, thereby enhancing the confusion" (p. 256 in the article as reprinted in Jay Haley).

**1954**

Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)

**NOTES**

**1:**

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whom restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

## **ETHICS/STANDARDS OF CARE**

**1997**

**Karlin, Robert (1997). Illusory safeguards: Legitimizing distortion in recall with guidelines for forensic hypnosis - two case reports. International Journal of Clinical and Experimental Hypnosis, 45, 18-40.**

Two amnesic automobile accident victims remembered the information needed for their ongoing lawsuits during hypnosis. Meeting the recording requirements of the Hurd safeguards led to the admission of hypnotically influenced testimony in court in one case, whereas failure to record led to exclusion in the other. In both cases, closed-head trauma almost certainly prevented long-term memory consolidation. Thus adherence to guidelines for forensic hypnosis legitimized distortions in recall instead of preventing them. Hypnosis used to facilitate hypermnesia alters expectations about what can be remembered, makes memory more vulnerable to postevent information, and increases confidence without a corresponding increase in accuracy. Distortion of recall is an inherent problem with the use of hypnosis and hypnotic-like procedures and cannot be adequately prevented by any set of guidelines.

**Barber, Joseph (1995, November). When hypnosis causes trouble. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

**NOTES**

**1:**

**NOTES: Sexual acting out occurs, even with highly trained and responsible clinicians. But other problems occur, and it is the same qualities of hypnosis that**

make it useful that also make for problems. I found 20 publications that exhibited problems in therapy, and they all discussed only the mental illness of the patients.

1995

Frischholz, Edward J. (1995, November). A critical evaluation of the 1985 AMA Report on hypnosis and memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

JAMA 1985 concluded that hypnotically refreshed memories are less reliable than nonhypnotic recall. There are two problems with their conclusion: 1. No consensually validated definition of 'hypnosis' is identified. They talk about administration of induction, and differences in hypnotic susceptibility. 2. Empirical criteria for discriminating the unique and/or moderating effects attributable to hypnosis are not specified.

For example Loftus showed that memory errors can be created without hypnosis. You should not just add hypnosis to that model.

The criticisms have not led to remedial practices. No research has been done to show how to minimize errors or how to facilitate accuracy.

'What is Hypnosis?' Something that is done vs. something that happens? A procedure or responsivity? Questions like this are relevant to research on whether hypnotically refreshed memories are less reliable than ordinary recall.

Hypnosis is not a 'valid therapeutic modality' (i.e., 'hypnotherapy' is a misnomer). Hypnosis can be used adjunctively with many different types of therapeutic modalities: --psychodynamic therapies --behavior modification treatments --cognitive restructuring strategies --systematic desensitization --flooding --direct suggestion

There is a specious communality: hypnosis is used in a different kind of way with each approach.

If hypnosis is defined in terms of whether an hypnotic induction procedure was administered to the subject, then hypnosis is a universal phenomenon (i.e., everyone can be administered an hypnotic induction procedure). This, in the AMA report, permitted the courts to define it this way, which leads to a number of ridiculous results.

We need to highlight 'What are the variables that are the source of the errors?' The sources are not hypnosis. We can minimize the sources by the way we ask questions, instruct the subjects, etc.

If hypnosis is defined in terms of the nature of the subjects' response to the procedures, then hypnosis is not a universal phenomenon (i.e., there are wide individual differences in hypnotic responsivity). I have shown that it is possible to alter memories, using the Loftus model, in people who are both low and high hypnotizable.

We need to take into account induction procedure, hypnotizability, type of memory, and the retrieval/influence procedure. The demand characteristics re forced responding, expectancies about memory (e.g. video recorder model), expectancies about hypnosis (e.g., everyone remembers) must be accounted for.

Dependent variables in this type of research include memory accuracy, memory errors, and subjective confidence.

1994

Barber, Joseph (1994, October). How to use and abuse boundaries with hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco. Keywords: abuse, ethics/standards of care, hypnotherapy, hypnotist, psychodynamic, relationship/transference, suggestion

#### NOTES

(for only part of the presentation) I would like to focus on how we can productively use boundaries. Hypnosis experience reactivates archaic experiences with parents; if therapist can evoke trust, the patient can feel increasingly that they can relax into the experience.

Beahrs, John O. (1994). Why dissociative disordered patients are fundamentally responsible. International Journal of Clinical and Experimental Hypnosis, 42 (2), 93-96.

The author was asked to respond to the question, "To what extent should patients with multiple personality disorder (MPD) be held fundamentally responsible for their actions?"

Bloom, Peter B. (1994). Clinical guidelines in using hypnosis in uncovering memories of sexual abuse: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 42 (3), 173-178.

"Joan," a clinical psychologist, requested a psychiatric consultation to determine whether hypnosis could recover accurate memories of suspected child abuse by her still living father. Are there clinical guidelines in using hypnosis in uncovering such possible memories of sexual abuse? We asked Dr. Peter B. Bloom to share his views with us.

#### NOTES

Gives case example and clinical guidelines for using hypnosis in uncovering memories of sexual abuse. 1. In medical practice, "Primum non nocere," i.e. "First do no harm." 2. "No therapist should ever, either directly or indirectly, suggest abuse outside of a specific therapeutic context--certainly not to a client who is on the phone making a first appointment!" 3. "A therapist must not jump quickly to the conclusion that abuse occurred simply because it is plausible." 4. "A therapist should never simply assume that a client who cannot remember much from childhood is repressing traumatic memories or is in denial." 5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'" 6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families." 7. "Therapists should reconsider the 'no

pain, no gain' philosophy of treatment." 8. "The context of therapy is as important as the content." 9. "Tolerate ambiguity." (Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."

#### COMMENT

The tenet that insight is necessary for change and growth is not true. Change can occur without insight, although insight may be helpful in maintaining change once it has occurred.

#### SUMMARY

These guidelines are presented to enhance safe practice, however, clinicians should use their own judgement to determine the best path to follow with each patient.

#### NOTE

Guidelines 1, 8, 9, 10, 11, 12, and 13 are those of Peter B. Bloom. Those labeled as Guidelines 2, 3, 4, 5, 6, and 7 were taken with permission from Yapko, M. (1993 September/October). "The seductions of memory. The false memory debate." *Family Therapy Networker*, 17, pp. 30-37. All discussions, however, are those of Peter B. Bloom.

Bloom Peter (1994, October). Training boundaries that enhance responsible therapy: Using hypnosis creatively in one's own discipline. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Presented three cases that he elected not to treat, to illustrate the principle that we should only treat cases we would be professionally trained to treat without hypnosis. (1) a hemorrhoidectomy patient, where he elected not to do hypnosis because he is not trained specifically in anesthesiology and didn't know how to do anesthesia procedures; (2) conversion hysteria in 12 year old girl, because he isn't trained in child psychiatry and doesn't know child development; (3) to confirm the supposed existence of unidentified flying objects, or UFOs (when a woman tried to get him to hypnotize her so the "truth" would emerge). We must free ourselves from treatment of patients who retreat from reality, when we can't find commonality in goals.

Ganaway, George K. (1994, October). The thin line: Reality and fantasy in hypnotically facilitated memory retrieval during psychotherapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

**Historical review: Every hundred years there has been a peak in interest in altered states--a fin de siècle zeitgeist. It is the Brigadoon effect, i.e. something materializing for one day every 100 years. The theories developed then suffer from "paradigm grandiosity." In hypnosis, we can refer back to:**

**1694 Salem witch trials**

**1790s Gausssner's exorcism (see Ellenberger); in a 1775 showdown between him and Mesmer, there occurred the turning point between exorcism and psychotherapy.**

**1880s Charcot at Salpêtrier 'demonstrated' that hypnosis was an organic, pathological condition. Ultimately this contributed information about the plasticity of hypnotized people. (In the 1880s Bernheim thought it wasn't pathological and thought that suggestion was the important element in hypnosis.)**

**Recent historical contributions have influenced our views of MPD. Spiegel and Kardiner published book about hypnosis and war neuroses. Cheek & LeCron developed ideomotor questioning, which ignores the contribution of unconscious fantasy. Jacob Arlow's metaphor for MPD is two movie projectors aiming at a screen from two different sides. The subjectively known experiential world thereby combines external reality and the person's internal, motivated perceptions. The author presented a case study of female therapist, who had been previously diagnosed as MPD, who presented with dissociative symptoms that she thought were due to abuse by her grandmother. She fabricated the memories in order to get the holding and physical nurturing from her therapist for being courageous and remembering the abuse.**

**Maintenance of professional boundaries is very important in treatment.**

**Lynn, Steven Jay; Nash, Michael R. (1994). Truth in memory: Ramifications for psychotherapy and hypnotherapy. American Journal of Clinical Hypnosis, 36, 194-208.**

**In this article we address a number of issues relevant to the practice of psychotherapy and hypnotherapy: How reliable is memory? How are therapists' and clients' beliefs and expectancies related to pseudomemory formation? Are certain clients particularly vulnerable to pseudomemory creation? Does hypnosis pose special hazards for pseudomemory reports? What are the variables or factors that mediate hypnotic pseudomemories? In addition to reviewing the literature on these topics, we intend to sensitize the clinician to the potential pitfalls of critical reliance on the patient's memories, as well as uncritically accepted clinical beliefs and practices.**

**1993**

**London, Ray William (1993, October). Refreshed adult memories: Abuse survivor or therapeutic victim?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

**NOTES**

The author addresses four areas: 1. public policy 2. psychological issues 3. legal issues (evidence) 4. how to properly deal with it

A definition of sexual abuse is being applied to behaviors that for years were not considered out of bounds (e.g. entering a bathroom where someone else is). Furthermore, using the word "survivor" for abused people equates patients with survivors of concentration camps, who do not present with repressed memories typically. National incidence of child abuse remains unclear estimates are 6 to 60% of females. In Florida, only 13% of cases reported are confirmed.

Some therapists who specialize in this area in surveys indicate that they have false beliefs regarding memory and effects of trauma.

[These represent only partial notes on a lengthy and substantial paper.]

Perry, Campbell (1993, October). A case of multiple allegations of masturbation by a psychiatrist during hypnotic and/or sodium amytal therapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

This is a case study of a Canadian psychiatrist accused by 5 women of masturbating during therapy.

Stolar, Donald Sigmund (1993). History of hypnosis in court. [Lecture] UCLA Hypnosis Seminar.

#### NOTES

Disclaimer--The following information is not intended to substitute for professional legal advice and should not be used as such.

The following events led up to our current situation in California, regarding the use of hypnotically elicited information in court:

1968 - Harding vs. the State of Maryland. First case in which the state prosecution requested use of hypnosis. (Prior to this hypnotically refreshed memory was not used in court testimony because the memory was regarded as unreliable.) Police hypnotized a state's witness, and a man was convicted of rape. Hypnosis in this case was considered no different from other memory jogging techniques (Like showing a witness pictures.)

1978 - Reiser published "Hypnosis and it's use in law enforcement." In it he stated that 60% of witnesses hypnotized by police gave important information that helped the case. Reiser is a psychologist working in the Los Angeles Police Department.

1976 - Chowchilla kidnaping case, the driver of the bus was hypnotized, and remembered enough of a license plate to catch the kidnappers.

1980 - Reiser, Handbook of Investigative Hypnosis \_ N=384 cases were investigated using hypnosis. In 67% of these cases, hypnosis was thought to have led to valuable information. Where external corroboration was possible, 90% of the new pieces of information were accurate. The Society for Investigative and Forensic Hypnosis was established by Reiser.

During this same period, courts were pulling back from permitting hypnotically refreshed memories to be given in court testimony.

1979 Martin Orne (in the *International Journal of Clinical and Experimental Hypnosis*) proposed safeguards for the use of hypnosis for forensic purposes. 1. Licensed psychologist or psychiatrist does the hypnosis. 2. Hypnotist is independent of prosecution, defense, and investigator. 3. Any information regarding a crime given to the hypnotist before hypnosis must be written down. 4. The hypnotist writes everything the witness says. 5. All interviews, including the pre-hypnosis interview, are recorded. 6. Only the hypnotist and witness are in the room, and 7. independent verification is very important.

Inasmuch as Reiser had been training detectives to do investigative hypnosis, he countered the Orne requirements by noting that: 1. Therapists are not trained investigators; detectives typically work with trauma victims. 2. Reports of adverse side effects following investigative hypnosis are exaggerated 3. Confabulation and fantasy are no more prevalent in hypnosis than in waking state.

Herbert Spiegel, in addressing the reliability of hypnotically refreshed memories, said hypnosis can make an "honest liar" out of a person. That is, they can be personally convinced that they have remembered something that in fact did not happen.

1980 - Bernard Diamond, M.D. (psychiatrist and law professor) wrote an article in the *California Law Review*, noting that: 1. Hypnotically refreshed testimony is full of fantasy and confabulation. 2. A hypnotist cannot tell if the subject is simulating. 3. A hypnotized subject cannot discriminate between fact and fantasy. 4. A hypnotized subject could become hardened against cross examination because with hypnosis he becomes more confident.

Courts began using the Frye Rule: in order for expert testimony to be admissible, it must be what is generally accepted to be true, in the scientific research literature.

1982 - The Shirley Decision (California Supreme Court) A woman who was raped was hypnotized before the trial. The accused, a man named Shirley, admitted having sex but said it was not forced. The Supreme Court used the Frye Rule to exclude any testimony from either side from anyone who had been hypnotized. (This rule applied to any hypnosis, including hypnotherapy.) Later the Court revised it to say that the defendant could be hypnotized (but not the plaintiff) because nothing should impede their defense.

1982 - Proposition 8 passed (Victim's Rights bill) and allowed hypnotically refreshed testimony to be used.

1986 - Three Justices, including Justice Rose Bird, were removed from the California Supreme Court (by election) and the legislature wrote Section 795 (which represented a middle ground). Hypnotically refreshed memory is allowed if the court testimony is limited to pre-hypnotic recall.

Weissberg, Michael (1993). Multiple personality disorder and iatrogenesis: The cautionary tale of Anna O.. *International Journal of Clinical and Experimental Hypnosis*, 41, 15-34.

An examination of Breuer's treatment of Anna O. Illustrates some of the controversies surrounding the recent rise of case reports of multiple personality disorder. Anna O., the first patient of the cathartic method, psychoanalysis, and dynamic psychiatry, fits current criteria for multiple personality disorder. Breuer's treatment, however, may have contributed to her states of absence; the timing, type, and intensity of Breuer's interventions make it possible that he unwittingly encouraged and amplified Anna's dissociations, reified her ego fragments, and then explained Anna's symptoms with the pseudomemories and confabulations recovered from Anna while she was hypnotized. A review of Breuer's treatment highlights some of the controversial aspects of multiple personality disorder, specifically its possible vulnerability to iatrogenesis via suggestion and unconscious collusion and other factors. The current stance of some multiple personality disorder enthusiasts, opaque to their participation in interactions that may lead to certain patient productions, resembles the older psychoanalytic stance exemplified by the early Breuer and Freud. The dialectic of the therapist as a neutral observer versus as an influential participant continues to be a focus of controversy, both within psychoanalysis and psychotherapy and in the understandings of the etiology and treatment of multiple personality disorder.

1992

Crawford, Helen J.; Kitner-Triolo, Melissa; Clarke, Steven W.; Olesko, Brian (1992). Transient positive and negative experiences accompanying stage hypnosis. Journal of Abnormal Psychology, 101 (4), 663-667.

Frequency of positive and negative experiences accompanying stage hypnosis was assessed in follow-up interviews with 22 participants of university-sponsored performances. Most subjects described their experience positively (relaxing, interesting, exciting, satisfying, illuminating, and pleasurable), but some described it negatively (confusing, silly, annoying, and frightening). Five subjects (22.7%) reported partial or complete amnesia; all were highly responsive to the stage hypnosis suggestions. One subject was completely unable to breach amnesia and felt annoyed and frightened. Five subjects (22.7%) believed the hypnotist had control over their behavior. Participants (n=15) tested subsequently on the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962) were mostly moderately to highly hypnotizable ( $M = 7.07$ ), and the scores correlated significantly ( $r = .68$ ) with the percentage of passed stage hypnosis suggestions.

#### NOTES

Echterling and Emmerling (1987, American Journal of Clinical Hypnosis) conducted a follow-up of 18 people who participated in stage hypnosis at a university, within a month after the experience. Referring back to the hypnosis itself, 39% reported positive experiences, 39% reported both positive and negative experiences, and 22% (four people) reported 'strongly negative' experiences. The present study contacted subjects immediately after the stage hypnosis experience, either in person or by telephone. They completed both objective questions and open-ended questions referring to three time periods: after the hypnotic induction, during

the hypnotic suggestions, and after the stage hypnosis had been terminated. Subjects were invited to come to the laboratory to be tested for hypnotizability, and 15 of the 22 did return for testing.

Of the 22 Ss, 4 had previously participated in stage hypnosis, one in laboratory hypnosis, and one had been hypnotized by her father. Of the 15 tested with the Stanford Hypnotic Susceptibility Scale, Form C: 7 were high hypnotizables (scoring 9-12), 7 were medium hypnotizables (scoring 4-8), and one was a low hypnotizable (scoring 0-3). Several people reported that they 'went along with' the hypnotist's suggestions, role playing rather than actually experiencing the suggestions.

"Most of the subjects found the experience positive: 86.4%, relaxing; 86.4%, interesting; 77.3%, exciting; 59.0%, satisfying; 54.6% illuminating; and 54.6%, pleasurable. Negative experiences were also reported: 36.4%, confusing; 36.4%, silly; 9.1%, annoying; and 9.1%, frightening. Only 1 subject reported the stage hypnosis experience as entirely negative.

"The stage hypnotists told the participants about the suggestions at the end of the stage hypnosis performance and supposedly lifted amnesia. Despite this, some participants continued to experience partial or full amnesia for the suggestions. ...

"One participant reported complete amnesia even after the interview and was distraught, permitting only a telephone interview and not accepting an offer to be hypnotized at a later time to help recall what had been forgotten. ...

"... The interviewer told her what had been observed and attempted to breach the amnesia. The subject continued to report complete amnesia.

"Two other participants continued not to remember many of the suggestions but showed no major concern. Waking suggestions to breach amnesia were given, but no further information was obtained.

"Five participants reported feeling that the hypnotist had complete control over their behavior and that they could not resist the hypnotist's suggestions" (p. 664).

In their Discussion, the authors note that in general, when negative experiences occur, they tend to be mild and transient. None of the subjects in this investigation reported some of the negative sequelae reported in earlier literature (headaches, nausea, drowsiness). The few subjects who had strong cognitive distortions following hypnosis were highly hypnotizable, which also was observed in an earlier study published by the first author and her colleagues (Crawford, Hilgard, & Macdonald, 1982, *International Journal of Clinical and Experimental Hypnosis*).

Spontaneous post hypnotic amnesia is one example of cognitive distortion. The authors remarked on the rather high incidence of spontaneous amnesia for some specific suggestions (22.7%), which was discovered when friends of the subjects described to them what they had done on stage. In an experimental study by Hilgard and Cooper (1965), only 7% of student subjects had spontaneous amnesia (though 35% had amnesia following suggestions for posthypnotic amnesia). Furthermore, in the Hilgard and Cooper study, hypnotizability correlated with suggested amnesia but not with spontaneous amnesia. Cooper (1972) reviewed the literature on posthypnotic amnesia and observed that spontaneous occurrence is less frequent than suggested amnesia.

Explanations of spontaneous amnesia include ideas that high hypnotizables who experience it are significantly different from those who do not (Chertok, 1981;

Weitzenhoffer, 1989); or that it is due to expectancy (Kirsch, 1985); or that it is found in people with a tendency for dissociation in and out of hypnosis, or people who may be prone to repression or dissociative and post-traumatic stress disorders. For reviews of these issues, see Kihlstrom, 1987; Kihlstrom & Hoyt, 1990; Frankel, 1990; Nemiah, 1985; Spiegel, 1990; Spiegel & Cardena, 1991).

The authors note that stage hypnotists, while they may otherwise be ethical, do not provide information to subjects to correct misperceptions about hypnosis. For example, in this study 22.7% of the subjects believed, after the stage hypnosis experience, that the hypnotist had control over their behavior and they couldn't resist the suggestions. "Appropriate guidelines for stage hypnosis (see also Crawford et al., 1982) include screening out participants who are in therapy or counseling, correcting misperceptions about hypnosis among the participants before the hypnosis begins, screening subjects prior to hypnosis, avoiding embarrassing or upsetting suggestions, providing dehypnosis instructions to those who do not remain in hypnosis (or are asked to leave the performance), terminating fully the hypnotic experience, removing all amnesia suggestions and reviewing the events at the end of hypnotic experience, and remaining available afterward for further questions" (p. 666).

1992

Deutch, James A. (1992, October). Ethics in clinical social work. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

[Introductory comments by the Moderator Dr. Sam Migdall from Beverly, Mass.: Insurance may not cover you if you are practicing outside the scope of your practice. How do internists bill for treating a phobia with hypnosis?

In training sessions we hear about single session cures, but usually we need to work much longer (and using the same methods we would use not using hypnosis).

How do we initiate and decide on hypnotic treatment? Is there a solid diagnosis, treatment plan? Or do we accept the patient's opinion of what is going on?]

Deutch's paper presented the following information:

Article 7 of socialwork ethics says people who use hypnosis must abide by our ethics plus those of SCEH (and ASCH if they belong). In my opinion, though different, the ethics all have the goal of providing to the consumer the best service they can render.

All are focusing on practicing within one's level of competency. [Details of talk not recorded.]

Hoencamp, E. (1992). Comment on the Nelson case. [Comment/Discussion] .

#### NOTES

Comments on paper by H. B. Gibson, 'A recent British case of a man charged with using hypnosis for rape and other sexual offences.' Comentator refers to his earlier article, Hoencamp, E. (1990). Sexual abuse and the abuse of hypnosis in the

therapeutic relationship. *International Journal of Clinical and Experimental Hypnosis*, 28, 283-297.

**Kluft, R. P. (1992). Hypnosis with multiple personality disorder. American Journal of Preventative Psychiatry & Neurology, 3, 19-27.**

Recommends hypnotically facilitated psychotherapy as the treatment of choice for MPD and to accelerate case-finding. Twenty-one categories of hypnotic interventions with MPD patients are summarized.

**Lynn, Steven Jay; Rhue, Judith W. (1992, October). Memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

#### **NOTES**

[Author presented a dramatic case report of patient who recalled specific events that subsequently he and the patient investigated and disproved. What the patient thought they saw could not possibly have been seen.]

The experimental literature on memory gives us some things to think about. Therapy relies highly on memory, and the therapist shapes the contours of the memory by validating the memories, which are rarely doubted. Tacit acceptance of memories as historical facts is part of the contract of therapy.

Memory studies challenge the idea of accurate storage. Some people are unduly confident of their memory. Bartlett's research demonstrated distortion according to schema, interpretations, embellishments, etc. Jacobi et al indicate people's theories about what happened shape memory.

One theory is that trauma leads to amnesia, repression, dissociation. But research does not show inability to recall early life events indicates presence of a traumatic history. Repression is not prima facie evidence of abuse. The *Courage to Heal* book states that merely thinking you were abused is evidence that you probably were.

How do vague ideas crystallize? Loftus finds if inability to remember isn't attributed to ordinary forgetting, the person may look for memories, thereby creating them.

Studies of persons who confess to crimes, unsure whether they did or didn't do them, indicate that these people are easily coerced. Doubt in a memory's accuracy can be reframed by a therapist.

Hypothesis: Therapists who confidently state a view risk implanting pseudomemories. Therapists must be cautious.

Clients can confuse sources of information that they receive. Different sources of information can be integrated into a single memory (e.g. what occurred to them and what occurred to siblings can be integrated into a pseudomemory). Some limited evidence that early life experience memories could be implanted has been presented by Loftus.

Certain client characteristics contribute to false memories: 1. Present mood state (mood congruent memory). This effect is reliable when people are clinically depressed. Though clinicians may say it indicates early childhood abuse, the

memory might be selective or biased. 2. History of fantasy-proneness. In childhood this type of person might have had problems distinguishing fantasy from reality. LaBelle et al found absorption made it difficult to distinguish sounds in hypnosis from what really occurred, creating pseudo- memories. With this population it is essential to avoid suggesting abuse.

Lynn was successful in implanting an idea of abuse in an alter called Person. He used the Orne technique (from the BBC film "Hypnosis on Trial") to ask a patient what she had told him about her dog during the hypnosis; he did this to convince her of the importance of exploring her amnesic episodes.

Does hypnosis foster a literal re-experiencing of childhood events? NO. Nash, in an exhaustive review, failed to find correspondence between information from hypnotic age regression and childhood events. He notes that literal reliving is not possible. It is possibly an expression of primary process thinking. Hypnosis doesn't ameliorate memory problems; and it may exacerbate memory problems.

Lynn views primary process thinking observed in hypnosis as due to the demand of hypnosis to fantasize and relinquish critical thinking or objectivity. This plus Therapist and Patient expectancies may foster tenacious beliefs that events occurred.

Many hypnotic suggestions may interfere with memory. The AMA 1985 report suggests that hypnosis can influence confidence in a 'memory' with no actual improvement in accuracy.

The effects aren't limited to hypnosis however. Simulators and controls also generate pseudomemories. Repeated questioning of Ss who are led to believe that questioning helps distinguish memories from fantasies, actually diminishes the accuracy of memories.

Hypnotizability is correlated with pseudomemory occurrence. We should evaluate a client's hypnotizability when evaluating for pseudomemories.

Perceived verifiability rate is important, as pseudomemories are higher where you can't verify the reported memory, it is thought. Therefore, approach with caution. Make every effort to corroborate memories.

Subjective reports may tell narrative truths even though inconsistent with the historical record, and could be useful independent of historical accuracy. I agree that those 'memories' could be important, just as age progression or past life regression material could be useful in therapy. But should we base our interpretations or conclusions on events that are not confirmed? A patient's belief in abuse by their parent has enormous implications for a family.

Therapists should understand the dynamics of a request for using hypnosis to recall forgotten memories before using uncovering techniques. Ask yourself, "Why is this being requested?" Also ask other questions: 1. Is the person fantasy prone, dissociative, suggestible, a high hypnotizable? 2. Is the person stabilized enough to focus on an abreaction? 3. Is there conscious or unconscious motivation to avoid responsibility for one's own behavior? 4. Is there a wish to arrive at a facile solution, a magic cure, the royal road to the unconscious; or is there an attempt to control the treatment hour, to avoid issues, to test the therapist? 5. Is therapy stalled, not moving forward? 6. Am I angry with the client because they expect to uncover more?

Instead of using hypnosis to retrieve memories, I may focus on the issues to which I answer 'Yes' in the forgoing list.

I do not believe current research is sufficiently persuasive to throw out hypnosis for retrieving memories. The dangers of pseudomemory are endemic to therapy. Incorporating hypnosis into a broader frame of therapy depends on the skill of the clinician. However, we must use hypnosis with great caution

#### COMMENTS FROM AUDIENCE

Joseph Dane: In 75% of cases that could be verified, they found corroborating evidence: what should you look for as an index that the memory recalled in hypnosis is more likely to be accurate?

Lynn: Many instances of abuse are corroborated. No one questions the veracity of all memories. To my knowledge there are no ways of corroborating genuine from false memories. We know subjective conviction is not sufficient, and clients' affective experience can be very misleading. Since my experience [in the case study reported at the beginning of this presentation] I have talked with many therapists who have had similar experiences.

David Spiegel - the problem is not the hypnosis: patients go in and out of hypnosis all the time, momentarily. The problem is, how do I explore the material in psychotherapy? There is no substitute for corroboration if you can get it. But you have to be sensitive to the vulnerability of those people.

Howard Hall: What is a genuine memory? No memory is undistorted. More importantly, can we verify significant events that might have had long term consequences, like abuse? We should try to verify memories when we base treatment programs on them. The only memories in the literature that have a reputation of being accurate are highly traumatic events that stand out, and these reports are anecdotal in nature.

Strauss, Billie S. (1992, October). What's in a name: Use and presentation of hypnotherapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Psychologists have standards of ethical and professional conduct for clinical and research endeavors. Several guidelines which have particular relevance for the use of hypnosis are (1) issue of informed consent, (2) issues of training, and (3) consultation with another professional.

New Guidelines have been published by APA. 1. Informed consent is required. This raises the issue of whether we [invariably] should use the term hypnosis. What if we use hypnotic techniques in a non-hypnotic context? Or conversely, if a patient doesn't go into a hypnotic state, are we bound to tell them so? Bauman (1988) thought, with respect to psychotherapy, that we don't need to explain about "interpretation" or "behavior modification." (I tend to tell patients about these, however, as much as the patient can understand.) Euphemisms for hypnosis (guided imagery, relaxation) are also used. If a patients say they don't want to use hypnosis, it should not be used, even under the guise of guided imagery.

Does informing patients of potential hazards result in a self-fulfilling prophesy?

One needs to pay attention to the implications when the hypnotist also may be interacting with students and colleagues in a non hypnotic setting, e.g. setting up double binds when asking them to do something. Think carefully about role implications, especially if you have perceived status. 2. A second issue has to do with training. APA adopted a resolution that hypnosis should not be taught to lay people. New guidelines require that hypnosis and projective techniques only be taught to people with adequate training. 3. A third issue is consultation (e.g. when hypnosis is used by one professional, and the patient is being treated by someone else in psychotherapy). The patient should give permission for the two to communicate. This raises issues of countertransference, especially of omnipotence and control and of splitting.

Patterson, David R. (1991, August). Why hypnosis is not taken more seriously as a form of pain control. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

Despite the backing of laboratory studies and numerous clinical case reports, hypnotically based pain control is infrequently used in pain programs and lacks respect in the scientific community. It is argued that this is a situation that could be remedied by 1) delineating more often whether hypnosis is to be used as facilitator for other techniques or as an analgesic in itself, 2) improving the quality of clinical research, 3) resolving the issue of the significance of hypnotizability in pain control, and, 4) integrating hypnotic interventions with a better understanding of the nature of pain.

1990

Page, Roger A.; Handley, George W. (1990). Psychogenic and physiological sequelae to hypnosis: Two case reports. American Journal of Clinical Hypnosis, 32 (4), 250-256.

Two cases of hypnotic sequelae occurring in a research context (with a non-clinical college population) are reported. Case 1 was a male who experienced retroactive amnesia following hypnosis: He was unable to recall familiar telephone numbers later that day. This was not a continuation of an earlier confusion or drowsiness (as is often found) since he indicated he was wide awake following hypnosis. Two parallels exist with previous reports: unpleasant childhood experiences with chemical anesthesia and a conflict involving a wish to experience hypnosis but a reluctance to relinquish control. Case 2 was a female who, while in hypnosis, experienced an apparent epileptic seizure that had characteristics of both petit mal and grand mal seizures. Although having a history of epilepsy, she had not had a seizure in 7 years. We suspect that the seizure was psychogenic and may have been triggered by wording used in the hypnotic scale or other similarities. Possible mechanisms are discussed and preventative recommendations are made.

1989

**Gibson, H. B. (1989). The Home Office attitude to forensic hypnosis: A victory for scientific evidence or for medical conservatism?. [Comment/Discussion] .**

**NOTES**

The author is in agreement with the Home Office Circular (August 1988) that advises against the use of hypnosis in police investigations. However he disagrees with the Circular statement that "'There may be danger that, in some cases, the experience of hypnosis may cause longer term harm to the mental health of the subject...' This is certainly not true if the proceedings are carried out by a competent health professional" (p. 26).

**Pinizzotto, Anthony J. (1989). Memory and hypnosis: Implications for the use of forensic hypnosis. Professional Psychology: Research and Practice, 20 (5), 322-328.**

**NOTES**

The author reviews arguments regarding hypnosis in forensic investigations, offers procedures of a nonhypnotic nature to enhance memory recall, and suggests guidelines for hypnosis in criminal cases. The effects of hypnosis on memory, as well as the concomitant dangers regarding those effects, are discussed.

**Torem, Moshe S. (1989). Iatrogenic factors in the perpetuation of splitting and multiplicity. Dissociation, 2, 92-98.**

Many dissociative patients tend to have rapidly dissociative switching from one ego-state to another. These trance-like states make the patients highly suggestible to outside influences which include the therapists' verbal and nonverbal communication. Some therapists may have an over-investment in more personalities, and thus ignore the needs of the whole person. Treating an adult patient who is in an age regressed ego-state, or alter personality, presents a particular challenge as to the patient's boundaries since violating these boundaries may perpetuate splitting and multiplicity. Therapeutic limit setting, the issue of trust, and countertransference issues are discussed.

**1988**

**Coons, P. M. (1988). Misuse of forensic hypnosis: A hypnotically elicited false confession with the apparent creation of a multiple personality. International Journal of Clinical and Experimental Hypnosis, 36 (1), 1-11.**

A case is presented in which there was flagrant misuse of forensic hypnosis. The patient, a woman in her early 30s, was accused of shooting her 2 children. During a hypnotic interview, the police hypnotist used an extremely suggestive interrogative technique, and the suspect produced an apparent secondary personality who confessed to the shootings. Subsequently the prosecutor tried to enter the "hypnotic confession" as evidence against the defendant. The evidence was dis-allowed because of the manner in which it was obtained and because of the lack of verification from other sources. The literature regarding the use of forensic

hypnosis is reviewed as is the literature regarding multiple personality and the experimental production of multiple personality-like phenomena.

Greaves, G. B. (1988). Common errors in the treatment of multiple personality disorder. Dissociation, **1**, 61-66.

Psychotherapists report widely different experiences in their attempts at treating multiple personality disorder (MPD) patients. Some have deepened their interests and developed full-time specialized practices with this clinical population. Others have declined to have any further contact with them at all, referring possible MPD patients to colleagues when they first suspect that this disorder may be present. Still others have decided against treating more than one or two MPD patients. These diverse decisions are examined with a focus upon the effects of therapists' uneven attention to the formal properties of the dyadic psychotherapeutic experiences as a possible influence upon their future work with MPD. Problems concerning the framework of psychotherapy and the countertransference conflicts which often move the therapist unconsciously and irrationally to alter the canons of psychotherapy in mutually detrimental ways appear to be crucial determinants.

#### NOTES

Discusses countertransference conflicts that often move the therapist unconsciously and irrationally to alter the canons of psychotherapy in mutually detrimental ways.

MacHovec, Frank J. (1988). Hypnosis complications, risk factors, and prevention. American Journal of Clinical Hypnosis, **31**, 40-49.

There is a substantial body of clinical and experimental research data documenting the incidence of mild to severe after effects coincident with the use of hypnosis in persons with no prior history of similar medical or mental problems. This article provides an overview of relevant clinical and experimental research and a review of pertinent literature since 1887. Subject, hypnotist, and environmental risk factors are listed, a definition and classification system for hypnosis complications is suggested, and recommended preventive practices are described.

Venn, J. (1988). Misuse of hypnosis in sexual contexts: Two case reports. International Journal of Clinical and Experimental Hypnosis, **36** (1), 12-18.

A military officer was accused by 2 young men of having used hypnosis to attempt homosexual relations. The officer denied the charges and claimed that the young men had imagined these events while they were in altered states of consciousness. The officer did admit to questionable practices such as consuming alcoholic beverages with the 2 young men and then using relaxation techniques with them in bedrooms. Subject motivation and nonhypnotic coercive tactics such as abuse of authority and alcohol seem important in understanding alleged cases of hypnotic coercion.

1987

**Olness, Karen N.; Libbey, Patricia (1987). Unrecognized biologic bases of behavioral symptoms in patients referred for hypnotherapy. American Journal of Clinical Hypnosis, 30, 1-8.**

Twenty patients referred for hypnotherapy had organic conditions which explained their symptoms. Each had been evaluated previously by physicians. Eleven had also been in psychotherapy; two of these had been hospitalized on child psychiatry inpatient units. Presenting symptoms included five with nocturnal enuresis, four each with headaches and recurrent abdominal pain, three with recurrent headaches, two with anxiety, and one each with sleep problems and tics. Diagnoses included hyperthyroidism, diabetes, diastometyelia, partial oxalotranscarbamyase deficiency, sinusitis, carbon monoxide poisoning, vitamin overdose, food allergy, amebiasis, constipation, urinary tract infection, paroxysmal atrial tachycardia, and seizures. Each child had complete remission of symptoms with treatment of his/her underlying disease. Morbidity related to delayed diagnoses included parental anxiety and guilt, child anxiety, growth delays, family financial difficulties, loss of parental work time, loss of school days, and loss of confidence in child health professionals by families.

**Patterson, David R.; Questad, Kent A.; Boltwood, Michael D. (1987). Hypnotherapy as a treatment for pain in patients with burns: Research and clinical considerations. Journal of Burn Care and Rehabilitation, 8 (3), 263-268.**

Hypnotherapy has increasingly been included in the management of burn patients, particularly in the area of acute pain. To better understand such issues as (1) overall efficacy of hypnotherapy to alleviate acute burn pain, (2) instances in which hypnotherapy is contraindicated, (3) interaction of hypnotherapy with medication, (4) standard induction techniques to use with various age groups, (5) role of nursing and other staff in facilitating hypnotic effects, and (6) future methodological directions, they examined the clinical and methodological merits of recent studies of hypnoanalgesia. A literature search found 17 studies in which hypnotherapy was applied to the management of burns. The literature generally supports the efficacy of this approach to reduce burn pain; however, little else can be concluded from these studies. Several recent studies have applied hypnotherapy to aspects of burn care other than pain using excellent experimental designs. It is suggested that future studies of acute pain management follow suit.

**American Medical Association Council on Scientific Affairs (1986). Scientific status of refreshing recollection by the use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 34, 1-12.**

The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when

testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection.

#### NOTES

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APA Council of Representatives (1986, December). Resolution on hypnosis. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 1.

#### NOTES

The Council of Representatives adopted a motion that opposes the teaching of hypnosis to persons who are not fully trained in a health delivery profession. The motion presented by Dr. Gene Levitt, Division 30 representative to Council of Representatives, was passed by voice vote on August 24, 1986. It read as follows:

"Be it resolved that the American Psychological Association, in the interest of the public, opposes applications of hypnosis by persons who are not fully trained members or advanced students of a health delivery profession and who lack specific, in-depth training in hypnosis. Therefore, be it also resolved that APA opposes the teaching of hypnotic induction techniques or applications of hypnosis that involve treatment or assessment with patients or clients to persons who are not fully trained members or advanced students of a health delivery profession. Be it resolved further that upon passage of this resolution, its text shall be conveyed to the APA Ethics Committee to consider its incorporation in the APA Code of Ethics. We note that the resolution is consistent with the preamble of Principle 1 of the code as well as the Standards for Providers of Psychological Services (Principles and Implications of Standards, 3)"

Dr. Levitt proposed that the motion be named the "Erik L. Wright Memorial Resolution" in honor of the Division 30 Council representative who introduced the first version of it in 1980.

Judd, Fiona K.; Burrows, Graham D.; Dennerstein, Lorraine (1986). Clinicians' perceptions of the adverse effects of hypnosis: A preliminary study. Australian Journal of Clinical and Experimental Hypnosis, 14, 49-60.

Questionnaires were sent to all members of the Australian Society of Hypnosis and responses obtained from 202 members and associate members who used hypnosis clinically. Respondents' experience in the use of hypnosis and the frequency of use of hypnosis as a treatment modality varied. Overall 43.5% of respondents reported adverse effects with one or more patients over the preceding year. Most adverse effects attributed to hypnosis were transient and included development of panic or

extreme anxiety, development of excessive dependence and difficulty in terminating hypnosis. Exacerbation or precipitation of significant depression was an infrequent but serious adverse effect attributed to hypnosis. Other infrequent adverse effects included symptom substitution, acting out behaviour, fantasied sexual seduction, precipitation or worsening of psychotic illness or difficulties in the management of organic conditions. The difficulties were acknowledged of differentiating between the effects of hypnosis itself and other components of the therapeutic transaction, but the results of this survey suggested both that hypnosis be employed clinically by properly trained professionals and that further sensitive clinical research is needed in the area.

**1985**

Fellows, Brian J. (1985). Hypnosis teaching and research in British psychology departments: Current practice attitudes and concerns. British Journal of Experimental and Clinical Hypnosis, 2 (3), 151-156.

#### NOTES

The author mailed a questionnaire to 58 departments of psychology to determine the extent/nature of hypnosis teaching and research, and attitudes toward teaching and research on hypnosis. The author noted a general anxiety about teaching students how to do hypnosis (as contrasted with learning about hypnosis). "Some of the anxieties which departments have about the teaching of hypnosis seem to stem from some rather ancient and invalid conceptions about the nature of hypnosis and what it can do" (p. 153). The author also relates his personal experience teaching undergraduates "something about the procedures and phenomena which have been traditionally associated with hypnosis" (p. 153). They may use one of the standard hypnotizability scales, study a particular hypnotic phenomenon such as ideomotor action or age regression, or study an empirical issue such as facilitation of recall. He reports not meeting with "any particular difficulties," but also that he has seen two problems: the student who is anxious about doing the procedure, and an occasional subject who reports the experience was unpleasant or disturbing--e.g. during age regression. He reports teaching students to handle these events in a normalizing manner. J. Holroyd

Orne, Martin T. (1985). The use and misuse of hypnosis in court. In Rosner, Richard (Ed.), Critical issues in American psychiatry and the law (2, ). New York: Plenum Press. (Reprinted from Crime and Justice: An Annual Review of Research, vol. 3, edited by Michael Tonry and Norval Morris, 1981, The University of Chicago Press.)

#### NOTE

An earlier version of this essay appeared in the Monograph Issue of the International Journal of Clinical and Experimental Hypnosis on the forensic uses of hypnosis, 27 (4) (1979): 311-41.

**1984**

Allison, R. B. (1984). Difficulties diagnosing the multiple personality syndrome in a death penalty case. International Journal of Clinical and Experimental Hypnosis, 32 (2), 102-117.

The problems involved in diagnosing the multiple personality syndrome in a rape-murder suspect are illustrated by the case of Kenneth Bianchi and the Hillside Stranglings. Hypnotic investigations of his amnesia revealed "Steve," who admitted guilt for the rape-murders. "Billy" later emerged, claiming responsibility for thefts and forgeries. Attempts to evaluate Kenneth Bianchi with methods used in therapy yielded an original opinion that he was a multiple personality and legally insane. Later events showed the diagnosis to be in error. A new diagnosis was made of atypical dissociative disorder due to the effects of the examining methods themselves. Warning is given that it may be impossible to determine the correct diagnosis of a dissociating defendant in a death penalty case.

Braun, Bennett G. (1984). Hypnosis creates multiple personality: Myth or reality?. International Journal of Clinical and Experimental Hypnosis, 32 (2), 191-197.

Since before the turn of the century, multiple personality has been associated with hysteria and hypnosis. The myth that hypnosis can create multiple personality is examined in this paper by reviewing studies that have suggested or implied a casual link between hypnosis and multiple personality. While it is possible that personality fragments can appear under hypnosis, there is no evidence that personalities with separate life histories and a full range of affect can be created with hypnosis. The author concludes that hypnosis is a valuable tool in diagnosing and treating multiple personalities.

Kleinhaus, Moris; Beran, Barbara (1984). Misuse of hypnosis: A factor in psychopathology. American Journal of Clinical Hypnosis, 26, 283-290.

Six cases of posthypnotic trauma are presented to illustrate possible psychopathologic symptoms that may be exhibited in Ss following the misuse of hypnosis, particularly for a stage performance. Medical professionals must be made aware of the possibility of immediate as well as long-term deleterious effects that may follow misuse of hypnosis so that those cases which come to the attention of the physician will be properly diagnosed and treated.

Orne, Martin T.; Soskis, David A.; Dinges, David F.; Orne, Emily Carota (1984). Hypnotically induced testimony. In Wells, G. L.; Loftus, E. F. (Ed.), Eyewitness testimony: Psychological perspectives (pp. 171-213). New York: Cambridge University Press.

## NOTES

This is a modified version of a policy brief prepared for the National Institute of Justice. The Conclusions read:

**"The use of guidelines is designed to permit the subsequent evaluation of a hypnosis session by independent experts, in order to determine whether undue suggestiveness was present. Nonetheless, even when hypnosis has been used appropriately in a forensic situation and when the session has been monitored and conducted in a manner that is likely to minimize undetected biasing, inadvertent distortions of memory may still occur. Although the recommended guidelines for conducting the hypnosis session help determine what was done during the session, they do not prevent (nor is there any reliable way to prevent) subjects from confounding distorted hypnotic memories with prior and subsequent nonhypnotic recall or from placing undue confidence in these distorted recollections. Thus, the use of the results of hypnosis applied in forensic situations, as well as the use of the procedure itself, demands extreme caution.**

**"'Hypnotically refreshed' memories cannot be used to 'verify' facts for which no adequate evidence exists, especially when subsequent investigation has failed to produce any substantial independent corroboration and the individual did not recall the fact or was not confident of it prior to hypnosis. As long as the detail recalled is verified by independent physical evidence, the utility of hypnosis can be considerable and the risk attached to the procedure - if properly conducted - minimal. There is no way, however, by which anyone (including an expert with extensive experience in hypnosis) can for any particular piece of information obtained in hypnosis determine whether it is an actual memory or a confabulation. For these reasons, hypnotically induced testimony is not reliable and ought not be permitted to form the basis of testimony in court" (pp. 210-211).**

**Gruenewald, Doris (1982). Problems of relevance in the application of laboratory data to clinical situations. International Journal of Clinical and Experimental Hypnosis, 30 (4), 345-353.**

**Advantages and disadvantages of measuring hypnotic susceptibility in clinical settings are presented. The argument for standardized methods of measurement in the interest of scientific advancement is balanced against clinical considerations and counterindications. The question of identity of hypnotic processes in the laboratory and in the clinical situation is addressed.**

**1982**

**Sacerdote, Paul (1982). A non-statistical dissertation about hypnotizability scales and clinical goals: Comparison with individualized induction and deepening procedures. International Journal of Clinical and Experimental Hypnosis, 30 (4), 354-376.**

**Researchers and theoreticians in the field of hypnosis have insisted for some time that reports of clinical applications of hypnosis should include the patients' classification based on their responses to standardized hypnotizability scales. Accordingly, clinical scales (Barber & Wilson, 1978/79; Cooper & London, 1979; J.R. Hilgard & E.R. Hilgard, 1979; Morgan & J.R. Hilgard, 1979; Wilson & Barber, 1978) have been developed or adapted from pre-existing standardized scales. For**

the same purpose, the Hypnotic Induction Profile (HIP) of Spiegel (1978), which claims reliability in classifying patients according to hypnotizability and psychopathology, has been developed and utilized.

Additionally, tailored scales which include specific qualitative items have been proposed (E.R. Hilgard, Crawford, P. Bowers, & Kihlstrom, 1979). According to a few clinical investigators (Frankel, Apfel, Kelly, Benson, Quinn, Newmark, & Malmaud, 1979) no disadvantage does ensue from routinely subjecting patients to hypnotizability scales. The positive results are: accumulation of reliable information about the validity of hypnotic intervention in various clinical conditions; differentiation between results of hypnosis and results of psychotherapy; and also a determination of whether hypnotizability is a fixed talent or whether it can be improved with training. With the individual patient the use of hypnotizability scales would rapidly indicate if his score will be high enough for certain specific applications and in general to determine whether therapy with hypnosis should even be attempted. The present author recognizes the rationale for the use of scales in the therapeutic realm, especially if the results are to be reported. The present author notes, however, that the generally accepted hypnotizability scales give disproportionate weight to some categories of hypnotic responses, but they are not comprehensive enough to tap all the possible capabilities of individual patients. Standardized scales of hypnotizability rely almost entirely upon written or spoken instructions and therefore miss the opportunities of nonverbal communication. Also, most hypnotizability scales implicitly seem only to recognize hypnosis obtained by progressive relaxation as "the typical hypnosis." Some examples are presented to clarify how the use of standardized scales or of HIP (Spiegel, 1978) would wrongly classify a considerable minority of patients as nonhypnotizable or poorly hypnotizable, thus depriving them of potential therapeutic benefits.

1981

Gruenewald, Doris (1981). Failures in hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 29 (4), 345-350.

Failures in hypnotherapy are discussed in the context of considerations applying to treatment in general. Emphasis is given to the principle that hypnotherapy must be structured according to patients' personality and needs. When treatment fails, therapists should examine carefully what may have led to an unsatisfactory outcome.

Kleinhaus, Moris; Beran, B. (1981). Misuses of hypnosis: A medical emergency and its treatment. International Journal of Clinical and Experimental Hypnosis, 29 (2), 148-161.

Hypnosis is an intense interpersonal relationship requiring 2-way respect and involvement. Inadequate understanding of this dynamic relationship, and a consequent inability to cope with its potential dangers, may result in posthypnotic trauma. Unless treated carefully by a hypnotherapist who is experienced in both the techniques of dehypnotization and the utilization of psychotherapy, such traumas

may persist for a very long time. In this paper, one striking case illustrates mishandling of the hypnotic event and immediate posthypnotic treatment and details the procedure by which successful treatment was eventually determined.

Zelig, Mark; Beidleman, William B. (1981). The investigative use of hypnosis: A word of caution. International Journal of Clinical and Experimental Hypnosis, 29 (4), 401-412.

The purpose of the present experiment was to determine the efficacy of hypnosis for enhancing the recall of Ss exposed to a stress provoking motion picture. This stimulus, which vividly displayed several workshop accidents, was selected to provide an analog to witnessing an actual crime. After viewing the film, Ss were questioned in either hypnosis or in a waking state and responded to a questionnaire which contained leading and nonleading questions. Dependent measures included the number correct, number of errors, and the average confidence rating given to their responses. Analyses of these data revealed that waking Ss were significantly more accurate on leading questions. No significant differences were observed when Ss' responses to nonleading questions were examined. Post hoc correlational analyses across both hypnotic and waking conditions revealed that hypnotic susceptibility and confidence ratings were positively correlated while susceptibility and the number of correct responses were not significantly correlated. These findings are compared with previous research and the resulting implications for hypnotically conducted interrogations are discussed.

1980

Fromm, Erika (1980). Values in hypnotherapy. Psychotherapy: Theory, Research and Practice, 17 (4), 425-430.

Hypnosis is an altered state of consciousness characterized by a regression in the service of the ego along with increased access to the unconscious. This makes it possible to achieve lasting therapeutic results faster in hypnosis than in the waking state. Hypnosis is also a state of decreased vigilance, a vulnerability that involves dangers if a patient is in the hands of a poorly trained, incompetent, or unscrupulous therapist. In general, the same human and moral values that guide responsible therapists with patients in the ordinary waking state must guide them with patients in hypnosis, only more so. Contemporary permissive hypnotherapists do not superimpose their own wills or personalities onto patients but provide support, help patients face the frightening parts of the unconscious, and thus aid them in coping with conflicts and gaining full autonomy and freedom from fear. (11 ref).

Reiser, Martin; Nielson, Michael (1980). Investigative hypnosis: A developing specialty. American Journal of Clinical Hypnosis, 23, 75-84.

## NOTES

Author describes his involvement with the Los Angeles Police Department, using

hypnosis for "enhancing the recall of key witnesses whose memories of the crime were poor" (p. 75). In 1975, the author and other experts in hypnosis trained 11 lieutenants and 2 captains to use hypnosis. The author describes the training program and a one-year demonstration project, during which volunteer witnesses and victims were interviewed by the hypnotist investigators. "In 77% of cases, important information was elicited that had not been available by routine interrogation. Approximately 16% of cases were solved with the aid of hypnosis" (p. 76). "Follow-up with the involved witnesses and victims has not revealed any instance of ill effects stemming from the hypnosis program, while 39.8% of the hypnosis subjects reported some relief or benefit resulting from the hypnosis session" (p. 77). Jean Holroyd

1979

Ault, R. L. Jr. (1979). FBI guidelines for use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 27 (4), 449-451.

The Federal Bureau of Investigation uses hypnosis as a tool for investigative purposes in selected cases where further leads are needed and witnesses or victims are willing to participate in a hypnotic interview. All sessions are tape recorded, preferably by video. A hypnotic interview cannot necessarily provide accurate leads, and therefore careful investigative work is done to verify the accuracy of any information obtained in hypnosis. Psychiatrists, psychologists, or physicians specially trained in hypnotic techniques have been employed to add protection for the witnesses or victims being questioned under hypnosis.

Frankel, Fred H.; Apfel, R. J.; Kelly, S. F.; Benson, H.; Quinn, T.; Newmark, J.; Malmaud, R. (1979). The use of hypnotizability scales in the clinic: A review after six years. International Journal of Clinical and Experimental Hypnosis, 27 (2), 63-73.

This is a review of the use, after 6 years, of the Stanford Hypnotic Susceptibility Scale, Forms A and B (Weitzenhoffer & E. R. Hilgard, 1959); the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962); the Hypnotic Induction Profile (Spiegel & Bridger, 1970); and the Stanford Hypnotic Clinical Scale (Morgan & J. R. Hilgard, 1975) in the clinical situation. The great majority of over 300 patients found their experience with the scale to be a positive one, despite the authors' initial hesitancy about exposing them to the probability of failure on at least some of the items. The standardized scales were administered as specific tests, not as part of therapy.

The data on responsivity has not only contributed to clinical strategy in individual cases, but has also added to our understanding of hypnosis, of psychopathology, and of therapeutic outcome.

Hilgard, Ernest R.; Loftus, Elizabeth F. (1979). Effective interrogation of the eyewitness. International Journal of Clinical and Experimental Hypnosis, 27 (4), 342-357.

Eyewitness reports have been investigated in the psychological laboratory from time to time ever since 1900. Specimen studies from the early period and from the last decade indicate that free reports are consistently more accurate but less complete than reports obtained through specifically directed inquiry. The optimal combination is free report followed by the asking of specific questions. The wording of those questions, however, can have a substantial effect on the answers given. Furthermore, the wording of questions put to a witness can distort the witness's memory for the previously experienced event. These techniques and findings have implications for the study of other "retrieval" techniques such as hypnosis. Although laboratory-type control cannot be expected in practical settings, scientific validation of interrogation methods as practiced can be obtained if recording is complete and accurate, if processes of memory restoration or amplification are studied as they occur in the course of interrogation, and if outcome studies are fully reported, including both successes and failures to gain new information or to substantiate existing information.

Kleinhauz, Moris; Dreyfuss, Daniel A.; Beran, Barbara; Goldberg, Tova; Azikri, David (1979). Some after-effects of stage hypnosis: A case study of psychopathological manifestations. International Journal of Clinical and Experimental Hypnosis, 27, 219-226.

Some deleterious effects of stage hypnosis are described through a case report. A middle-aged respected member of a kibbutz who became the subject of an evening's entertainment by a stage hypnotist suffered a posttraumatic neurosis. The stage hypnotist, unaware of her traumatic childhood during World War II when she and her sister were hidden by Gentiles, requested her to regress to that age. This reactivated a former successfully repressed trauma and acted as a precipitating factor to the development of a traumatic neurosis which was left untreated. She was self-referred for adequate psychiatric treatment 11 years later. This treatment successfully restored her to an adequate level of functioning.

Orne, Martin T. (1979). The use and misuse of hypnosis in court. International Journal of Clinical and Experimental Hypnosis, 27, 311-341.

The various forensic contexts in which hypnosis has been used are reviewed, emphasizing its advantages and pitfalls. The technique may be helpful in the context of criminal investigation and under circumstances involving functional memory loss. Hypnosis has no utility to assure the truthfulness of statements since, particularly in a forensic context, subjects may simulate hypnosis and are able to willfully lie even in deep hypnosis; most troublesome, actual memories cannot be distinguished from confabulations either by the subject or by the hypnotist without full and independent corroboration. While potentially useful to refresh witnesses' and victims' memories to facilitate eyewitness identification, the procedure is relatively safe and appropriate only when neither the subject, nor the authorities, nor the hypnotist have any preconceptions about who the criminal might be. If such

preconceptions do exist -- either based on information acquired before the hypnotic procedure or on information subtly communicated during the hypnotic procedure -- hypnosis may readily cause the subject to confabulate the person who is suspected into his "hypnotically enhanced memories." These pseudomemories, originally developed in hypnosis, may come to be accepted by the subject as his actual recall of the original events; they are then remembered with great subjective certainty and reported with conviction. Such circumstances can create convincing, apparently objective "eyewitnesses" rather than facilitating actual recall. A number of minimal safeguards are proposed to reduce the likelihood of such an eventuality and other serious potential abuses of hypnosis.

Perry, Campbell (1979). Hypnotic coercion and compliance to it: A review of evidence presented in a legal case. International Journal of Clinical and Experimental Hypnosis, 27 (3), 187-218.

There are 2 main positions concerning the potential of hypnosis to coerce unconsenting behavior. One position asserts that coercion is possible through the induction of distorted perceptions which delude the hypnotized person into believing that the behavior suggested is not transgressive. The other position asserts that where hypnosis appears to be a causal factor in coercing behavior, other elements in the situation -- especially a close hypnotist-client relationship -- were the main determinants of behavior. The present paper analyzes the court transcript of a recent case in Australia in which a lay hypnotist was found guilty of 3 sexual offenses against 2 female clients. The uniqueness of the case is that it pits the 2 main positions on hypnotic coercion against each other. The hypnotist admitted the acts attributed to him; his defense was that hypnotic coercion is impossible since a hypnotized person would resist immediately any transgressive suggestion. The women involved stated that they were aware of what was happening but that, because they were hypnotized, they were unable to resist. Analysis of the court transcript indicates that neither a hypothesis of hypnotically induced perceptual distortion, nor one of a close hypnotist-client relationship can account for the events that occurred. Other alternative explanations are discussed within the context of the inherent difficulties of analyzing a court transcript.

Warner, K. E. (1979). The use of hypnosis in the defense of criminal cases. International Journal of Clinical and Experimental Hypnosis, 27 (4), 417-436.

The 4 principal stages in a criminal proceeding are discussed with a view toward determining the role that hypnosis can and does play in the American judicial system. In the preliminary investigative stage, hypnosis is primarily a technique for the discovery of evidence and its use is largely unfettered by court imposed restrictions. In the pre-trial stage, however, hypno-related testimony will be screened for abuses in obtaining it. At the trial stage, hypno-related testimony is generally admissible as a basis for expressing an opinion concerning mental condition, although no opinion may be expressed concerning the truthfulness of statements made under hypnosis. Where the testimony of a trial

witness has been enhanced by the prior induction of hypnosis, the extent to which taint has occurred is usually a question for the jury to determine. In cases of flagrant suggestion during the induction process, however, such testimony will not be allowed in evidence. Learned societies in the field of hypnosis must bear the responsibility for educating the judiciary on the limits of hypnosis as an evidentiary technique.

Worthington, T. S. (1979). The use in court of hypnotically enhanced testimony. International Journal of Clinical and Experimental Hypnosis, 27 (4), 402-416.

The leading judicial decisions on the use of hypnosis on witnesses are presented. Emphasis is on the increasing use of hypnosis by the police or prosecution with witnesses in criminal cases. Hypnosis has proved to be a valuable tool to learn facts not otherwise available. There is, however, a potential for abuse when the information learned is used directly as evidence in court or when the subjective certainty of the witness is increased to the point where cross-examination becomes ineffective. Safeguards are needed to prevent abuse.

1978

Schafer, D. W.; Rubio, R. (1978). Hypnosis to aid the recall of witnesses. International Journal of Clinical and Experimental Hypnosis, 26, 81-91.

14 cases are presented of interrogation under hypnosis of witnesses and victims of crimes. Videotaping is considered essential for use of the court, if necessary. Interrogation of indicted people should be done only as an exception, if at all. The ideal case for hypnosis interrogation is with a witness or a victim where information is obtained which leads to evidence which itself will stand up in court without the need of the hypnosis interrogation to be presented as such. Guidelines for such interrogation are presented.

1976

Hodge, J. R. (1976). The contractual aspects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 391-399.

No generally accepted theory of the essence of hypnosis is currently available, nor are any specific responses uniquely associated with hypnosis. A necessary, though not sufficient, aspect of hypnosis involves the subject's preconceived expectations and selective attention to a series of agreements ("contracts") which are developed between patient and therapist before the induction, during the induction and deepening procedures, and during the operational phase. These contracts may be either implicit or explicit, but they can be identified in all hypnotic interactions. The skillful therapist will make the contracts explicit by defining, at least in general terms, what he expects. If the patient agrees, i.e., "sings the contract," he is likely to comply with suggestions.

1968

Sakata, Kenneth I. (1968). Report on a case of failure to dehypnotize and subsequent reputed aftereffects. International Journal of Clinical and Experimental Hypnosis, 16 (4), 221-228.

The failure of a hypnotized S to execute a suggested task may have contributed to a failure to dehypnotize, the repression of the unsuccessful task after awakening, and a prolongation or reinstatement of hypnosis 3 days later. Some interview material and procedures utilized in handling the problems encountered are presented. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Moss, C. Scott; Rikken, G.; Coyne, L.; Bishop, W. (1965). Some correlates of the use (or disuse) of hypnosis by experienced psychologist-therapist. International Journal of Clinical and Experimental Hypnosis, 13, 39-50.

147 psychologist-psychotherapists were compared on the basis of their attitude towards the employment of hypnosis as a technique in psychotherapy. 1 finding was the absence of extensive differences between the 2 groups in the use of most other therapy techniques, though the hypnosis-favorable group made somewhat more active use of a wider variety of approaches. Doctrine and experience level per se were not significant determinants of the behavior in question. A major finding was that those favorably disposed were inclined to represent themselves as significantly more objective (rather than clinical or intuitive) in their frame-of-reference. A number of significant biographical correlates were found which led to the advancement by speculation of vignettes of the 2 extreme attitude groups. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Orne, Martin T. (1965). Undesirable effects of hypnosis: The determinants and management. International Journal of Clinical and Experimental Hypnosis, 226-237.

Various kinds of complications arising from the use of hypnosis are reviewed. The distinction is drawn between the induction of hypnosis when it is perceived as an episodic event, as in a laboratory context, versus the effect when it is perceived as leading to permanent changes, as in a therapeutic context. An attempt is made to draw these and other distinctions in order to understand better the possible sources of difficulties. [Author Abstract]

1964

Ludwig, Arnold M. (1964). An historical survey of the early roots of mesmerism. International Journal of Clinical and Experimental Hypnosis, 12 (4), 205-217.

Many believe that Franz Anton Mesmer helped lay the foundations upon which modern hypnotic theory and practice evolved. However, as one views the history of healing through suggestion prior to Mesmer, it becomes apparent that neither his theories nor his practices showed much originality. In fact, there is good evidence

that Mesmer plagiarized the work of others. With this in mind, it appears that Mesmer's contribution to later psychological healing and theory was related more to his personality than to his originality. (Journal Abstract)

**1963**

Levitt, Eugene E.; Hershman, Seymour (1963). The clinical practice of hypnosis in the United States: A preliminary survey. International Journal of Clinical and Experimental Hypnosis, 11 (1), 55-65.

A preliminary survey of 301 clinical practitioners of hypnosis who responded to a questionnaire suggests that reported success in inducing hypnosis is unrelated to claimed experience with hypnosis. Children and adolescents are reported to be more susceptible than adults, but there is no sex difference reported. Type of training is generally unrelated to reported success as a hypnotist. Reported percentages of patients who attain various levels of hypnotic depth are generally in keeping with earlier reports. Unexpected reactions to being hypnotized were reported by one out of four respondents.

Pulver, Sydney E. (1963). Delusions following hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 11-22.

Delusions occurring after hypnosis in the nonpsychotic patient are usually a result of the interplay of 3 factors. (a) the development of rapid, tense, transference reactions in hypnosis; (b) the presence of major defects in the patient's character structure; and (c) the occurrence of countertransference reactions on the part of the hypnotist which touch on a specific area of conflict within the patient. The presence of a chaperon or the use of tape recorders are not satisfactory preventive measures. Rather, the physician using hypnosis should focus upon: (a) preliminary psychological evaluation and selection of patients free from disposition to delusion formation, (b) identification of transference reactions and a willingness to discuss with patients, (c) awareness of his own emotional responses to the patient. Basic courses in psychiatry are recommended. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1962**

Moss, C. Scott; Logan, J. C.; Lynch, D. (1962). Present status of psychological research and training in hypnosis: A developing professional problem. American Psychologist, 17, 542-549. (Abstracted in American Journal of Clinical Hypnosis, 1963, 6, 82)

Anonymous questionnaires on training and research in hypnosis were returned by 54 of 55 psychology department chairmen with approved clinical psychology training programs and 39 of 85 American Medical Association approved medical schools. 8 psychology departments and 2 medical schools have courses in hypnosis. Unless the "psychological profession is more active in protecting its rights to research and clinical use of a methodology which is basically psychological, it may

find itself legally excluded from the field." (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Marcus, Howard W.; Bowers, Margaretta K. (1961). Hypnosis and schizophrenia in the dental situation. A case report. International Journal of Clinical and Experimental Hypnosis, 9, 47-57. (In Index Medicus 61: 1228)

#### Author's Summary

A case is presented of a schizophrenic patient, paranoid type, whose phobic fear of dentistry had resulted in the development of a delusional system: he would get well if his teeth were repaired under hypnosis. In reality, his need of dental care was severe. He had lost three teeth by extraction because of painful cavities which he could not permit to be treated with conventional methods. He presented deep cavities in his front teeth. The patient was consistently unable to make rapport with several psychiatrists and dental treatment was finally discontinued because of unwillingness to proceed without psychiatric supervision. Alternative methods of handling the situation and its implications are discussed.

McCartney, James L. (1961). A half century of personal experience with hypnosis. International Journal of Clinical and Experimental Hypnosis, 9, 23-33.

#### NOTES

(Author's Summary and Conclusions). "After fifty years of experience with hypnosis, it is evident that it is not a superficial and careless technic but should be utilized only by capable, trained physicians, as are the other complex and difficult medical technics. ... In order to induce hypnosis, the patient must be perfectly willing to be hypnotized, he must have confidence in the practitioner, and he must concentrate on doing exactly as he is told. In selected cases, drugs or electrical impulses may be used for the initial induction of hypnotic sleep, but if hypnotherapy is to be continued, the physician must keep in contact with the patient by repeated suggestions. The technic used should fit the individual patient, but in most cases, verbal suggestions are all that is necessary to bring about dissociation. Hypnosis may be used to facilitate the beginning of mental catharsis, the establishment of transference, and may be easily instituted following narcosynthesis, electroshock therapy, minimum stimulus, or Sedac. Suggested activity under hypnosis may be carried out at a designated time, place, and manner after awakening. This is a result of autosuggestion and may be mistaken for psychopathic behavior. Such suggestions may be instituted by television, movies, radio, telephone, or recorded or written instruction. Hypnosis may be used to plant suggestions; if misused, it may create an obsessive-compulsive neurosis, while when properly used, it may overcome many functional symptoms and may be used to supplement other forms of psychotherapy" (p. 32).

Shaw, S. Irwin (1961). The dangers of hypnosis (the mental hypodermic) as applied to dentistry. International Journal of Clinical and Experimental Hypnosis, 9 (2), 53-58.

#### NOTES

The author expresses the opinion that there are no inherent dangers in using hypnosis in dentistry, if the dentist is well-trained (including training in the psychodynamic factors involved, counter-transference, etc.) He indicates that dentists should not use hypnodontia with patients who are in psychiatric treatment, or recently had such treatment, without consulting with the physician or psychologist involved in the mental health treatment. "The qualified practitioner of hypnosis is always alert to possible involvements on the part of the patient, and perhaps including himself, in the emotional relationship connected with trance induction. It is this knowledge and full awareness of possible dangers, which prevents harm to the dental patient, in the same way that the conscientious user of a hypodermic syringe, knowing of dangers involved, is always careful to avoid risks when making injections of drugs or chemicals into the patient" (p. 56).

1960

Abramson, M. (1960). Danger! hypnotherapist at work. Bulletin, Hennepin County Medical Society, 31, 101-106.

The author reviews briefly pros and cons regarding the medical use of hypnosis. He concludes: "It is the author's opinion, based on an extensive personal experience of over 15 years, that the use of hypnotherapy by a physician or dentist who has been properly trained and who uses this technique strictly within his field of competence carries with it no more (and probably less) 'danger' than the use of many other techniques of treatment used in medicine today." [Abstract from American Journal of Clinical Hypnosis, 1960, 3, 120.]

Raginsky, Bernard B. (1959). Temporary cardiac arrest induced under hypnosis. International Journal of Clinical and Experimental Hypnosis, 7 (2), 53-68.

#### NOTES

##### Summary

"An experiment is described in which the symptoms of syncope and temporary complete cardiac arrest were induced under hypnosis in a patient who had been operated on for a so-called Adams-Stokes syndrome and who had, until the time of the experiment, remained free of such symptoms. An attempt is made to correlate contemporary knowledge in explaining this phenomenon.

"It is pointed out that maturity in the biological sciences takes about twice as long to achieve as does maturity in the physical sciences. This holds especially true in the use of hypnosis" (p. 66).

The authors report that in attempting to reinduce a fainting episode, "We were not at all prepared for the complete cardiac arrest which followed the hallucinated episodes" (p. 59).

**1956**

**Marcuse, F. L.; Phipps, G. T. (1956). A demonstration of dental extraction with hypnotic anesthesia. Journal of Clinical and Experimental Hypnosis, 4, 2-4.**

**NOTES**

**The authors report on a demonstration of dental extractions with two patients (of five patients with whom hypnosis was attempted). They describe successful results despite 3-minute inductions in people not pre-trained, a terse and abrupt approach by the dentist (who uses only hypnosis and refers non-responding patients elsewhere). "While the hypnotist demonstrated effectively what could be done with hypnosis, his theoretical orientaton as to why this had occurred can only be described as unfortunate. In response to questioning he stated and quite flatly: that in hypnosis there are no dangers (1); that hypnosis is essentially cardiovascular in nature; that drugs had no place along with hypnosis--despite the advice of Moss (2) that dentists should use hypnosis along with drugs routinely unless the latter is contraindicated. He expressed his attitude toward the use of local anesthetics by indicating that the package he had had was thrown away because it had become spoiled from disuse. Hypnosis was presented in effect as an all or nothing technique" (p. 3).**

**1954**

**Meares, Ainslie (1954). History-taking and physical examination in relation to subsequent hypnosis. Journal of Clinical and Experimental Hypnosis, 2 (4), 291-295.**

**NOTES**

**"Summary. The history-taking and physical examination of the initial interview can be so structured as to facilitate the subsequent induction of hypnosis. Rapport is established, and negative transference feelings are not allowed to develop. There must be no holding back or hiding of the real complaint with screen symptoms. Physical examination is a symbolic surrender and paves the way for the real surrender of passive hypnosis. If induction by an active method is anticipated, authoritative attitudes are introduced into the history-taking and physical examination" (p. 295).**

**EVENTS RELATED POTENTIAL (ERP)**

**2001**

**Jensen, Stacia M.; Barabasz, Arreed; Barabasz, Marianne; Warner, Dennis (2001). EEG P300 event-related markers of hypnosis. American Journal of Clinical Hypnosis, 44 (2), 127-139.**

**Demonstrated that when subjects are stringently selected for hypnotizability and responses are time-locked to events, robust markers of hypnotic response emerge that reflect alterations in consciousness corresponding to subjects' subjective experiences of perceptual alteration. To further test this hypothesis, the researchers obtained EEG visual P300 event-related potentials (ERPs) from 20 high- and low-**

hypnotizable subjects (7 males and 13 females, aged 19-52 years). The effects of positive obstructive and negative obliterating instructions were tested during waking and alert hypnotic conditions. High-hypnotizables showed greater ERP amplitudes in response to the negative hallucination condition and lower ERP amplitudes in response to the positive obstructive hallucination when compared to the low-hypnotizables. Contrary to socio-psychological or role play conceptualizations, the hypnotic induction resulted in specific psychophysiological responses which could not be produced by waking imagination or by the lows who were trying to mimic hypnotic responding. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1999**

Barabasz, A.; Barabasz, M.; Jensen, S.; Calvin, S.; Trevisian, M.; Warner, D. (1999). Cortical event-related potentials show the structure of hypnotic suggestions is crucial. International Journal of Clinical and Experimental Hypnosis, 47 (1), 5-22.

Electroencephalographic cortical event-related potentials (ERPs) are affected by information processing strategies and are particularly appropriate for the examination of hypnotic alterations in perception. The effects of positive obstructive and negative obliterating instructions on visual and auditory P300 ERPs were tested. Twenty participants, stringently selected for hypnotizability, were requested to perform identical tasks during waking and alert hypnotic conditions. High hypnotizables showed greater ERP amplitudes while experiencing negative hallucinations and lower ERP amplitudes while experiencing positive obstructive hallucinations, in contrast to low hypnotizables and their own waking imagination-only conditions. The data show that when participants are carefully selected for hypnotizability and responses are time locked to events, rather robust physiological markers of hypnosis emerge. These reflect alterations in consciousness that correspond to participants' subjective experiences of perceptual alteration. Accounting for suggestion type reveals remarkable consistency of findings among dozens of researchers.

NOTES

1:

In their Discussion the authors note that not all of the highly hypnotizable subjects demonstrated the changes predicted, consistent with Hilgard's (1992) observation that individual differences in response remain even among high hypnotizables. Post-experimental inquiry revealed the sources of (non-predicted) response for these two people. "One, showing only a moderate ERP amplitude attenuation in the obstructive condition, noted she pictured a cardboard box in front of the computer monitor, but 'I pictured a rather small box that didn't block the entire screen!' Another showed an apparently contradictory response, a markedly diminished amplitude in the negative hallucination that called for deafness during the auditory stimuli. This participant reported the perception of complete obliteration of all sounds and, therefore, showed no surprise ERP effect. 'It was kind of scary when he (AB) said 'deaf' the second time. I couldn't hear anything at all. I was glad when he

touched my shoulder and it was OK to hear again. I don't think I would do that again ... I mean do the hypnotic suggestion as much!" (pp. 17-18).

De Pascalis, Vilfredo (1999). Psychophysiological correlates of hypnosis and hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 47 (2), 117-143.

This article reviews and summarizes electroencephalographic (EEG)-based research on physiological and cognitive indicators of hypnotic responding and hypnotic susceptibility, with special attention to the author's programmatic research in this area. Evidence that differences in attention levels may account for hypnotic depth and individual differences in hypnotizability is provided with traditional EEG rhythms, event-related potentials, and 40-Hz EEG activity. The alteration of stimulus perception may be a secondary effect with respect to allocation of attentional resources. In both nonhypnosis and hypnosis conditions, high hypnotizables appeared to show greater task-related EEG hemispheric shifts than did low hypnotizables. Findings concerning cognitive and physiological correlates of hypnotic analgesia are discussed with respect to hemispheric functioning in the apparent control of focused and sustained attention. The conclusion is that although a definitive EEG-based signature for hypnosis and hypnotizability is not yet established, there are a number of promising leads.

#### NOTES

1:

The authors conclude that their results support Hilgard's (1986) hypothesis that high hypnotizables are better able to focus attention on task-relevant stimuli than low hypnotizables; "show a greater 40-Hz EEG hemispheric specificity in both nonhypnotic and hypnotic conditions" (p. 134) which suggests "greater physiological flexibility (i.e., the subjective capacity to shift from one state to another)" (p. 134); exhibit more EEG beta activity during early stages of hypnotic inductions (especially Left hemisphere) though there is hemisphere balancing later -- supporting Gruzelier's (1988, 1996) theory; show changes in ERP that can't be explained by a theory of goal directed strategies but are consistent with findings by Barabasz et al (1996) "showing that hypnotic alteration of stimulus perception operates early at the level of the detection of the signal as well as later at the level of response bias" (p. 134); and, given hypnotic analgesia suggestions, they "showed significantly smaller total, delta, and beta 1 amplitudes in the right hemisphere across all frontal, central, and posterior recordings so that a significantly more pronounced hemispheric asymmetry in favor of the left hemisphere was displayed" (p. 135).

De Pascalis, V.; Magurano, M. D.; Bellusci, A. (1999). Pain perception, somatosensory event-related potentials and skin conductance responses to painful stimuli in high, mid, and low hypnotizable subjects: Effects of differential pain reduction strategies. Pain, 83 (3), 499-508.

In this study, pain perception, somatosensory event-related potential (SERP) and skin conductance response (SCR) changes during hypnotic suggestions of Deep

Relaxation, Dissociated Imagery, Focused Analgesia, and Placebo, compared with a Waking baseline condition, were investigated. SERPs were recorded from frontal, temporal, central, and parietal scalp sites. Ten high, 9 mid, and 10 low hypnotizable right-handed women participated in the experiment. The following measures were obtained: (1) pain and distress tolerance ratings; (2) sensory and pain thresholds to biphasic electrical stimulation delivered to the right wrist; (3) reaction time and number of omitted responses; (4) N2 (280+/-11 ms) and P3 (405+/-19 ms) peak amplitudes of SERPs to target stimuli delivered using an odd-ball paradigm; (5) number of evoked SCRs and SCR amplitudes as a function of stimulus repetition. Results showed, high, mid and low hypnotizables exhibited significant reductions of reported pain and distress ratings during conditions of Deep Relaxation/Suggestion of Analgesia, Dissociated Imagery and Focused Analgesia. High hypnotizable subjects displayed significant reductions in pain and distress levels compared to mid and low hypnotizables during Dissociated Imagery, Focused Analgesia and, to a lesser degree, during Deep Relaxation. Placebo condition did not display significant differences among hypnotizability groups. High hypnotizables, compared to mid and low hypnotizables, also showed significant increases in sensory and pain thresholds during Dissociated Imagery and Focused Analgesia. High, mid, and low groups showed significant reductions in P3 peak amplitudes across all hypnosis conditions and, to a lesser degree, during Placebo. The temporal cortical region was the most sensitive in differentiating SERP responses among hypnotizability groups. On this recording area the subjects highly susceptible to hypnosis displayed significantly smaller P3 and greater N2 peaks during Focused Analgesia than did the other hypnotizable groups. In this condition highly susceptible subjects also reported the highest number of omitted responses and the shortest Reaction Times. These subjects also showed faster habituation of SCRs when compared with mid and low hypnotizables. During Dissociated Imagery and Focused Analgesia, highly hypnotizable subjects also disclosed a smaller total number of evoked SCRs than did mid and low hypnotizable subjects. The results are discussed considering possible common and different mechanisms to account for the effects of different hypnotic suggestions.

Abstract from National Library of Medicine, PubMed

Kallio, Sakari; Revonsuo, Antti; Lauerma, Hannu; Hdmldinen, Heikki; Lang, Heikki (1999). The MMN amplitude increases in hypnosis - a case study. Neuroreport, **10** (17), 3579-3582.

The neural mechanisms associated with hypnosis were investigated in a single highly hypnotizable subject by measuring the mismatch negativity (MMN) component of auditory ERP, reflecting the preattentive discrimination of change in stimulus flow, in normal baseline state and under hypnosis. It has been proposed that the frontal inhibition associated with hypnosis can be measured as a decrease in MMN. ERPs were elicited using the passive oddball paradigm with standard and deviant sine tone stimuli of 500 and 553 Hz respectively. The measurement was repeated in five separate sessions. In hypnosis the MMN was significantly larger compared to baseline. The results indicate that hypnosis can give rise to altered information

processing in the brain even at a relatively early, i.e. preattentive level and that the larger MMN measured under hypnosis does not support frontal inhibition theory.

1998

Crawford, Helen J.; Knebel, Timothy; Kaplan, Lyla; Vendemia, Jennifer M. C.; Xie, Min; Jamison, Scott; Pribram, Karl H. (1998). Hypnotic analgesia: 1. Somatosensory event-related potential changes to noxious stimuli and 2. Transfer learning to reduce chronic low back pain. International Journal of Clinical and Experimental Hypnosis, 46 (1), 92-132.

Fifteen adults with chronic low back pain (M = 4 years), age 18 to 43 years (M = 29 years), participated. All but one were moderately to highly hypnotizable (M = 7.87; modified 11-point Stanford Hypnotic Susceptibility Scale, Form C [Weitzenhoffer & Hilgard, 1962]), and significantly reduced pain perception following hypnotic analgesia instructions during cold-pressor pain training. In Part 1, somatosensory event-related potential correlates of noxious electrical stimulation were evaluated during attend and hypnotic analgesia (HA) conditions at anterior frontal (Fp1, Fp2), midfrontal (Fe, F4), central (C3, C4), and parietal (P3, P4) regions. During HA, hypothesized inhibitory processing was evidenced by enhanced N140 in the anterior frontal region and by a prestimulus positive-ongoing contingent cortical potential at Fp1 only. During HA, decreased spatiotemporal perception was evidenced by reduced amplitudes of P200 (bilateral midfrontal and central, and left parietal) and P300 (right midfrontal and central). HA led to highly significant mean reductions in perceived sensory pain and distress. HA is an active process that requires inhibitory effort, dissociated from conscious awareness, where the anterior frontal cortex participates in a topographically specific inhibitory feedback circuit that cooperates in the allocation of thalamocortical activities. In Part 2, the authors document the development of self-efficacy through the successful transfer by participants of newly learned skills of experimental pain reduction to reduction of their own chronic pain. Over three experimental sessions, participants reported chronic pain reduction, increased psychological well-being, and increased sleep quality. The development of "neurosignatures of pain" can influence subsequent pain experiences (Coderre, Katz, Vaccarino, & Malzack, 1993; Melzack, 1993) and may be expanded in size and easily reactivated (Flor & Birbaumer, 1994; Melzack, 1991, 1993). Therefore, hypnosis and other psychological interventions need to be introduced early as adjuncts in medical treatments for onset pain before the development of chronic pain.

NOTES

1:

The authors suggest that "the anterior frontal region deals with the active allocation of attention and disattention, whereas spatiotemporal aspects of the somatosensory perceptions involve the posterior cortical systems" (p. 113) They acknowledge that "other inhibitory pain systems are actively interacting with the frontal attentional system, including the limbic and thalamic systems" and mention evidence that the inhibitory processing "may extend as far as spinal cord antinociceptive mechanisms as evidenced by reductions in brief latency (Hagbarth & Finer, 1963) and R-III

amplitude (Kiernan, Dane, Phillips, & Price, 1995) of spinal reflexes" (p. 113). Both pain perception and strategies of pain control may involve the anterior cingulate cortex (Kropotov et al. 1997), which has many connections with anterior frontal cortex "and is thought to be an area that organizes responses to noxious stimuli" (p. 113).

For the chronic low back pain Ss there were reductions in reported low back pain during the experimental sessions, and significant improvements in psychological well-being and sleep quality across the three sessions. "The importance of developing self-efficacy through learning to control experimental pain and the understanding of one's own attentional and disattentional abilities was demonstrated as being a significant intervention in the modulation and control of chronic pain" (p. 123).

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. Pain, 75 (1), 85-92. Keywords: analgesia/anesthesia, autonomic nervous system, EEG, electrical stimulation, event related potential (ERP), inhibition, neurophysiology, pain, pain threshold, reflex, suggestion

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

Abstract from National Library of Medicine, PubMed

1997

Barabasz, Arreed; Barabasz, Marianne (1997, August). Altered brain activity shows the structure of hypnotic suggestions is crucial. [Paper] Presented at the annual

meeting of the American Psychological Association, Chicago, IL. (Abstract was published in *Psychological Hypnosis*, Winter-Spring 1998, Vol 7, No. 1, pp. 3-4.)

Recently, Kirsch and Lynn (1995) helped to converge understandings of hypnosis and at the same time stimulated renewed consideration of the central issues. Kihlstrom (1996, p.1) reminded us that trance versus non-trance as well as persistent individual differences versus experimental manipulation "continue to divide the field." Hilgard (1992, p. 80) emphasized that the "basic reason" hypnosis theories are in disarray stems from the lack of "any truly distinguishing basis - psychological, physiological or neurophysiological - by which to distinguish sharply between the established hypnotic condition (call it 'trance' or any other name) and normal waking consciousness." Cortical event related potentials (ERPs) provide one way of shedding light on this issue.

This study tested the effects of positive obstructive and obliterating instructions on visual and auditory EEG P300 ERPs. Considering issues raised by Spiegel and Barabasz (1988), 20 participants, stringently selected for hypnotizability, were requested to perform identical tasks during waking and alert hypnotic conditions. High hypnotizables showed greater ERP amplitudes while experiencing negative hallucinations (i.e., a suggestion not to perceive stimuli) and lower ERP amplitudes while experiencing positive obstructive hallucinations (i.e., a suggestion to perceive competing stimuli instead of the presented ones) in contrast to low hypnotizables and their own waking imagination only conditions. Accounting for suggestion type reveals remarkable consistency of findings among dozens of researchers.

The findings do not contradict the real and impressive effects of hypnosis that result from immediate social influences, social context and personal abilities (Kirsch, Council, Mobayed, 1987; Lynn, Rhue & Weekes, 1990). Given the leptokurtic distribution of hypnotizability in the general population, social influence may entirely account for many of the hypnotic phenomena seen in research and clinical situations, which tap primarily those of moderate hypnotizability. However, the present study does show that when participants are very stringently selected and responses are time locked to events, robust physiological markers of hypnosis emerge that reflect alterations in consciousness and correspond to subjective experiences of perceptual alteration.

Jasiukaitis, Paul; Nouriani, Bitá; Hugdahl, Kenneth; Spiegel, David (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere?. *International Journal of Clinical and Experimental Hypnosis*, 45 (2), 158-177.

Research and theory over the past couple decades have suggested that the right cerebral hemisphere might be the focus of brain activity during hypnosis. Recent evidence from electrodermal responding, visual event-related potentials, and Stroop interference, however, can make a case for a role of the left hemisphere in some hypnotic phenomena. Although hemispheric activation on hypnotic challenge may depend in large part on the kind of task the challenge might involve, several general aspects of hypnosis might be more appropriately seen as left-rather than right-hemisphere brain functions. Among these are concentrated attentional focus and the

role of language in the establishment of hypnotic reality. A left-hemisphere theory of hypnosis is discussed in light of recent findings and theories about a left-hemisphere basis for synthetic or generational capabilities (Corballis, 1991) and a neuro-evolutionary model of a left-hemisphere dopaminergic activation system for the implementation of predetermined motor programs (Tucker & Williamson, 1984). -- Journal Abstract

1995

Barabasz, Arreed F.; Barabasz, Marianne; Jensen, Stacia (1995, November). Effects of hypnosis on cortical event-related potentials during visual and olfactory hypnotic hallucinations. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

1:

Slotnick and London showed that different wording of suggestions led to very different results, which explains why our study on negative hallucinations and Spiegel's study had opposite results.

This study is still ongoing. Screened for highs who passed visual and olfactory hallucinations and lows who passed only motoric items on hypnotizability tests. Trained Ss with eyes open induction, and lows had instructions to simulate hypnosis. (Used the eyeroll induction, eyes open.)

Did waking administration of alternating checkerboard pattern on computer screen. Then did eyes open hypnotic induction plus a depth check to make sure they were deep (assign number; then instructed raise a finger when you double it; then again, raise a finger when you double it). Then used checkerboard design again.

Obstructive visual hallucination - "imagine traveling through space, a dark nebula" (better than imagining you are blind. Lows had no difference in waking, obstructive hallucination, and negative hallucination. The highs did--looks like they had to see it before they couldn't see it. "The dark nebula envelopes you completely, and now you can see nothing."

Schnyer, David M.; Allen, John J. (1995). Attention-related electroencephalographic and event-related potential predictors of responsiveness to suggested posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 43 (3), 295-315.

Higher frequency electroencephalographic (EEG) activity around 40 Hz has been shown to play a role in cognitive functions such as attention. Furthermore, event-related brain potential (ERP) components such as N1 and P1 are sensitive to selective attention. In the present study, 40-Hz EEG measures and early ERP components were employed to relate selective attention to hypnotic response. Participants were 20 low hypnotizable individuals, half assigned as simulators, and 21 high hypnotizable individuals. Each of these groups was subsequently divided into two groups based on recognition amnesia scores. The four groups differed in 40-Hz (36-44 Hz) EEG spectral amplitude recorded during preinduction resting conditions but not in EEG amplitude postinduction. The groups also differed in N1

amplitudes recorded during hypnosis. Regression analysis revealed that these effects only distinguish the high hypnotizable participants who experienced recognition amnesia from all other groups. The findings support the role of selective attention in hypnotic responsiveness, and the utility of subdividing high hypnotizable individuals is discussed.

1994

Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs) possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics. Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Crawford, Helen J. (1994). Brain systems involved in attention and disattention (hypnotic analgesia) to pain. In Pribram, Karl H. (Ed.), Origins: Brain and self organization (pp. 661-679). Hillsdale, NJ: Lawrence Erlbaum Associates.

Data are reviewed from regional cerebral blood flow, EEG, and somatosensory event-related potential (SERP; both scalp and intracranial) studies of attention to and disattention (hypnotic analgesia) of painful stimuli to provide further evidence for two neurophysiological systems of pain involving the cortex: (1) the epicritic, sensory system of pain associated with the parietal, posterior region, and (2) the protocritic, distress, comfort-discomfort system of pain associated with the far fronto- limbic region. Studies of neurophysiological changes accompanying suggested hypnotic analgesia support the hypothesis that the executive controller of the far frontal cortex, via the far fronto-limbic attentional system, acts as a gate against the ascent of painful stimuli into conscious awareness by 'directing' downward the inhibition of incoming somatosensory information coming from the thalamic region. In hypnotically responsive individuals who could eliminate the perception of pain, reviewed studies demonstrated increased regional cerebral blood in the frontal and somatosensory regions, shifts in hemispheric dominance of EEG

theta power, differential surface SERP topographical patterns in the anterior and posterior regions of the brain, and reduction of the intracranial SERP P160 waveform in the gyrus cingulus.

## NOTES

1:

Paradoxically, there may be physiological reactivity to pain stimuli while the hypnotized Subject reports they are not consciously aware of pain. Posner's proposal of two different attentional systems may account for why there is physiological reactivity concurrent with lack of awareness of pain. Posner suggested that the posterior brain is involved with engaging and disengaging attention while the anterior brain is involved in attention for action or effortful attention. "Thus, the posterior region is involved in space and time, the epicritic processes, whereas the anterior region is involved in comfort- discomfort, the protocritic processes (Pribram, 1991)" (p. 665).

In parallel, there appear to be two systems of pain involving the cortex, as revealed in positron emission tomography research. Also relevant is clinical data showing that "removal of the frontal or cingulate cortex in patients with intractable pain leads to the amelioration of distress while not eliminating sensory pain (Bouckoms, 1989)" (p. 665).

The author proposes a neuropsychophysiology of hypnotic analgesia based on Hilgard's (1986) neodissociation theory of hypnosis, together with Pribram and McGuinness' (1975, 1992) attention model. In this view, "Hilgard's executive control system is the far frontal cortex 'directing' the inhibition of incoming painful stimuli" (p. 666) after determining that the somatosensory signal is 'irrelevant.'

"Highly hypnotizable individuals ('highs') have greater attentional and disattentional abilities than low hypnotizable individuals ('lows'). ... Recent neuroimaging techniques (PET, SPECT, CBF) that assess regional brain metabolism have found no differences in waking conditions between low and highly hypnotizable individuals, but have consistently reported that only highs show increased cerebral blood flow during hypnosis, suggestive of enhanced cognitive effort (Crawford, Gur et al., 1993; Halama, 1989; Meyer, Diehl, Ulrich, & Meinig, 1989; Walter, 1992)" (p. 666).

The hippocampus appears to be involved as a gating mechanism in selective attention (Crowne, Konow, Drake & Pribram, 1972; Isaacson, 1982, Isaacson & Pribram, 1986; R. Miller, 1991; Pribram, 1991; Arnolds et al., 1980) This gating function may be promoted "through a cortico-hippocampal relay [that] transmits information by theta wave modulation and Hebbian synaptic modification so that there is selective disattention" (p. 667). The author suggests that hypnotic pain control may involve directing attention away from pain sensory signals.

Highly hypnotizable people generate more EEG theta than low hypnotizables whether they are hypnotized or not, and Crawford (1990) observed marked hemispheric shifts in theta when highs (but not lows) were attempting to control pain with hypnosis.

This paper reports on preliminary results of SERP studies of people given hypnotic analgesia suggestions to reduce electric shock stimulus evoked pain. The results were analyzed individual by individual, because group data obscured pronounced

shifts in SERP patterns (e.g. habituation rates differed among Subjects). For highs, the SERP tended to be reduced, and the lower amplitudes were observed as early as the N100-P200 components. This did not occur for low hypnotizables.

Different kinds of mechanisms may be operative for high hypnotizables, however. "In over half of the high hypnotizable subjects the far frontal region (Fp1, Fp2) showed strong arousal during attention to pain, but during hypnotic analgesia there was a flattening out of the SERPs to the point they are hard to measure. By contrast, the more posterior SERPs (including F3 and F4), while reduced in amplitude, were still evident. The other half of highs showed little SERP activity in the far frontal region in either attend or disattend conditions, but substantial reductions of SERPs at all locations during hypnotic analgesia" (p. 670). Additionally, some of the highs evidenced a contingent negative variation (CNV) or a late 400-500 msec negativity in the far frontal region, which author is inclined to interpret as "a preparation for a response or for an inhibition of a response" (p. 670).

Case studies of two patients with intracranial electrodes and scalp electrodes recording SERPs are presented in support of the experimental data. The two female patients were diagnosed with obsessive compulsive disorder; one was highly hypnotizable and one was not. They received 30 moderately painful stimuli to the left middle finger under sequential conditions: waking attention, hypnosis with analgesia suggestions, and hypnosis with attention instructions. The highly hypnotizable patient reported significantly less pain during suggested analgesia, and that reduction in pain was associated temporally with reduction of SERP at P160 in the gyrus cingulus (and at no other recording sites). The 'unhypnotizable' patient showed no SERP changes. As an aside, the author notes that "Subsequent to the hypnotic analgesia, when the pain was attended to again during waking this patient showed a significant enhancement of the same positivity wave at Fz, as if there was a rebound effect (something we have also observed in some of our SERP subjects at the BRAINS Center)" (p. 674).

**DePascalis, Vilfredo (1994). Event-related potentials during hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 42 (1), 39-55.**

Event-related potentials were elicited by visual stimulation and recorded at frontal, central, and posterior scalp sites so as to study the psychophysiological process associated with hypnotic hallucination. Subjects were screened using two measures of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Form A and the Stanford Hypnotic Susceptibility Scale, Form C). Seven high and 9 low hypnotizable right-handed females participated in the experiment. Eight intermediate hypnotizable right-handed females served as controls. Peak amplitudes and latencies of P1, N1, P2, N2, and P3 components were compared in two hypnotic conditions (obtained by means of hypnotic suggestions): stimulus enhancement and stimulus elimination. High hypnotizable subjects displayed a significant attenuation of the P1 and N1 amplitudes of the evoked response while experiencing stimulus elimination. The effect for the P1 component was greatest at the posterior sites compared to that found at the anterior and central sites. A similar trend across condition was also observed for P3 peak amplitude, even though the Group x

Condition interaction was only marginally significant ( $p < .07$ ). during negative hallucination, P3 peak latency for high hypnotizables was shorter than that obtained during stimulus enhancement. This effect was more pronounced across the right hemisphere. These results are discussed in light of previous findings.

1993

Dabic-Jeftic, Mirjana; Barnes, Graham (1993). Event-related potentials (P300) during cognitive processing in hypnotic and non-hypnotic conditions. Psychiatria Danubina, 5 (1-2), 47-61.

In this study authors investigated to find out if there were any specific changes of event related potentials in subjects before hypnosis, entering hypnosis, in deep hypnosis and leaving hypnosis, and to compare mental activities of subjects such as capability of correctly calculating and remembering the exact number of unexpected stimuli delivered by stimulator with their verbal or nonverbal reports during any of the conditions investigated. The methodology was of testing the cognitive evoked potentials elicited by auditory stimuli, using the oddball paradigm. Obtained results show that the most constant values of shortest latency and highest amplitudes of the cognitive waves, especially P300 were found during deep hypnosis. All five subjects in the investigation answered with the exact number of delivered target stimuli only after deep hypnosis. Conversely, in all other conditions their answers were approximate to the correct number of delivered target stimuli. (Author abstract.)

NOTES

1:

In this experiment, 5 adult volunteers were told to attend to one of two tones delivered through headphones. The tones were randomly delivered but one occurred 85% of the time (the 'frequent, non-target tone') and the other occurred 15% of the time (the 'rare, target tone'). The subjects were to notice, remember, and count the target tone. Measures were taken during five periods: pre-hypnosis, entering hypnosis, deep hypnosis, leaving hypnosis, and post-hypnosis.

Some subjects had extensive hypnosis experience prior to the experiment; others had little.

The EEG P300 wave was sensitive to condition. Latency of P300 was significantly shorter in deep hypnosis compared with other periods. Higher amplitude of P300 also occurred during deep hypnosis compared with other periods. (Notes taken from secondary reference, Ericksonian Newsletter.)

Jutai, Jeffrey; Gruzelier, John; Golds, John; Thomas, Martin (1993). Bilateral auditory-evoked potentials in conditions of hypnosis and focused attention. International Journal of Psychophysiology, 15, 167-176.

Brain event-related potentials (ERPs) evoked by auditory stimulation were used to study cerebral hemispheric activity during hypnosis. ERPs were recorded from bilateral central (C3 and C4) and temporal (T3 and T4) scalp locations in response to tone pips in 6 medium-high and 6 low-susceptible subjects in three conditions:

baseline (tones only), hypnosis (tones plus hypnotic induction), and a focused attention control (tones plus a newspaper story read by the hypnotist). Task asymmetries were individually adjusted for baseline asymmetries. Responses from central locations did not differentiate hypnosis from focused attention for either group. The same was true of temporal locations for the low-susceptible group. The predominant temporal lobe pattern for both conditions and groups was larger left than right responses. The exception was the hypnosis condition for the medium-high susceptible group where there was an increase in responses in the right temporal lobe.

Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical processes of the brain and performance. International Journal of Psychophysiology, 14, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

1992

Miller, Scott D.; Triggiano, Patrick J. (1992). The psychophysiological investigation of multiple personality disorder: Review and update. American Journal of Clinical Hypnosis, 35, 47-61.

NOTES

1:

A review and methodological critique. Updates Putnam, 1984. Currently, psychophysiological differences reported in the literature include changes in cerebral electrical activity, cerebral blood flow, galvanic skin response, skin temperature, event-related potentials, neuroendocrine profiles, thyroid function, response to medication, perception, visual functioning, visual evoked potentials, and in voice, posture, and motor behavior. Reviews the new research on the psychophysiological investigation of MPD from published, unpublished, and ongoing studies, and attempts to place current findings into a conceptual framework. Authors note results from unpublished and ongoing studies and include a critical analysis of current research methodology as well as suggestions for future research.

1990

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

## NOTES

1:

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis.

The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any

other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]

2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.

3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

Discussion. "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During

suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

1989

Spiegel, David; Bierre, Pierre; Rootenberg, John (1989). Hypnotic alteration of somatosensory perception. American Journal of Psychiatry, 146, 749-754.

The effects of hypnotic alterations of perception on amplitude of somatosensory event-related potentials were studied in 10 highly hypnotizable (HH) Subjects and 10 Subjects with low hypnotizability. The HH Subjects showed significant decreases in amplitude of the P100 and P300 waveform components during a hypnotic hallucination that blocked perception of the stimulus. When hypnosis was used to intensify attention to the stimulus, there was an increase in P100 amplitude. Findings are consistent with observations that HH individuals can reduce or eliminate pain by using purely cognitive methods such as hypnosis. Together with data from the visual system, these results suggest a neurophysiological basis for hypnotic sensory alteration.

## NOTES

1:

Four conditions were presented in random order to each Subject. Normal Attention - subjects were instructed to button-press each time they felt the target stimulus. Passive Attention - subjects were instructed to attend to the stimuli but not button-press. Hypnotic Attention - subjects received a hypnotic induction (eye closure and arm levitation, which provided behavioral confirmation; then instructed to attend carefully to the stimuli, which they were told to experience as 'pleasant and interesting,' and button-press in response to targets. Hypnotic Obstructive Hallucination - hypnotic induction exercise was followed by the hypnotic suggestion of a local anesthetic, such as novocaine, spreading from fingers to hand to forearm on the stimulated limb; then instructed to make the limb cold, tingling, and numb; then told to button-press if they felt any of the target stimuli.

Experimenter was blind to hypnotizability scores.

Results were that the Highs showed significant decreases in P100 (45%) and P300 (38%) amplitudes during a hypnotic hallucination which blocked perception of the stimulus, but an increase (35%) in P100 amplitude when hypnosis was used to intensify attention to the stimulus. The authors view this as cognitive flexibility akin to the clinical situation in which high hypnotizables reduce or completely eliminate pain. They consider this evidence (along with earlier findings on similar blocking of perception in the visual system) of a neurophysiological basis for hypnotic sensory alteration.

1988

Aravindakshan, K. K.; Jenner, F. A.; Souster, L. P. (1988). A study of the effects of hypnotic regression on the auditory evoked response. International Journal of Clinical and Experimental Hypnosis, 36, 89-95.

Hypnotic regression in 6 hypnotizable Ss experienced in regression was studied by means of the auditory evoked response (AER). AER latency and amplitude is affected by arousal, attention, stimulus strength, and age. Ss aged between 27 and 61 years were regressed to the age of 7-9 years, and AERs were compared among three states of consciousness: normal awareness, hypnotic relaxation, and hypnotic regression. There was no change in AER morphology in the direction of that seen in children. Thus, age regression is not seen as a reversion to an earlier stage of neurological development but perhaps as role playing which is spontaneous and uninhibited, with the benefit of innocent belief in its accuracy.

## NOTES

1:

Raikov (1982) regressed 2 experienced Ss, comparing his results with those of actors acting as children and low hypnotizable subjects; he claimed to be able to reproduce neonatal reflexes in the highly hypnotizable Ss but not in the actors and low hypnotizable subjects.

AER's were used "because latency of the major waves and amplitude of the response is affected by level of arousal and attention..., strength of the stimulus, and,

more importantly for this study, by age.... Surwillo (1981) noted that peak latencies of AERs were 16-21 msec longer in children aged 9-13 than in adults..." (p. 90)

**DISCUSSION** reviews the literature.

Changes in the intensity of light stimulation can cause significant shifts in the amplitude and latency of the visual evoked response, but neither the amplitude nor the latency have been changed by suggested alterations in stimulus intensity during hypnosis (Andreassi, Balinsky, Gallichio, de Simone, & Mellers, 1976; Beck & Barolin, 1965; Beck, Dustman, & Beier, 1966; Zakrzewski & Szelenberger, 1981). Similarly, significant changes were seldom found in the AER with suggested variations of sound intensity during hypnosis (Amadeo & Yanovski, 1975) and in somatosensory responses to electrical stimuli applied to the fingers with suggested anesthesia during hypnosis (Halliday & Mason, 1964). Deehan and Robertson (1980) were able to abolish the AER completely during hypnosis, but their stimuli were very different from that used in the present study.

"In all such studies, hypnosis and suggestions were aimed at changing the intensity of the stimulus to S's awareness, while the actual intensity of the stimulus was unaltered. In the present study, the authors attempted to find whether the morphology of the AER in children could be reproduced by age regression, without altering the nature or intensity of the stimulus in its delivery.... Like previous investigators, the present authors noticed that the tracings were cleaner and easier to produce during hypnosis (see Figure 1), although the changes in neurological development observed by Raikov (1982) were not evident" (pp. 93-94).

**Spiegel, David; Barabasz, Arreed F. (1988). Effects of hypnotic instructions on P300 event-related-potential amplitudes: Research and clinical applications. American Journal of Clinical Hypnosis, 31, 22-27.**

Apparently conflicting findings in two recent studies of the effects of hypnotic hallucination on the P300 component of cortical event-related potentials are examined. In one study, Barabasz and Lonsdale (1983) found an increase in P300 amplitude in response to hypnotic anosmia instructions. However, Spiegel, Cutcomb, Ren, and Pribram (1985) obtained a decrease in P300 amplitude after instructing high hypnotizables that an imaginary cardboard box blocked their view of the stimulus generator. These differences are reconciled on the basis of differences in the hypnotic instructions given. The former study employed language which emphasized negation ("You will not smell anything at all"), while the latter had subjects focus on a competing obstructive hallucination. The anosmia subjects were surprised when they smelled anything at all, leading to an enhanced P300 response, while the subjects in the visual study were so absorbed in the hallucinated obstruction that perception of the stimulus was reduced. Clinical implications of these two studies are examined.

**1985**

**Meszaros, Istvan; Banyai, Eva I.; Greguss, Anna C. (1985). Evoked potential correlates of verbal versus imagery coding in hypnosis. In Waxman, David; Misra,**

Prem C.; Gibson, Michael; Basker, M. Anthony (Ed.), Modern trends in hypnosis (pp. 161-168). New York and London: Plenum Press.

In our previous works it has been demonstrated that late components of midline evoked potentials recorded in the associative cortical areas do reflect significant modifications of selective attention caused by hypnosis. More and more data can be found in the literature indicating that subdominant hemispheric functions--significant in imagery coding--are more expressed in hypnosis as compared to the waking state. The purpose of the present experiment was to study how the motor reactions and the bilaterally recorded evoked potentials reflect the hypnotic modifications in processing visually exposed vs. imagery commands. A warning tone signal was followed by a tachistoscopically exposed verbal or imagery command to push a button either by the right or the left hand, according to the content of the command. Correct and incorrect responses and their reaction time were recorded together with the registration of EEG, EMG, ECG, EOG and evoked potentials in frontal, central, and occipital right and left monopolar leads. The alterations of the motor responses and of the negative evoked potential peak appearing with 120 ms latency and of the positive peaks with 200 and 300 ms latencies showed characteristic differences as functions of verbals vs. imagery task (i.e. dominant vs. subdominant hemispheric processing) as a result of hypnosis.

Spiegel, David; Cutcomb, Steven; Ren, Chuan; Pribram, Karl (1985). Hypnotic hallucination alters evoked potentials. Journal of Abnormal Psychology, 94 (3), 249-255

Brain electrical potentials evoked by visual stimulation were analyzed to study the neurophysiological mechanism associated with hypnotic hallucination. The visual evoked responses of 6 high- and 6 low-hypnotizable subjects were compared in three hypnotic conditions: stimulus enhancement, stimulus diminution, and stimulus elimination (obstructive hallucination). High-hypnotizable individuals demonstrated significant suppression of the later components of the evoked response (N1 and P3) while experiencing obstructive hallucinations, indicating a change in information processing. This effect was significantly greater in the right, as compared to the left, occipital region.

#### NOTES

1:

In the stimulus enhancement condition, Ss were told that one of two colored stimuli would appear unusually bright and interesting. In the stimulus diminution condition, Ss were told that the alternate color stimulus would appear drab, dull, uninteresting. In the obstructive hallucination condition, Ss were told to visualize a box that blocked their view of the TV monitor, making it impossible to see anything on the TV screen. The stimuli were 8 cm x 8 cm squares (colored gratings) presented 1 meter in front of S: 50% were blue vertical gratings, 50% were pink horizontal gratings.

Ss were told to press a button in response to any stimulus they happened to see; hence all stimuli were potential targets. To control for the effect of motor potentials

when they pressed the button, a button-pressing/passive-attention control group was added. Only results significant beyond this control group were attributed to a hypnotic hallucination effect. A second control group of medium level hypnotizable Ss were required to (a) button press after each stimulus presentation and (b) attend passively to the TV monitor screen without button pressing. "Thus, we had three control conditions: (a) for attentional demands, comparing the performance of high hypnotizables in the obstructive hallucination versus the hypnotic stimulus enhancement condition, (b) for hypnotizability, in comparing the high hypnotizables in the obstructive hallucination condition versus the low hypnotizables in the same condition, and (c) for button-pressing behavior, comparing the performance of the high hypnotizables to that of control subjects in press versus no-press conditions" (p. 250).

In their discussion, the authors state, "Our results are consistent with the hypothesis that an hypnotic instruction of obstructive hallucination among high- hypnotizable subjects is accompanied by a decrease in the amplitude of the P3 component of the evoked response throughout the brain, and of the N2 and P3 components in the occipital region. This dampening of amplitude is particularly notable among high hypnotizables in the right, as compared with the left, occipital area, suggesting greater inhibition of scalp-recorded response to a visual stimulus in the right hemisphere.

"These data show that while experiencing an obstructive hallucination blocking the stimulus, high-hypnotizable subjects demonstrate a change in the information-processing components of the evoked response (Baribeau-Braun, Picton, & Gosselin, 1983), rather than primarily in channel selection, which is reflected more by P1 and N1 (Ford, Roth, Dirk, & Kopell, 1978; Hillyard & Picton, 1979). Although there were differences at P1 and N1 between high and low hypnotizables, they were not significantly greater than those observed in the press/no-press control group. These observations make it possible to address several alternative explanations for the findings, such as the possibility of differences in nonspecific arousal leading to a differential preparation (Naatanen, 1969), which should be reflected primarily in changes in the early components, as would any differences in pupil size. Drowsiness or inattention in this condition should be associated with an increase, rather than a decrease, in response amplitudes (Schacter, 1976). The possibility that high hypnotizables might have defocused their view of the monitor (Schulman-Galambos, & Galambos, 1978) is made less likely by the fact that defocusing is accompanied by increases in P1 latency (Sokol & Moskowitz, 1981), whereas there were no P1 latency differences in the obstructive hallucination condition" (p. 254).

1984

Hogan, Marjorie; MacDonald, John; Olness, Karen (1984). Voluntary control of auditory evoked responses by children with and without hypnosis. American Journal of Clinical Hypnosis, 27 (2), 91-94.

Reports ability of children to voluntarily change brainstem auditory evoked responses (BAER). Fifteen children were studied. Both control and hypnosis groups showed changes in interwave latencies after verbal suggestions when compared to a

normal control group. These findings suggest that children may be able to modify peripheral auditory input into the brainstem through simple suggestion alone. Children in the formal hypnosis group did have more specific control for the task suggested. However, it is possible that children in the control group moved into an altered state of consciousness after listening to a taped story, reading a book, or spontaneously. They may have attained the observed changes in BAER while in a hypnosis-like state. This study encourages additional research in self-regulatory skills of autonomic processes in children.

1983

Barabasz, Arreed F.; Lonsdale, Christopher (1983). Effects of hypnosis on P300 olfactory-evoked potential amplitudes. Journal of Abnormal Psychology, 92 (4), 520-523.

From a sample of 93 undergraduates, 4 high- and 5 low-hypnotic susceptibility (the Stanford Hypnotic Susceptibility Scale: Form C) Ss were exposed to a waking condition and a hypnotic induction condition that included a suggestion for anosmia. ANOVAs of the P300 showed significant amplitude increases for weak and strong odors for high-hypnotizable Ss in hypnosis, but not for high-hypnotizable Ss in the waking state. No such amplitude increases were found for the low-hypnotizable ss

Nash, John (1983). Negative visual hallucination and concomitant changes in cortical event-related potentials (Dissertation, University of California, Santa Barbara). Dissertation Abstracts International, 45 (2), 716-B. (Order No. DA 8411224)

The purpose of this investigation was to examine the effects of negative visual hallucination (NVH) on cortical event-related potentials (ERPs), and to compare these effects with those of selectively attending to and ignoring stimuli. Five highly hypnotically susceptible subjects, four female and one male, were trained to block from subjective experience, i.e., negatively hallucinate, a ring of strobe-illuminated circles surrounding a central, independently strobe-illuminated circle. This stimulus array was modeled after part of the Titchener-Ebbinghaus circle illusion, since previous research had shown that subjects could attenuate the effects of the optical illusion via NVH of the outer, illusion-producing circles. "Analysis of the ERP data revealed amplitude and latency changes in various ERP components across the three experimental conditions (Attend, Ignore, NVH) for the four female subjects, a negative result which is explained in motivational terms. "The most noteworthy finding was the selection of the P3 amplitude variable at C2 by stepwise discriminant analysis for the four females, and the fact that this amplitude systematically decreased across conditions from largest in Attend to smallest in NVH. A variety of individual patterns were observed in terms of other ERP components which allowed discrimination (successful classification) among the three conditions. The results suggest that both Ignoring and NVH of a stimulus result in a decrease in the subjective certainty of perception of the stimulus. Individual

differences in patterns of ERP changes are interpreted in terms of differing strategies for execution of the experimental instructions. The results support the view that NVH instructions produce distinctive ERP effects and that NVH generally can be viewed as an extreme level of ignoring" (p. 716).

1982

Cutcomb, Steven Donald (1982, May). Studies in the brain correlates of human cognitive function (Dissertation, Stanford University). Dissertation Abstracts International, 42 (11), 4609-4610-B.

Three studies in the electrophysical correlates of human cognitive function are described. In study one, colored gratings were presented tachistoscopically to humans in two selective attention paradigms based upon the design of Hansen and Hillyard (1980), and Hillyard, Hink, Schwent, and Picton (1973). Visual event-related potential (ERP) data from Fz, Cz, Pz, T5, T6, O1, and O2, and behavioral responses were collected, and averaged ERPs were subjected to feature extraction (P1, N1, P2, N2, and P3 amplitudes and latencies) as well as a principle components factor analysis. Both analyses revealed as a significantly larger N2 component in the visual ERP, peaking at 310 msec and maximally frontally, during attending to task-relevant (attended-channel) stimuli. The P3 component was significantly larger in response to all attended-channel stimuli. In study two, the task was repeated using a group of six high and six low susceptible subjects during hypnosis. ERPs from Fz, Cz, Pz, O1, and O2, and behavioral responses were recorded during the task, and during a hypnotic suggestion of a negative hallucination (obstructed view of the stimulus monitor) while the stimuli were presented. The averaged ERP data was subjected to feature extraction followed by analyses of variance. No inter-group differences were found in the ERPs during the selective attention tasks. "During the obstructed view suggestion, the lows showed a normal visual ERP, while the highs had a visual ERP with a significantly diminished P1, P2, N2, and P3 component amplitude at O1 and O2. These results are evidence for an altered brain response during the obstructed view suggestion in high susceptible hypnotized subjects. "In study three, EEG were recorded from twelve high and twelve low susceptible hypnotic subjects (frontal, central, occipital) during baseline and hypnotized conditions. Data were transformed to normalized theta and alpha-band power spectral averages for each group. No significant inter-group alpha differences were found. Highs had significantly more relative theta energy frontally. During hypnotic tasks, the highs showed higher relative theta power at all leads. These results are consistent with the trait conception of hypnotic susceptibility" (pp. 4609-4610).

1981

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the

**Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.**

## **NOTES**

**1:**

**Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.**

**Experiment 1. Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.**

**The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15, 16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.**

**The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.**

**Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments.**

In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

Experiment 2. The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

Results. "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a consistency of responses over experimental sessions that were widely separated in time, making conscious or unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

N.B. None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

Zakrzewski, Kajetan; Szelenberger, Waldemar (1981). Visual evoked potentials in hypnosis: A longitudinal approach. International Journal of Clinical and Experimental Hypnosis, 29 (1), 77-86.

Visual Evoked Potentials (VEP's) were recorded in 5 healthy 20-24 year-old-females during hypnosis, hypnosis after the suggestion of blindness, and in 3 waking conditions. VEP's were recorded in these conditions 10 times within each S on different days. Both within-Ss and between-Ss analyses showed a tendency of VEP N-250 latencies (and possibly also amplitudes) to increase in hypnosis when compared to the waking state. Overall, these changes tended to be rather small. No changes were found in the earlier VEP waveform components, and some tendencies noted in the later P-300 component were largely nonsignificant. Decrease in N-250 amplitudes after the hypnotic suggestion of blindness was significant for the whole group, but was difficult to interpret, since amplitude in this condition was not significantly different from the wake control condition N-250 amplitude.

The results are considered preliminary, and a few possibilities of confirming and/or explaining them using somewhat more stringent methodology are discussed. The within-Ss approach is recommended for future studies of evoked potentials in hypnosis.

1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, 133 (3), 161-169.

The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding S2 differed only after the most intense S1. Hypnotic suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

Rizzo, Paolo Andrea; Amabile, Giuseppe; Fiumara, Romano; Caporali, Manlio; Pierelli, Francesco; Spadaro, Maria; Zanasi, Marco; Morocutti, Cristoforo (1980). Brain slow potentials and hypnosis. Biological Psychiatry, 499-506.

NOTES

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SUMMARY. Contingent negative variation behavior was studied in 12 voluntary normal subjects in basal conditions and in the hypnotic trance state under different emotional suggestions. A CNV voltage decrease and the appearance of a PINV were observed in the hypnotic state. Furthermore 12 nonhypnotizable control subjects were tested under the same experimental conditions and no CNV modification was found" (p. 505).

1978

Parwatarikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon

experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet- induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro- stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

1975

Saletu, B.; Saletu, M.; Brown, M.; Stern, J.; Sletten, I.; Ulett, G. (1975). Hypno-analgesia and acupuncture analgesia: A neurophysiological reality?. Neuropsychobiology, 1, 218-242.

The effects of hypnosis, acupuncture and analgesic drugs on the subjective experience of pain and on objective neurophysiological parameters were investigated. Pain was produced by brief electric stimuli on the wrist. Pain challengers were: hypnosis (induced by two different video tapes), acupuncture (at specific and unspecific loci, with and without electrical stimulation of the needles), morphine and ketamine. Evaluation of clinical parameters included the subjective experience of pain intensity, blood pressure, pulse, temperature, psychosomatic symptoms and side effects. Neurophysiological parameters consisted of the quantitatively analyzed EEG and somatosensory evoked potential (SEP). Pain was significantly reduced by hypnosis, morphine and ketamine, but not during the control session. Of the four acupuncture techniques, only electro- acupuncture at specific loci significantly decreased pain. The EEG changes during hypnosis were dependent on the wording of the suggestion and were characterized by an increase of slow and a decrease of fast waves. Acupuncture induced just the opposite changes, which were most significant when needles were inserted at traditional specific sites and stimulated electrically. The evoked potential findings suggested that ketamine attenuates pain in the thalamo-cortical pathways, while hypnosis, acupuncture and morphine induce analgesia at the later CNS stage of stimulus processing. Finally some clinical-neurophysiological correlations were explored.

1960

Hernandez-Peon, R.; Dittborn, J.; Borlone, M.; Davidovich, A. (1960). Changes of spinal excitability during hypnotically induced anesthesia and hyperesthesia. American Journal of Clinical Hypnosis, 3, 64. (From 21st International Congress of Physiology, Buenos Aires, 1959, pg. 124, Abstracts)

Although hypnosis is well established, the physiological mechanisms of the hypnotic state and their related sensory phenomena are far from clear. Hernandez-Peon and Donoso have found that the magnitude of photic evoked potentials in the optic radiations of awake human subjects changed in response to previous verbal suggestions concerning the intensity of the expected photic stimulus. This striking observation led the cited authors to propose that certain hypnotic sensory phenomena might be explained, at least partially, by changes occurring as far down as second-order sensory neurons by centrifugal mechanisms controlling the sensory input to the brain. In the intact subject it is impossible to record uncontaminated electrical indexes of afferent impulses from those lower sensory neurons. However, it is possible to gain indirect evidence of tactile sensory inflow to the spinal cord by recording cutaneous reflexes. In young males, a forearm skin reflex evoked by a single square pulse of 0-.1 msec. duration was recorded with cathode-ray oscilloscope. The amplitude of the evoked potentials was often reduced during the hypnotic state, and it was further reduced by verbally suggesting to the hypnotized subject complete anesthesia of the forearm. Reciprocally, during hypnotically suggested hyperesthesia the cutaneous reflex was enhanced. It is concluded that during hypnotic anesthesia and hyperesthesia excitability changes occur at the spinal level, and it is suggested that these changes probably involve the spinal internuncial system interposed between the dorsal root ganglion cells and the motoneurons. (From Abstracts, 21st Internat. Cong. Physiol., Buenos Aires, 1959, p. 124.)

## EXPECTANCY/ATTRIBUTION

1995

Kirsch, Irving; Lynn, Steven Jay (1995). The altered state of hypnosis: Changes in the theoretical landscape. American Psychologist, 50 (10), 846-858.

Presentations of theories of hypnosis in scholarly and introductory texts portray the field as dominated by two warring camps, variously referred to as state and nonstate or as special process and social psychological. Current issues and theories in the hypnosis literature are examined. In the process, we seek to dispel the myth that hypnosis theorists can be grouped into two camps. Although there is considerable controversy about the nature of hypnosis, no issues separate all so-called special process theorists from all social psychological theorists. Instead, virtually all substantive differences between theorists cut across this apparent distinction. Furthermore, the positions taken on many of the important issues dividing the field can no longer be portrayed as simple dichotomies, such as state versus nonstate or trait versus situation. Positions on these issues can more

accurately be described as points on a continuum. We conclude by drawing attention to specific questions and issues that remain unresolved.

1994

Atkinson, Richard P. (1994). Relationships of hypnotic susceptibility to paranormal beliefs and claimed experiences: Implications for hypnotic absorption. American Journal of Clinical Hypnosis, 37, 34-40.

This study examined the relationship of hypnotic susceptibility level to belief in and claimed experience with paranormal phenomena. The Harvard ... and the Inventory of Paranormal Beliefs and Experiences [developed for this study] were administered on consecutive days to 43 undergraduate students (14 men, 29 women) ... . a significant multiple correlation was obtained ( $r = .55, p < .001$ ). A partial correlation between hypnotic susceptibility and belief in paranormal phenomena was also significant ( $r = .53, p < .001$ ), while hypnotic susceptibility was not found to be significantly related to claimed paranormal experiences. Implications of these relationships for the role of absorption in hypnosis are discussed.

#### NOTES

Discusses relationship to Absorption, and the fact that Labelle, Dixon, Laurence, & Nadon (1990) got correlation of hypnotizability with paranormal experience

Martin, D.; Tomak, J.; Lynn, S. J. (1994, October). Detecting simulation with the hypnosis simulation index. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Orne described demand characteristics of the hypnotic situation, such that some Ss want to either deceive the hypnotist or to please the hypnotist or to help the experiment work. To separate essence of hypnosis he devised an experimental technique, which informs S to role-play, and tells them intelligent Ss will be able to do this. Sheehan & McConkey note that though the model specifies subjective experience, it lacks a way of determining if people are truthful.

We developed a scale assuming hypnotized Ss would be truthful and wouldn't say they had experiences they didn't, but that simulators would exaggerate. The scale included events plausibly reported by highs but not widely reported.

The scale has 31 items, and is titled the Hypnotic Experience Scale. It has 24 items for experiences during hypnosis, 5 for experiences after hypnosis, and 2 for how deeply hypnotized they felt and what kind of hypnotic subject they thought they were.

Ss participated in 2 sessions. They had the Harvard group scale in the first, and simulation instructions in second session. Simulation instructions were read to Low and Medium subjects. To encourage Ss to keep eyes closed, they were told it was essential to keep their eyes closed. We had scores on:

Hypnosis Simulation Index

SCL 90

## **DES**

### **Tellegen Absorption Scale**

**Highs did not receive any simulation suggestions. Then the Stanford Scale was administered. Highs and Simulators had to pass at least 9 Harvard items.**

**Of the predictors, only the Hypnosis Simulation Index discriminated. It correctly classified 94% of the Ss. To eliminate non-useful items, a stepwise discriminate analysis was performed. 15 items remained. These 15 items were used in a series of analyses. They discriminated between the 2 groups from 100% to 70% of the time.**

**This study is the first to successfully discriminate hypnotized from dissimulating subjects. Simulators' performance indicate they tend to respond in stereotypic ways that exaggerate how hypnotized Ss respond. Hypnotized Ss who passed more than 10 items only rated themselves as average on hypnotizability.**

**This has potential applications in forensic situations.**

## **1993**

**Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.**

**This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.**

**Council, James R.; Grant, Debora L. (1993, October). Context effects: They're not just for hypnosis anymore. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL**

## **NOTES**

**Context effects in Absorption research are found in correlations, not in mean differences. Original paper has been replicated and yet results are not always significant. Now we are trying to generalize the effect to other areas: an individually administered measure will influence other measures made in the same session.**

**Other tests that correlate with hypnosis are studied with 2 x 2 design, enabling order effects and same vs separate contexts to be studied. Or two tests are administered at two points in time, with "bridges" between the two sessions (e.g. same experimenter, same consent forms, etc.) As one adds more and more bridging cues, the correlation of Absorption with other Tellegen MPQ subscales increases.**

**Same context assessment increases correlation between hypnotizability and 6-8 other scales; with childhood trauma scale when trauma scale is administered first;**

with beliefs in paranormal phenomena when the measure is related to an adjustment scale. The same inflation of correlations was found in Beck Depression scale research.

These results are of concern because we may have to re-do a lot of personality research that suggested correlation between personality test variables, as the correlations may be inflated by the effects of testing in the same context.

Gearan, Paul; Kirsch, Irving (1993). Response expectancy as a mediator of hypnotizability modification: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41 (2), 84-91.

The role of response expectancy in bringing about increases in hypnotic susceptibility by use of the Carleton Skill Training Program (CSTP) was assessed with 27 subjects selected for their low hypnotizability scores. Subjects were randomly assigned to one of two conditions: 13 received the CSTP to increase their hypnotic susceptibility, and 14 received no training. In addition to assessing hypnotizability, hypnotic response expectancies were assessed before and after training. With pretreatment hypnotizability controlled, subjects in the training group scored significantly higher than control subjects on all self-report measures of hypnotizability but not on a measure of observed behavioral response. Changes in response expectancy were found to be highly correlated with changes in hypnotizability. With changes in expectancy controlled, no significant differences between the trained and control groups were found.

Morgan, William P. (1993, October). Use of hypnosis in exercise and sport psychology. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Performance of exercise is rated as equal effort with hypnosis and waking conditions; but with hypnotic suggestion they will perceive it as more or less effortful (uphill exercise vs going down the hill). When they think they are going up hill both cardiac and respiratory response increase physiologically, with catecholamine differences.

Mitchell (1981) suggests that respiration changes with exercise do not result from muscle feedback, but that central motor brain signals go to both the cardiovascular centers and to exercising muscle. Actually, it appears that both muscle and cortex give signals, and their synergy governs whether ventilation or heart rate increase.

Wang & Morgan, Psychophysiological responses to imagined exercise, Sport Psychology Lab, University of Wisconsin-Madison. Reported that both external (watching someone else) and internal (imagining oneself) visualizing give responses similar to actual exercise.

We have done research on the prediction of respiratory distress (dyspnea) - work we have done with fire fighters. The best predictor of this on treadmill with air supply is trait anxiety. Sometimes the firefighters who took off face mask even though they had air did not know why they did. It is an opportunity to use hypnotic age

regression. SCUBA divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

For active people and athletes there is an "iceberg" profile on the POMS, below average on tension, depression, anger, fatigue, and confusion, but higher on vigor. But the divers who panic have a flat profile, around the 50th percentile on all POMS scales.

Middleman et al used Navy divers in 25 degree C. water and used hypnosis to increase and decrease their body temperature--one of the best papers on the topic. Ss who were best able to use imagery, to think of a beach, had the poorest responses; the ones who could relax did poorest, because shivering produces heat and keeps you warm. It is opposite of what is needed.

In our work, we took 5 highest and 5 lowest anxiety Ss; the latter had higher rates of respiration than the former.

All Ss are similar in oxygen use whether volunteers or not. When people volunteer for research before they know hypnosis will be used, the males are lower than females [on hypnotizability?] when they finally volunteer. [He presents a lot of different tests on which volunteers do not differ from nonvolunteers personality wise.]

Ikai & Steinhaus is a classic study of Disinhibition of Inhibitory Mechanisms. Taking Ss up to their maximum (in weight training) to a plateau, Ikai & Steinhaus said this is a pseudomaximum. They showed that strength increases if - you fire a starter pistol behind them - you ask them to shout just as they do it - they have alcohol - they have amphetamine sulfate - they have hypnosis It is disinhibition of the inhibitory mechanisms.

[He referred to the book Mind of the Marathoner.]

In Tibet an anthropologist was amazed to see a man running into their camp, and he ran straight through--a monk carrying messages. He created a non-cultic form of meditation in the laboratory (trained to visually "fix" on mountaintop, to have respiration in synchrony with locomotion, and to use a pseudo mantra "down" each time they put their foot down). Placebo condition was used also. Ss were tested by blinded lab assistants. Endurance time increased from 16 minutes to 20, while controls decreased a minute.

Now we can predict who will win a race. Elite runners do not dissociate; they use association strategy. They pay close attention to race strategy, they monitor themselves constantly (they slow down when they feel bad), and attempt informally to stay loose, not get tight, and relax. Dissociation has, however, been used for the last 300 meters of a marathon (New Zealander Dixon).

Dixon, Michael; Laurence, Jean-Roch (1992). Two hundred years of hypnosis research: Questions resolved? Questions unanswered!. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 34-66). New York: Guilford Press.

NOTES

These notes summarize only that part of the chapter concerning nonvoluntary behavior (pp 38-39; 58-61).

The concept of 'nonvolition' has been and continues to be an important issue in hypnosis research. The concept pertains to the "subjective report that the hypnotic suggestion is enacted without the subject's conscious and willful participation" (p. 38). When hypnosis was attributed to a magnetic fluid, in the days of Mesmer, the issue did not arise (because of course a person would not have control over something that happened to them physically). However, when hypnosis came to be considered a psychological phenomenon, the issue of how a behavior could be the result of motivated action and yet not perceived as being under conscious influence became important. In 1819 Faria wrote that the nonvolition paradox is due to the hypnotized subject's tendency to misattribute the source or reason for one's behaviors; he noted that successful suggestions depended upon the subject falsely attributing to the hypnotist the power to influence them. From that point forward, circular reasoning was used to state that one is hypnotized if one experiences their behavior as nonvolitional, and nonvolitional behavior signifies that a person is hypnotized.

"The observation of the seemingly complete automaticity of response in the highly hypnotizable subject led Liebeault in his 1866 book (followed later on by Bernheim and Liegeois) to describe these subjects as 'puppets' in the hands of the hypnotist. This was a quite unfortunate statement, since it would lead to one of the fiercest legal debates surrounding the use of hypnosis in the last 20 years of the 19th century (Laurence & Perry, 1988). ...

"The most prominent author (if not the only one) who attempted to tackle this difficult question was Pierre Janet, who would make the investigation of automatisms the basis of his theory of hypnosis, rather than suggestion or suggestibility. This theoretical orientation is best exemplified by his concept of desagregation psychologique seen in some psychopathologies, or the carrying out of a posthypnotic suggestion in the normal individual (Janet, 1889; see also Ellenberger, 1970; Perry & Laurence, 1984; Prevost, 1973). Nonetheless, until the end of the 19th century, and for a good part of the 20th century, these reports of nonvolition were thought to be the end result of some neurological changes happening during hypnosis--an idea that has not been substantiated by contemporary research." (pp 38-39)

Reports of nonvolition are explained as due to dissociation by Hilgard, or as the results of misattributing the origins of behaviors and experiences by Spanos and by Lynn. Neodissociationists like Hilgard regard misattribution to be a cognitive alteration, mainly an internal triggering mechanism, while social psychologists like Spanos and Lynn regard the misattribution to be the results of situational demands and therefore an external triggering mechanism.

"Regardless of one's preferred metaphor, the issue of nonvolitional reports remains at the core of an integrated view of hypnosis and hypnotizability. The question remains as follows: By which mechanisms does this occur, and how can we predict a priori who will report involuntariness and under what circumstances? Whereas dissociationists have emphasized general cognitive mechanisms and de-emphasized situational factors, social- psychological theorists have emphasized situational

variables and de-emphasized individual differences. Given the limitations of both approaches, emphasis will have to be placed not on their continued separation but on their integration, as more and more investigations demonstrate that they clearly interact with each other (see, e.g., Nadon, Laurence, & Perry, 1991)." (p. 60)

"At the height of the confrontation between the two French schools, hypnosis found its way into the legal arena. Following a series of criminal cases in which hypnosis had been allegedly involved, the two schools once again found themselves on opposite sides of the fence. For La Salpetriere, only those who had a propensity toward criminality (and hystericals were prime candidates) could be the victims of hypnosis. For the Nancy school, in highly responsive individuals suggestions could lead to criminal behavior. Unfortunately for the Nancy school, it soon became evident that the concept of suggestion was not sufficient in explaining the questions raised by the courts, and Bernheim was forced to recognize that in cases where suggestions had played a role, other dispositional and situational factors were probably more important in the genesis of the reprehensible behaviors. His espousing a too extreme position meant that the baby was thrown out with the bathwater. History may indicate that the same fate is now awaiting contemporary theoretical positions that adopt an extreme stance vis-a-vis the phenomenon of hypnosis" (p. 61).

1992

Giolas, M. H.; Saners, B. (1992). Pain and suffering as a function of dissociation level and instructional set. Dissociation, 5, 205-209.

48 female student Ss who scored above 20 on the Dissociative Experiences Scale and 48 subjects scoring below 20 on the DES were compared for response to ischemic pain. Experimental conditions included (1) a group imagining their arm becoming numb and insensitive, (2) a distraction group focusing on their breathing, and (3) a control group with no instructions. Subjects rated pain at one-minute intervals for the sensory experience of pain and for suffering (the emotional experience). The procedure was ended at subject's request or after 20 minutes. Across all conditions, the high dissociative group tolerated pain significantly longer than low dissociatives. Analysis revealed lower suffering ratings for high dissociators in the condition where, like in hypnosis, they imagined their arm numb. This is consistent with beliefs that during abuse in childhood the child learns to use imagination to reduce suffering.

Kvaal, Steven; Lynn, Steven Jay; Myers, Brian (1992, October). The Gulf war: Effects on hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

We did a study that follows the line that volunteers may differ from nonvolunteers for hypnosis experiments (Authors cite 3 studies, including one with Hilgard as later author; Brodsky; Zamansky). Also, Ss who volunteer early in the quarter at the

university are motivated for hypnosis; later volunteers want course credit. The former want to experience hypnosis.

Previously we did a study on authoritative vs permissive suggestions with Ss who volunteered early or late in the quarter; Ss were tested twice. For Ss who volunteered in first 2 weeks of the quarter, scores decreased across testing; for Ss volunteering late, scores remained stable across testing. This implies that if an experiment were conducted late in a quarter we would conclude that repeated testing has no effect; if done earlier, we would have concluded repeated testing decreases scores.

This result has been replicated. It is therefore important to run Ss across an entire quarter or year.

The present study differs from the foregoing study. It addresses the question: Do life events affect scores on the Harvard Scale? Do tension, uncertainty, etc. affect scores? Would they depress scores? Are scores reactive to environmental events?

On January 14 the U.S. issued an ultimatum to Iraq; that very day we administered a tape recorded version of the Harvard Scale of Hypnotic Susceptibility, preceded by the Tellegen Absorption Scale. The hypnotizability tests were self-scored for involvement and involuntariness. Tension throughout the day escalated, culminating with bombing 2 hours before the hypnosis screening. The graduate student announced war had started and told Ss they could leave if they wanted. All 52 Ss stayed!

Control group was 58 Ss tested at same time of the quarter, one year before (10 days into the quarter).

Analysis was by a 3 x 2 ANOVA. There was no main effect for time of testing, sex, or interaction for any measures on hypnotizability, or subjective involvement.

The Tellegen Absorption scale showed a significant timing x sex interaction: males on outbreak of war scored lower than all other groups (15 vs 21 or more for all other groups). Tensions had no effect on subjective or objective scores of hypnotizability. Thus the males were affected on the Absorption Scale by outbreak of war.

The fact the Tellegen Scale was more reactive suggests hypnotizability may be more stable than Absorption. Absorption might have been depressed because males were more upset by images of military services.

Little research has been conducted to examine the possible positive effects on hypnotizability of positive events in real life.

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

## NOTES

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for

**Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.**

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

Lyons, Larry C. (1992, October). Absorption and hypnotizability: Meta-analysis of studies to determine if contextual effects are important. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Correlations between hypnotizability and Absorption range from .20 to .40; Council et al. suggest the correlation between these variables is a context effect (expectancy). In our review there was no statistically significant difference between correlations

that were found in and out of context (.26 and .23, weighted means) in more than 40 studies with more than one correlation per study.

When Absorption was measured before hypnosis experience the  $r = .25$ ; after the hypnosis experience,  $r = .32$  (significantly different), which also was different from what context hypothesis would predict. Any context difference may be a function of length of time between the Absorption and hypnosis sessions.

Data does not support the context hypothesis. Measuring Absorption after hypnosis resulted in higher mean correlations with susceptibility. However, the magnitude of this relationship was small. Variation due to test reliability and small sample size are likely explanations of the differences in the magnitude of the correlations across studies. We also must consider scale reliability and sample error (samples less than 1000 have departures from the population correlation that are fairly large).

## CONCLUSION

We should construct confidence intervals around observed correlations and look at the overlap; don't look only at the significance of the difference between correlations.

Author is in the process of conducting a mail survey to obtain unpublished results on context effect.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.

In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to

be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.

**NOTES**

The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.

Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental of social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----  
----- False suggestion Group A Group B Group C  
Group D  
result (n=15) (n=15) (n=15) (n=15) -----  
-----

Accepted 12 6 7 3

Rejected 3 9 8 12 -----

----- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Oakman, Jonathan M.; Woody, Erik Z. (1992, October). Automaticity, the Stroop effect, and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

Builds on the first Dixon study of Stroop effect and hypnotizability, which presented stimuli too fast and also the probabilities of congruent/noncongruent stimuli were varied. Highs had more interference in all conditions, seeming to process with language more. It cast doubt on the use of strategies by highs. Measurement of hypnotizability outside the situation cast doubt on expectancy (social psychology influence) theories.

Automaticity refers to responses that seem effortless, fast, and require little attention. They propose that this characterizes hypnosis. Highly automatic behavior cannot be suppressed. Reading is automatic; color naming is not. The greater the automaticity factor, the more the Stroop effect. Automaticity relates to automatic movement in hypnosis.

Previous research on Stroop used visual tasks, while hypnosis is largely auditory. So we used identification of volume of a word presented over a speaker, plus the regular (visual) Stroop task.

The words "loud" or "soft" were presented as loud or soft in volume. Lows = 4 or lower; highs = 8 or more on Canadian test of hypnotizability, the Waterloo Group Form C.

[In the Visual Stroop?] Reaction Time was greater for incongruent than congruent stimuli for highs (almost statistically significant) but not lows. It is an 8 ms difference for highs.

The Auditory Stroop is very different for both groups; however highs did not show more difference in reaction time than lows.

Auditory and Visual Stroop tasks did not correlate. Waterloo hypnotizability correlated: .28 with Visual Stroop, .11 with Auditory Stroop.

Logan's theory about automaticity seems appropriate: automatization is a shift from using a strategy to relying on memory; inhibition of the automatic response is based on using a strategy instead of relying on memory. Lows may be very able to inhibit automatic processing when necessary; they are the interesting exceptions to the rule, because the Stroop has been a reliable finding in psychological research for years.

Page, Roger A.; Handley, George W. (1992). Effects of 'deepening' techniques on hypnotic depth and responding. International Journal of Clinical and Experimental Hypnosis, 40, 157-168.

The present study attempted to assess the effectiveness of commonly used deepening techniques and of surreptitiously provided stimulation on hypnotizability scores, in-hypnosis depth reports, retrospective realness ratings, and the Field Inventory of Hypnotic Depth (Field, 1965). High, medium, and low hypnotizables were assigned in equal numbers to 1 of 3 groups, each containing 54 Subjects. Controls were compared to Subjects receiving 2 deepening techniques or 2 suggestions for positive and negative hallucinations that were surreptitiously enhanced. Of the 4 dependent measures employed, the only significant different between groups related to a change in depth reports for the manipulation items themselves, leading to the conclusion that the effect of the techniques was at best minimal and transient. Some methodological and conceptual issues are also discussed.

Perry, Campbell (1992). Theorizing about hypnosis in either/or terms. International Journal of Clinical and Experimental Hypnosis, 40, 238-252.

The present paper addresses 3 issues raised by Coe (1992). First, it maintains that the "altered state" issue of the 1960s remains buried in current dichotomous classifications of hypnosis theories as involving either "special processes" or the social- psychological position. Given the current diversity of the field, it appears imprudent to classify theorizing in either/or terms; additionally, despite a history of using the term "altered state" in a circular way, it is not an inherently circular formulation. It can be used descriptively simply to point to the observation that some individuals in hypnosis report subjective alterations. A second issue broached concerns the metaphorical status of the term "hypnosis"; it is accepted as a

**misleading metaphor inherited from 19th century investigators such as Braid, Faria, Puysegur, and Liebeault. Provided that it is recognized that this metaphor refers to a "domain" (E. G. Hilgard, 1973) of characteristically elicited behaviors, no problem ensues in retaining this metaphor derived from nocturnal sleep. A subsequent discussion of current conceptualizations of hypnosis indicates considerable agreement among investigators; there is much consensus that hypnosis is an individual differences phenomenon, in which imagination may, in some individuals, become so intense and so vivid, as to take on "reality value," to the extent that a hypnotized person may have difficulty in distinguishing fantasy from reality. The S abilities of imagery/imagination, absorption, dissociation, and automaticity (which may be proved to be an index of dissociation) are proposed as being the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.**

**30 low hypnotizability Ss were administered the Carleton Skills Training (CST) program, while 8 were assigned to a practice group. Prior to treatment, an attempt was made to facilitate training by altering the ecological conditions of the laboratory. All Ss were tested immediately after treatment, and trained Ss were retested after 5-7 months. Immediate training gains were large and were comparable in magnitude to those routinely found at Carleton University. In addition, (a) trained Ss responded comparably whether screened once or twice, (b) practice alone did not enhance hypnotic performance, and (c) natural high hypnotizability Ss obtained significant larger Field Inventory of Hypnotic Depth (Field, 1965) scores than created high hypnotizables. Follow-up scores fell between scores posted at screening and immediately after training. Current findings are interpreted in the context of existing evidence concerning the CST program.**

#### **NOTES**

**(based on the Discussion) "Results from these two investigations (include Bates et al., 1988) challenge the claim that lasting changes have occurred in the ability of most trained Ss to experience hypnosis. With regard to the present findings, it is reasonable to wonder whether scores would have been even lower had follow-up data been gathered a few months later. In the only other published study to address the problem of maintenance, Spanos, W. P. Cross, Menary, and Smith (1988) found that after at least 9 months, trained Ss outscored low hypnotizability Ss who had never received training. Unfortunately, these investigators do not report comparisons between trained Ss' follow-up scores and either original screening or immediate posttest scores. The authors do report, however, that 20% of trained Ss obtained high scores at follow-up. Given that at least 50%, and as high as 80%, of Ss routinely score in the high range immediately after receiving the CST program at Carleton University, a follow-up figure of 20% implies that with time, the hypnotic performance of most trained Ss began to return to baseline levels.**

**"With regard to the subjective experience of trained Ss.... These results confirm previous findings by Bates & Brigham (1990) which indicated that the hypnotic experiences of CST graduates - even those who are the most responsive to the**

modification program - may not be comparable in all respects to those of untrained, high hypnotizable individuals" (pp. 237-238).

"The present study altered the context in which training occurred by increasing the salience of the laboratory; adding, repainting, carpeting, and redecorating experimental rooms; requiring Es to dress professionally; and temporarily attributing the CST program to Washington State University. When demand characteristics were arranged in this manner, training gains were of the same magnitude as those found at Carleton University and were much larger than those found in all prior replication studies. The apparent importance of contextual factors is underscored by findings reported by Bates et al. (1988), who manipulated demand characteristics in a systematic fashion and observed that Ss' responses to the CST program are moderated by the context in which training occurs. Given the important role that ecological variables have generally played in hypnosis research, it should come as no surprise that factors like these would affect attempts to modify hypnotic performance" (p. 238).

1991

Daglish, Mark R. C.; Wright, Peter (1991). Opinions about hypnosis among medical and psychology students. Contemporary Hypnosis, 8, 51-55.

A survey was undertaken of opinions about hypnosis among first year medical and psychology students at the University of Edinburgh. Data are presented on the effects of self-estimated hypnotizability and sex, on opinions about hypnosis. The results are compared with those from similar studies conducted in Australia and the USA. Overall, the surveyed population showed a similar level of knowledge about hypnosis to that found among the general public.

Grabowski, Karen L.; Roese, Neal J.; Thomas, Michael R. (1991). The role of expectancy in hypnotic hypermnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 193-197.

Previous research has yielded equivocal evidence of hypnotic memory enhancement. This study assessed effects of expectancy and hypnotizability on recall for videotaped material under waking and hypnotic conditions. Ss (n = 138) were informed of hypnotic induction either before (expectancy condition) or after (no expectancy condition) watching a videotaped enactment of a crime and completing an initial waking recall test (R1). Both groups then underwent hypnotic induction, and completed the test again (R2). Ss' raw recall scores were significantly greater under hypnotic than waking conditions, but this hypermnesia was not evident when scores were corrected for mere increase in rate of responding. Ss expecting later hypnosis scored significantly higher than Ss with no such expectations, but again, this difference was not evident in corrected scores. Hypnotizability of Ss was, however, related to corrected recall, with high hypnotizability Ss displaying the greatest increase in rate of responding from R1 to R2. No evidence for the hypothesized "suppression effect" underlying hypnotic hypermnesia was found.

Thus Ss tended to answer more questions on R2 but most of this increase was error. Moreover, high hypnotizability Ss displayed this pattern to a far greater extent than other Ss, indicating that they were more likely than others to increase the no. of responses made between tests.

The finding of an interaction effect between hypnotizability and corrected recall suggests that hypnosis does play some role in the hypnotic hypermnnesia described in the literature, possibly refuting the findings of several recent studies (e.g., Nogrady, McConkey, & Perry, 1986; Register & Kihlstrom, 1987). High hypnotizability Ss increased the number of responses made from R1 to R2 to a greater extent than other Ss. The lack of an interaction between hypnotizability and expectancy, however, fails to support the suggestion by Salzberg and DePiano (1980) that people of differing hypnotizabilities differ also in their susceptibility to demand biases.

As both Klazky and Erdelyi (1985) and Whitehouse et al. (1988) have noted, however, the use of hypnosis with witnesses of crimes may be useful if it can stimulate individuals to share uncertain recollections, perhaps providing otherwise unconsidered clues. The present data suggest that such guessing may also be increased by mere expectation of hypnosis. The value of forensic hypnosis may, therefore, be in part one similar to placebo: the simple notion of hypnosis placed in witnesses' minds may be sufficient to inspire useful leads.

Lynn, Steven Jay; Weekes, J. R.; Neufeld, U.; Ziuney, O.; Brentar, J.; Weiss, F. (1991). Interpersonal climate and hypnotizability level: Effects of hypnotic performance, rapport, and archaic involvement. Journal of Personality and Social Psychology, 60, 737-743.

Designed to extend research by McConkey and Sheehan, they tested 24 hypnotizable and 21 un hypnotizable Ss in high interpersonal/high rapport (including education about misconceptions about hypnosis, eye contact, and friendly self-disclosure) and low interpersonal/low rapport testing contexts. Overall, hypnotizable Ss were more responsive to hypnosis, rated the hypnotist more positively, and experienced greater involuntariness and archaic involvement than un hypnotizable subjects. However, results provide support for the hypothesis that low hypnotizable Ss are particularly sensitive to variations of the hypnotist's interpersonal behavior. Only low hypnotizable Ss' objective and subjective hypnotic performance on the SHSS, Form C, was enhanced by hypnotist behavior designed to optimize rapport. Hypnotizable Ss' behavior was stable across testing contexts.

Oettingen, Gabriele; Wadden, Thomas A. (1991). Expectation, fantasy, and weight loss: Is the impact of positive thinking always positive?. Cognitive Therapy and Research, 15 (2), 167-175.

Investigated the impact of expectation and fantasy on the weight losses of 25 obese women participating in a behavioral weight reduction program. Both expectations of reaching one's goal weight and spontaneous weight-related fantasies were measured at pretreatment before Ss began 1 year of weekly group treatment. Consistent with the hypothesis that expectation and fantasy are different in quality,

these variables predicted weight change in opposite directions. Optimistic expectations but negative fantasies favored weight loss. Ss who displayed pessimistic expectations combined with positive fantasies had the poorest treatment outcome. Expectation but not fantasy predicted program attendance. The effects of fantasy are discussed with regard to their potential impact on weight reduction therapy.

Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.

Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.

#### NOTES

Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).

This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).

The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that are similar to experiences reported by patients with verified electrical foci in the

temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."

Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid (n = 8) or invalid (n = 8). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, *Cortex*, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to

suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

Peterson, Patricia; Coe, William C. (1991, April). Negative sequelae to hypnosis: A function of expectations?. [Paper] Presented at the annual meeting of the Western Psychological Association.

#### NOTES

Researchers have theorized that the ways in which hypnotic subjects respond may result from their expectancies of the experience. If so, it seems likely that warning subjects of possible negative aftereffects before they are hypnotized could elicit subsequent reports of such effects.

Three groups of subjects were given varied expectancies prior to a hypnotic induction and scale: (A) a specific warning of a 50% chance of negative aftereffects, (B) a vague warning of negative aftereffects, and (C) no mention of aftereffects. Subjects later reported positive, negative, sleep related, and bodily change sequelae. The findings were in the expected direction in that Group A reported more negative sequelae than Groups B or C. However, Group C (the controls) also reported more negative sequelae and bodily changes than Group B. The inadvertent addition of a positive expectancy administered in the Group B scenario may have acted as a confound and caused that group's lower level of negative sequelae.

Reiss, Steven (1991). Expectancy model of fear, anxiety, and panic. Clinical Psychology Review, 11, 141-153.

The purposes of this article are to summarize the author's expectancy model of fear, review the recent studies evaluating this model, and suggest directions for future research. Reiss' expectancy model holds that there are three fundamental fears (called sensitivities): the fear of injury, the fear of anxiety, and the fear of negative evaluation. Thus far, research on this model has focused on the fear of anxiety (anxiety sensitivity). The major research findings are as follows: simple phobias sometimes are motivated by expectations of panic attacks; the Anxiety Sensitivity Index (ASI) is a valid and unique measure of individual differences in the fear of anxiety sensations; the ASI is superior to measures of trait anxiety in the assessment of panic disorder; anxiety sensitivity is associated with agoraphobia, simple phobia, panic disorder, and substance abuse; and anxiety sensitivity is strongly associated with fearfulness. There is some preliminary support for the hypothesis that anxiety sensitivity is a risk factor for panic disorder. It is suggested that future researchers

evaluate the hypotheses that anxiety and fear are distinct phenomena; that panic attacks are intense states of fear (not intense states of anxiety); and that anxiety sensitivity is a risk factor for both fearfulness and panic disorder.

Kihlstrom, John F.; McConkey, K. M. (1990). William James and hypnosis: A centennial reflection. Psychological Science, *1*, 174-178.

For William James, hypnosis was both an experimental technique for creating divisions of consciousness, and a laboratory model of naturally occurring disorders of awareness. James' treatment of consciousness in hypnosis presages contemporary interests in dissociation and implicit cognition, and underscores the role of the self in conscious mental life. At the same time, James recognized the complexity of hypnosis as an interpersonal process. In the end, James' views suggest how a rapprochement between the cognitive and social approaches to hypnosis might be achieved.

Kirsch, Irving (1990). Changing expectations: A key to effective psychotherapy. Pacific Grove, CA: Brooks/Cole. (Reviewed in American Journal of Clinical Hypnosis, *34*, 138)

#### NOTES

This is a clinical hypnosis textbook written from the perspective of a cognitive therapist, and based on response-expectancy theory. The author discusses how expectancy theory can account for results obtained with hypnosis, cognitive behavioral, and psychodynamic psychotherapy, as well as with psychopharmacology. The book draws heavily upon psychological research in psychotherapy as well as hypnosis, and discusses how therapists can mobilize patient positive expectations for change. Hypnotic responses are viewed as 'genuine' responses that subjectively are not perceived to be under voluntary control (similar to other classes of response behavior).

Lynn, Steven Jay (1990). Is hypnotic influence coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, *32* (4), 239-241.

#### NOTES

Unlike Levitt, Baker, & Fish (1990), Lynn, Rhue, & Weekes (Psychological Review, 1990 in press) concluded that nonvoluntary behaviors in hypnosis are similar to other spontaneous social behaviors (like conversational response to social stimuli). "Hypnotized subjects, like nonhypnotized subjects, act in terms of their aims, according to their point of view, and in relation to their interpretation of appropriate behavior and feelings" (p. 239).

"Research shows that hypnotizable subjects resist and even oppose suggestions as a function of their expectancies and perceptions about appropriate hypnotic behavior (Lynn, Nash, Rhue, Frauman, & Sweeney, 1984; Lynn, Snodgrass, Rhue, & Hardaway, 1987; Lynn, Weekes, Snodgrass, Abrams, Weiss, & Rhue, 1986; Spanos, Cobb, & Gorassini, 1985). In one study (Spanos et al., 1985), when subjects were

informed that deeply hypnotized subjects were capable of becoming involved in suggestions and simultaneously resisting them, subjects resisted 95% of the suggestions. When subjects were told that deeply hypnotized subjects were incapable of resisting suggestions, they passed the majority of suggestions. Thus, knowledge about what constitutes appropriate hypnotic role behavior is a reliable determinant of resistance, apparently more reliable than the monetary lures used by Levitt et al." (P. 240).

These studies by Levitt et al. only used behavioral measures of resistance and hypnotizability, and Ss' perceptions of the resistance instructor and hypnotist. "The ratings of global perceptions are, however, no substitute for measures of subjects' perception of the \_relationship\_. ... The failure to measure important variables relevant to the central dimensions of concern--coercion, compliance, involuntariness, and relational factors--precludes meaningful interpretation of the nonresisters' motivation and behavior" (p. 240).

As Orne (1959) has suggested, we should not attribute behavior in the hypnosis context to something unique to hypnosis (such as coercive influence), because other kinds of social context also constrain behavior, e.g. psychotherapy and psychology experiments, with coercive features. Therefore, it seems important in the future to compare the responses of hypnotized subjects with those of subjects in waking-imagination and hypnosis-simulating conditions. In addition to looking at their behavior, it is important to examine their own perceptions of their actions, given the complexity of the social situation entailed in hypnosis.

"Finally, there are statistical grounds to be wary of the authors' conclusions. They assert that 'relational factors in the hypnotic dyad influence hypnotic responsiveness,' yet in three of the studies (I, II, and IV), subjects' ratings of the hypnotist failed to discriminate whether they resisted or responded to the suggestion" (p. 241). Even where Study III was compared with Study II, the difference in the percentage of Ss who resisted failed to reach statistical significance. "In fact, across all studies, differences in overall resistance rates were not documented by statistical tests--despite procedural variations and differing monetary incentives. So contrary to authors' assertion, relational factors \_in the hypnotic dyad\_ generally had little bearing on resistance behavior. If anything, ratings of the resistance instructor had greater weight" (p. 241).

McCue, Peter A. (1990). Unsuggested effects in the hypnosis setting: Evidence of a special state?. British Journal of Experimental and Clinical Hypnosis, 7, 69-79.

Controversy still surrounds the traditional view that a special state ('hypnotic trance', 'hypnotic state' or simply 'hypnosis') arises in responsive subjects when they are exposed to hypnotic induction procedures. The existence of reliable unsuggested (spontaneous) effects would lend support to a special state interpretation of hypnosis, provided that such effects only tended to occur in hypnosis or self-hypnosis settings and provided that the possibility that they arose from inadvertent suggestion, cues in the situation or from subjects' knowledge of, or expectations about, hypnosis could be excluded. Several supposedly unsuggested effects are considered (e.g. increased 'primary process thinking', 'trance logic', and

literalness), but it is concluded that the evidence bearing on them does not provide strong support for a special state interpretation of hypnosis.

## NOTES

Increased suggestibility following a hypnotic induction procedure could arise from subjects' expectations: if subjects believe that they will respond better to suggestions if they are 'hypnotized', they may be less likely to respond if no induction procedure is administered. Further, hypnotic induction procedures themselves contain suggestions, and successful response to them may facilitate responsiveness to subsequent suggestions - not through the development of a special state of consciousness ('trance'), but through simple changes in subjects' beliefs and expectations. For example, take the case of a subject exposed to a hand levitation induction procedure: the hypnotist asks the subject to focus his or her attention on a spot on the back of one of the subjects hands. The hypnotist then suggests that the hand will feel light and will lift by itself towards the subject's face, whereupon the subject will enter a hypnotic trance. The subject might not realize that hand levitation can be experienced fairly easily by many people, and when his or her hand starts to lift, without any feeling that it is being deliberately lifted, he or she may infer that it is due to entering a trance. Believing that he or she is entering an altered state, the subject may interpret certain sensations, which actually result from sitting still and relaxing, as additional evidence that he or she has been 'hypnotized'. When given further suggestions, the subject may be less inclined to harbour negative, doubting thoughts and may be more likely to respond positively" (pp. 69-70).

"Hypnotic state theorists might argue that some people can readily 'slip into hypnosis' without the necessity of an induction procedure, but such reasoning threatens the 'special' quality of the presumed 'hypnotic state', i.e. if people can drift into and out of a 'state of hypnosis' in the course of everyday life, it has to be asked whether the presumed hypnotic trance state is anything other than an ordinary state of consciousness. If it is not, then the term 'hypnotic trance' or 'hypnotic state' is essentially redundant" (p. 70).

"It is conceivable that simply labeling a condition as 'hypnotic' may, in itself, facilitate 'primary process' material, i.e. if subjects believe that hypnosis entails dream-like experiences, their being exposed to a hypnotic induction procedure may constitute a tacit suggestion for such experiences" (p. 72).

McNally, Richard J. (1990). Psychological approaches to panic disorder: A review. Psychological Bulletin, 108 (3), 403-419.

Panic disorder has been the subject of considerable research and controversy. Though biological conceptualizations have been predominant, psychological theorists have recently advanced conditioning, personality, and cognitive hypotheses to explain the etiology of panic disorder. The purpose of this article is to provide an empirical and conceptual analysis of these psychological hypotheses. This review covers variants of the "fear-of-fear" construal of panic disorder (i.e., Pavlovian interoceptive conditioning, catastrophic misinterpretation of bodily sensations, anxiety sensitivity), research on predictability (i.e., expectancies) and controllability,

and research on information-processing biases believed to underlie the phenomenology of panic. Suggestions for future research are made.

Nilsson, Kayla Mae (1990). The effect of subject expectations of 'hypnosis' upon vividness of visual imagery. International Journal of Clinical and Experimental Hypnosis, 38, 17-24.

This study explored how the expectation of hypnosis and the expectation of relaxation affected the vividness of visual imagery. 63 Ss who volunteered for a visual imagination study were randomly assigned to 4 groups. Ss were administered the vividness subscale (VS) of the Vividness and Control of Imagery Scale twice. In the 3 experimental groups, expectations were varied during the 2 VS administrations. All 3 groups were presented with a relaxation exercise between VS administrations. In 2 groups, it was labeled "hypnosis," and in the third group it was correctly labeled "relaxation." A control group listened to a neutral tape between their VSs. All groups were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) after the 2 imagery tests. The results indicated that the vividness of visual imagery was significantly enhanced (equally) in the experimental groups but not in the control group.

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

#### NOTES

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NOTES: "A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense.

Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

1990

Rokke, Paul D.; Carter, Alice S.; Rehm, Lynn P. (1990). Comparative credibility of current treatments for depression. Psychotherapy, 27, 235-242.

Current treatments of depression were evaluated for credibility. Interpersonal, communication, self-control, cognitive, social skills, and relaxation placebo therapies were rated significantly more credible and efficacious than psychodynamic and activity-change therapies, which were rated significantly more credible than biological (drug) therapy. Implications were addressed.

#### NOTES

The authors presented the basic theoretical rationale and procedures associated with the nine therapies. They used the Beck Depression Inventory and the Eysenck Personality Inventory to investigate individual differences.

Subjects were 252 psychology students, 128 male and 124 female; 22% had previously sought counseling and 34% had previously been clinically depressed.

Jupp, J. J.; Collins, J. K.; Walker, W. L. (1989). Relationships between behavioural responsiveness to hypnotic suggestions and estimates of hypnotic depth following 11 sequential instances of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 17, 93-98.

Behavioral responsiveness to suggestions was assessed in an initial hypnosis session, and hypnotic depth was assessed in this session, followed by 10 weekly standardized hypnotic experiences. Correlations were calculated between behavioral responsiveness, initial and subsequent depth estimates, and between successive trance depth estimates. Levels of trance depth estimates were found to increase through weeks 1 to 11. Significant positive correlations were found between behavioral responsiveness scores and trance depth estimates to the fourth week but not beyond. Significant positive relations were found between successive estimates of trance depth except for the correlation between estimates for the fourth and fifth weeks. These results are discussed in terms of the estimates of trance depth being attributions from self-observations of behavioral responsiveness to hypnotic suggestions.

Ronnestad, Michael Helge (1989). Hypnosis and autonomy: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 37, 154-168.

The study focused on autonomy as a moderator variable in the prediction of subjectively reported hypnotic depth. Ss in the experimental part of the study were 56 undergraduate psychology and education majors classified as either high or low in autonomy. Ss who were equated on capacity for absorption were individually administered 1 of 3 hypnotic inductions: an authoritarian induction, a permissive hetero- induction, or a self-hypnosis induction. The study had a double-blind design.

The data suggest that situational manipulation has greater impact on low than on high autonomy Ss. Individual-difference variables such as absorption, have greater impact on hypnotic depth for high than for low autonomy Ss. The data indicate that the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. A factor-analytic inquiry of absorption confirmed the importance of affective/regressive capacity for hypnotic functioning for high autonomy Ss. The study supported the alternate-path perspective of hypnosis.

#### NOTES

There is very little research on autonomy and hypnosis. The authors cite studies showing only a modest relationship between hypnotizability and locus of control.

In this study, 176 students were assigned to the high autonomy group if they were in the upper 1/3 of two of 3 autonomy scales (Rotter's Locus of Control Scale, the Inner-Directedness Subscale of the Shostrom Personal Orientation Inventory, and the Autonomy subscale of Jackson's Personality Research Form) and not in the lower 1/3 of the third scale. Ss were designated as low autonomy if the obverse obtained. This procedure yielded 27 high and 29 low autonomy Ss.

Ss were hypnotized with one of three inductions: authoritarian with many motor items (Barber Suggestibility Scale), permissive with mostly imagery (Barber & Wilson's Creative Imagination Scale), or guided self-hypnosis with mostly imagery (taken from Fromm et al, 1981). After hypnosis, Ss rated their own hypnotic depth on a 1-10 scale, and their perception of E or the procedure as authoritarian and directive. Ss' attitude, expectations, motivation, and experienced effortlessness were measured. E rated Ss for pre-hypnosis rapport and post-hypnosis rapport.

The results indicated that there was no difference in hypnotizability level between high and low autonomy Ss. The correlation between effortlessness of experience and hypnotic depth was high for low autonomy Ss (.51) but not significant for high autonomy Ss (.12). In general the two groups were very similar in terms of mean scores on most variables. The differences appeared in the correlations between self-reported hypnotic depth and the other variables. For low autonomy Ss correlations were not significant between depth and pre-hypnotic variables (rapport-pre, absorption, expectation) but for highs the same correlations were significant (rapport-pre .47, absorption .54, expectation .48).

But for post-hypnosis variables, low autonomy Ss had significant correlations between depth and the two variables measured from post-hypnosis interviews (perceived authoritarian/directiveness .40, effortlessness .51) and the highs did not have significant correlations. The multiple correlation between these variables and depth was  $R = .28$  for low autonomy Ss (with no contribution from rapport-pre) and  $R = .72$  for high autonomy Ss, with absorption contributing most. The more they perceived the induction as authoritarian or directive, the greater depth reported by low autonomy Ss. Although low and high absorption Ss did not differ on the Absorption Scale, absorption predicted hypnotic depth better for the highs.

The author divided the Absorption Scale into four rational factors: Affective/Regressive, Perceptual/Cognitive, Dissociative, and Mystical. Low and high autonomy Ss scored at approximately the same level on these categories, but

correlations between these categories and depth for low and high autonomy Ss were somewhat different. (See Table.)

#### **Correlations between Categories of Absorption and Hypnotic Depth for Low and High Autonomy Ss**

**Absorption Low Autonomy High Autonomy All Ss Category r r r**

**Affective/Regressive .14 .56\*\* .33\*\* Perceptual/Cognitive .25 .33\* .29\* Dissociative .32\* .57\*\* .47\*\* "Mystical" .07 .16 .11**

In their discussion, the authors note that one might assume that high autonomy Ss would be less affected by variations in hypnosis procedures than low autonomy Ss. The differences found in depth scores for these two groups were supportive of this expectation. "Fluctuations in subjectively reported depth scores for low autonomy Ss only, clearly suggest autonomy to be a moderator variable" (p. 163).

Moreover, the results indicate "that high autonomy Ss in comparison to low autonomy Ss are more likely to express their inner dispositions, such as absorption and expectation, in the hypnotic setting. High autonomy Ss may be more reflective of and attuned to individual predisposing characteristics and less influenced by situational demands. ... the hypnotic behavior of high autonomy Ss is more likely to be self- congruent and less likely to be demand-congruent. Low autonomy Ss, however, are more likely to be demand congruent and less likely to be self-congruent. The latter finding was suggested both by the significant F ratio for low autonomy Ss across treatments, and also by the stronger relationship found for this group between depth and how authoritarian/directive they perceived the procedure to be" (p. 163).

[Paradoxically, among low autonomy Ss an authoritarian approach yields less depth but greater suggestibility (higher hypnotizability scores).] "The tendency for low autonomy Ss to have a higher behavioral score on the authoritarian procedure is consistent with Tellegen's (1979) assumption that there are two pervasive dimensions in current hypnotizability measures--a compliance dimension and a true hypnotic responsiveness dimension. According to Tellegen, motor items may be more saturated with compliance, while cognitive items may be more saturated with true hypnotic responsiveness. The BSS has a motor emphasis, and the higher behavioral scores for the low autonomy group of Ss may be interpreted as an expression of compliance.

"In addition to the inner-directedness and self-congruence hypothesis of why autonomy may be a moderator variable, another possible explanation is related to accuracy of self-perception. The intercorrelational and multiple regression data showed repeatedly that a stronger relationship existed between prehypnotic variables and hypnotic depth for high autonomy than for low autonomy Ss. The relational capacity, as tapped by the rapport-pre variable, absorption, which may be conceptualized as a personality trait; and expectation, a cognitive variable, were all related to depth for high autonomy Ss. For low autonomy Ss, none of these variables were individually related to depth. Differences in Ss' accuracy of self-reporting may explain this. According to ego-psychology theory, highly individuated Ss, with clear self-other differentiation and congruence in self-perception, are better able to make accurate statements about themselves. The self-assessments of Ss with low differentiation capability may be less accurate and possibly more affected by

demand characteristics and response set. In other words, their self-assessments have more error. The generally lower correlations for the low autonomy Ss may reflect this" (p. 164).

"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

1989

de Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

1988

Elton, D.; Boggi-Cavallo, P.; Stanley, G. V. (1988). Group hypnosis and instructions of personal control in the reduction of ischaemic pain. Australian Journal of Clinical and Experimental Hypnosis, 16, 31-37.

Three groups of students were tested on ischemic pain threshold and pain tolerance. The control group of 95 subjects received a single pain test. The hypnosis group of 42 subjects received a single session of hypnotic induction prior to the pain test. The hypnosis and personal control group of 32 subjects received hypnotic induction and suggestions of personal control prior to the pain test. The hypnotic procedure included the use of a pendulum, coupled with suggestions of arm elevation and lip analgesia. It was found that hypnotic induction resulted in lower [sic] pain threshold and pain tolerance. Suggestions of personal control and hypnosis further lowered [sic] the pain measures.

#### NOTES

The ABSTRACT appears to have mis-statements, for the word should be "higher" or "raised." In the article the results are stated as, "The hypnosis conditions with suggestion of personal control produced the higher pain threshold (mm/Hg) and longer tolerance (seconds) than the hypnosis only group and both hypnotic inductions produced higher threshold and longer tolerance than the control condition" (p. 35)

"The results suggest that a single brief group session of hypnosis can produce a significant change in response to ischaemic pain. The added instruction of increased personal control produced a greater effect and reinforces the importance of the self concept in the reaction to pain" (p. 36).

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

Katsanis, Joanna; Barnard, Joanna; Spanos, Nicholas P. (1988). Self-predictions, interpretational set and imagery vividness as determinants of hypnotic responding. Imagination, Cognition and Personality, 8 (1), 63-77.

Two studies assessed the effects of self-predictions and interpretations of suggested demands on hypnotizability. Subjects overestimated their responsiveness to suggestions. Those who believed that they would fail all or almost all suggestions invariably attained low hypnotizability scores. However, those who believed that they would be highly responsive exhibited wide variability in their actual hypnotizability. Among subjects who self-predicted high responsiveness, those who adopted a passive "wait and see" interpretation toward suggestions scored significantly lower in hypnotizability than those who believed that they should actively bring about suggested effects. Study 2 also found that the relationship between adopting an active interpretation and hypnotizability was moderated by subjects' level of imagery vividness. Theoretical implications are discussed.

Pavia, M.; Stanley, R. O. (1988). Effect of defining induction as hypnosis or relaxation. Australian Journal of Clinical and Experimental Hypnosis, 16, 11-21.

Previous studies have shown that the perceived definition of an induction may sometimes affect the subject's responses to the induction. These variations in the effect of induction definition may be due to interactions between a subject's motivations and expectations of the induction technique and the way the induction is defined. These authors explored this interaction with groups of clinical and student subjects. Differing definitions of induction as 'hypnosis' or 'relaxation' did not result in significant differences in response among either group, though subjects in neither group were found to have high expectations of motivation (sic).

Perry, Campbell (1988, November). An interactionist position on hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Context makes differential contributions across items on scales, e.g. amnesia depends mostly on individual differences. Yet in the 19th Century it occurred almost inevitably, spontaneously, because of expectancy of therapist and patient.

Success in pain reduction is much greater in clinic (Crasilneck; Melzack et al; Cedercrentz - skull injury) than in lab (Hilgard's studies of highs and lows).

Central to the disagreement about special state/socio-behavioral theories is the question, "What are the origins of beliefs about hypnosis?" The beliefs can be modified by experience, which is mediated by individual differences.

Author suggests trying to predict which individual will respond to which hypnosis item. Since there are at least 3 factors in hypnotizability scales, one needs a number of variables to do this type of research. Nadon et al (Journal of Personality and Social Psychology 1987) predicted hypnotizability with PICS (an imagery control test) and Absorption scale plus Evans' Sleep Questionnaire subscale plus Belief in [paranormal events] subscale: predictions were 63% correct. PICS (as compared with other imagery tests) reflects imagery as a preferred mode of thinking. Now, can we predict who will make highly confident errors when asked to remember details of a crime? Who is more vulnerable when told a pseudomemory is veridical? In a test of this question, mimicking a field setting, the authors weren't able to predict the people who would make errors, who functioned at the same level following neutral instructions ("We don't know what we'll find") and Reiser-type instructions ("You can use a zoom lens to see the scene up close") in hypnosis. Also, the effect of an increase in confident errors was greater for highs than for lows. People with high hypnotizability and low PICS made the most errors. N.B. Since lows also increased in errors, one should be cautious in any case.

Creation of pseudomemory research: Using SHSS:C and PICS one can predict 81% of those who accepted and reported the implanted

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. Journal of Personality and Social Psychology, 53, 563-571.

#### NOTES

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception.

Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo? Hypnosis, 4, 135-140.)

#### NOTES

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in Psychosomatic Medicine, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects. The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological

implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

**Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.**

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

#### **NOTES**

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your

own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259). The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

1986

Council, James R.; Kirsch, Irving; Hafner, L. P. (1986). Expectancy versus absorption in the prediction of hypnotic responding. Journal of Personality and Social Psychology, 50, 182-189.

The Absorption Scale was administered to subjects in the context of a hypnosis experiment and in a context unrelated to hypnosis. Expectancies of responding to hypnotic suggestions were assessed both before and after trance induction, but before administration of suggestions. Hypnotic depth was assessed by different methods before suggestions were given, and after hypnosis. Absorption was correlated with hypnotic responsivity and expectancy, but only when assessed in a hypnotic context. Completing the Absorption Scale in a hypnotic context appeared

to affect responsiveness by altering expectancies. Only postinduction expectancies were predictive of response to suggestions. Results of path analysis suggest that trance inductions alter expectancies for responding to hypnotic suggestions and that these altered expectancies determine subsequent hypnotic behavior.

Echterling, Lennis G.; Emmerling, David A. (1986, August). Contrasting response expectancies of stage and clinical hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

Although both are labeled hypnosis, the experience, behaviors, and effects of hypnosis in stage and clinical settings differ dramatically. We explore these differences between stage and clinical hypnosis and conceptualize them within the framework of nonvolitional response expectancy. Two methods were used to gather information for this study. First, we observed the contrasting styles, strategies and situations in both stage and clinical hypnosis. Second, we identified and interviewed individuals who had experienced trance in both clinical and stage settings. We found significant differences in hypnotist style, subject attribution of causality, trance depth, trance behavior, and outcome. Our discussion contrasts the differing response expectancies of stage and clinical hypnosis in terms of situation, subject's role, and subject's perception of hypnotizability.

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Laurence, Jean-Roch; Nadon, Robert (1986). Reports of hypnotic depth: Are they more than mere words?. International Journal of Clinical and Experimental Hypnosis, 34, 215-233.

The empirical work relating hypnotizability, the hypnotic situation, and the reports of hypnotic depth is reviewed and evaluated. Asking Ss to assess their hypnotic depth is a complex task involving the interaction of experiential, cognitive, and contextual variables. Accordingly, future experimental work should take into account this multidimensionality; phenomenological, situational, cognitive, and motivational factors implicated in verbal reports should be explored in terms of their respective relationships with both hypnotizability and self-ratings of hypnotic depth. More sophistication in the experimental inquiries of hypnotic depth is required in order to further our understanding of the cognitive and affective structures underlying the hypnotic experience.

#### NOTES

In past years, hypnotic susceptibility and hypnotic depth were regarded as the same thing, and depth was inferred from responses to test suggestions on hypnotizability scales (e.g. Davis & Husband, 1931; LeCron, 1953).

There has been little investigation of the relationship between Subjects' subjective experiences and reported "depth." Research suggests that "hypnotic depth reports are usually significantly higher for Ss who have undergone a hypnotic treatment than for those who have received task-motivation (Ham & Spanos, 1974; Spanos & Barber, 1968; Spanos, Stam, D'Eon, Pawlak, & Radtke-Bodorik, 1980); imagination-control; or relaxation-control instructions (Connors & Sheehan, 1978; Gilbert & Barber, 1972; Spanos & Barber, 1968; Spanos, Radtke-Bodorik, & Stam, 1980, Experiment 2)" (pp. 217-218). Others have found that changes in inward experiencing (e.g. feelings of unreality, a sense of disappearance of body parts) could not be attributed simply to sitting quietly with the eyes closed (Barber & Calverley, 1979). [A footnote on p. 218 indicates some studies didn't find this difference between a hypnosis group and a task-motivation control group.]

When Ss are asked to estimate subjective depth after having experienced hypnotizability test items, they are likely to infer depth from whether or not they passed the items (and indeed, early scales promoted that assumption). Reports of subjective depth taken before rather than after the test items still correlate with overall hypnotizability score, though not to as high a degree (E. R. Hilgard & Tart, 1966; Tart, 1970). Although usually depth estimates correlate with hypnotizability in the .50 to .75 range (Perry & Laurence, 1980), the correlations were obtained in the hypnotic context, and Ss may use their own behaviors as one determinant of their estimated depth.

From another line of study it is observed that Ss' subjective depth may be at variance with behavioral performance on hypnosis scales (Bowers, 1981). High hypnotizables judge their own depth from their performance on cognitive items (e.g. amnesia, hallucinations) while mediums and lows judge their own performance based on their responses to motor items and challenge items (Kihlstrom, 1981). In one experiment on amnesia, it appeared that Ss did not judge their own depth by how well they did on the amnesia task (Spanos, Stam, D'Eon, Pawlak, and Radtke-Bodorik, 1980). "M. T. Orne (1966, 1980) has emphasized that although it is necessary to operationalize S's responses to hypnotic suggestions, behavioral

concomitants are only valid if they accurately reflect subjective alterations in an individual's experience" (p. 221).

"The social-psychological approach (see Barber, 1969; Radtke & Spanos, 1981, 1982; Spanos, 1982; Wagstaff, 1981) rejects the notion of hypnotic depth as an indicator of a unique state. These authors argue that the reports of having been hypnotized reflect attributions made by Ss when confronted with a hypnotic context. ... Bem (1972) and Kelley (1972) have emphasized the idea that the more ambiguous an experience is, the more a person is likely to base his or her judgment primarily on available external information" (p. 222). In this case, defining the situation as involving "hypnosis" is one of the most potent predictors of Ss' reports of subjective experience (Spanos, Radtke- Bodorik, and Stam, 1980). Other variables that influence subjective depth estimates are the wording of the hypnotizability scale, expectancy, and information provided directly or indirectly. On the other hand, McCord (1961) found that his patients had widely disparate expectations for how they thought they would feel when hypnotized, so expectancy as a predictor would not necessarily determine specific experience.

Direct experimental work on predicting response to hypnosis test items from expectancies (Council, Kirsch, Vickery, & Carlson, 1983; Kirsch, Council, & Vickery, 1984) suggests that expectations may predict test response when people are given a cognitive skill type of induction, but not when given a 'typical trance' type of induction. Also, another study from that laboratory (Council & Kirsch, 1983) established that only when expectancies are assessed after an induction (but before the test items) do they effectively predict hypnotic behaviors. The present authors express the view that these results are difficult to account for on the basis of social psychology theories that weight heavily the role of expectancy in generating hypnotic response.

When Ss are permitted to use several different descriptors for their experience (being hypnotized, experiencing the effects, being absorbed, and responding to the suggestions), most Ss rated their own experiences as nonhypnotic (Radtke & Spanos, 1982). This was particularly true for medium hypnotizable Ss. Thus, unidimensional scales purporting to measure "depth" actually force Ss to interpret their multi-aspect experience in terms of the investigator's frame of reference, in this case "hypnotic depth." Nevertheless, the highly hypnotizable Ss were the least likely to be swayed from their self description of being "deep" when offered alternative ways of describing their experience. This is concordant with results reported earlier by Barber et al. (1968).

"The attribution literature may provide clues as to why most highly hypnotizability Ss retain their high ratings of experienced depth when confronted with situational manipulations. Self-perception theory strictly applies when Ss' experiences are ambiguous, forcing them to fall back on contextual factors to make self-appraisals. The relationship between expectancies, absorption, effect of scale wording, and hypnotizability scores suggest, however, that high hypnotizable Ss do not rely heavily on contextual factors when assessing their levels of hypnotic depth. Most of these Ss maintain their reports of altered experiences, even when situational determinants are changed (Harackiewicz, 1979; Kihlstrom, 1984; Lepper, Greene, & Nisbett, 1973). Thus, the hypnotizability by depth scale interaction found by

Radtke and Spanos (1981) may suggest that experiences reported by high hypnotizable S are not inherently ambiguous. Accordingly, self-perception theory may not apply to them" (pp.226-227).

In their Discussion, the authors state, "Several studies have attempted to relate personal, real-life events to the experience of hypnosis. A number of studies (e.g., As, 1963; Field, 1965; Shor et al., 1962; Wilson & Barber, 1982) have shown that absorption, tolerance of unusual experiences, automaticity, compulsion, and trust are related to the capacity to be hypnotized. Other studies (Bowers & Brenneman, 1981; Tellegen & Atkinson, 1974; Van Nuys, 1973) have shown that certain variants of attention are also related to hypnotizability. Extensive work by J. R. Hilgard (1970, 1979) has shown that patterns of personal development relate to hypnotizability in adult life. It appears then that hypnotizable individuals bring a host of experiences and abilities with them to the hypnotic context. It makes intuitive sense which is supported by the available empirical data, that a complex interaction among these experiences and abilities, the hypnotic context, and hypnotic responsiveness is implicated in Ss' assessments of their hypnotic depth. Studies are needed in which all of these potential determinants of hypnotic depth reports are taken into account. Only then will a clearer picture of their respective importance emerge" (p. 228).

1985

Kirsch, Irving (1985, November). Response expectancy as a determinant of experience and behavior. American Psychologist, 40 (11), 1189-1202.

Response expectancies, defined as expectancies of the occurrence of nonvolitional responses, have generally been ignored in theories of learning. Research on placebos, hypnosis, and fear reduction indicates that response expectancies generate corresponding subjective experiences. In many cases, the genuineness of these self-reported effects has been substantiated by corresponding changes in behavior and physiological function. The means by which response expectancies affect experience, physiology, and behavior are hypothesized to vary as a function of response mode. The generation of changes in subjective experience by corresponding response expectancies is hypothesized to be a basic psychological mechanism. Physiological effects are accounted for by the mindbody identity assumption that is common to all nondualist philosophies of psychology. The effects of response expectancies on volitional behavior are due to the reinforcing properties of many nonvolitional responses. Classical conditioning appears to be one method by which response expectancies are acquired, but response expectancy effects that are inconsistent with a conditioning hypothesis are also documented.

Patterson, C. H. (1985). What is the placebo in psychotherapy?. Psychotherapy, 22 (2), 163-169.

Although there is an extensive literature on the placebo effect in psychotherapy, the distinction between the placebo and other elements of the therapeutic process has not been clear. This paper analyzes the therapeutic relationship in terms of separating the placebo elements and the specific factors. The so-called nonspecific

elements, often equated with the placebo, are proposed as the specific factors. It is contended that those variables focused upon by those studying the social psychological factors are actually part of the placebo.

A class of 145 college students was given Barber's Creative Imagination Scale (CIS) and Spiegel's Eye Roll Sign, and later given several opportunities to volunteer for research projects, some of which specified hypnosis was involved. Those S's who volunteered for the hypnosis experiments took the Harvard Group Scale of Hypnotizability (HGSHS). Hypnosis volunteers differed from the non-hypnosis volunteers by significantly higher grades and more total experimental volunteerism, but were no significantly different on the CIS or Eye Roll Sign. In general, nonwhites scored higher on the CIS. Among hypnosis volunteers, there was a low negative correlation between the Harvard Consciousness scale and volunteering for experiments other than hypnosis.

1984

Critelli, Joseph W.; Neumann, Karl F. (1984). The placebo: Conceptual analysis of a construct in transition. American Psychologist, 39, 32-39.

The placebo in psychotherapy has unfortunately retained the negative connotation of an inert "nuisance variable," a label that it originally incurred in the field of medicine. In addition, the transition toward more cognitive models of psychotherapy, particularly Bandura's theory of self-efficacy, has led to problems in defining the placebo within psychology. This transition has resulted in an awkward interface between certain preferred cognitive metaphors and the negative connotations of a presumably cognitive placebo construct. As a result, suggestions have recently been made to dismiss the placebo construct from psychology and to do away with the use of true placebo controls in outcome research. The present analysis maintains that (a) the placebo can be adequately defined within psychology, (b) the negative connotation of the placebo label is largely undeserved, (c) the placebo retains a continuing conceptual and empirical utility for evaluating psychotherapy, and (d) the therapeutic efficacy of current therapies is well established even though they have not generally been shown to be more effective than nonspecific treatment.

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Kirsch, Irving; Council, James R.; Vickery, Anne R. (1984). The role of expectancy in eliciting hypnotic responses as a function of type of induction. Journal of Consulting and Clinical Psychology, 52 (4), 708-709.

## NOTES

Combined data from a study by J. R. Council et al (see PA, vol 7:4975) and from a study by the present 3rd author (1983) on cognitive skill hypnotic induction to test the hypothesis that the relationship between expectancy and suggestibility varies as a function of type of induction. Analysis of data on 100 Ss shows significant Expectancy x Type of Induction interactions on the Stanford Hypnotic Susceptibility Scale, the Creative Imagination Scale, and an inventory of hypnotic depth. Within-cells correlations revealed a significant relationship between expectancy and responses to skill induction. Correlations between expectancy and responses to a traditional trance induction were nonsignificant.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

## 1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the

trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

## NOTES

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill

induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsivity. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsivity generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

McConkey, Kevin M. (1983). Behaviour, experience, and effort in hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 11, 73-81.

Subjects were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A, and were afterwards asked to rate the degree to which they experienced the items; subjects also scored their behavioural performance on the items. Data were analyzed to explore the relationships among behaviour, experience, and effort. Findings indicated a significant positive relationship between behaviour and experience on all of the HGSHS:A items, a significant negative relationship between behaviour and effort on the ideomotor items, and a significant positive relationship between behaviour and effort on the cognitive items. A similar pattern was observed between experience and effort. Also, subjects of varying HGSHS:A responsivity differed in terms of overall experience of the scale but not in terms of the overall amount of effort that they expended. Implications of the data are discussed in terms of the factors influencing subjects' experiential response and behavioural performance as well as the attributions that they make concerning effort during hypnosis.

Myles, (1983, April). Cognition, hypnotic susceptibility, and laboratory induced pain (Dissertation, University of Waterloo). Dissertation Abstracts International, 43 (10), 3360-B.

Individuals' experiences of pain, and responses to pain treatments vary greatly. This study attempted to relate two areas of research concerned with this variation: (a) cognitions and pain (thoughts, images, etc.), in particular, catastrophizing versus coping; and (b) hypnotic susceptibility and analgesia. "Subjects were preselected for high or low hypnotic susceptibility. Susceptibility assessment was divorced from the laboratory study to minimize the potential bias of expectancies concerning hypnosis. High hypnotic susceptibility was expected to potentiate therapeutic effects of hypnotic-like treatment that did not involve a hypnotic induction. "Ten high and ten low-susceptible subjects were assigned to each of three groups: (a) a cognitive treatment, encouraging subjects to reduce spontaneous catastrophizing and increase self-generated coping cognitions; (b) a dissociative imagery treatment, encouraging

subjects to engage in self-generated engrossing images; (c) an attention- placebo manipulation. "Pre and post-treatment assessments involved tolerance and pain-report measures during the cold-pressor task, and interview and questionnaire information concerning cognitions. "No treatment effects were evident on measures of pain. Cognitive data indicated less catastrophizing and more coping during the post-treatment stressor across all groups. Subjects in the dissociative imagery group did report more imagery during the post- treatment assessment than subjects in the other groups, but this increased use of imagery was not associated with a decrease in pain. "Interview and questionnaire data supported prior reports that catastrophizing is related to increased pain. Low catastrophizing was associated with a high sense of control, high use of a variety of coping strategies, and lower pain reports. These relationships were altered following treatment, however, leading to a caution in generalizing about such variables. "High susceptibility did not potentiate therapeutic effects for either experimental treatment. Nor was susceptibility related in any other consistent way to pain, although high susceptibility was associated with more extensive use of post-treatment imagery. "Methodological inconsistencies and problems in laboratory pain research were discussed, and suggestions made for future work in the area" (p. 3360).

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology.

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

O'Connell, Sean (1983). The placebo effect and psychotherapy. Psychotherapy: Theory, Research and Practice, 20 (3), 337-345.

The power of psychotherapy to cure can be comprehended through an investigation into the efficacy of placebo in medical history. The evolution of "placebo" leads to a conceptualization of psychotherapy as a form of placebo. Explanations for the presence of the placebo effect, as well as guidelines for its elicitation, are outlined.

"Faith in the gods or in the saints cures one, faith in little pills another, faith in a plain common doctor a third, hypnotic suggestion a fourth. ... Faith in us, faith in our drugs and methods, is the great stock in trade of the profession (paracelsus, 1570)" (p. 337).

Ross, Sherman; Buckalew, L. W. (1983). The placebo as an agent in behavioral manipulation: A review of problems, issues, and affected measures. Clinical Psychology Review, 3, 457-471.

Need for greater recognition and appreciation of placebo effects was stated, and problems hindering their clear conceptualization are noted. Previous reviews of the history and use of placebos are acknowledged. This review provides a summary of research primarily within the last 20 years, and in particular considers studies reflecting on placebos as agents of psychomotor, physiological, cognitive, affective, and clinical manipulations. General conclusions of manipulative efficacy are provided, and issues and problems related to clarification of placebo phenomena are identified. Psychological and medical evidence reflects increasing attention to the placebo and of effects on a wide range of behavioral functions. While important ethical and methodological questions remain, recent evidence of a physiologic basis for placebo action suggests exciting new insights into placebo phenomena.

Farthing, G. William; Brown, Scott W.; Venturino, Michael (1982). Effects of hypnotizability and mental imagery on signal detection sensitivity and response bias. International Journal of Clinical and Experimental Hypnosis, 30, 289-305.

It was hypothesized that the ability to selectively concentrate attention on mental images would be greater among high hypnotizable Ss than among low hypnotizable Ss, as indicated by a greater interference with visual signal detection by concurrent visual mental imagery in response to specified nouns. This hypothesis was not supported in the overall results, though the finding of a significant interference effect among the high hypnotizable female Ss, but not among other subgroups, indicates that further research with a more refined procedure might be worthwhile. On the control trials without images, the high hypnotizable Ss made more false alarms than lows, and had a significantly different bias index indicating that high hypnotizable Ss were more likely than lows to respond "yes" when uncertain about whether the signal was present; false alarms can be interpreted as a nonhypnotic measure of suggestibility. The high and low hypnotizable Ss did not differ in their times to generate images in response to the specified nouns.

1981

Fling, Sheila; Thomas, Anne; Gallaher, Michael (1981). Participant characteristics and the effects of two types of meditation vs. quiet sitting. Journal of Clinical Psychology, 37 (4), 784-790.

Randomly assigned 61 undergraduate volunteers to Clinically Standardized Meditation (CSM), quiet sitting (SIT), or wait list1 and 19 others to Open Focus

(OF) or wait list2. Ss were tested before training and again 8 weeks later. All groups but wait list2 decreased significantly on Spielberger's trait anxiety. All groups became nonsignificantly more internal on Rotter's locus of control. On the Myers-Briggs Type Indicator, meditation volunteers were more introverted than extraverted, intuitive than sensing, feeling than thinking, and perceiving than judging. All groups became more intuitive, approaching significance for CSM only. OF became significantly more extraverted than both CSM and SIT, and CSM significantly more so than wait list1. Practice time correlated with anxiety reduction for the combined treatment groups. More evidence was found for correlations of practice time and outcome with growth motivation than with either new experience motivation or expectancy of benefit.

Franck, Jerome (1981, August). Therapeutic components shared by all psychotherapies. [Paper] Presented at the annual meeting of the American Psychological Association.

#### NOTES

The author summarizes as follows. 1. Patients who receive any form of psychotherapy do better than controls. 2. Followup studies show most patients who show improvement maintain it; the closing of gap between patients who improve and those who don't is due to those who do less well catching up. Perhaps the main effect is to accelerate improvement which would eventually happen anyway. 3. Determinants of successful treatment are personal qualities of Patient and Therapist. 4. There are a few conditions which have more specific treatment indications. --Behavior therapy - for phobias, obsessive compulsive disorders, sexuality problems --Cognitive therapy - for depression Further advantages of specific treatments for specific conditions may be found.

All patients seek treatment not just for symptoms but because of demoralization. The common elements are: Subjective incompetence, loss of self esteem, alienation, hopelessness, helplessness, a feeling others could help but won't, feeling of loss of control. Demoralization plus distress leads to seeking treatment.

A small percentage without demoralization seek treatment for specific symptoms (e.g., patients with a simple phobia of height). Anxiety and depression (or loss of self esteem) are most frequent symptoms in Outpatient Departments.

Success in treatment often is due to restoration of morale (which removing symptoms can do very well). 1. Citing Doehrenwald research. 2. People seek treatment only 1-2 years after symptoms appear, after trying other ways of dealing with them. 3. Many patients improve rapidly in treatment (Garfield found the Mean = 5 or 6 sessions.) Mean symptom relief is same after 4 sessions and drop-out than after 6 months; also those on waiting list in phone contact improve as much.

Shared components in the various therapies combat demoralization: 1. Emotionally charged and vital relationship with the helping person (or group). 2. Healing setting (which increases Therapist's prestige and promotes healing). (a) Therapeutic rituals (which lead to an external reason for abandoning the symptom; the more spectacular the reason, the greater the motivation). (b) Therapeutic bond.

Expectation of help is the best predictor of outcome. (Cites his own placebo study.) One problem found was that responsiveness to placebo didn't correlate with response to psychotherapy. (Cites Lieberman's study). Patients receiving psychotherapy role-induction interview improved more. 3. Provision of learning experiences - movement of values toward those of the therapist 4. Emotional arousal. Supplies motivation for change. Cites his experiments on emotional arousal and attitude change, manipulating arousal using ether drip or adrenalin (leads to temporary attitude change). Something else besides arousal may be needed to sustain change. 5. Enhances sense of mastery, control of one's self and internal states. (a) provides conceptual scheme (b) gives experience of success 6. Provision of opportunities (and incentives) to practice

Properties of Patient which assure success: 1. Distress 2. Earlier relationship with parent which leads to capacity to relate. (Molly Harrower's predictors) 3. To profit from specific procedures: capacity for insight for psychoanalysis.

Properties of Therapist which contribute to success:

We haven't gotten farther than Rogers' empathy, warmth, and positive regard; Whitehorn & Betz's Type A and B; and [missed reference name] activity level. He thinks success may be related to Therapist's parapsychological ability, healing power.

Physiology of hope: Placebos for dental pain lead to pain relief for some. Endorphin antagonist made pain re-occur for them.

1979

Beers, Thomas M.; Karoly, Paul (1979). Cognitive strategies, expectancy, and coping style in the control of pain. Journal of Consulting and Clinical Psychology, 47, 179-180.

Measures of tolerance, self-reported pain threshold, and overall discomfort of cold-pressor pain were obtained from 114 male subjects in a pretest-training-posttest experiment. Training consisted of brief practice in one of four cognitive strategies: rational thinking, compatible imagery, incompatible imagery, and task-irrelevant cognition. Analyses of covariance indicated (a) that cognitive-imaginal strategies facilitated endurance of pain and raised self-reported threshold, (b) that rational thinking and compatible imagery were generally the most effective treatments, (c) that expectancy alone was not a significant pain-attenuating factor, (d) that treatments did not affect discomfort ratings, and (e) that individual differences in imaginal ability and coping style did not correlation with changes in any of the dependent measures.

Carr-Kaffashan, Lucille; Woolfolk, Robert L. (1979). Active and placebo effects in treatment of moderate and severe insomnia. Journal of Consulting and Clinical Psychology, 47 (6), 1072-1080.

This study examines the efficacy of relaxation training and a highly credible placebo in the treatment of both severe and moderate sleep onset insomnia. The placebo treatment was designed to elicit an expectation for improvement comparable with

that of relaxation training. Expectancy of improvement was further controlled by informing subjects to expect improvement only after the third week of therapy, thus allowing comparisons of the treatments to be made during the counterdemand period (first 3 weeks) and the positive demand period (fourth week and beyond). Responses of severe and moderate insomniacs were similar across treatment conditions, over weeks, and in response to the counterdemand/positive demand manipulation. Only subjects trained in relaxation techniques improved significantly during the counterdemand period. The active treatment was significantly more effective than the placebo in reducing sleep onset latency during the counterdemand period. After the introduction of positive expectancy of therapy outcome, relaxation was no longer superior to placebo. Findings are discussed in terms of the methodological difficulties inherent in controlling for subject expectancy of therapeutic effects in treatment studies of insomnia.

Johnson, Lynn S. (1979). Self-hypnosis: Behavioral and phenomenological comparisons with heterohypnosis. International Journal of Clinical and Experimental Hypnosis, 27, 240-264.

In a study of behavioral and phenomenological differences between auto- and heterohypnosis, standard autohypnotic and hetero-hypnotic experiences were administered to 48 college students (25 males, 23 females). Total scores of behavioral and phenomenological responses were compared for each experience. The phenomenological scores were also factor analyzed for each type of hypnosis. Behavioral total scores were comparable. Inexperienced Ss were as able to hypnotize themselves as to be hypnotized by another. Scores on "challenge" items were also comparable, whereas items suggesting positive actions showed greater variability. Factor analyses showed that the subjective experiences were generally similar. Heterohypnosis evoked more feelings of unawareness, passivity, and loss of control. Self-hypnosis elicited more feelings of time distortion, disorientation, active direction, and trance variability. The relationship between hypnotic mode and order effects was discussed in terms of Ruch's (1975) facilitatory/inhibitory effects. Conclusions are drawn that self-hypnosis and heterohypnosis are sufficiently similar to be conceptualized under the same label. Data is offered on expectations of self-hypnosis and their effect on later responsiveness.

1978

Hearn, Greg (1978, November). Susceptibility and the process of social interaction in the hypnotic context. [Unpublished manuscript] (Submitted as a partial requirement for the B. S. degree with honours in psychology at the Univ of Queensland)

The hypothesis was tested that the process of social interaction between hypnotist and subject is dependent upon the susceptibility level of subjects. Using Interaction Process Analysis (Bales, 1950), the interaction patterns of 16 high susceptibles and 16 low susceptibles were analyzed. Susceptibility level had been pretested with the HGSHS:A. The hypnotist was then instructed on how to control for differences in

the process of interaction which were isolated and the initial hypnotic session was repeated on a new sample. This time the performance and interaction patterns of six high susceptibles and six low susceptibles were compared. Results suggested that trait differences give rise spontaneously to differences in the process of interaction and some combination of these effect the subjects final hypnotic performance. Hence it is argued that an interactionist framework would aid the understanding hypnotic responsivity.

Karlin, Robert; Mann, David; Carracher, John (1978, September). Placebo considerations in clinical hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada. (Reprinted in part in American Psychological Association Division of Psychological Hypnosis Newsletter, April, 1979)

While the last 20 years have seen great progress in understanding factors underlying hypnotic phenomena in the laboratory, underlying process in clinical settings is much less clear. It is suggested that hypnosis, like most other psychotherapeutic techniques, derives most of its efficacy from its value as a placebo. Its assumed efficacy legitimizes high levels of therapist demand for change and increases the patient's efficacy expectations and perceived control. Conceptual distinctions are made between syndromes that should respond well to hypnotic treatment and those that should not. A rationale for the differing views of clinical and experimental workers in hypnosis is suggested. Finally, the central importance of the patient-therapist relationship is noted.

1977

MacMillan, M. B. (1977). The cathartic method and the expectancies of Breuer and Anna O.. International Journal of Clinical and Experimental Hypnosis, 25, 106-118.

Expectancies about the consequences of the suppression of behavior and about the effects of expressing emotions are proposed as sources of the "talking cure" which developed during Breuer's treatment of Anna O. and which later became known as the cathartic method. Although the argument is similar to one proposed by Ellenberger (1970, 1972) it sets out a more rational alternative to his explanation that the method was partly a creation of the mytho-poetic unconscious. The analysis of the interaction between Breuer and Anna O. makes explicit the expectancies underlying each of the steps through which the cathartic method developed and traces these expectancies to the general beliefs and the specific theoretical interests shared by them.

1976

Coe, William C. (1976). Effects of hypnotist susceptibility and sex on the administration of standard hypnotic susceptibility scales. International Journal of Clinical and Experimental Hypnosis, 24, 281-286.

Hypnotists' susceptibility and sex were examined for their effects on the administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Neither resulted in different hypnotic responsiveness from Ss. Comparatively inexperienced hypnotists obtained data similar to the normative sample for the Stanford scale. The results suggest that inexperienced hypnotists are capable of administering standardized scales validly, and that characteristics of the hypnotist are relatively ineffective in distorting Ss' responses to these scales.

Connors, J.; Sheehan, P. W. (1976). Analysis of the cue characteristics of task motivational instructions. International Journal of Clinical and Experimental Hypnosis, 24, 287-299.

This study investigated the assumption of Barber's model of hypnosis that its set of task motivational instructions is thoroughly "nonhypnotic" in character. If this assumption is correct, then the cues associated naturally with task motivational instructions should be more compatible with a suggestibility test situation explicitly defined as nonhypnotic than with one defined as hypnotic, and this affinity should be reflected in both Ss' objective and subjective suggestibility test scores. Barber's (1965) Suggestibility Scale data collected from 90 Ss did not confirm the main prediction under test, but results failed to provide unequivocal support for the model; subjective evidence, in particular, supported least well the assumptions of the paradigm.

Gatchel, Robert J.; Proctor, Janet D. (1976). Effectiveness of voluntary heart rate control in reducing speech anxiety. Journal of Consulting and Clinical Psychology, 381-389.

The effects of learned control of heart rate deceleration and therapeutic expectancy set in reducing speech anxiety were investigated in a factorial design employing 36 speech-anxious subjects. Heart rate control training and no heart rate control training were each paired with high-therapeutic-expectancy and neutral-expectancy instructions, in order to assess the individual and combined effects of the two factors. Results demonstrated that learning to control heart rate deceleration led to a significant reduction in self-report, physiological (heart rate and skin conductance level), and overt signs of anxiety, relative to the no-heart-rate control condition. High-therapeutic-expectancy instructions also contributed to a reduction in self-reported anxiety. These results demonstrate that learned heart rate control is an effective therapeutic technique for reducing anxiety.

Hemme, Robert; Boor, Myron (1976). Role of expectancy set in the systematic desensitization of speech anxiety: An extension of prior research. Journal of Clinical Psychology, 32 (2), 398-404.

## SUMMARY

The influence of expectancy set with regard to therapy outcome on the effectiveness of systematic desensitization (SD) for reducing public speaking anxiety was investigated. The 7 Ss given a high expectancy set for favorable therapy outcome were informed about psychological research that indicates that SD is effective to reduce public speaking fears. SD was administered with the standard instructions to the 11 Ss given a neutral expectancy set. This expectancy manipulation did not require deception and perhaps could be used with actual SD therapy clients. As in previous research by Woy and Efran, the expectancy set manipulation significantly modified Ss' self-report of subjective perceptions of anxiety from pretreatment to posttreatment speeches, but did not affect overt behavioral or physiological indices of anxiety. Since subjective perceptions of anxiety responses are psychologically significant behaviors, these data suggest the importance of conveying a high expectation of improvement to SD and perhaps also to other types of therapy clients. SD sessions administered to small groups of clients on consecutive days, as in this study, appeared to be as effective to reduce speech anxiety as SD sessions administered to each client individually at 1-week intervals, as in the Woy and Efran study" (pp. 403-404).

1975

Aletky, Patricia J.; Carlin, Albert S. (1975). Sex differences and placebo effects: Motivation as an intervening variable. Journal of Consulting and Clinical Psychology, 43 (2), 278.

NOTES

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" ... the present findings would suggest that future studies of placebo effects should take into account the nature of the dependent variable and the pertinent differential sex-role expectations" (p. 278). The performance measure was a dynamometer pull task. The placebo was a jelly applied to the forearm "and alleged to relieve muscular fatigue" (p. 278). The motivational instructions were telling Subjects that "individuals in good health and with normal muscle tonus would be expected to show improved performance on the posttreatment trial" (p. 278).

Barber, Theodore Xenophon (1975). Responding to 'hypnotic' suggestions: An introspective report. American Journal of Clinical Hypnosis, 18 (1), 6-22.

The author first presents an introspective report which describes some of his attitudes, motivations, and expectancies and ongoing thought processes while he is responding to 'hypnotic' suggestions. The introspective report indicates that (a) suggested effects are experienced when a person thinks with and imaginatively focuses on those things that are suggested and (b) a person imaginatively focuses on the suggestions when he sees the test situation as useful and worthwhile and when he wants to and expects to experience those things that are suggested. It is then argued that the responsive subject in a hypnotic situation differs in every important respect from the sleepwalker and closely resembles the person who is involved in reading an interesting novel or in observing an interesting motion picture. Finally, the author outlines a course, now being developed, that aims to teach individuals how to respond to suggestions.

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

Brown, H. Alan (1973). Role of expectancy manipulation in systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (3), 405-411.

Expectancy, relaxation, and hierarchy content were manipulated in a 2X2 factorial design with two additional control groups. It was hypothesized that a major portion of therapeutic change following desensitization could be accounted for by the subjects' responses to positive feedback inherent in the paradigm. Spider-phobic subjects saw either photographs of spiders or blank slides that they believed to be tachistoscopically presented pictures of spiders. In the factorial part of the design, half of the subjects believed their progress through the hierarchy to be contingent on autonomic responses; the others believed rate of progress to be random. Findings

did not support the hypothesis that expectancy was the only factor in desensitization, but they did serve to clarify the role of expectancy vis-a-vis the counterconditioning elements typically discussed in the literature.

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McReynolds, William T.; Barnes, Allan R.; Brooks, Samuel; Rehagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

1972

Barber, Theodore Xenophon; de Moor, Wilfried (1972). A theory of hypnotic induction procedures. American Journal of Clinical Hypnosis, 15 (2), 112-135.

The first part of the paper delineates nine variables in hypnotic induction procedures that give rise to heightened responsiveness to test-suggestions: (a) defining the situation as hypnosis; (b) removing fears and misconceptions; (c) securing cooperation; (d) asking the subject to keep his eyes closed; (e) suggesting relaxation, sleep, and hypnosis; (f) maximizing the phrasing and vocal characteristics of suggestions; (g) coupling suggestions with naturally-occurring events; (h) stimulating goal-directed imagining; and (i) preventing or reinterpreting the failure of suggestions. Data are presented to support the theory that the nine variables augment responsiveness to test-suggestions by giving rise to positive

attitudes, motivations, and expectancies which, in turn, tend to produce a willingness to think with and vividly imagine those things that are suggested. The second part of the paper specifies situational variables and variables involved in induction procedures that produce a trance-like appearance, changes in body feelings, and reports of having been hypnotized.

**1970**

Goldstein, M. S.; Sippelle, Carl N. (1970). Hypnotically induced amnesia versus ablation of memory. International Journal of Clinical and Experimental Hypnosis, 19 (3), 211-216. (Abstracted in Current Contents, 2, 35, 21)

Divided 33 hypnotizable undergraduates, all capable of achieving the criterion of amnesia for a 7-digit number, into 3 groups: 2 hypnotized and 1 pretend. The distributions of errors for an amnesic performance of these groups were compared with the theoretical chance distribution of errors expected in an amnesic performance. Both hypnotized groups differed significantly from the pretend group and from the theoretical distribution, while the performance of the pretend group did not differ significantly from the chance distribution. The performance of the pretend group conformed to the expectancy for amnesia significantly better than did the performance of either of the hypnosis groups. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

**1969**

Barber, Theodore Xenophon; Calverley, David S.; Forgione, Albert; McPeake, John D.; Chaves, John F.; Bowen, Barbara (1969). Five attempts to replicate the experimenter bias effect. Journal of Consulting and Clinical Psychology, 33, 1-6.

**NOTES**

Failed to cross-validate the Rosenthal & Fode, 1963, work on experimenter bias effect in five separate investigations. Concludes that the effect is more difficult to demonstrate than was implied in several recent reviews and that it is not known what preconditions are necessary to obtain it.

**1968**

Barber, Theodore Xenophon; Calverley, David S. (1968). Toward a theory of 'hypnotic' behavior: Replication and extension of experiments by Barber and co-workers (1962-65) and Hilgard and Tart (1966). International Journal of Clinical and Experimental Hypnosis, 16, 179-195.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS" CAPABILITIES AND DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Orne, Martin T.; Wender, Paul H. (1968). Anticipatory socialization for psychotherapy: Method and rationale. Official Journal of the American Psychiatric Association, 124 (9), 1202-1209.

There is a strong positive relationship between a patient's perception of psychotherapy and its ultimate success. Some patients who appear to lack motivation for treatment may be capable of profiting from psychotherapy if they are taught what to expect--if they understand the "rules of the game." A clinical procedure for introducing such patients to psychotherapy is outlined by the authors, who also present excerpts from a hypothetical socialization interview.

1966

Orne, Martin T.; Evans, Frederick J. (1966). Inadvertent termination of hypnosis with hypnotized and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 14, 61-78.

6 highly hypnotizable Ss and 6 unhypnotizable Ss, instructed to simulate hypnosis, were given hypnotic instructions by means of a tape-recording. Continuous measures of subjective hypnotic depth and GSP were recorded to allow E to take the role of technician. After Ss had been hypnotized by the tape-recorder, a light went

out, the tape-recorder stopped, and E rushed from the room--apparently in search of a fuse box. The Ss were observed for 30 min. through the 1-way screen. During this time the hypnotic suggestions appeared to lose their effectiveness and the hypnotized Ss gradually awoke. However, 5 of 6 simulating Ss behaved as though they were in hypnosis throughout. 5 of 6 deeply hypnotized Ss assumed that the fuse really had blown, whereas 5 of 6 simulating Ss perceived the "accident" to be part of the experiment. It was concluded that it is necessary to construct a situation in which both groups perceive the power failure to be genuine. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1965**

Levitt, Eugene E.; Overley, T. M. (1965). Experience of the hypnotist as a factor in hypnotic behavior. International Journal of Clinical and Experimental Hypnosis, 12 (1), 34-38.

A group of student nurse volunteers were found to obtain scores on the Stanford Hypnotic Susceptibility Scale which did not differ when they were hypnotized by experienced or by inexperienced hypnotists. Neither did scores vary from 1st to 2nd occasion regardless of the experience of the hypnotist. The results are interpreted to mean that the factor of hypnotist experience is likely to be irrelevant to subject performance in the standardized, research situation. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Brady, J. P.; Levitt, E. E. (1964). Hypnotically-induced 'anosmia' to ammonia. International Journal of Clinical and Experimental Hypnosis, 12, 18-20.

The procedure to demonstrate anosmia by the inhalation of ammonia is discussed. Deeply hypnotized Ss who are not knowledgeable of the relevant facts of physiology may fail to respond to ammonia fumes when it is suggested that they have no sense

of smell (anosmia). However, persons who, in fact, are anosmic do respond to ammonia fumes because they are a powerful stimulus to the pain fibers in the nasal mucosa. This procedure illustrates that the crucial factor in the response of the hypnotized S is not the actual facts of anatomy and physiology, but the S's concept of them. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Brady, J. P. (1964). Expectation and performance in hypnotic phenomena. Journal of Abnormal and Social Psychology, 69, 572-574.

Expectations concerning the occurrence of 7 phenomena through hypnotic suggestion were solicited from 12 female Ss, all of whom scored high on the Stanford Hypnotic Susceptibility Scale. Attempts were then made to induce these phenomena in the Ss. The results indicate that performance and expectation were discordant about as often as they were in accord. There appeared to be an interaction between task and expectation-performance accord. (PsycINFO Database Record (c) 2002 APA, all rights reserved) NOTES 1: NOTES: When Ss were not manipulated into their expectations, the relationship between expectancy and hypnotic behavior was minimal.

Melei, Janet P.; Hilgard, Ernest R. (1964). Attitudes toward hypnosis, self-predictions, and hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 12, 99-108.

Correlation of questionnaire results from a sample of 1326 students with hypnotic susceptibility scores of 340 of these later hypnotized showed (a) that those volunteering for hypnosis were more favorable in attitude than those who did not volunteer; (b) attitudes toward hypnosis were predictive of susceptibility for females, not for males; and (c) self-predictions yielded significant low positive correlations with actual susceptibility for both sexes. Other findings concern differences between those having prior experience with hypnosis and those without such experience. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

O'Connell, D. N. (1964). An experimental comparison of hypnotic depth measured by self-ratings and by an objective scale. International Journal of Clinical and Experimental Hypnosis, 12, 34-46.

The behavioral items of an individually-administered test of hypnotic susceptibility were scored by the Ss themselves (N = 88) and by E. Susceptibility scores derived from these self-ratings and observer-ratings were in excellent agreement ( $r = .90$ ) and did not differ significantly in distribution. Marked item scoring biases were found as a function of hypnotizability: poor hypnotic Ss tending to underevaluate their performance and good ones to overevaluate it. Moderate correlations were found between magnitude estimates made by Ss of their subjective hypnotic depth and both observer-rating ( $r = .55$ ) and self-rating ( $r = .54$ ) susceptibility scores. The interrelation and potential usefulness of these types of scoring procedures are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, 11, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

1959

Kroger, William S.; Schneider, Sidney A. (1959). An electronic aid for hypnotic induction: A preliminary report. International Journal of Clinical and Experimental Hypnosis, 7, 93-98.

#### NOTES

The BWS or brain wave synchronizer is "an instrument specifically designed to induce various levels of hypnosis by subliminal and photic stimulation of the brain waves" (p. 93). It was developed after noticing that radar operators on ships sometimes fell into deep hypnotic states while watching signals on a radar screen. It has been used with 2500 subjects, 200 of whom were receiving pre-natal training for childbirth under hypnosis.

"For the first five minutes there is a gradual increase in the number of subjects who enter deep hypnosis. At this level, a figure of 50% reach the deep state" (p. 95).

The instructions given were, "Concentrate on the center of the instrument. When your eyes become tired and heavy, as they will, just let them close and feel yourself going deeper and deeper into a relaxed state." It is acknowledged that this procedure worked when Ss expected to experience hypnosis; the rate of deep hypnosis increased as the expectancy of hypnosis increased. "Deep hypnosis in individual inductions reached 80% under the following conditions:

A. Synchronizer on 5 minutes

B. Expectation Level of 50 [on a scale in which 100 represented having seen demonstrations of conventional hypnosis and an explanation of what the instrument would do]" (p. 97).

1958

Barber, Theodore Xenophon (1958). Hypnosis as perceptual-cognitive restructuring: II. "Post"-hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 6 (1), 10-20.

#### NOTES

The author presents "experimental evidence indicating that there is no essential difference between 'hypnotic' behavior and 'post-hypnotic' behavior" (p. 11).

##### "Summary and Conclusions

"When 'somnambulistic' subjects were told to 'wake up' after they were given a 'post-hypnotic suggestion' and 'amnesia for the suggestion' they behaved as follows:

1. They opened their eyes and became relatively more aware of their surroundings.
2. They were aware that the signal for the 'post-hypnotic- behavior had special significance for them.

3. They were 'set' to 'obey the hypnotist's suggestions' from the moment they were told to 'wake up,' until they were convinced that their interpersonal relationship with the operator was no longer that of subject and hypnotist.

4. When the 'post-hypnotic suggestion' was uncomplicated and fitted into the normal pattern of behavior, the subjects carried it out without 'going deeper into trance,' i.e., without becoming relatively more 'detached' from their surroundings. However, when the 'post-hypnotic suggestion' was of such a nature that it was necessary for the subjects to 'go deeper into trance' to properly carry it out, the subjects did 'go deeper into trance.'

"Whether the subjects did or did not have amnesia for the 'post-hypnotic suggestion' was not important. 'Amnesic' and 'non-amnesic' subjects carried out the 'post-hypnotic' behavior in essentially the same way.

"These experiments indicate that:

1. If the operator properly manipulates the situation, the 'good' hypnotic subject is 'set' to carry out the operator's commands in the 'post-hypnotic' period in the same way as during 'hypnosis.'

2. If, in order to properly carry out the 'post-hypnotic suggestions,' it is necessary for the subject to 'go deeper into trance' -- i.e., to become relatively inattentive to stimuli not emanating from the operator -- the good subject will do so.

3. There is no essential- difference between the subject's behavior in the 'hypnotic' period and in the 'post-hypnotic' period.

4. If we are to continue speaking of 'suggestions' to be carried out in the post-hypnotic period we should term them 'post'-hypnotic 'suggestions'" (pp. 19-20).

Dittborn, Julio M. (1958). Expectation as a factor of sleep suggestibility. Journal of Clinical and Experimental Hypnosis, 6 (4), 164-170. (Abstracted in Psychological Abstracts 61: 2390)

## NOTES

Authors studied expectation ("the attitude of waiting attentively for something usually to a certain extent defined, however vaguely," as defined by Drever) as a factor of sleep suggestibility. They tested young soldiers in the Chilean army using the postural sway test of suggestibility, repeated twice, to yield 12 Subjects. After a third postural sway test the Subjects were required to respond to a series of visual, then later oral, stimuli. [Experimental instruments are not clearly described in this article.]

The Subjects returned a week later and were asked to respond to the stimuli by using the word "sueno" (dream) for two Ss and "dormir" (sleep) for another two. The word "sleep" was used in the third experiment, following suggestions like "As you read more and more or as you hear yourself repeating the word 'sleep or dream' over and over again you will become more and more sleepy" (p. 166).

Apparently the outcome measure was the number of stimuli to which the Subject responded before lack of response indicated a trance. [Description is unclear.]

Barber, Theodore Xenophon (1957). Hypnosis as perceptual-cognitive restructuring: I. Analysis of concepts. Journal of Clinical and Experimental Hypnosis, 5 (4), 147-166.

### Summary

1. 'Trance' involves a selective and relative inattention to internal and external stimulation.
2. Hypnosis involves one type of 'trance' behavior but hypnosis differs from other types of 'trance' in that it is an interpersonal relationship in which one person, the operator, restructures the 'perceptions' and conceptions of the other person, the subject.
3. The operator can restructure the thoughts and 'perceptions' of the 'good' hypnotic subject because (a) the subject is relatively detached and inattentive to his self and his surroundings and (b) the subject is 'set' -- he is ready and willing -- to accept the operator's words as true statements and to 'literally think as the operator wants him to think.'
4. 'Perceptual-cognitive restructuring' and not 'suggestion' is the essential element in hypnosis.
5. We can begin to understand hypnosis and the phenomena of hypnosis by one general principle: the hypnotic subject behaves differently because he 'perceives' and conceives differently. The behavior of the hypnotic subject is in strict accordance with his altered conceptions of his self and his surroundings" (p. 162).

## EXPERIMENTAL HYPNOSIS

1992

Coe, William C. (1992). Hypnosis: Wherefore art thou?. International Journal of Clinical and Experimental Hypnosis, 40 (4), 219-237.

The present paper focuses on the influences of social-political needs of various groups with interests in hypnosis (i.e., stage hypnotists, lay hypnotists, licensed practitioners, and researchers). While hypnosis is a specific topic of interest to groups with varying needs, it also serves as an example for other topics in psychology that may overlap the needs of other groups -- especially practitioners and researchers. The identity given to hypnosis varies depending upon which particular group of persons is offering the identity, and the nature of the identity reflects each group's biases and needs. These various identities, however, are not always acceptable, in part or in whole, by the other groups, as the needs of one or more may be in conflict with those of others.

**1969**

Blatt, Sidney J.; Goodman, John T.; Wallington, Sue Ann (1969). Is the hypnotist also being hypnotized?. International Journal of Clinical and Experimental Hypnosis, 17, 160-166.

Noted that 2 hypnotists had cognitive and affective experiences similar to those expected in the S as a function of the hypnotic manipulation when they were conducting hypnotic inductions. Though the hypnotists may have been responding to the mood tone of the Ss or responding on the basis of their expectations about the effect of the hypnotic manipulation, it seemed equally possible that the hypnotists may have experienced mild forms of the trance state they had induced in their Ss. These observations seemed consistent with prior notes of such a phenomenon. This phenomenon has important implications for the clinical and experimental use of hypnosis and for concepts such as transference and countertransference, empathy, demand characteristics, and E bias. Suggestions are made for the systematic evaluation and study of this phenomenon. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Evans, Frederick J.; Schmeidler, D. (1964). Reliability of two observers scoring the Stanford Hypnotic Susceptibility Scale, Form C. International Journal of Clinical and Experimental Hypnosis, 12 (4), 239-251.

2 Os scored the responses of 60 Ss on a 12-item objective test, Stanford Scale of Hypnotic Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). Mean total scores reported by the 2 Es did not differ significantly. The correlation between the total scores of the 2 Es was .947. Nevertheless, differences in total scores assigned occurred with 40% of Ss, which is a significant departure from perfect agreement. The 2 Es disagreed about correct scoring of 54 items (7.5% of all items scored). The extent of disagreement was significantly greater than 0. Disagreement was not related to the level of susceptibility of Ss, nor to the relative experience of Es with hypnosis. More than 1/2 of the disagreements involved systematic differences in the interpretation and application of the scoring criteria for 2 items; item 6: Dream, and item 9: Anosmia to Ammonia. These systematic differences affecting scoring reliability happened to counterbalance to produce similar total scores in this study.

Several sources of potential scoring unreliability of SHSS:C are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## EYE MOVEMENT

2001

**Bjick, Suzanne (2001). Accessing the power in the patient with hypnosis and EMDR. American Journal of Clinical Hypnosis, 43 (3/4), 203-216.**

Notes that both E. Rossi's ideodynamic accessing model of hypnosis and EMDR are intended to access information stored in the mind-body system. Some possibilities for effectively using hypnosis and EMDR in combination are discussed. The similarities and the uniqueness of each method, both theoretically and in terms of the different protocols, are compared to provide a rationale for combining them. Verbatim examples from a clinical case (a woman with posttraumatic stress disorder (PTSD) are presented to demonstrate exactly how these models can be usefully combined in clinical practice. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1998

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

## NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm,

accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1992

Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.

The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD.

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Yapko, Michael D. (1992). Editor's Viewpoint. Milton H. Erickson Foundation Newsletter, 12 (3), 2.

#### NOTES

A controversial issue is heating up, and therapists are beginning to feel the heat. The issue involves the common practice of helping clients recover apparently repressed memories of early childhood sexual trauma. In the second edition of my hypnosis textbook, \_Trancework\_ (1990, Brunner/Mazel), I included a special section on the possibility of hypnotically implanting false memories---vivid memories of things that never actually happened that the client comes to believe as true recollections. I pointed out the risks of suggestive procedures and urged caution in suggesting memories of any sort, whether a formal hypnotic induction took place or not.

"Early this year a non-profit foundation was formed in Philadelphia called the False Memory Syndrome Foundation which serves as a clearing house for relevant information, and even publishes a newsletter. It also provides support to families broken apart by these problems. If you are interested in the complex issues regarding suggestion and memory, you can contact the FMS Foundation at 3508 Market Street, Suite 128, Philadelphia, PA 19104, telephone (215) 387-1865. David Calof's group also publishes Treating Abuse Today. They, too, are cognizant of the relevant issues. Their address is 2722 Eastlake Avenue East, Seattle, WA 98012, telephone (206) 329- 9101" (p. 2).

**1991**

**Wolpe, Joseph; Abrams, Janet (1991). Post-traumatic stress disorder overcome by eye-movement desensitization: A case report. Journal of Behavior Therapy and Experimental Psychiatry, 39-43.**

Post-traumatic stress disorder is an exceptionally stressful syndrome that has been extremely difficult to treat. The prognosis was recently dramatically improved by the introduction of eye-movement desensitization. This paper reports, in substantial detail, a case that was precipitated by a rape 10 years earlier, describing its manifestations and various unsuccessful attempts to treat it: followed by a detailed exposition of the eventual, completely successful treatment by eye-movement desensitization.

**1990**

**Gravitz, Melvin A. (1990). Adverse behavior associated with the eye-roll test of hypnotizability: Clinical and theoretical considerations. Psychotherapy: Theory, Research and Practice, 27, 267-270.**

For 15 years, subjects' response to the eye-roll test has been used to measure susceptibility without adverse effects. A case is described of a hospitalized young man who displayed dissociative behavior when asked to do the eye-roll as part of a diagnostic evaluation. Etiological and theoretical considerations, and implications for therapeutic strategy are discussed.

**1988**

**Gabel, Stewart (1988). The right hemisphere in imagery, hypnosis, rapid eye movement sleep, and dreaming: Empirical studies and tentative conclusions. Journal of Nervous and Mental Disease, 176, 323-331.**

Reviews studies that have addressed the issue of whether there is an increased activation or efficiency of right-hemispheric processes during imagery, hypnosis, REM sleep, and dreaming. Evidence strongly supports the notion of increased right-hemispheric activation in simple imaginal or visual states during usual consciousness. There are also studies supporting this view of REM sleep, dreaming, and hypnotic phenomena. It is concluded, however, that the lack of adequate studies, contradictory or negative findings, and moderating variables (e.g., task

difficulty, cognitive style) make it difficult to draw definitive conclusions concerning right-hemispheric processes.

1987

Kluft, Richard (1987). The withheld eye-roll sign. American Journal of Clinical Hypnosis, 30, 9-19.

Within the context and the assumptions of the Hypnotic Induction Profile (HIP), the eye-roll sign is understood to indicate a stable biologically based measure of potential hypnotic capacity. Serendipitous observations seemed to suggest that the eye-roll sign underwent significant changes in 14 particular patients. On exploration of these patients' subjective experiences, it was discovered that certain patients associated the eye-roll with incipient dyscontrol and consciously withhold a full and accurate response. In others, such withholding occurred as a conversion symptom. Furthermore, some patients were aware of the implications of the eye-roll and made efforts to represent themselves as un hypnotizable by withholding a full eye-roll. No genuine changes in eye-roll signs were noted. Clinical illustrations are offered and discussed.

1984

Magnavito, F.; Gaupp, L. (1984, October). Absorption, hypnotic susceptibility, and automatization of visual attention. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Absorption (Tellegen Scale) correlated .62 with SHCS and -.45 with a measure of visual automatization. They conclude that highly absorption-prone individuals attend more to sensory information, processing their environment in a childlike, less automatized manner. The measure of visual automatization, H, was obtained by camera recorded eye movements and fixations as Ss viewed slides in any way they desired.

1982

Spiegel, David; Tryon, Warren W.; Frischholz, Edward J.; Spiegel, Herbert (1982). Hilgard's illusion. Archives of General Psychiatry, 39 (8), 972-4.

Examines E. R. Hilgard's (see PA, Vol 68:11932) critique of the hypothesis that eye roll (ER) is related to hypnotizability, clarifying the nature of the data relevant to the ER hypothesis. The authors contend that there are a number of factual errors in Hilgard's article: his (1) explanation of the procedure used in determining the Hypnotic Induction Profile (HIP) grades, (2) characterization of the HIP as a single-item test, and (3) his contention that the levitation score is the sole determinant of manifest hypnotic response. (9 ref.)

1980

Spanos, Nicholas P.; Pawlak, Anne E.; Mah, Christopher D.; D'Eon, Joyce L. (1980). Lateral eye movements, hypnotic susceptibility and imaginal ability in right-handers. Perceptual and Motor Skills, 50, 287-294.

A total of 46 male and 36 female right-handers were assessed on three measures of left-moving, as well as on hypnotic susceptibility, and several measures of imaginal ability. The three left-moving indices intercorrelated significantly. However, none of these indices correlated significantly with hypnotic susceptibility or imaginal ability variables in either sex.

1979

Sheehan, D. V.; Latta, W. D.; Regina, E. G.; Smith, G. M. (1979). Empirical assessment of Spiegel's hypnotic induction profile and eye-roll hypothesis. International Journal of Clinical and Experimental Hypnosis, 27 (2), 103-110.

39 healthy male volunteers were hypnotized twice using Spiegel's (1974) Hypnotic Induction Profile (HIP). Their responses were scored independently by 2 raters who alternated roles as hypnotist and observer. Results indicated: (a) high inter-rater reliability for HIP components and for the Hypnotic Induction Score (HIS); (b) satisfactory test-retest correlations for the eye-roll, up gaze, squint, posthypnotic arm levitation, and control differential; (c) component scores and HIS increased from Session 1 to Session 2; (d) the role of the rater was not influential; (e) inter-item correlations on HIP were similar to those reported by Spiegel; and (f) the analysis does not support the hypothesis that the eye-roll is dependably predictive of hypnotic signs measured by HIP subsequent to measurement of the eye-roll.

1978

Spanos, Nicholas P.; Rivers, Stephen M.; Gottlieb, Jack (1978). Hypnotic responsivity, meditation, and laterality of eye movements. Journal of Abnormal Psychology, 87 (5), 566-569.

Right-handed male subjects were pretested on a number of person variables; they then meditated for eight sessions. Measures of hypnotic responsivity, meditating skill, imaginal abilities, and attitudes toward hypnosis loaded on a common factor that was labeled sustained nonanalytic attending. However, laterality of eye movement (left moving) failed to load on this factor. The implications of these findings for current theorizing concerning hypnosis and meditation are discussed.

Weerts, Theodore C.; Lang, Peter J. (1978). Psychophysiology of fear imagery: Differences between focal phobia and social performance anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 1157-1159.

Spider phobics and speech anxious subjects imaged fear scenes with spider and public-speaking content and a series of standard scenes that were constructed to vary in degree of emotional arousal and movement. Heart rate, skin conductance, and ocular activity were recorded. Spider phobics rated all imagery contents as

more vivid and reported more scene movement than speech anxious subjects. Both groups responded to their own fear scenes with higher ratings of emotion and a greater physiological response than to the other group's fear scenes. The arousal response of spider phobics to relevant fear scenes was greater than that of speech anxious subjects. The data suggest that the outcome of imagery-based therapies may be partly determined by type of fear.

1976

Spiegel, Herbert; Aronson, Marc; Fleiss, Joseph L.; Haber, Jerome (1976). Psychometric analysis of the Hypnotic Induction Profile. International Journal of Clinical and Experimental Hypnosis, 24, 300-315.

Psychometric analyses of the Hypnotic Induction Profile (HIP) of Spiegel (1974a), a sixteen point test designed to measure hypnotic capacity, are presented herein. Briefly summarized are the sequential phases of trance experience as monitored by the HIP. On the basis of a factor analysis of individual items entering into the HIP's of 1674 patients, two distinct factors emerged. One is defined largely by up-gaze and eye-roll, the other by some of the subsequent items. Two methods for scoring the HIP, a configurational method involving both factors (profile scoring) and an actuarial method using only items from the second factor (induction scoring), are defined. As expected from the factor analysis, eye-roll is little related to the HIP graded by either scoring method. The correlation of induction scoring with the eye-roll is .22 in a sample of 1023 patients. Such a correlation is significant, although it accounts for only 5% of the variance that eye-roll and induction scoring have in common. That the low correlation may be a function of the relationship of hypnotizability to psychopathology is shown by a highly significant correlation ( $r = .52$ ) between eye-roll and induction scores in a population selected as non-psychotic. The usefulness of the HIP in relation to psychodiagnosis has been demonstrated elsewhere and is not the subject of this paper. Evidence is presented bearing on the reliability of the profile and induction scores, both yielding satisfactory reliabilities. Some validity information is given through satisfactory correlations with existing standardized scales. The HIP and Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1959) correlate .55.

Spiegel, Herbert; Aronson, M.; Fleiss, J. L.; Haber, J. (1976). Psychometric analysis of the hypnotic induction profile. International Journal of Clinical and Experimental Hypnosis, 24, 300-315.

Psychometric analyses of the Hypnotic Induction Profile (HIP) of Spiegel (1974a), a sixteen point test designed to measure hypnotic capacity, are presented herein. Briefly summarized are the sequential phases of trance experience as monitored by the HIP. On the basis of a factor analysis of individual items entering into the HIP's of 1674 patients, two distinct factors emerged. One is defined largely by up-gaze and eye-roll, the other by some of the subsequent items. Two methods for scoring the HIP, a configurational method involving both factors (profile scoring) and an

actuarial method using only items from the second factor (induction scoring), are defined. As expected from the factor analysis, eye-roll is little related to the HIP graded by either scoring method. The correlation of induction scoring with the eye-roll is .22 in a sample of 1023 patients. Such a correlation is significant, although it accounts for only 5% of the variance that eye-roll and induction scoring have in common. That the low correlation may be a function of the relationship of hypnotizability to psychopathology is shown by a highly significant correlation ( $r = .52$ ) between eye-roll and induction scores in a population selected as non-psychotic. The usefulness of the HIP in relation to psychodiagnosis has been demonstrated elsewhere and is not the subject of this paper. Evidence is presented bearing on the reliability of the profile and induction scores, both yielding satisfactory correlations with existing standardized scales. The HIP and Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1959) correlate .55.

1975

Albert, Ira B.; Boone, Donald (1975). Dream deprivation and facilitation with hypnosis. Journal of Abnormal Psychology, 84 (3), 267-271.

We attempted to modify sleep and dreaming through the administration of various posthypnotic suggestions. Subjects were 17 male undergraduates who were selected for high susceptibility to hypnosis. After two adaptation nights, 5 subjects were given a dream-deprivation suggestion, 8 were given a suggestion of dream-facilitation, and the remaining 4 subjects were administered a neutral posthypnotic suggestion. Subjective dream reports were dramatically affected in the predicted directions. Electrophysiological changes were also noted in certain subjects, although these results were not nearly as consistent as the subjective data. The dream-deprivation group had significantly more Stage 1 sleep than the other two groups; and certain of these subjects had much less REM sleep.

1971

Weitzenhoffer, Andre M. (1971). A case of pursuit-like eye movements directly reflecting dream content during hypnotic dreaming. Perceptual and Motor Skills, 32, 701-702. (Abstracted in Current Contents, 3, 34, 16)

Describes a sample of eye movements from a hypnotized S spontaneously dreaming of watching a watch swing on a chain. These were repeated on another dream occasion and in imagination. The study (a) supports the notion that the content of some imagined and dreamed visual experiences is reflected in specific ways in eye movements; and (b) suggests a close relationship between nondream and dream visual and/or motor imagery. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Brady, J. P.; Levitt, E. E. (1964). Nystagmus as a criterion of hypnotically induced visual hallucinations. Science, 146, 85-86.

Hypnotized Ss who report hallucinating a visual situation which would ordinarily elicit optokinetic nystagmus demonstrate nystagmus under these conditions. They and control Ss are unable to feign nystagmus in the waking state, either by imagining the situation or by direct efforts to simulate the eye movements. Thus an objective criterion is provided for the presence of visual hallucinations. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## EYE/OPHTHAMOLOGY

1993

Lindsay, Suzanne; Kurtz, Richard M.; Stern, John A. (1993). Hypnotic susceptibility and the endogenous eyeblink: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 92-96.

This study investigated the relationship between hypnotic susceptibility, hypnotic state, and the endogenous eyeblink with 36 undergraduates, who were assigned to four independent groups (waking-low, hypnotized-low, waking-high, and hypnotized- high susceptibles) on the basis of combined cutoff scores on both the Creative Imagination Scale and the Stanford Hypnotic Clinical Scale for Adults. The auditory vigilance task required subjects to discriminate between 200 ms and 300 ms tones over a 35-minute period. Hypnotic depth was controlled across trials using the Long Stanford Scale of Hypnotic Depth. As predicted, high-susceptible subjects had a significantly lower blink rate than low-susceptible subjects. The predicted interaction between susceptibility and hypnotic state was also confirmed. High-susceptible subjects showed a significant decrease in blinking for the hypnotized condition, whereas low-susceptible subjects did not. The need for replication with more adequate measures of susceptibility is discussed.

## NOTES

1:

In a preliminary study, Weitzenhoffer (1979) found significant differences between high- and low-susceptible subjects following a hypnotic induction. The highs showed a 66% decrease in blink rate from a baseline reading. More recently, Tada, Yamada, and Hariu (1990) reported a series of studies suggesting that blink rate was dramatically reduced during the hypnotic state, as well as finding a relationship between high susceptibility and decreased blink rate. Although these studies tend to support Weitzenhoffer's (1979) research, they are poorly controlled and report no quantitative data" (p. 93).

In the present study, "to assure that subjects kept their eyes open, they were required to maintain their gaze on a dimly lighted box (12" x 12") placed one meter in front of them. Subjects in both conditions were asked to rate their hypnotic depth by using the Long Stanford Scale of Hypnotic Depth (Tart, 1970) before being given a practice trial of 20 tones. Following the practice trial, participants were again asked to rate their hypnotic depth, and the trial period began. Subjects gave subsequent depth ratings every 10 minutes for the remainder of the 35-minute trial. The hypnotic state was maintained across time periods by using deepening instructions when necessary" (p. 94).

In their Discussion, the authors noted that "High-susceptible subjects in the hypnotized state have a significantly lower blink rate and presumably greater attentional focus than lows. Although the interaction was significant and in the predicted direction, it accounted for only a small portion of the overall variance, suggesting that trait differences are more robust than those for state" (p. 95).

1989

Holroyd, Jean; Maguen, Ezra (1989). And so to sleep: Hypnotherapy for lagophthalmos. American Journal of Clinical Hypnosis.

We used hypnosis to facilitate eye closure during sleep for a 44-year-old woman whose nocturnal lagophthalmos prevented use of a contact lens following cataract surgery and could have resulted in severe corneal damage. On three separate occasions the symptoms remitted following a very brief course of treatment. We discuss the results in terms of alternate theories of hypnotic performance.

NOTES

1:

The Discussion section notes, "There was an excellent correlation between the onset of hypnotherapy and the cessation of the recurrent corneal erosion secondary to nocturnal lagophthalmos. Healing of corneal erosion, disappearance of the superficial punctate keratopathy, and alleviation of ocular foreign body sensation occurred promptly following hypnotherapy (with two separate therapists)" (pp. 267-268).

The authors present the view that "heightened suggestibility, more vivid imagery, and more specific influence of thoughts upon organ systems probably came into play (Brown & Fromm, 1986; Holroyd, 1987). Social influence explanations (role taking, expectancy, compliance) seem less relevant as explanations. This highly motivated patient had not been able to keep her eyes closed during sleep despite her conscious efforts, her "good-patient" role, her positive expectations about the benefits of standard treatments, and respectful incorporation of the assistance provided by her ophthalmologist" (p. 268).

Miller, Scott D. (1989). Optical differences in cases of multiple personality disorder. Journal of Nervous and Mental Disease, 177 (8), 480-486.

Nine patients (aged 24-43 years) diagnosed with multiple personality disorder (MPD) and 9 control Ss role-playing MPD were given complete ophthalmological examinations to test whether the MPD Ss would show greater variability in visual functioning across alter personalities than would control Ss role-playing MPD. An analysis of variability of 8 optical measures in 4 prominent areas of vision was performed by comparing 2 covariance matrices for equality. Analyses showed that MPD Ss had significantly more variability across alter personalities than did their control counterparts on measures of visual acuity with correction, visual acuity without correction, visual fields, manifest refraction and eye-muscle balance. Ratings for clinical significance showed that the MPD Ss had 4.5 times the average number of changes in optical functioning between alter personalities of the control Ss.

1984

Murphy, Joseph K.; Fuller, A. Kenneth (1984). Hypnosis and biofeedback as adjunctive therapy in blepharospasm: A case report. American Journal of Clinical Hypnosis, 27, 31-37.

The efficacy of ophthalmologic, hypnotic, and biofeedback treatment procedures in a case of blepharospasm was evaluated. Manual eye rubbing and eye opening served as dependent measures which were assessed by the patient during treatment and a three month follow-up. Results indicated that ophthalmologic treatment had a limited effect. In contrast, brief hypnosis had a dramatic but short-lived effect and biofeedback had a moderate but sustained effect. Results are discussed in terms of the efficacy of psychological intervention, the limitations of the report, and the need for future research.

1982

Cunningham, Paul V.; Blum, Gerald S. (1982). Further evidence that hypnotically induced color blindness does not mimic congenital defects. Journal of Abnormal Psychology, 91, 139-143.

Six undergraduate women, highly skilled in hypnotic techniques, were trained under hypnosis with a color mixer to experience red, green, blue, and total color blindness and were then programmed for the same responses in the posthypnotic state under conditions of amnesia. After awakening they were shown pseudoisochromatic plates as a preliminary check on the efficacy of the prior hypnotic instructions. The experiment consisted of successive administrations of the Farnsworth-Munsell 100-hue test, initially under normal baseline viewing conditions followed by each of the color-blind conditions in turn. Results indicate that although the observers subjectively experienced the varieties of color blindness as instructed, their responses differed from specimen responses of individuals with congenital defects in color discrimination. Implications for interpreting hypnotic alterations of perception are discussed.

Sheehan, Eugene P.; Smith, Howard V.; Forrest, Derek W. (1982). A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes. International Journal of Clinical and Experimental Hypnosis, 30, 138-146.

2 groups of 8 Ss each, matched for suggestibility and degree of myopia, were assessed by a signal detection method in their ability to make a monocular spatial discrimination, both before and after 15 minutes of listening either to music or to taped suggestions that vision would improve. There was a significantly greater improvement in sensitivity on the part of the group of Ss listening to suggestions, and within this group, but not within the group of Ss listening to music, there was a significant negative correlation ( $r = -.67$ ) between S's initial sensitivity and the amount by which it increased. There was no significant difference between the

amounts by which the criterion changed in the 2 groups. In contrast with the results reported by Graham and Leibowitz (1972), there was no evidence in the present study to indicate that the amount of improvement shown by Ss depended upon either their suggestibility as measured by BSS or their refractive error.

NOTES

1:

"In contrast with the results reported by Graham and Leibowitz (1972), there was no evidence in the present study to indicate that the amount of improvement shown by Ss depended upon either their suggestibility as measured by BSS or their refractive error" (p. 144).

1972

Graham, Charles; Leibowitz, Herschel W. (1972). The effect of suggestion on visual acuity. International Journal of Clinical and Experimental Hypnosis, 20, 3.

NOTES

1:

In experiment one, all subjects participating attained the maximum score on the BSS. The subjects were hypnotized and post-hypnotic suggestions were given to the effect that the subject really knew how well they could see, and this was contingent upon relaxation. The patient was now given an opportunity to re-read the eye charts. It was found that in this experiment, myopic visual acuity was significantly improved through the use of hypnosis and positive suggestion.

In experiment two, subjects who scored the maximum and the minimum on the BSS were used. The same procedure was used as in number one except that the highly susceptible subjects were told that "various studies had demonstrated that being hypnotized was not a pre-requisite for obtaining improvement." The insusceptibles were told that "acuity improved under hypnosis, but like many other phenomena associated with hypnosis, improvement in vision was also well within the reach of the non-hypnotizable subjects, if they simply learned to relax their eyes." it was found that myopic visual acuity was significantly improved in the absence of a formal hypnotic induction. This improvement was for the highly hypnotizable subjects only, and did not transfer to outside the experimental situation.

In experiment three, subjects were used who scored the maximum on the BSS and the Harvard Group Scale. Testing was done in both the hypnotized and waking state. it was found that the rank order correlation between initial and final acuity levels was .98 ( $p < .001$ ), indicating the effect of suggestion was selective.

1969

Weitzenhoffer, Andre M. (1969). Eye-blink rate and hypnosis: Preliminary findings. Perceptual and Motor Skills, 28, 671-676.

Tests the validity and reliability of certain features of the outer appearance of hypnotized individuals which have long been popularly and clinically considered good indices of "hypnosis." The present report focuses on eye-blink rate. 19 Ss were administered a slight modification of the Stanford Scale of Hypnotic Susceptibility, Form A. Samples of their blink rates were obtained prior to the induction of

hypnosis and some time after the induction of hypnosis procedure had been terminated, but before the dehypnotization procedures began. The results support the popular and clinical belief that hypnotic-like behavior is accompanied by a decrement in blink rate to the extent that Ss scoring 6 or more points on the Stanford Scale showed a marked and statistically significant mean reduction in blink rate of over 60% following the induction procedure and some testing of their suggestibility. In contrast, Ss scoring 5 or less and presumably not hypnotized but merely suggestible to non-suggestible, did not show a statistically significant decrement. As a possible index of "hypnosis," such a decrease in rate was found to have a test-retest reliability of .86. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Davison, Gerald C.; Singleton, Lawrence (1967). A preliminary report of improved vision under hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (2), 57-62.

REPORTS AN ACCIDENTAL FINDING WHICH WAS FELT TO BE PROVOCATIVE AND WORTHY OF FURTHER, MORE CONTROLLED, INVESTIGATION. THE EMPHASIS IS ON DETAILED DESCRIPTION OF THE PHENOMENON, WITH A MINIMUM OF THEORIZING. WHILE IN A VERY DEEP HYPNOTIC TRANCE, S WAS INDUCED TO HAVE BOTH POSITIVE AND NEGATIVE HALLUCINATIONS. ON THE FOLLOWING DAY, HE REPORTED SPONTANEOUSLY THAT HE HAD BEEN STRUCK BY THE CLARITY OF BOTH THE VISIONS AND THE PERCEPTIONS OF ACTUAL OBJECTS WHILE HYPNOTIZED; HE HAD NOT, HOWEVER, BEEN WEARING HIS GLASSES AT THE TIME, THOUGH, UNDER NORMAL CIRCUMSTANCES HE WORE HIS GLASSES AT ALL TIMES. NO SUGGESTIONS FOR IMPROVED VISION OR EXTRA EFFORT HAD BEEN

**GIVEN. 2 CAREFUL OPHTHALMOLOGICAL EXAMINATIONS WERE MADE DURING THE FOLLOWING 2 WK., CONFIRMING THE FACT THAT S'S EYESIGHT SHOWED A SIGNIFICANT IMPROVEMENT DURING HYPNOSIS AS OPPOSED TO THE WAKING STATE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Schneck, Jerome M. (1967). Hypnotherapy for symptoms associated with cataract. International Journal of Clinical and Experimental Hypnosis, 2, 54-56.**

**HYPNOTHERAPY WAS USED TO ALLEVIATE SYMPTOMS IN A PATIENT WITH CATARACT. THEY INCLUDED FEELINGS OF ANXIETY, EYE TENSION, BLURRING OF VISION, AND SELF-CONSCIOUSNESS. HYPNOTHERAPY CAN ASSIST THE DIFFERENTIATION OF THE PSYCHOLOGICAL AND STRUCTURAL BASIS OF A VARIETY OF SYMPTOMS BUT CARE IS REQUIRED TO AVOID MASKING UNDERLYING STRUCTURAL PATHOLOGY. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1965**

**Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.**

**The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

## **FACTOR ANALYS**

**1993**

**Woody, Erik Z. (1993, October). Factors, facets, and fiddle-faddle. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

## **NOTES**

**The classic suggestion effect implies involuntary behavior. A theory by Norman & Tim Shallice (published in a book on cognitive neuropsychology by Shallice) explains the classic suggestion effect in terms of underlying control processes.**

There are 2 complementary systems: 1. contention scheduling (routine acts that don't require conscious control, activating schemas through environmental events and other schemas) for well learned habitual tasks. 2. supervisory attentional system - nonroutine actions in centralized processes, accessing unique information, operating only indirectly by modulating lower level control system, biasing their selection of schemas by system #1.

These two systems permit the sense of behavior being automatic or willed. The theory can be used to explain hypnotic nonvolition. For highs, hypnosis may partly disable System #2, dissociating lower levels of control and resulting in genuine changes in behavior because System #1 would be more enabled, triggered directly by co-active schemas and environmental stimuli. This increased dependence on a lower level of control would not rule out a wide range of behavior. It's mainly novel or very complex behaviors that would diminish, plus exercise of will.

The model also illuminates our understanding of behavioral rigidity and the tendency for thought/action to be triggered by [suggestions?]. Spontaneous voluntary behavior would be diminished. (See for example Orne's studies of the effect of apparent power outage during an experiment, in which high hypnotizable Ss did not move or leave the room but sat passively, whereas low hypnotizable simulating Ss simply got up and left.)

Also a weaker "supervisor" would lead to disinhibition of inappropriate or peculiar associations or behavior. In labs one sees few such triggers, although Hilgard observed drug flashbacks. The phenomena of hypnosis sequelae appear like a disinhibition of experiences.

Hypnotic analgesia follows this model too, an automatic and controlled processing of perceptual input.

Amnesia that follows hypnosis can be explained by this theory. Shallice has a model of how memory is affected: memory is a higher control system, enabling the handling of non-routine situations. Confronted by a nonroutine memory problem, the supervisory system formulates a model of what [the information] should look like, pulls out memories, and compares the model. If hypnosis interferes with the supervisor function it should interfere with memory (the description and verification phases) leading to [hypnotic amnesia?]. [With hypnosis one would predict]: 1. Poor access to memories requiring description (not overlearned material). Recall should demonstrate good cued memory but poor free recall. [It has been observed that] hypnotic amnesia selectively impairs free recall rather than recognition recall. 2. Hypnotized Ss should show poorer verification (the ability to discriminate irrelevant from correct associations). Many studies have shown this, with impoverished verification (e.g. the "discovery" of elaborate previous lives).

A dissociated control theory of hypnosis is thus possible, emphasizing a loss of control of supervisory system processes. It would implicate changes in frontal lobe processing. The essence of hypnosis, according to this approach, is the bypassing of executive control, and the frontal lobe is viewed as a center of executive control.

There are several ways that hypnosis suggests inhibition of frontal lobe functioning: 1. impoverishment of self initiated behavior 2. other-directedness 3. frontal amnesia (unable to distinguish true memories from irrelevant memories; prone to

confabulation, especially when probed with false information) 4. poorer in temporal or sequential organization in memory.

How do we proceed to make this theoretical approach useful? We should do more neuropsychological studies, as Helen Crawford does. They emphasize the inhibition of frontal lobe functions.

Testable hypotheses arise: 1. Hypnotizable Ss should show the same kind of problem solving problems as frontal lobe patients. 2. Memory of hypnotized Ss should be like patients with frontal amnesia.

1992

Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. *International Journal of Clinical and Experimental Hypnosis*, 40, 21-43.

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum. Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

#### NOTES

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum---which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content

confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5 " (p. 27). "In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance . He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965)); Hilgard's general factor would probably correspond better to the Tellegen genuine responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales.

Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the instructions used to introduce the particular

hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

**Brentar, John P.; Lynn, Steven J. (1992, August). The Post-Hypnotic Experience Scale: Validity and reliability. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.**

**This paper describes the development of the Posthypnotic Experiences Scale (PES), a 57-item scale comprised of four subscales labeled Pleasant, Somatic- Kinesthetic, Irritability/Anger, and Anxiety. It was derived by way of an initial factor analysis using 444 subjects and refined by a second factor analysis using 288 subjects. In three data collection phases, the subscales were found to be internally consistent and to exhibit low to moderate test-retest reliabilities. The PES was also found to evidence excellent content, convergent, and discriminant validity, as measured by indices of hypnotizability, positive affect, depression, anxiety, hostility, sensation seeking, dysphoria, social desirability, perceptual aberration, absorption, and physical symptomatology. Behavioral validity was demonstrated in so far as subjects who were willing to volunteer for a second experiment, without reimbursement, scored higher on the Pleasant subscale than did nonvolunteers. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)**

**Frischholz, Edward (1992, October). The dimensionality of hypnotic performance. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

#### **NOTES**

**A 1985 article by Balthazar & Woody in Psychological Bulletin is the best I have read on this topic, and on how factor analysis can be used fruitfully.**

**Many people using the same data sets have arrived at difference conclusions. My results are based on two data sets: Balthazar & Woody's, in which they created a unidimensional scale. (If you factor analyze a simplex matrix you obtain a 3 factor matrix; yet you knew it was unidimensional. They pointed out the 2nd factor correlated with item difficulty, and the 3rd factor had a U-shaped correlation with item difficulty.)**

**Factor analysis may not be best way to demonstrate unidimensionality.**

**I decided to use non metric multidimensional analysis to confirm unidimension. By this, Form A appears to be multidimensional. The same holds true for Stanford Form C scale.**

**Interpretability of the different dimensions? I agree with Dr. Stone: unidimensions are better for interpreting tests. But you should start out by constructing one in the first place.**

**I argue that Form C is unidimensional, because the items were selected by using item/full score correlations, hence a first component was built into it. But what does the scale measure? The only way to know is to correlate it with external measures,**

like Woody does. There are no studies using factor analysis showing that different factors on hypnotizability tests have different correlations with external measures (e.g. Factor 1 doesn't correlate differently with Absorption than Factor 3).

We might better start with a theory if we are going to construct new hypnotizability scales. Don't just use item total correlations. It would be better to find items representing different dimensions, scale the items, then correlate them with different external referents.

Then when we do collect data, make sure the items are unidimensional representations.

Third, we should appropriately validate these dimensions.

Stone, Mark H. (1992, October). Rasch scaling of hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

The author calibrated responses to the Stanford Scales of hypnotizability, which have not been used much by clinicians. Much of the data collected by Hilgard and Weitzenhoffer on the development of those scales was not published.

Rasch measurement techniques analyzed item data taken from the individual Form A and B manuals.

The Rasch measurement involves natural Log odds, adjusted by variance of the respective persons. Thorndike's text explains this procedure taken from Wright & Stone, 1979, Best Test Design.

The calibration of items on Forms A and B of the Stanford scales indicates they differ greatly on difficulty and order of items. Items 1, 2, 3 are among the most difficult. Yet, items should follow item difficulty order.

For practicing clinicians, the mean and SD are inadequate to guide treatment. The practitioner wants to know how the patient responds to each item, compared with what would be expected (Like a Chi square). When data from misfit analysis is combined with clinical observation, we would get more understanding [of the patient's capabilities].

Not only are the 12 items not in order of difficulty, but there is redundancy. We could shorten the scale by selecting only items that span the same range of item difficulty: 4, 8, 10, 11, 2, 1 or 7, and 3. This would give a screening scale with wider range measured, more finely graduated, better suited to diagnosing misfit. We could connect seemingly disparate scale items.

Form C has a perfect correlation between order of difficulty and order of administration, except for 12 which must be administered earlier.

Forms I and II [the Profile scales] deviate from the administration order and the difficulty order.

Only Form C seems to be located in the way the author would want, a Guttman type scale (which is Like Rasch's analysis).

Woody, Erik Z.; Oakman, Jonathan; Drugovic, Mira (1992, October). Fleshing out a two-component view of individual differences underlying hypnotic responsiveness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Balthazar and I pointed out that different psychological processes are implicated in hypnotizability scale items, depending on the difficulty of the item. One process is more important on easy items, the other on difficult items.

We correlated an external variable as a function of difficulty of the items. Used the Absorption scale as the non-hypnotic measure for the latent correlation (biserial correlations). As item difficulty increases, the correlation with Absorption increases (from .2 to .5).

This suggests a high level of Absorption is needed to pass difficult items on the hypnotizability scale. We argued that Absorption is connected to true hypnotic responsiveness.

Now we are looking for indicators of easy item responsiveness. Last year I tried to explain anomalies in the data, anomalies that disappeared with a full complement of Ss.

Another possible external variable to correlate with item difficulty is a social compliance type of attribute, but in the history of hypnosis those variables are not found. Therefore we used a model from alcohol research that investigates an expectancy type of suggestion.

In that model, Ss drank two drinks that were alcohol free, but one drink purportedly had alcohol. Ss were told that large amounts of alcohol affect changes in perception, and that we were testing whether small amounts did. They were tested for "feeling of sluggishness in limbs," etc. They rated a list of experiences they might be having. The 109 Ss had been tested on Harvard A scale in separate research.

Ratings in the alcohol model had high internal consistency; this suggestion score correlated with hypnotizability in .2-.3 range.

The pattern of latent correlations would be predicted to be a graph with a negative slope, which the researchers obtained.  $R = -.77$

The easier the hypnosis item, the stronger the correlation with the expectancy measure. The easiest Harvard A scale items tap little more than those expectancy effects, and the hardest items have almost nothing to do with the expectancy effect.

What does this mean? We thought it was evidence of a social influence factor. Further work suggests we need to be more specific.

We measured the other putative variables: 1. Compliance Questionnaire (Gudjonsson, 1989); it evaluates the tendency to comply with requests, and to obey instructions; e.g., "I tend to go along even when someone is wrong." It has correlated with a measure of social conformity. 2. Suggestibility Questionnaire (which we developed). Items were based on interviews in which Ss told about everyday suggestible things--e.g. "When I hear about an illness I tend to get it. When someone tells me they smell something, I tend to also."

These Compliance and General Suggestibility tests correlated .12 and .07 respectively with the alcohol expectancy measure; nor did they correlate with each other. They do not measure the same trait. Also, though they correlated .18 and .26 with hypnotizability, neither variable showed the spectral pattern on latent correlation analysis.

Thus, we need to be more specific in linking the alcohol expectancy measure to hypnosis.

Most items on Harvard A scale are motor items of either direct suggestion or inhibition (challenge) type. The relationship of alcohol expectancy to direct motor items is strong; the relationship is weaker with motor challenge items (for which another process must be important).

We can think of will vs automatic control of behavior, as in the theory presented by Normal and Shallice. For well-learned behavior there are two levels of control: 1. low level - doesn't require conscious attention and control 2. higher level - relevant to initiation of action, planning

Direct motor suggestion response requires little attentional effort and the role of will is not important. There exists ambiguity for indeterminacy of the role of will and attention. Ambiguity offers an opportunity to attribute one's action to hypnosis. What happens in alcohol expectancy is different, but an ambiguous experience is happening due to "alcohol" in the drink--ambiguous experience is interpreted according to the context.

This differs from the neodissociation theory explanation, according to which the suggested behavior is enacted voluntarily but the voluntary aspect is separated from consciousness. To me, for simple motor acts the causality is inferred rather than perceived. For simple motor acts, no such higher level control is needed.

Motor challenge items have instructions to "try" to overcome; S must exert will. "Try to raise your arm" is different from "Raise your arm." The S could remain role consistent and not try; ambiguity is maintained and the S could look to the context for an explanation.

In the Normal and Shallice model, hypnosis weakens the higher system relative to the lower system. The S might be trying to exert will but experience it as less [influential] than in the normal state. Such capacity would not be tapped by an alcohol expectancy measure.

We think of individual differences in hypnotizability as multiple processes, like a tree that consists of more than one healthy branch but has plenty of dead wood to be pruned out.

**1991**

Ross, Colin A.; Joshi, S.; Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. *Hospital and Community Psychiatry*, 42, 297-301.

The 28-item Dissociative Experiences Scale was administered to a stratified cluster sample of 1055 respondents in a general population of Winnipeg. Dissociative experiences were common in the sample and were not related to socioeconomic status, sex, education, religion, or place of birth, although they declined with age in both sexes. A principal components analysis identified three factors accounting for

47.1% of the combined variance of scores. The first factor, absorption-imaginative involvement, is composed of common, benign experiences such as missing part of a conversation, being able to ignore pain, staring into space, absorption in a television program or movie, not being sure if you did something or only thought about it, and remembering things so vividly one seems to be reliving it. The other two factors, activities of dissociated states and depersonalization-derealization, composed of less common experiences such as not recognizing friends or family members and not recognizing one's own reflection in a mirror, may be powerful predictors of DSM-III-R dissociative disorders.

1990

Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. *American Journal of Clinical Hypnosis*, 32, 201-207.

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales. NOTES 1: NOTES: The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

"The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items related to modifications of regulatory control, changes in self- monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10- point scale. The items related to the experience of disturbances in identity,

memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202- 203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205).

"All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

1989

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. *International Journal of Clinical and Experimental Hypnosis*, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic- like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis,

however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

**1988**

**Donovan, David (1988). Factor analytic structure of attitudes towards hypnosis, guided imagery, and relaxation. [Unpublished manuscript] (Paper written for Comrey's Factor Analysis Course, UCLA)**

**NOTES**

**Factor analysis of semantic differential responses of 212 adults regarding 3 terms (hypnosis, imagery, relaxation) placed imagery in an intermediate position between the extremes of hypnosis and relaxation. Both common and unique factors extracted are discussed.**

**Pekala, Ronald J. (1988, November). Pattern dissimilarity in phenomenological structures among individuals of different hypnotic levels: Hypnosis and eyes-closed conditions. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.**

**NOTES**

**Hierarchical factor analysis was consistent with the psychograms in showing the same pattern in eyes closed conditions for four levels of hypnotizability; but different patterns during hypnosis for the four level groups. This procedure enables the quantification of different phenomenological states, and to operationalize them.**

**1983**

**McConkey, Kevin M. (1983). Behaviour, experience, and effort in hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 11, 73-81.**

**Subjects were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A, and were afterwards asked to rate the degree to which they experienced the items; subjects also scored their behavioural performance on the items. Data were analyzed to explore the relationships among behaviour, experience, and effort. Findings indicated a significant positive relationship between behaviour and experience on all of the HGSHS:A items, a significant negative relationship between behaviour and effort on the ideomotor items, and a significant positive relationship between behaviour and effort on the cognitive items. A similar pattern was observed between experience and effort. Also, subjects of varying HGSHS:A responsivity differed in terms of overall experience of the scale but not in terms of the overall amount of effort that they expended. Implications of the data are discussed in terms of the factors influencing subjects' experiential response and behavioural performance as well as the attributions that they make concerning effort during hypnosis.**

**1982**

**Kihlstrom, John F. (1982, October). Self appraisals of hypnotic 'depth'. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.**

#### **NOTES**

**Subjects take both private experience and public behavior into account, and weight the available information according to an implicit theory of hypnosis.**

#### **1977**

**Burns, Ailsa (1977). The distribution and factor structure of hypnosis scores following intervention. International Journal of Clinical and Experimental Hypnosis, 25, 192-201.**

**An intervention procedure was found to produce significant gains in hypnotic performance in a sample of 90 Ss. It was argued that the postintervention scores could be regarded as a measure of asymptotic rather than average hypnotizability. The distribution and factor structure of these scores were then considered to see whether these differed from what is generally found when average hypnotizability is measured. Using Orne and O'Connell's (1967) Diagnostic Rating Scales, a trimodal distribution was obtained with the modes falling at the top of the ideomotor passive range, the bottom of the cognitive range, and the middle of the "classic somnambulist" range. Analysis of subscale scores based on this distribution indicated the presence of a trait of general hypnotic competence. A 3-factor solution gave a strong general hypnotic factor, best represented by challenge items, a second ideomotor passive factor, and a third factor which could represent either a difficulty or a dissociation dimension. A 4-factor solution reduced the generality of the first factor, gave it more the appearance of a challenge factor, and introduced a strong imagery factor along with a passive ideomotor and a posthypnotic suggestion/negative hallucination factor. The size of the unrotated first factor was found to compare favorably with that obtained in other studies: this could be interpreted as meaning that the effect of training is to increase the size of the general factor in hypnotic performance. It is suggested that the 3 modes may represent 3 hierarchically arranged "ideal types" of hypnotic response, and that the effect of training has been to push members of the 3 classes closer towards their paradigm.**

#### **1976**

**Spiegel, Herbert; Aronson, Marc; Fleiss, Joseph L.; Haber, Jerome (1976). Psychometric analysis of the Hypnotic Induction Profile. International Journal of Clinical and Experimental Hypnosis, 24, 300-315.**

**Psychometric analyses of the Hypnotic Induction Profile (HIP) of Spiegel (1974a), a sixteen point test designed to measure hypnotic capacity, are presented herein. Briefly summarized are the sequential phases of trance experience as monitored by the HIP. On the basis of a factor analysis of individual items entering into the HIP's of 1674 patients, two distinct factors emerged. One is defined largely by up-gaze and**

eye-roll, the other by some of the subsequent items. Two methods for scoring the HIP, a configurational method involving both factors (profile scoring) and an actuarial method using only items from the second factor (induction scoring), are defined. As expected from the factor analysis, eye-roll is little related to the HIP graded by either scoring method. The correlation of induction scoring with the eye-roll is .22 in a sample of 1023 patients. Such a correlation is significant, although it accounts for only 5% of the variance that eye-roll and induction scoring have in common. That the low correlation may be a function of the relationship of hypnotizability to psychopathology is shown by a highly significant correlation ( $r = .52$ ) between eye-roll and induction scores in a population selected as non-psychotic. The usefulness of the HIP in relation to psychodiagnosis has been demonstrated elsewhere and is not the subject of this paper. Evidence is presented bearing on the reliability of the profile and induction scores, both yielding satisfactory reliabilities. Some validity information is given through satisfactory correlations with existing standardized scales. The HIP and Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1959) correlate .55.

**1969**

Field, Peter B.; Palmer, R. (1969). Factor analysis: Hypnosis inventory. *International Journal of Clinical and Experimental Hypnosis*, 17, 50-61.

An inventory scale of hypnotic depth and the Stanford Hypnotic Susceptibility Scale, Form A were factor analyzed, based on a sample of 223 college students. Both measures yielded a general factor of hypnotic depth. Rotation yielded inventory factors of unawareness, drowsiness, enthusiasm, subjective conviction, and Stanford factors of challenge and ideomotor-posthypnotic suggestibility. Results of an earlier study describing development of the hypnosis inventory were successfully cross-validated. (Spanish & German summaries) (19 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Greenleaf, Eric (1969). Developmental-stage regression through hypnosis. *American Journal of Clinical Hypnosis*, 12, 20-36.

Twenty subjects serving as their own controls were given four developmental tasks under conditions of hypnotic regression (R) and hypnotic simulation (S). Scored interview data were correlated with performances under R and S. Findings: (a) The Ss' pattern of responses is best conceptualized as a 'mixed' regression rather than 'true' developmental regression. (b) Even when Ss are used as their own controls, the R condition is productive of a greater mean number of childlike responses than is the S condition, disregarding response patterns. (c) The S condition scores provide measures of a set of relatively independent, the R condition of a set of relatively unitary performance variables; this in the same Ss. (d) Factor analysis yielded three orthogonal factors: 'outcome by test performance,' a personality constellation and a factor describing interpersonal actions. The specific situational

variable with greatest impact on test performance was the subject's ability to pretend.

1962

As, Arvid; Lauer, Lillian W. (1962). A factor analytic study of hypnotizability and related personal experiences. *International Journal of Clinical and Experimental Hypnosis*, 10 (3), 169-181.

To throw further light on the exclusivity of "primary suggestibility" as reported by other investigators, a factor analysis was performed in a sample of 102 female college students on the basis of the intercorrelations of 23 items of personal experiences earlier shown to be related to hypnotizability, and 19 items from 2 hypnosis scales. No simple factor structure emerged. 2 factors were interpreted: the 1st as a hypnotic factor with special emphasis on the capability to sustain the effect of suggestion over time, and the 2nd as a combination of psychological changeableness and social influencibility. A brief discussion was given of the composite picture of hypnotic susceptibility emerging from the fact that many hypnotic items loaded on both factors. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## FALSE MEMORY

2002

Gravitz, M.A. (2002). The search for Bridey Murphy: Implications for modern hypnosis.. *American Journal of Clinical Hypnosis*, 45, 3-10.

The 1956 publication of "The Search for Bridey Murphy" was a noteworthy event in the history of hypnosis. This internationally best selling book, written for lay readers, described several recorded sessions of alleged time-regression to a prior life nearly two centuries before 1956. While subsequent investigations disproved that claim, there were a number of important implications for the science and practice of hypnosis. Although it was concluded that the Bridey Murphy interviews were products of cryptomnesia, the book was a significant factor associated with a resurgence of public and professional interest in the modality.

## NOTES

The author notes that the hypnotist was a layman who did no mental status evaluation prior to the hypnosis. The author also considers and rejects several alternative hypotheses (reincarnation or regression to past lives; fraud or hoax; monetary motivation on the part of the hypnotist; and development of a dissociated identity, i.e. multiple personality disorder. He concludes, "Tighe's expectancies, her prior hypnotic experiences with Bernstein, her compliance, transference, acquiescence, and heightened suggestibility, could have set the stage for the subsequent behavior of both the hypnotist and subject in a nonconscious interrelationship in which both parties accepted their beliefs as reality" (p. 7).

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Page, R. A. (2002, December). Bridey Murphy: Five decades later.. Hypnos: Swedish Journal of Hypnosis in Psychotherapy and Psychosomatic Medicine, 29 (4), 182-185..

#### NOTES

This paper examines the impact and explanations of the case, aided by recordings of some of the actual hypnotic sessions conducted, and comments on a companion paper by Melvin A. Gravitz, Ph.D.

2002

Scorborja, Alan; Mazzoni, Giuliana; Kirsch, Irving; Milling, Leonard S. (2000, August). Evaluating the exclusions: Comparing influences of hypnosis and leading questions on memory reports. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

Recall and memory distortion were assessed in a sample of 50 highly hypnotizable participants, using a modified form of the Gudjonsson Suggestibility Scale. After listening to a story, half of the participants were asked a series of leading questions, and the others a corresponding series of nonleading questions. Half of the participants in each condition were asked the questions following a hypnotic induction, and the other half in a nonhypnotic context. All participants were then asked nonleading questions without hypnosis. No increases in correct responses were found. Both leading questions and hypnosis resulted in increased error rates

and a decrease in "don't know" responses. Implications of the findings regarding the per se exclusion of post-hypnotic testimony are discussed. [Abstract in Psychological Hypnosis: Bulletin of Division 30, Volume 10 Issue 1, Winter-Spring 2001.]

1999

Stern, Clara; Stern, William (1999). Recollection, testimony, and lying in early childhood. Washington, DC: American Psychological Association. (First published in 1909, in German.)

NOTES

This book, previously unavailable to American readers, describes a seminal study by William and Clara Stern, first published in Germany in 1909, documenting their own children's abilities to recollect, recount, testify, and distinguish truth from falsehood" (from publisher statement). Contents: Recognition as the basis of recall; The chronological development of recall and testimonial ability; False testimony-- Mistaken recollections, pseudo-lies, and lies; Recognition; Correct recollection; Purposive recall; Mistaken recollections; Experimental studies of testimony in early childhood; The falsification of testimony through fantasy; Pseudo-lies and lies; Educating young children to report on their experiences; The origins of lying and its prevention; The capability of small children as witnesses in legal proceedings.

1997

Karlin, Robert (1997). Illusory safeguards: Legitimizing distortion in recall with guidelines for forensic hypnosis - two case reports. International Journal of Clinical and Experimental Hypnosis, 45, 18-40.

Two amnesic automobile accident victims remembered the information needed for their ongoing lawsuits during hypnosis. Meeting the recording requirements of the Hurd safeguards led to the admission of hypnotically influenced testimony in court in one case, whereas failure to record led to exclusion in the other. In both cases, closed-head trauma almost certainly prevented long-term memory consolidation. Thus adherence to guidelines for forensic hypnosis legitimized distortions in recall instead of preventing them. Hypnosis used to facilitate hypermnesia alters expectations about what can be remembered, makes memory more vulnerable to postevent information, and increases confidence without a corresponding increase in accuracy. Distortion of recall is an inherent problem with the use of hypnosis and hypnotic-like procedures and cannot be adequately prevented by any set of guidelines.

1996

Perry, Campbell; Orne, Martin T.; London, Ray William; Orne, Emily Carota (1996). Rethinking per se exclusions of hypnotically elicited recall as legal testimony. International Journal of Clinical and Experimental Hypnosis, 44 (1), 66-81.

In 1993, Boggs argued for a rethinking of the per se exclusion of hypnotically elicited testimony. This article analyzes the Minnesota v. Mack (1980) case that

initiated this exclusion and the two Illinois cases Boggs cites in favor of her position. The scientific data on the effect of hypnosis on memory do not support Boggs's position. Rather than providing reasons for rethinking this per se position, these data suggest that it should be retained.

Lynn, Steven Jay; Martin, Daniel J.; Frauman, David C. (1996). Does hypnosis pose special risks for negative effects? A master class commentary. International Journal of Clinical and Experimental Hypnosis, 44 (1), 7-19.

#### NOTES

The authors review evidence in both experimental and clinical hypnosis situations. They conclude that "the available data do not justify the conclusion that hypnotherapy is any more dangerous, or ultimately less effective, than other psychotherapy and relaxation procedures" (p. 13). However, negative effects do sometimes occur in clinic or in laboratory. They indicate that the following situations and factors suggest need for particular care or vigilance:

Increased Psychopathology

Intensified Transference

Misconceptions About Hypnosis

Suggestions May Instigate or Reveal Unexpected Affect

Difficult or Inappropriate Suggestions

Direct Suggestions to Relinquish Symptoms

Countertransference Reactions

Suggestive Procedures and False Memory Creation

Inadequate Training in Psychology and Psychotherapy

Maestri, D.; Perry, C.; Laurence, J.-R. (1996, August). Children's memory for a special event: Exploring the effects of repeated questioning on recall, suggestibility, and photo lineup identification. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Recollections of a visit at the Montreal Olympic Stadium from two groups of children (4.5- and 5.5-year-old) were elicited on four occasions with free recall, direct questions, and misleading questions. Recall was evaluated in terms of correct, incorrect, neutral, repeated, omitted, and attributional responses. To study the possibility of children choosing one type of suggestion more readily than the other, the misleading questions were further evaluated in terms of the type of suggestion implied. A photo lineup recognition task of familiar and unfamiliar faces present during the visit was also included. Children displayed high degrees of acquiescence to the misleading questions and a clear preference for the suggestion that did not involve their own person. In the photo lineup identification task, 21-37 percent (across trials) of the children mistakenly judged familiar and unfamiliar faces as having been present at the event. Results were discussed in a legal context. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

1995

8025, Ruehle & Zamansky, 1995

Neodissociation theory proposes that hypnotic suggestions are performed relatively automatically, whereas sociocognitive theories suggest that effortful cognitive strategies are necessary. To distinguish between the predictions derived from the two theories, we gave hypnotized subjects the suggestion to forget the number eight, and asked them to solve a series of addition problems using that number. It is a well-established finding in cognitive psychology research that subjective estimations of time depend on the amount of cognitive effort expended during that time. Increases in cognitive effort are associated with decreases in subjective time. Accordingly, if hypnotic subjects carry out a suggestion relatively automatically, they should perceive the time taken as longer than if they carry it out using effortful cognitive strategies. Highly hypnotizable subjects under hypnosis and low hypnotizable subjects instructed to simulate hypnosis were given the suggestion to forget the number eight and to replace it with nine. They were then given a page of addition problems, many of which included eights in the solutions, and were instructed to do the problems as quickly and accurately as possible. They were also informed that they would be asked to estimate the time spent completing the problems.

Subjects completed the addition problems and then gave their time estimates. As a control for changes in time estimation brought about simply by being hypnotized, all subjects also completed a series of addition problems without the amnesia suggestion, and again estimated the time. The order of the two conditions (i.e., with and without the amnesia suggestion) was counterbalanced across subjects.

Results showed that the simulators, who intentionally avoided the number eight in their solutions to the problems, perceived the time spent doing these problems as shorter than the time spent doing problems normally, without the suggestion to forget the number eight. The increase in cognitive effort therefore resulted in decreased subjective time, as expected. The hypnotized subjects, on the other hand, showed no difference in their time estimations under the two conditions. The two groups did not differ in their time estimates without the amnesia suggestion, but with the suggestion, the hypnotized group perceived the time as longer than did the simulators. The results, then, are consistent with neodissociation theory, since the hypnotized subjects appeared to expend relatively less cognitive effort in carrying out the amnesia suggestion.. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

Orne, Emily Carota; Whitehouse, Wayne G.; Dinges, David F.; Orne, Martin T. (1996). Memory liabilities associated with hypnosis: Does low hypnotizability confer immunity?. International Journal of Clinical and Experimental Hypnosis, 44 (4), 354-369.

Retrospective analyses of data from the authors' program of research on hypnosis and memory are presented, with special emphasis on effects observed among low hypnotizable individuals. In Experiment 1, participants completed seven forced-

recall trials in an attempt to remember a series of pictures that had been shown 1 week earlier. For half the participants, the middle five trials were carried out using hypnotic procedures; the remaining participants performed all recall attempts in a motivated waking condition. Hypnosis failed to enhance correct recall for either high or low hypnotizable participants beyond the hypermnesia and reminiscence effects associated with repeated retrieval attempts over time. However, whereas high hypnotizable participants produced substantial numbers of confident recall errors (i.e., intrusions) independent of the use of hypnosis, low hypnotizable participants exposed to hypnotic procedures reported significantly more intrusions than their counterparts in the waking condition. In Experiment 2, participants were asked to identify whether specific recollections, reported during two forced-interrogatory recall tests conducted 1 week earlier, had originated in the first or second of those tests. A general bias to misattribute previously reported recollections to the first of two recall occasions was observed; however, the effect was greatest among low hypnotizables who had undergone the second recall attempt in hypnosis. The findings imply that highly hypnotizable individuals are not unique in their vulnerability to distortions of memory induced by hypnotic techniques. Individuals of lesser hypnotic capacity also manifest memory alterations when exposed to such procedures. -- Journal Abstract

American Medical Association Council on Scientific Affairs (1995). Report on memories of childhood abuse. International Journal of Clinical and Experimental Hypnosis, 43 (2), 114-117.

#### NOTES

The AMA considers the technique of 'memory enhancement' in the area of childhood sexual abuse to be fraught with problems of potential misapplication" (p. 114). "Most controversial are those 'memories' that surface only in therapy and those from either infancy or late childhood (including adolescence)" (p. 114).

Dywan, Jane (1995). The illusion of familiarity: An alternative to the report-criterion account of hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 43 (2), 194-211.

Hypnosis increases the likelihood that participants will report incorrect material at higher levels of confidence. One interpretation of such data is that hypnosis induces individuals to lower the criterion they use to make memory reports. A lowered report criterion could account for the increase in items that participants are willing to report as memories but not for the increase in confidence that typically accompanies hypnotic retrieval. Although some participants may indeed lower their report criterion, this alone should not result in the highly confident confabulation so often observed. An alternative perspective is that for some participants, hypnosis alters the experience of retrieval such that items generated during retrieval attempts are more likely to have the qualities (e.g., perceptual fluency, vividness) usually associated with remembering. This illusion of familiarity would account for the

higher levels of confidence that are so frequently observed in hypnotic recall, and adopting this perspective should lead to even greater caution in the use of hypnosis as an aid to retrieval.

Levitt, Eugene E.; Pinnell, Cornelia Mare (1995). Some additional light on the childhood sexual abuse-psychopathology axis. International Journal of Clinical and Experimental Hypnosis, 43 (2), 145-162.

This exposition is an attempt to unravel the complexities of the relationship between childhood sexual abuse and adult psychopathology. Four facets of the relationship are examined in some detail: (a) the extent of childhood sexual abuse; (b) the probability that sexual abuse in childhood will result in psychopathology in the adult; (c) the reliability of early life memories in later life; and (d) the role of recovered memory of trauma in the healing process. The conclusions of this logico-empirical analysis are that first, government statistics tend to underestimate the extent of childhood sexual abuse, whereas independent surveys tend to overestimate it. Estimating prevalence is further complicated by variations in the definitions of key terms. Possibly the only safe conclusion is that true prevalence cannot be reliably determined. Second, empirical investigations of childhood sexual abuse conclude that not all victims are emotionally injured. A substantial number of these investigations find that a majority of victims suffer no extensive harm. Other variables such as family dynamics are involved; there may be only a few cases in which emotional harm results from sexual abuse as a single factor. Third, memory research suggests that memory in general is a dynamic, reconstructive process and that recall of childhood events is particularly vulnerable to distortion. Memory cannot dependably produce historical truth. Last, there is some clinical evidence that abreaction of a traumatic event in adulthood may have a remediative effect. Similar evidence for childhood trauma is lacking. The belief in the healing effect of recalling and reliving a childhood trauma depends on the therapist's orientation.

Nagy, Thomas F. (1995). Incest memories recalled in hypnosis -- a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (2), 118-126.

Accuracy of repressed memories recovered in hypnosis cannot be reliably determined with any greater certainty than non-hypnotically recalled events. Therefore, the practice of therapists' accepting hypnotically enhanced memories as veridical, absent corroborating evidence, is not advocated. A 52-year-old woman with a 27-year history of panic attacks and sleep disorder inadvertently recovered incest memories in hypnosis. Photographs and remembered events by other family members were thought by the patient to provide general support although they did not constitute actual proof of abuse. Implications are discussed.

Sarbin, Theodore R. (1995). On the belief that one body may be host to two or more personalities. International Journal of Clinical and Experimental Hypnosis, 43 (2), 163-183.

The belief in the validity of the multiple personality concept is discussed in this article. Two scaffolding constructions are analyzed: dissociation and repression. As generally employed, these constructions grant no agency to the multiple personality patient. The claim is made that the conduct of interest arises in discourse, usually with the therapist as the discourse partner. In reviewing the history of multiple personality and the writings of current advocates, it becomes clear that contemporary users of the multiple personality disorder diagnosis participate in a subculture with its own set of myths, one of which is the autonomous actions of mental faculties. Of special significance is the readiness to transfigure imaginings into remembering of child abuse, leading ultimately to the manufacture of persons. The implications for both therapy and theory of regarding the patient as agent in place of the belief that the contranormative conduct is under the control of mentalistic faculties are discussed.

1994

Ceci, Stephen J.; Loftus, Elizabeth F.; Leichtman, Michelle D.; Bruck, Maggie (1994). The possible role of source misattributions in creation of false beliefs among preschoolers. International Journal of Clinical and Experimental Hypnosis, 42 (4), 304-320.

In this article the authors examine one possible factor in the creation of false beliefs among preschool-aged children, namely, source misattributions. The authors present the results from an ongoing program of research which suggest that source misattributions could be a mechanism underlying children's false beliefs about having experienced fictitious events. Findings from this program of research indicate that, although all children are susceptible to making source misattributions, very young children may be disproportionately vulnerable to these kinds of errors. This vulnerability leads younger preschoolers, on occasion, to claim that they remember actually experiencing events that they only thought about or were suggested by others. These results are discussed in the context of the ongoing debate over the veracity and durability of delayed reports of early memories, repressed memories, dissociative states, and the validity risks posed by therapeutic techniques that entail repeated visually guided imagery inductions.

Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual.]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question? Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Frankel, Fred H. (1994). The concept of flashbacks in historical perspective. International Journal of Clinical and Experimental Hypnosis, 42, 321-336.

A computer search of the literature for papers indexed under "flashbacks" produced a list of 70 references, many found in publications on the topics of substance abuse and trauma. Several of these were letters or papers written in languages other than English. In all, the author reviewed 55 papers. Although most of these papers contained comments that addressed the subject matter to some extent as recurrences or reminiscences of past happenings, the variability in the use of the term leaves many unresolved questions regarding the veridicality of the imagery. Nothing in the presentations reviewed by the author clearly demonstrates the unidimensional nature of flashbacks nor any recognizable neurophysiological correlate. The content of a flashback appears to be at least as likely to be the product of imagination as it is of memory.

Ganaway, George K. (1994, October). The thin line: Reality and fantasy in hypnotically facilitated memory retrieval during psychotherapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

Historical review: Every hundred years there has been a peak in interest in altered states--a fin de cicle zeitgeist. It is the Brigadoon effect, i.e. something materializing for one day every 100 years. The theories developed then suffer from "paradigm grandiosity." In hypnosis, we can refer back to:

1694 Salem witch trials

1790s Gaussner's exorcism (see Ellenberger); in a 1775 showdown between him and Mesmer, there occurred the turning point between exorcism and psychotherapy.

1880s Charcot at Salpêtrier 'demonstrated' that hypnosis was an organic, pathological condition. Ultimately this contributed information about the plasticity

of hypnotized people. (In the 1880s Bernheim thought it wasn't pathological and thought that suggestion was the important element in hypnosis.)

Recent historical contributions have influenced our views of MPD. Spiegel and Kardiner published book about hypnosis and war neuroses. Cheek & LeCron developed ideomotor questioning, which ignores the contribution of unconscious fantasy. Jacob Arlow's metaphor for MPD is two movie projectors aiming at a screen from two different sides. The subjectively known experiential world thereby combines external reality and the person's internal, motivated perceptions. The author presented a case study of female therapist, who had been previously diagnosed as MPD, who presented with dissociative symptoms that she thought were due to abuse by her grandmother. She fabricated the memories in order to get the holding and physical nurturing from her therapist for being courageous and remembering the abuse.

Maintenance of professional boundaries is very important in treatment.

Garry, Maryanne; Loftus, Elizabeth F. (1994). Pseudomemories without hypnosis. International Journal of Clinical and Experimental Hypnosis, 42 (4), 363-378.

Hypnosis is often colloquially associated with "the power of suggestion"; however, some cognitive memory researchers believe that suggestions have power even without hypnosis. A well-known phenomenon in cognitive psychology is the "misinformation effect," in which subjects who are misled about previously witnessed events often integrate that inaccurate postevent information into their accounts of the event. In the present article, we review the misinformation literature in four major rounds according to the nature of the memory distortion. The first three rounds are studies of memory suggestibility for observed events; by contrast, the fourth (and newest) one deals with personal or autobiographical memory. Considered collectively, these four rounds of research provide compelling evidence that it is not hard at all to make people truly believe they have seen or experienced something they have not -- without any hypnosis at all. Finally, we discuss the tragic implications for the unquestioned acceptance of all recovered memories.

Kihlstrom, John F. (1994). Hypnosis, delayed recall, and the principles of memory. International Journal of Clinical and Experimental Hypnosis, 42 (4), 337-345.

This article reviews the seven principles of memory function that set limits on the degree to which any attempt to recover a long-forgotten memory can succeed: encoding, organization, time dependency, cue dependency, encoding specificity, schematic processing, and reconstruction. In the absence of independent corroboration, there is no 'litmus test' that can reliably distinguish true from false memories, or memories that are based on perception from those that are based on imagination. Practicing clinicians should exercise great caution when using hypnosis or any other technique to facilitate delayed recall.

Lynn, Steven Jay; Nash, Michael R. (1994). Truth in memory: Ramifications for psychotherapy and hypnotherapy. American Journal of Clinical Hypnosis, 36, 194-208.

In this article we address a number of issues relevant to the practice of psychotherapy and hypnotherapy: How reliable is memory? How are therapists' and clients' beliefs and expectancies related to pseudomemory formation? Are certain clients particularly vulnerable to pseudomemory creation? Does hypnosis pose special hazards for pseudomemory reports? What are the variables or factors that mediate hypnotic pseudomemories? In addition to reviewing the literature on these topics, we intend to sensitize the clinician to the potential pitfalls of critical reliance on the patient's memories, as well as uncritically accepted clinical beliefs and practices.

Lynn, Steven. Jay; Rhue, Judith W.; Myers, Bryan P.; Weekes, John R. (1994). Pseudomemory in hypnotized and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 42 (2), 118-129.

High hypnotizable (n = 23) and low hypnotizable simulating (n = 13) subjects received pseudomemory suggestions. High hypnotizable and low hypnotizable simulating subjects were equally likely to pass the target noise suggestion during hypnosis and were also equally likely (high hypnotizables, 47.83%; low hypnotizable simulators, 64.29%) to report pseudomemories when tested for pseudomemory after instructions to awaken. As in previous research with task-motivated subjects, pseudomemory rate (high hypnotizables, 47.48%; low hypnotizable simulators, 46.25%) was not reduced by informing subjects that they could distinguish fantasy and reality in a nonhypnotic state of deep concentration. At final inquiry, after deep concentration, high hypnotizable and low hypnotizable simulating subjects' pseudomemories remained comparable (43.48% and 38.46%, respectively). Unlike previous research, high hypnotizable subjects did not report more unsuggested noises and more pseudomemories of novel sounds than did awake low hypnotizable simulating subjects. Pseudo-memory reports were generally consistent with subjects' ratings of whether the hypnotist expected them to believe the sounds were real or imagined.

Nash, Michael R. (1994). Memory distortion and sexual trauma: The problem of false negatives and false positives. International Journal of Clinical and Experimental Hypnosis, 42 (4), 346-362.

Logically, two broad types of mnemonic errors are possible when adult psychotherapy or hypnosis patients reflect on whether they were sexually abused or not as a child. They may believe that they were not abused when in fact they were (false negative error), or they may believe they were abused when in fact they were not (false positive error). The author briefly reviews the empirical evidence for the occurrence of each of these types of errors, and illustrates each with a clinical case. Further, in considering the incidence, importance, and clinical implications of these

errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea is made for theorists and researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

Nash, Michael R. (1994, October). Reports of early sexual trauma: The problem of false negatives and false positives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The problem of false positives and problem of false negatives are distinct and should be treated differently. The question involves pseudomemories vs repression.

Evidence for false positives: 1. Memory research 2. Developmental psychopathology 3. Contemporary psychoanalytic theory 4. Clinical field studies

No laboratory researcher has produced false memories that are as gravid, or as emotionally loaded as early abuse.

Evidence for repression: 1. "Repressor Personality" research (Weinberger & Schwartz, who view it as a trait rather than a state). 2. Implicit memory research 3. Hypnosis research on memory (see Nash chapter in Fromm & Nash book on research in hypnosis) 4. Clinical field studies

Ofshe, Richard; Singer, Margaret T. (1994). Recovered memory and robust repression: Influence and pseudomemory. International Journal of Clinical and Experimental Hypnosis, 42, 391-410.

A subset of the psychotherapists practicing trauma-focused therapy predicate their treatment on the existence of a newly claimed, powerful form of repression that differs from repression as used in the psychoanalytic tradition and from amnesia in any of its recognized forms. Recovered-memory specialists assist patients to supposedly retrieve vast quantities of information (e.g., utterly new dramatic life histories) that were allegedly unavailable to consciousness for years or decades. We refer to the hypothesized mental mechanism as 'robust repression' and call attention to the absence of evidence documenting its validity and to the differences between it and other mental mechanisms and memory features. No recovered-memory practitioner has ever published a full specification of the attributes of this mechanism. That is, the properties it would have to have for the narratives developed during therapy to be historically accurate to any significant degree. This article reports a specification of the properties of the robust repression mechanism based on interviews with current and former patients, practitioners' writings, and reports to researchers and clinicians. The spread of reliance on the robust repression mechanism over the past 20 years through portions of the clinical community is traced. While involved in therapy, patients of recovered-memory practitioners come to believe that they have either instantly repressed large numbers of discrete events or simultaneously repressed all information about abuse they may have endured for as long as a decade. Patients' therapy-derived accounts are thought by some social influence, memory, and clinical specialists to be

inadvertently created iatrogenic effects: inaccurate pseudomemories and confabulations produced due to patient-therapist interaction, the use of leading, (sic) suggestions, hypnosis, and the mismanagement of the dependent relation of the patient on the therapist. Three cases are reported which illustrate how new life accounts predicated by robust repression can develop during therapy with a recovered- memory practitioner.

Schefflin, Alan W. (1994). Forensic hypnosis: Unanswered questions. Australian Journal of Clinical and Experimental Hypnosis, 22, 25-37.

Many courts have mistakenly identified hypnosis as more suggestive than eyewitness testimony or leading questions, and therefore these courts have applied unnecessarily restrictive rulings on hypnosis. The dangers of suggestion in eyewitness and interrogation cases pose reliability problems that are equally as great. In all situations, pre-trial evidentiary hearings on admissibility of 'suggestive' testimony is essential. Expert testimony should be available to assist the judge. The forensic rules to date have failed to clarify some hard cases. In resolving these cases, courts are encouraged to adopt a case-by-case analysis rather than a total prohibition on hypnotically refreshed recollection. Courts have assumed conclusions about hypnosis that the laboratory experiments suggest are incorrect - juries are not overly persuaded by hypnosis testimony, there is no inevitable concreting effect and witnesses do not become impervious to cross-examination. Thus, the restrictive per se disqualification rules for hypnotically refreshed recollection are too severe.

Spiegel, David; Schefflin, Alan W. (1994). Dissociated or fabricated? Psychiatric aspects of repressed memory in criminal and civil cases. International Journal of Clinical and Experimental Hypnosis, 42 (4), 411-432.

During the last decade, clinicians, courts, and researchers have been faced with exceedingly difficult questions involving the crossroads where memory, traumatic memory, dissociation, repression, childhood sexual abuse, and suggestion all meet. In one criminal case, repressed memories served as the basis for a conviction of murder. In approximately 50 civil cases, courts have ruled on the issue of whether repressed memory for childhood sexual abuse may form the basis of a suit against the alleged perpetrators. Rulings that have upheld such use underscore the importance of the reliability of memory retrieval techniques. Hypnosis and other methodologies employed in psychotherapy may be beneficial in working through memories of trauma, but they may also distort memories or alter a subject's evaluation of their veracity. Because of the reconstructive nature of memory, caution must be taken to treat each case on its own merits and avoid global statements essentially proclaiming either that repressed memory is always right or that it is always wrong.

Spiegel, David (1994, October). On patients not remembering abuse when it in fact may have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

False memories and false non-memories may be two sides of the same coin. What is the evidence for repression?

If people are abducted by extraterrestrials, why don't they just keep them? [Joke!]

It seems counter-intuitive that people would forget important, arousing things that happen.

The three main components of hypnosis (suggestibility, absorption, and dissociation) are also aspects of memory: 1. Absorption relates to encoding (narrowing attention); also happens during traumatic events (Loftus' "gun memory" which is so clear, while they don't encode what gunman's face looks like). 2. Dissociation relates to memory storage (compartmentalization of information). Traumatized people have symptoms of dissociation, depersonalization. If you are in an unusual mental state, you may watch the event; the memory is stored without the usual network of associations. 3. Suggestibility relates to retrieval. The way questions are asked influences one's response. But hypnosis is not an infinite influencer; the main damage to memory contributed by hypnosis is "confident errors" (McConkey).

We did research one week after the Loma Prieta earthquake, and found significant cognitive alterations, memory alterations, etc. In our sample, 1/4 of the people felt detached from their body or from the ground right after the earthquake.

Memory alterations were compared with data from other studies after other traumas. Difficulties with memory occurred in 29% of our sample.

The disorganization of memory can follow even just witnessing trauma (e.g. the recent slaying of 8 people in the law office in San Francisco) And people who witnessed the execution of Harris. They were in no danger themselves, yet the level of dissociative symptoms were as high in the former.

The Briere & Cone and Herman & Shatzow studies are based on self report of earlier trauma, and that is a problem in research. But Williams' study does have the age of people when they were abused as children; see her article in Journal of Consulting and Clinical Psychology.

## COMMENTS FROM THE AUDIENCE

Dabney Ewin: Sex abuse trauma differs from earthquakes because the abuser says, "If you tell anybody I'll kill you." This is like a post hypnotic suggestion, which is carried out compulsively when given to the victim during fear.

Dale: How do we account for the vigor in the attempts of each side to convince the other. The people who have been real victims of sexual abuse need to be able to talk with the people who are victims of False Memory Syndrome. The impact on a family is just as traumatic as the sexual abuse itself.

Response by D. Spiegel: I wouldn't recommend that combination, but the point you make about damage to the falsely accused is relevant. Their lives are shattered but remember the damage done throughout life by sexual abuse.

Yapko, Michael D. (1994). Suggestions of abuse: True and false memories of childhood sexual trauma. New York, NY: Simon & Schuster.

## NOTES

From the section titled "A Note to Therapists:"

"I would encourage you not to (1) preclude open communication at all times among family members; (2) act as your client's 'hired gun'; (3) act as if corroboration of allegations of abuse were unnecessary; (4) jump quickly to the conclusion abuse occurred simply because it is plausible; (5) suggest a history of abuse to someone who is not your client; (6) refer a client out for hypnotic confirmation or disconfirmation on the false premise that hypnosis is some kind of lie detector; (7) ask leading or suggestive questions; (8) assume repression is in force when someone does not have much memory from childhood; (9) rely on your memory of the interaction. Tape your investigative sessions and review them later for any evidence of possible unintentional contamination of your client's recollections" (p. 217).

London, Ray William (1993, October). Refreshed adult memories: Abuse survivor or therapeutic victim?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

The author addresses four areas: 1. public policy 2. psychological issues 3. legal issues (evidence) 4. how to properly deal with it

A definition of sexual abuse is being applied to behaviors that for years were not considered out of bounds (e.g. entering a bathroom where someone else is). Furthermore, using the word "survivor" for abused people equates patients with survivors of concentration camps, who do not present with repressed memories typically. National incidence of child abuse remains unclear estimates are 6 to 60% of females. In Florida, only 13% of cases reported are confirmed.

Some therapists who specialize in this area in surveys indicate that they have false beliefs regarding memory and effects of trauma.

[These represent only partial notes on a lengthy and substantial paper.]

1993

Nadon, Robert (1993, October). Nomothetic and idiographic approaches to hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

Scientists and practitioners are not benefitting from each other's contributions. The central contribution to hypnosis, both basic and applied, is the logic and validity of study designs. The false memory issue is an example. Clinicians supply an answer the public likes, but scientist provide data based on nomothetic (group average) models that are not useful here.

Most of my own work is nomothetic, but it can work together with case study approach. We use a synergistic model: the combined effects of traits, cognitive,

social, and affective factors are investigated. Interactions are tricky to detect, but we need a spirit of enquiry that encourages designs sensitive to interactions.

One example is Radke & Spanos' study that used a scale rating whether subject was hypnotized and another indicating degree of absorption-and-hypnotized vs absorption-and-not-hypnotized. Nadon's reanalysis showed a scale by Ss interaction: mediums were different on the 7 point scale but highs were not. (Highs were less manipulated by the scale manipulation).

Jean-Roche Laurence and Nadon replicated the interaction. Then Nadon did a study to test the idea that highs were less affected by scale manipulation because they relied more on subjective experience. They measured Absorption in a different context and hypothesized that the highs here would be less affected on the 7 point scale in the other context; it was validated. There seemed to be a linear absorption by a quadratic hypnotizability interaction.

Another simple example of interaction at work: there are different lines predicting hypnotic ability based on the Absorption scale, representing need for control on the scale. Those low in need for control have a stronger prediction of hypnotizability from Absorption scale. With high need for control, Absorption doesn't predict hypnotizability. This may explain why the correlation isn't stronger between Absorption and hypnotizability.

Nadon investigated how level of relaxation could be affected by an interaction. Measured muscle tension of masseter (?) while listening to music (half of Ss) or focusing on relaxing (50%). In an experiential condition there was a negative correlation between Absorption and muscle tension (highs relaxed more); in an Instrumental condition it was the opposite. So both high and low Absorption people were capable of relaxation, but to get the best relaxation you would have to know their Absorption score.

A second study hypothesized that predispositions for certain kinds of affect (Tellegen's positive affect, like extroversion) and negative affect (like neuroticism). High Absorption extraverts low in neuroticism worked best with music; and [missed words]. This supports Tellegen's hypothesis re the effects of positive and negative affect and Absorption.

Now we can discuss individual characteristics that suggest which relaxation strategy will benefit. The practical implications can be validated by case studies.

**Sheehan, Peter W.; Garnett, Michelle; Robertson, Rosemary (1993). The effects of cue level, hypnotizability, and state instruction on responses to leading questions. International Journal of Clinical and Experimental Hypnosis, 41, 287-304.**

Two sessions were conducted in which independent groups of 86 high- and 85 low-susceptible subjects, responding individually under waking or hypnotic instruction, answered high- and low-cued leading questions about a video event that depicted shooting at an airport. The two sessions were separated by 1 week, and the same questions were asked in both sessions. It was predicted that highly susceptible subjects responding under hypnotic instruction would show the most evidence of accepting false information via strongly cued leading questions. Results showed general effects for leading questions and level of susceptibility but no firm support

for the involvement of hypnosis. Data are discussed in terms of both the linguistic and social factors that appear to have operated on subjects in the study, results overall highlight the strong influence of level of susceptibility on subjects' acceptance of false information.

1992

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

#### NOTES

Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).

Lynn, Steven Jay; Rhue, Judith W. (1992, October). Memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

[Author presented a dramatic case report of patient who recalled specific events that subsequently he and the patient investigated and disproved. What the patient thought they saw could not possibly have been seen.]

The experimental literature on memory gives us some things to think about. Therapy relies highly on memory, and the therapist shapes the contours of the memory by validating the memories, which are rarely doubted. Tacit acceptance of memories as historical facts is part of the contract of therapy.

Memory studies challenge the idea of accurate storage. Some people are unduly confident of their memory. Bartlett's research demonstrated distortion according to schema, interpretations, embellishments, etc. Jacobi et al indicate people's theories about what happened shape memory.

One theory is that trauma leads to amnesia, repression, dissociation. But research does not show inability to recall early life events indicates presence of a traumatic history. Repression is not prima facie evidence of abuse. The *Courage to Heal* book states that merely thinking you were abused is evidence that you probably were.

How do vague ideas crystallize? Loftus finds if inability to remember isn't attributed to ordinary forgetting, the person may look for memories, thereby creating them.

Studies of persons who confess to crimes, unsure whether they did or didn't do them, indicate that these people are easily coerced. Doubt in a memory's accuracy can be reframed by a therapist.

Hypothesis: Therapists who confidently state a view risk implanting pseudomemories. Therapists must be cautious.

Clients can confuse sources of information that they receive. Different sources of information can be integrated into a single memory (e.g. what occurred to them and what occurred to siblings can be integrated into a pseudomemory). Some limited evidence that early life experience memories could be implanted has been presented by Loftus.

Certain client characteristics contribute to false memories: 1. Present mood state (mood congruent memory). This effect is reliable when people are clinically depressed. Though clinicians may say it indicates early childhood abuse, the memory might be selective or biased. 2. History of fantasy-proneness. In childhood this type of person might have had problems distinguishing fantasy from reality. LaBelle et al found absorption made it difficult to distinguish sounds in hypnosis from what really occurred, creating pseudo- memories. With this population it is essential to avoid suggesting abuse.

Lynn was successful in implanting an idea of abuse in an alter called Person. He used the Orne technique (from the BBC film "Hypnosis on Trial") to ask a patient what she had told him about her dog during the hypnosis; he did this to convince her of the importance of exploring her amnesic episodes.

Does hypnosis foster a literal re-experiencing of childhood events? NO. Nash, in an exhaustive review, failed to find correspondence between information from hypnotic age regression and childhood events. He notes that literal reliving is not possible. It is possibly an expression of primary process thinking. Hypnosis doesn't ameliorate memory problems; and it may exacerbate memory problems.

Lynn views primary process thinking observed in hypnosis as due to the demand of hypnosis to fantasize and relinquish critical thinking or objectivity. This plus Therapist and Patient expectancies may foster tenacious beliefs that events occurred.

Many hypnotic suggestions may interfere with memory. The AMA 1985 report suggests that hypnosis can influence confidence in a 'memory' with no actual improvement in accuracy.

The effects aren't limited to hypnosis however. Simulators and controls also generate pseudomemories. Repeated questioning of Ss who are led to believe that questioning helps distinguish memories from fantasies, actually diminishes the accuracy of memories.

Hypnotizability is correlated with pseudomemory occurrence. We should evaluate a client's hypnotizability when evaluating for pseudomemories.

Perceived verifiability rate is important, as pseudomemories are higher where you can't verify the reported memory, it is thought. Therefore, approach with caution. Make every effort to corroborate memories.

Subjective reports may tell narrative truths even though inconsistent with the historical record, and could be useful independent of historical accuracy. I agree that those 'memories' could be important, just as age progression or past life regression material could be useful in therapy. But should we base our interpretations or conclusions on events that are not confirmed? A patient's belief in abuse by their parent has enormous implications for a family.

Therapists should understand the dynamics of a request for using hypnosis to recall forgotten memories before using uncovering techniques. Ask yourself, "Why is this being requested?" Also ask other questions: 1. Is the person fantasy prone, dissociative, suggestible, a high hypnotizable? 2. Is the person stabilized enough to focus on an abreaction? 3. Is there conscious or unconscious motivation to avoid responsibility for one's own behavior? 4. Is there a wish to arrive at a facile solution, a magic cure, the royal road to the unconscious; or is there an attempt to control the treatment hour, to avoid issues, to test the therapist? 5. Is therapy stalled, not moving forward? 6. Am I angry with the client because they expect to uncover more?

Instead of using hypnosis to retrieve memories, I may focus on the issues to which I answer 'Yes' in the forgoing list.

I do not believe current research is sufficiently persuasive to throw out hypnosis for retrieving memories. The dangers of pseudomemory are endemic to therapy.

**Incorporating hypnosis into a broader frame of therapy depends on the skill of the clinician. However, we must use hypnosis with great caution**

#### **COMMENTS FROM AUDIENCE**

**Joseph Dane: In 75% of cases that could be verified, they found corroborating evidence: what should you look for as an index that the memory recalled in hypnosis is more likely to be accurate?**

**Lynn: Many instances of abuse are corroborated. No one questions the veracity of all memories. To my knowledge there are no ways of corroborating genuine from false memories. We know subjective conviction is not sufficient, and clients' affective experience can be very misleading. Since my experience [in the case study reported at the beginning of this presentation] I have talked with many therapists who have had similar experiences.**

**David Spiegel - the problem is not the hypnosis: patients go in and out of hypnosis all the time, momentarily. The problem is, how do I explore the material in psychotherapy? There is no substitute for corroboration if you can get it. But you have to be sensitive to the vulnerability of those people.**

**Howard Hall: What is a genuine memory? No memory is undistorted. More importantly, can we verify significant events that might have had long term consequences, like abuse? We should try to verify memories when we base treatment programs on them. The only memories in the literature that have a reputation of being accurate are highly traumatic events that stand out, and these reports are anecdotal in nature.**

**Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.**

**In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.**

#### **NOTES**

**The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.**

**Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating**

statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental or social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----

	Group A	Group B	Group C	Group D
False suggestion	(n=15)	(n=15)	(n=15)	(n=15)
Accepted	12	6	7	3
Rejected	3	9	8	12

---- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a

number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

1991

Sheehan, Peter W.; Statham, Dixie; Jamieson, Graham A. (1991). Pseudomemory effects over time in the hypnotic setting. Journal of Abnormal Psychology, 100 (1), 39-44.

Highly (n=36), moderately (n=26), and low (n=48) susceptible Ss were administered either hypnosis or waking instruction to examine the hypothesis that pseudomemory will occur for hypnotic Ss as long as 2 weeks after suggestions are given for accepting false events. Accuracy and confidence of memory were measured for all ss, and memory was examined for free recall, structured recall, and recognition. Results indicated persistence of pseudomemory for the 2-wk period for both highly and moderately susceptible ss. Data highlighted the multifaceted operation of skill,

contextual, and state instruction factors, and a hypothesis that ambiguity of communication when suggestion is delivered plays a part in the maintenance of pseudomemory over time is offered for further testing.

**1990**

**Supreme Court of the United States (1990). Vickie Lorene Rock, Petitioner v. Arkansas, on writ of certiorari to the Supreme Court of Arkansas [June 22, 1987]. International Journal of Clinical and Experimental Hypnosis, 38 (4), 219-238.**

#### **NOTES**

The popular belief that hypnosis guarantees the accuracy of recall is as yet without established foundation and, in fact, hypnosis often has no effect at all on memory" (p. 232). "Three general characteristics of hypnosis may lead to the introduction of inaccurate memories: the subject becomes 'suggestible' and may try to please the hypnotist with answers the subject thinks will be met with approval; the subject is likely to 'confabulate,' that is, to fill in details from the imagination in order to make an answer more coherent and complete; and, the subject experiences 'memory hardening,' which gives him great confidence in both true and false memories, making effective cross-examination more difficult" (pp. 232-233). "The inaccuracies the process introduces can be reduced, although perhaps not eliminated, by the use of procedural safeguards" (p. 233). "The more traditional means of assessing accuracy of testimony also remain applicable in the case of a previously hypnotized defendant. Certain information recalled as a result of hypnosis may be verified as highly accurate by corroborating evidence. Cross-examination, even in the face of a confident defendant, is an effective tool for revealing inconsistencies" (p. 234). "We are not now prepared to endorse without qualifications the use of hypnosis as an investigative tool; scientific understanding of the phenomenon and of the means to control the effects of hypnosis is still in its infancy. Arkansas, however, has not justified the exclusion of all of a defendant's testimony that the defendant is unable to prove to be the product of prehypnosis memory. A State's legitimate interest in barring unreliable evidence does not extend to per se exclusions that may be reliable in an individual case. Wholesale inadmissibility of a defendant's testimony is an arbitrary restriction on the right to testify in the absence of clear evidence by the State repudiating the validity of all posthypnosis recollections" (p. 234).

**Udolf, R. (1990). Rock v. Arkansas: A critique. International Journal of Clinical and Experimental Hypnosis, 38 (4), 239-249.**

Rock v. Arkansas is the first United States Supreme Court decision that addresses the conflict between a criminal defendant's right to testify in his or her own behalf and a state's right to impose a restrictive rule of evidence barring hypnotically refreshed testimony. The present critique describes the operative facts in Rock v. Arkansas and the majority and minority decisions. It also highlights some of the psychological and legal issues involved and speculates on what Rock v. Arkansas may portend for the broader issue of the admissibility of hypnotically refreshed testimony in general.

**Pinizzotto, Anthony J. (1989). Memory and hypnosis: Implications for the use of forensic hypnosis. Professional Psychology: Research and Practice, 20 (5), 322-328.**

#### **NOTES**

The author reviews arguments regarding hypnosis in forensic investigations, offers procedures of a nonhypnotic nature to enhance memory recall, and suggests guidelines for hypnosis in criminal cases. The effects of hypnosis on memory, as well as the concomitant dangers regarding those effects, are discussed.

#### **1989**

**Sanders, Glenn S.; Gansler, David A.; Reisman, Stephen Jr. (1989). The effects of hypnosis on eyewitness testimony and reactions to cross-examination. American Journal of Forensic Psychology, 7, 33-60.**

Investigative hypnosis has been a widely used and valuable police technique, but recent court rulings have expressed reservations about the admissibility of hypnotically related testimony. The proposed research is the first directly relevant evaluation of the most serious of the courts' reservations: the allegation that hypnosis produces excessive and unshakable levels of confidence in witnesses, thereby effectively denying opposing counsel the right of cross-examination. Volunteers from the community witnessed a simulated crime, and were then interviewed by a professional police investigator to obtain evidence and testimony. Two-thirds of these witnesses were randomly assigned to have their memory refreshed by one of two hypnotic induction techniques. All witnesses were subsequently examined and cross-examined by a pair of practicing criminal lawyers, and their videotaped testimony was evaluated by another volunteer sample of community residents serving as jurors. On both objective and subjective measures, hypnotized witnesses provided more complete and internally consistent testimony. However, neither form of hypnotic induction led to greater witness confidence, credibility, or resistance to cross-examination. Our results generally replicate previous findings in a more realistic investigative simulation. The discussion considers artifactual explanations of the confidence null effects, and explores theoretical and policy implications of the data.

#### **NOTES**

People responding to a newspaper ad asking for volunteers who would be paid for participating in psychology research at the State University were later asked to undergo hypnosis. Of 45 who responded to the ad, six (13%) declined to have hypnosis. This rate of refusal has relevance to research on clinical hypnosis that requires paid volunteer participants.

**Waxman, David (1989). Nothing but the truth? Commentary on the 1988 Home Office Circular No. 66. [Comment/Discussion] .**

#### **NOTES**

The Commentator agrees with views expressed in the Home Office Circular and

suggests that if hypnosis is used in an investigation, the following guidelines should be observed.

" 1. The subject must be entirely willing to undergo hypnosis. Signed and witnessed consent should be obtained.

2. No accused person or suspect should be hypnotized in an attempt to obtain information.

3. Immunity from prosecution should never be offered to the person being hypnotized.

4. Hypnosis should be carried out by a physician or psychologist with knowledge in this field, experience in its clinical use and special training in the use of forensic hypnosis.

5. The hypnotist must be an independent specialist, with no responsibility either to the prosecution or the defence.

6. His opinion must be entirely unbiased. Therefore he should only be given some basic and known facts of the case. He should have no knowledge of the suspect so that he may remain impartial.

7. A full medical and psychiatric evaluation of the subject must be made by the specialist before commencing hypnosis. He must be satisfied that the subject is a fit person to undergo hypnosis.

8. Tape recordings and video-tape recordings covering the entire area of the room in which the hypnosis is to take place should be made. The subject should be informed that the interview is being recorded. The tapes should be opened as the subject enters the room by the police officer in charge of the case, with venue, date and time duly stated and sealed again after all discussion is concluded.

9. Only the specialist and the subject should be in the interview room during the examination in order to avoid inadvertent cueing of the latter by other persons.

10. There should be no prompting or cueing of the subject at any time during the interview.

11. The subject's general practitioner should be informed of the interview having taken place if considered advisable by the specialist. The latter should be available to undertake follow-up if required.

12. Information obtained under hypnosis should not be regarded as irrefutable evidence in a court of law. Corroborative evidence should always be obtained by the police. The corollary is that information obtained at the interview cannot be used to corroborate other information for which there is no evidence" (pp. 45-46).

1988

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived

changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

Perry, Campbell (1988, November). An interactionist position on hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Context makes differential contributions across items on scales, e.g. amnesia depends mostly on individual differences. Yet in the 19th Century it occurred almost inevitably, spontaneously, because of expectancy of therapist and patient.

Success in pain reduction is much greater in clinic (Crasilneck; Melzack et al; Cedercantz - skull injury) than in lab (Hilgard's studies of highs and lows).

Central to the disagreement about special state/socio-behavioral theories is the question, "What are the origins of beliefs about hypnosis?" The beliefs can be modified by experience, which is mediated by individual differences.

Author suggests trying to predict which individual will respond to which hypnosis item. Since there are at least 3 factors in hypnotizability scales, one needs a number of variables to do this type of research. Nadon et al (Journal of Personality and Social Psychology 1987) predicted hypnotizability with PICS (an imagery control test) and Absorption scale plus Evans' Sleep Questionnaire subscale plus Belief in [paranormal events] subscale: predictions were 63% correct. PICS (as compared with other imagery tests) reflects imagery as a preferred mode of thinking. Now, can we predict who will make highly confident errors when asked to remember details of a crime? Who is more vulnerable when told a pseudomemory is veridical? In a test of this question, mimicking a field setting, the authors weren't able to predict the people who would make errors, who functioned at the same level following neutral instructions ("We don't know what we'll find") and Reiser-type instructions ("You can use a zoom lens to see the scene up close") in hypnosis. Also, the effect of an increase in confident errors was greater for highs than for lows. People with high hypnotizability and low PICS made the most errors. N.B. Since lows also increased in errors, one should be cautious in any case.

Creation of pseudomemory research: Using SHSS:C and PICS one can predict 81% of those who accepted and reported the implanted pseudomemory.

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

#### NOTES

From a review in British Journal of Experimental and Clinical Hypnosis, 7, 175-178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility.

In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

Sheehan, Peter W. (1988). Memory distortion in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 296-311.

This paper presents data from a programmatic series of studies that varied the range of conditions affecting potential increase of recall, memory distortions, and distortions of confidence during and following hypnosis. All the studies used a paradigm that exposed Ss to misleading information some time before memory was tested and applied procedures in the hypnotic setting to analyze memory performance in both recognition and free recall. Results from the program failed to demonstrate any increment in accurate memory due to hypnosis, and the accuracy of memory reports in hypnosis was at times significantly reduced. Further, hypnotic recall was distinctively distorted when false information was introduced after, rather than before hypnosis. Results were discussed in relation to the role hypnotic as opposed to contextual variables may play in explaining Ss' memory test performances, and some legal implications are drawn from the data.

#### NOTES

This article investigates 3 major questions: 1. whether hypnosis makes recollections more susceptible to error 2. whether hypnosis reliably enhances recall 3. whether hypnosis alters certitude of what is remembered, independent of accuracy

The author reviews earlier literature, noting that different methodologies lead to different, sometimes conflicting, results. He uses Loftus' methods, which "allows for systematic exposure to specific information that is erroneous and examines the after- effects of that exposure on subsequent attempts to remember" (p. 298). The Ss are tested initially for memory of an incident, with subtle introduction of false information; then retested in way that probes for correct recall/recognition by presenting the incorrect information as an alternative for response. (Loftus has

presented the position that misinformation is incorporated into waking memory, and this examines whether the addition of hypnosis--especially with Ss who are highly hypnotizable--increases the effects.)

Sheehan reports six studies that varied type of memory test (free recall, recognition); type of instruction (hypnotic, waking, simulating); and level of hypnotizability (high, low). Each study dealt with the same incident that depicted an apparent robbery and three false pieces of information about the incident were presented to Ss in the misleading condition. The studies have been published elsewhere as: --Study 1 Sheehan & Tilden, 1983: High and low hypnotizable Ss tested under hypnosis & waking conditions. False information is given before hypnosis. --Study 2 Sheehan & Tilden, 1984: Real & simulating Ss presented with false information prior to hypnotic induction. --Study 3 Sheehan & Tilden, 1986: High hypnotizable and motivated low hypnotizable Ss presented with false information prior to hypnosis. --Study 4 Sheehan, Grigg, & McCann, 1984: Real & simulating Ss presented with false information after hypnotic induction. --Study 5 Sheehan & Grigg, 1985: High hypnotizable and motivated low hypnotizable Ss presented with false information after hypnotic induction --Study 6 (this article reports): High and low hypnotizable Ss tested under hypnosis and waking conditions. False information is given after hypnosis. Scene shown is described by hypnotist in a congruent (robbery) or incongruent (friendly encounter) way

Ss tended to give incorrect responses along the lines of the false cues, but this effect was not greater when hypnosis occurred after the leading information had been given. In two experiments (#4 and #5) the effect was associated with hypnosis. Thus, when Ss are hypnotized they are more likely to be misled by false information. Study 6 did not demonstrate the incorporation of false information into memory, possibly because there was a longer delay between presentation of the information and the memory test itself. This weakening effect of delay has also been shown by Loftus et al. (1978). High hypnotizable Ss in the hypnosis condition showed more distortion than lows not hypnotized in 4 of the 6 studies evidencing distortion.

The authors note that "confidence may be maintained in the hypnosis setting despite the presence of substantial inaccuracy. ... Simulating Ss performed just as confidently as real Ss ... raising the question that context may determine the results for confidence among real Ss. ... Where expectations were out of phase with stimulus events [Study 6], confidence effects involving hypnosis did not emerge" (pp. 304-305).

"Overall, data indicated that hypnotic instruction may be more reliably associated with confidence than level of hypnotizability, though both variables are associated with confidence at one time or another. What is not clear, however, is whether hypnosis itself is at issue or the context of which hypnosis forms a part. That context, of course, may include the belief of Ss brought to the formal test situation that hypnosis increases memory. ... Simulating Ss reported higher confidence levels than real Ss when results were analyzed just for the hypnotic setting ..., for recognition testing in Study 4; simulating Ss were not distinct from hypnotic Ss under waking conditions of testing. It seems that the hypnotic setting itself, or expectations about it, obviously communicated that an expression of strong conviction was required. Collectively, results demonstrated that simulating Ss

believed that a hypnotized person would be more confident, and they therefore reported greater confidence levels during their act of pretense" (pp. 305-306).

In their discussion, the authors note that there was more evidence for mis-reporting than for accuracy, but that hypnosis did not produce more error unless false information was given during hypnosis. High hypnotizable Ss produce many errors with a high level of confidence, but since simulators feign hypnosis by reporting high levels of confidence, it may be expectations about the ability of hypnosis to improve recall that influences these results. "Such expectations may influence hypnotic recall for all Ss, but this would not explain differential levels of confidence between high and low hypnotizable Ss when both are tested in exactly the same way--that is, when task demands are held constant" (p. 306).

"One major implication of the data is that future research should move away from focusing only on the truth validation or distorting influence of hypnosis to emphasize the role contextual features may play in accentuating memory distortion effects" (p. 307). "The one clear finding across all of the studies in the program was that hypnosis does not increase memory, and the findings provide no basis to justify the forensic application of hypnosis given that the point of forensic application is that hypnosis will help memory. Data also indicate that when leading questions are asked under hypnosis, they are likely to be more effective in distorting memory reports than when such questions are asked without hypnosis. Low resistance to misinformation was present among both hypnotic and waking Ss, but separated the two groups when the false information was given in hypnosis.

"One of the major inferences ... is that the most substantial risk to using hypnosis may lie not only with the tendency to mis-report itself, but with the tendency for hypnotic Ss to be convinced in their reporting no matter what the accuracy of their statements. This effect was pervasive enough that it may offer sufficient grounds for restricting how hypnosis should be used forensically" (p. 308).

Whitehouse, Wayne G.; Dinges, David F.; Orne, Emily C.; Orne, Martin T. (1988). Hypnotic hypermnesia: Enhanced memory accessibility or report bias?. Journal of Abnormal Psychology, 289-295.

Laboratory studies of hypnotic hypermnesia have yielded inconsistent evidence of memory enhancement, and the process responsible for the occasional positive findings have eluded identification. The present experiment assessed delay recall for filmed material under conditions in which subjects were required to answer all questions, by guessing if necessary. They also rated confidence in the accuracy of each response. After an initial wake-baseline forced-recall test, subjects were randomly assigned to hypnosis or waking conditions for a second forced-recall test. Both groups of subjects recalled additional correct details on the second test, but the magnitude of this hypermnesia was no greater for subjects exposed to the hypnosis treatment. Hypnotized subjects did, however, exhibit a significantly greater increase in confidence for responses designated as "guesses" on the prior waking test--a finding consistent with the view that hypnosis engenders a shift in the subjective criterion for what constitutes a "memory". Implications of these findings for the use of hypnosis in forensic situations are discussed. McCann, Terry; Sheehan, Peter W.

(1987, October). Pseudomemory creation and confidence in the experimental hypnosis context. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

After watching a video-tape of a bank robbery incident, 34 out of 40 highly hypnotizable subjects displayed pseudomemory reports subsequent to the administration of false memory suggestions given after hypnotic induction instructions. Incorporation of elements of pseudomemory into recall reports was accompanied by increased confidence ratings, but confidence ratings for those subjects displaying most pseudomemory distortion at recall fell appreciably when subjects were confronted with the reality constraints associated with recognition testing. Data imply that pseudomemories associated with hypnotic suggestion are not always accompanied by increased conviction or certitude, nor are they resistant to change in the face of contrary evidence. Data further indicate that subjects adapt both accuracy and confidence responses to the stimulus conditions of testing, implying that accuracy and confidence ratings may covary meaningfully.

1987

Register, Patricia A.; Kihlstrom, John F. (1987). Hypnotic effects on hypermnesia. International Journal of Clinical and Experimental Hypnosis, 35, 155-170.

The effects of hypnotic suggestions for improved memory were explored using procedures known to produce hypermnesia in the normal waking state. In Experience 1, 64 trait adjectives were randomly assigned to orthographic, phonemic, semantic, and self-referent orienting tasks in an incidental learning paradigm. These were presented to 40 Ss classified as low, medium, high, or very high in hypnotizability, followed by a series of 3 recall trials: immediately after the study phase, following a hypnotic suggestion for enhanced memory, and after termination of hypnosis. There were significant effects of both encoding condition and repeated trials on incidental recall. However, the hypermnesia effect observed in other experiments was not obtained, and there were no memory effects attributable to hypnosis. In Experiment 2, 60 line drawings of common objects were presented to an overlapping sample of 40 Ss, followed by the same recall procedure employed in Experiment 1. There was a significant hypermnesia effect of repeated trials, but again no effects attributable to hypnosis. In Experiment 1, the hypnotic procedure seemed to interfere with the normal waking hypermnesia effect; in Experience 2, hypnosis failed to enhance it. These results fail to support the use of hypnosis to enhance the memories of eyewitnesses in forensic investigations.

#### NOTES

The designs for Experiments 1 and 2 are complex and detailed, so they are not summarized here. The DISCUSSION follows, however:

"The present study concerned the effect of hypnotic suggestions on hypermnesia for words presented under conditions of incidental learning (Experiment 1) and for pictures studied under conditions of intentional learning (Experiment 2). Experiment 1 failed to produce a hypermnesia effect; in fact, recall decreased on the second trial, after hypnosis was induced, though these memories were recovered on a subsequent waking recall trial (for contrary findings, see Shields & Knox,

1986). This loss of memory was not a specific effect of hypnosis, because the extent of loss was not associated with S's hypnotizability. Experiment 2 succeeded in producing hypermnesia, but the effect was not a function of hypnotizability. These findings are consistent with those of Nogrady et al. (1985). Apparently hypnosis does not enhance waking hypermnesia effects.

"Dywan and Bowers (1983), who also embedded hypnosis in the waking hypermnesia paradigm, obtained somewhat different results. They observed a significant improvement in memory in hypnosis over and above what had been produced by waking hypermnesia. Moreover, they observed a significant increase in false recall on the hypnotic trial. These differences may have been due to the instructions given to Ss. Following the forced-recall procedure employed by Erdelyi and Becker (1974), Dywan and Bowers (1983) required their Ss to produce 60 items (the number of stimuli that had been presented during the study phase), even if they had to guess or respond randomly in order to do so. By contrast, neither Experiment 2 nor that of Nogrady et al. (1985) employed this forced-recall procedure. In addition, the instructions in Experiment 2 stressed accuracy in recall.

"The implication of these three studies taken together is that there is a high correlation between two products of hypnotic hypermnesia: any increase in accurate recall resulting from hypnotic procedures may be offset by a corresponding increase in false recollections. When Ss are not urged to produce more or new memories, hypnosis may not increase false recollection, but it will not increase accurate recall either. When hypnotized Ss are strongly encouraged to guess, as in Dywan and Bowers (1983), or in forensic situations, they may improve their levels of accurate recall, but this will be at the price of an increase in false recall. In fact, a study of normal waking memory by Roediger and Payne (1985) found that forced-recall instructions--in which Ss were asked to guess after they had exhausted their confident recall--increased intrusions tenfold over a condition in which Ss were warned 'not to guess wildly [p. 4]'--although there were no differences in correct recall. Although Roediger and Payne did not collect confidence ratings, we can assume that their Ss were able to distinguish between wild guesses and accurate memories (Johnson, 1985). Hypnotized Ss, however, appear to be poor at making this distinction (Dywan & Bowers, 1983; Nogrady et al., 1985).

"In the final analysis, hypnosis may encourage Ss to guess, but it does not appear to improve memory per se. Interestingly, hypnotized Ss do not seem to realize that they are guessing. Overall, their confidence levels tend to increase with no corresponding increase in accuracy (Dywan & Bowers, 1983; Nogrady et al., 1985). These Ss appear to confuse memories of prior guesses with those of the actual experience. For this reason, although cautionary instructions are likely to yield nothing new, instructions to guess are much more likely to produce misleading results when given to hypnotized individuals. This suggests that hypnosis is an unreliable technique for enhancing memory, and it should be used in forensic and other applied settings only with the utmost caution (for some guidelines see American Medical Association, 1985; M. T. Orne, 1979; M. T. Orne, Soskis, Dinges, & E. C. Orne, 1984). Other psychological techniques for improving memory may not possess these liabilities, and they may prove more suitable for use in field settings (Geiselman et al., 1985)."

1986

Nash, Michael R.; Drake, Stephen D.; Wiley, Stephen; Khalsa, Sahib; Lynn, Steven Jay (1986). Accuracy of recall by hypnotized age regressed subjects. Journal of Abnormal Psychology, 95 (3), 298-300.

Investigated the accuracy of the factual recall of highly hypnotically susceptible undergraduates both during and after the hypnotic procedure. Third-party verification (parent report) of the accuracy of recall was obtained for 2 S groups: 14 hypnotized Ss and 10 postsimulation control Ss. Results indicate that, despite the similarity to children in their way of relating to transitional objects, hypnotic Ss were significantly less able than control Ss to correctly identify the specific transitional objects actually used. Furthermore, all recollections obtained during hypnosis were incorporated into posthypnotic recollections, regardless of accuracy. Clinical implications are discussed.

Sheehan, Peter W.; Tilden, Jan (1986). The consistency of occurrences of memory distortion following hypnotic induction. International Journal of Clinical and Experimental Hypnosis, 34, 122-137.

The present study examined a range of circumstances for their effects on the vulnerability of hypnotic Ss to memory distortion. 26 high and 26 low hypnotizable Ss were tested individually in a design in which Ss received information that was either misleading or not misleading about a series of events depicting an apparent robbery. The information was presented prior to Ss being given hypnotic instructions, and low hypnotizability Ss were especially motivated for positive response in the session. Memory for the robbery was studied across a range of measures that included forced choice recognition, free recall, and response to leading questions. Results demonstrated predictably variable effects. The 2 groups performed appreciably differently in free recall, for example, while in recognition testing, data indicated that high and low hypnotizable Ss both incorporated misleading information into their memories to the same degree. Some implications of the data for the forensic context are discussed.

#### NOTES

56 Ss were prescreened with Harvard Group Scale of Hypnotic Susceptibility, Form A, defining highs = 9-12, lows = 0-3. Used Loftus materials for testing memory (wallet snatching sequence, on a series of slides). Errors were classified as errors of fact, of inference, or conjectures. Highs had more intrusions that were errors of fact than lows did ( $p < .05$ ), confirming the earlier results published by Sheehan & Tilden, 1984. There was no significant association between hypnotizability level and intrusion of central detail (description of robber and victim), but 57% of highs and only 18% of lows intruded peripheral objects incorrectly into their own narrative reports (i.e. descriptions given of the surroundings),  $p < .01$ .

There were trends for high hypnotizable Ss to recall more objects correctly than low hypnotizable Ss during narrative reporting ( $p < .06$ ) and to recall more central

objects ( $p < .06$ ), but not more peripheral objects. There may have been a loosening of criteria for memory among high hypnotizables, because they appeared to produce both greater accuracy and inaccuracy in recall of certain types of detail.

During the recognition testing, high hypnotizables exhibited significantly greater confidence in their responses than low hypnotizable Ss, but there was no group difference for accuracy. "Results for both tests of integration then (recognition and free recall) confirmed the prediction that hypnotic Ss incorporate false information into their memory, and the effect did not differentiate high from low hypnotizable Ss" (p. 131).

When a leading question implied that traffic lights were present in the scene, 34% responded in some way to that suggestion, and 20% said that they could see the lights in their minds eye; but 14% said that "although they could not see the lights, they nevertheless remembered they were there" (p. 132). Response to the leading question did not differ between high and low hypnotizable Ss.

In their discussion, the authors note that hypnosis did not enhance memory in this study. "Results overall suggest that hypnotic induction lowers the correspondence between confidence and accuracy. In the present study, hypnotic Ss were confident about their recall when the degree of accuracy of their reports suggested they should have been quite uncertain. Hypnotic instruction itself would appear, then, to establish conditions that spuriously facilitate a high degree of confidence in the reports that Ss produce.

"A major point to be made about the present study is that both general distortion and confidence effects observed here cannot necessarily be attributed to hypnosis. There was no independent comparison condition, for example, to contrast results for hypnotic Ss with results for Ss receiving no induction procedures. Effects, then, could be attributed to the hypnotic context as much as to the effects of induction per se, and context rather than state may be responsible for the vulnerability of hypnotic Ss that has been observed. The influence of context is seen at least in the clear evidence for an interaction between situational factors and hypnotizability. In free recall, hypnotizable Ss were more prone to distortions than un hypnotizable Ss, while in recognition, hypnotizable and un hypnotizable Ss were equally prone. Mode of testing is, therefore, a major contextual variable that is related to the nature of the distortion and confidence effects that can be observed. Present data further indicate that the hypnotic context is associated with memory distortion even in Ss who have little capacity for being hypnotized, but who are instructed to believe that they can, in fact, experience much of what is being suggested" (pp. 133-134).

Forensic implications need to be tempered because of difference between laboratory and real life, but practitioners nevertheless should be cautious. "While it is not true that hypnotized persons, by virtue of their hypnotizability level, will always distort their reports more obviously than nonhypnotic Ss, so as to bring their recollections into line with what is implied or suspected, parameters do exist that clearly increase the risks of distortion that can occur after hypnotic instruction. This is evidenced, for example, by the distinctive distortion effects that have been demonstrated for high hypnotizable Ss when they are given induction instructions and later requested to tell their story in their own way. Overall, the present data imply that the law needs to closely evaluate the impact of the different settings in which hypnosis takes

place and the different ways in which misleading information can be communicated to persons who are later asked to testify. The potential risks of hypnosis--as well as its utility--will depend critically on how that information has been conveyed, and the way in which Ss' memories are tested" (pp. 134- 135).

Wilson, L.; Greene, E.; Loftus, Elizabeth F. (1986). Beliefs about forensic hypnosis. International Journal of Clinical and Experimental Hypnosis, 34 (2), 110-121.

The beliefs people hold about hypnosis have an impact on the behavior of a witness who is hypnotized and on juries who hear these witnesses and weigh hypnotically influenced testimony. Students in Experiment 1 and registered voters from the community in Experiment 2 responded to questions about forensic hypnosis. Over 70% of the students as compared to about 50% of the community members were favorable toward the use of hypnosis by police for memory enhancement. In both groups, however, twice as many people reported that they would put less faith rather than more faith in the testimony of someone who had been hypnotized. A substantial portion of the students affirmed common myths about the effects of hypnosis on memory and behavior.

1985

Orne, Martin T. (1985). The use and misuse of hypnosis in court. In Rosner, Richard (Ed.), Critical issues in American psychiatry and the law (2, ). New York: Plenum Press. (Reprinted from Crime and Justice: An Annual Review of Research, vol. 3, edited by Michael Tonry and Norval Morris, 1981, The University of Chicago Press.)

NOTE

An earlier version of this essay appeared in the Monograph Issue of the International Journal of Clinical and Experimental Hypnosis on the forensic uses of hypnosis, 27 (4) (1979): 311-41.

Stager, Gordon L.; Lundy, Richard M. (1985). Hypnosis and the learning and recall of visually presented material. International Journal of Clinical and Experimental Hypnosis, 33, 27-39.

To examine the effect of hypnosis on the learning and recall of visually presented material, high and low hypnotizable Ss were presented, under hypnotized or awake conditions, with a short, entertaining movie followed by questions about the movie. 2 week later Ss, hypnotized or awake, were again asked questions concerning the movie. The principal finding was that high hypnotizable Ss in the hypnotic induction condition increased accurate recall without increasing inaccurate recall. Neither hypnotizability nor hypnotic induction at learning affected recall. The major finding of the present study is that hypnosis during recall of previously learned material is facilitative, but that hypnosis during that previous learning is not.

Thornton, P. (1985). Use of hypnosis by the police in the investigation of crime. Which way should the pendulum swing?. British Journal of Experimental and Clinical Hypnosis, 2 (2), 125-127. (National Council for Civil Liberties' opinion about the Home Office's proposed guidelines on use of hypnosis by the police in the investigation of crime)

## NOTES

### "Conclusions

20. The dangers of using hypnosis in the criminal process are clearly demonstrated from a civil liberty point of view.
21. Inaccurate and misleading information supplied under hypnosis could lead to the investigation and arrest of innocent parties.
22. A witness who had undergone hypnosis could innocently yet confidently give false evidence.
23. Magistrates or juries may tend to rely on answers given under hypnosis as being more reliable than those given in the waking state simply because of the mystery surrounding the process.
24. A witness could be unfairly yet effectively cross-examined on the video-recording of the hypnotic state.
25. Hypnosis should not be used even as a last resort in the investigation of crime" (p. 127).

## 1984

Orne, Martin T.; Dinges, David F.; Orne, Emily Carota (1984). On the differential diagnosis of multiple personality in the forensic context. International Journal of Clinical and Experimental Hypnosis, 32 (2), 118-169.

The problems of diagnosing multiple personality disorder in a forensic context are discussed, and illustrated by the case of State v. Kenneth Bianchi (1979), a defendant who was both charged with first degree murder and suspected of having the disorder. Because of the secondary gain (e.g., avoiding the death penalty) associated with the diagnosis of multiplicity in such a case, hypotheses had to be developed to permit an informed differential diagnosis between multiple personality and malingering. If a true multiple personality disorder existed, then (a) the structure and content of the various personalities should have been consistent over time, (b) the boundaries between different personalities should have been stable and not readily altered by social cues, (c) the response to hypnosis should have been similar to that of other deeply hypnotized subjects, and (d) those who had known him over a period of years should have been able to provide examples of sudden, inexplicable changes in behavior and identity, and evidence to be the case. Rather, the content, boundaries, and number of personalities changed in response to cues about how to make the condition more believable, and his response to hypnosis appeared to reflect conscious role playing. Further, the life history indicated a persistent pattern of conning and deliberate deception. It is concluded that Mr. Bianchi was simulating a multiple personality and the diagnosis of Antisocial

Personality Disorder with Sexual Sadism was made. Differential diagnoses and the clinical aspects that appeared to account for his behavior are discussed.

Sheehan, Peter W.; Tilden, Jan (1984). Real and simulated occurrences of memory distortion in hypnosis. Journal of Abnormal Psychology, 93 (1), 47-57.

79 undergraduates were prescreened for high or low susceptibility to hypnosis (Harvard Group Scale of Hypnotic Susceptibility--Form A) and tested individually to examine memory distortion in hypnosis. Independent groups of Ss were allocated to a 2 x 2 factorial design in which S grouping (hypnotic or simulating) was crossed with an information condition that either misled or did not mislead Ss about a series of scenes depicting an apparent robbery. It was hypothesized that memory distortion would characterize the performance of hypnotic Ss when memory was examined in unstructured, narrative recall. Results show that real Ss were differentiated appreciably from simulating Ss in the extent to which they incorrectly intruded uncued errors (i.e., errors not arising from misleading information) into their memories but not in their intrusion of cued errors (i.e., errors arising from misleading information). Real Ss remembered correctly more detail of a peripheral kind but also distorted more with respect to the same kind of detail. Results overall negate the view that earlier memory traces are revived in hypnosis, thereby leading to more accurate retrieval, and suggest that hypnotic Ss bring distinctive styles of information processing to bear on their recollections of complex, socially meaningful events

Sheehan, Peter W.; Grigg, Lyn; McCann, Terry (1984). Memory distortion following exposure to false information in hypnosis. Journal of Abnormal Psychology, 93 (3), 259-265.

92 Ss preselected for hypnotic responsiveness on the Harvard Group Scale of Hypnotic Susceptibility--Form A were tested in strict application of the real-simulating model of hypnosis to examine the hypothesis that hypnotic Ss distinctively incorporate false material into their memories when that material is introduced after, rather than before, hypnotic induction. Both real (n = 46) and simulating (n = 46) Ss were either exposed or not exposed to misleading information after receiving induction instruction. Procedures for testing were otherwise identical to those adopted in an earlier study by the 1st author and J. Tilden (see PA, vol 71:14147) in which false information was presented prior to hypnosis. Results confirm the hypothesis and show that hypnotic Ss differed appreciably from simulating Ss by incorporating more misleading material into their memory. Findings highlight the possibility of distinctive processing in hypnosis and implicate lowered critical assessment by hypnotic Ss of information they confidently accepted in the hypnotic context (20 ref)

Flatt, Jennifer R. (1983). What makes therapy work? Thoughts provoked by a case study. Australian Journal of Clinical and Experimental Hypnosis, 11 (2), 63-72.

The case described is offered as illustrating the doubt common to introspective therapists: what did cure the patient? "Francesca's" presenting problem and the object of the short-term psychological intervention described here, was a fairly circumscribed set of fears related to enclosed spaces. The therapeutic approach adopted was primarily hypnobeavioural, with hypnotically-assisted systematic desensitization and "in vivo" exposure being the main components of the planned programme. However, at the client's suggestion, one hypnotic session with content planned by the therapist as age regression produced rather dramatic and unexpected results claimed by the patient to effect complete cure.

#### NOTES

The therapist suggested that "her mind would take her back to a time that was important in understanding her fears and that she would be able to stay calm and relaxed while this past event was revealed to her" (p. 69). She subsequently imagined being in a cave, peaceful and calm. "On being roused from hypnosis, Francesca eagerly described her cave image. She was enthusiastic about the significance of this experience, claiming that it was evidence that in a previous life she had died from being locked into a cave as some sort of punishment and that this experience made her fear of enclosed places rational and comprehensible to her" (p. 69).

**Karlin, Robert (1983). Forensic hypnosis--two case reports: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (4), 227-234.**

Two criminal cases are briefly described. In these cases, hypnosis was used to "refresh the recollection" of the victim. In each case, the victim's unsupported identification of a perpetrator, produced through hypnosis, was the sole evidentiary basis of the prosecution. There was considerable evidence that both identifications were based on confabulation.

1981

**Zelig, Mark; Beidleman, William B. (1981). The investigative use of hypnosis: A word of caution. International Journal of Clinical and Experimental Hypnosis, 29 (4), 401-412.**

The purpose of the present experiment was to determine the efficacy of hypnosis for enhancing the recall of Ss exposed to a stress provoking motion picture. This stimulus, which vividly displayed several workshop accidents, was selected to provide an analog to witnessing an actual crime. After viewing the film, Ss were questioned in either hypnosis or in a waking state and responded to a questionnaire which contained leading and nonleading questions. Dependent measures included the number correct, number of errors, and the average confidence rating given to their responses. Analyses of these data revealed that waking Ss were significantly more accurate on leading questions. No significant differences were observed when Ss' responses to nonleading questions were examined. Post hoc correlational analyses across both hypnotic and waking conditions revealed that hypnotic

susceptibility and confidence ratings were positively correlated while susceptibility and the number of correct responses were not significantly correlated. These findings are compared with previous research and the resulting implications for hypnotically conducted interrogations are discussed.

1979

Ault, R. L. Jr. (1979). FBI guidelines for use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 27 (4), 449-451.

The Federal Bureau of Investigation uses hypnosis as a tool for investigative purposes in selected cases where further leads are needed and witnesses or victims are willing to participate in a hypnotic interview. All sessions are tape recorded, preferably by video. A hypnotic interview cannot necessarily provide accurate leads, and therefore careful investigative work is done to verify the accuracy of any information obtained in hypnosis. Psychiatrists, psychologists, or physicians specially trained in hypnotic techniques have been employed to add protection for the witnesses or victims being questioned under hypnosis.

Hilgard, Ernest R.; Loftus, Elizabeth F. (1979). Effective interrogation of the eyewitness. International Journal of Clinical and Experimental Hypnosis, 27 (4), 342-357.

Eyewitness reports have been investigated in the psychological laboratory from time to time ever since 1900. Specimen studies from the early period and from the last decade indicate that free reports are consistently more accurate but less complete than reports obtained through specifically directed inquiry. The optimal combination is free report followed by the asking of specific questions. The wording of those questions, however, can have a substantial effect on the answers given. Furthermore, the wording of questions put to a witness can distort the witness's memory for the previously experienced event. These techniques and findings have implications for the study of other "retrieval" techniques such as hypnosis. Although laboratory-type control cannot be expected in practical settings, scientific validation of interrogation methods as practiced can be obtained if recording is complete and accurate, if processes of memory restoration or amplification are studied as they occur in the course of interrogation, and if outcome studies are fully reported, including both successes and failures to gain new information or to substantiate existing information.

Orne, Martin T. (1979). The use and misuse of hypnosis in court. International Journal of Clinical and Experimental Hypnosis, 27, 311-341.

The various forensic contexts in which hypnosis has been used are reviewed, emphasizing its advantages and pitfalls. The technique may be helpful in the context of criminal investigation and under circumstances involving functional memory loss. Hypnosis has no utility to assure the truthfulness of statements since, particularly in a forensic context, subjects may simulate hypnosis and are able to willfully lie even

in deep hypnosis; most troublesome, actual memories cannot be distinguished from confabulations either by the subject or by the hypnotist without full and independent corroboration. While potentially useful to refresh witnesses' and victims' memories to facilitate eyewitness identification, the procedure is relatively safe and appropriate only when neither the subject, nor the authorities, nor the hypnotist have any preconceptions about who the criminal might be. If such preconceptions do exist -- either based on information acquired before the hypnotic procedure or on information subtly communicated during the hypnotic procedure -- hypnosis may readily cause the subject to confabulate the person who is suspected into his "hypnotically enhanced memories." These pseudomemories, originally developed in hypnosis, may come to be accepted by the subject as his actual recall of the original events; they are then remembered with great subjective certainty and reported with conviction. Such circumstances can create convincing, apparently objective "eyewitnesses" rather than facilitating actual recall. A number of minimal safeguards are proposed to reduce the likelihood of such an eventuality and other serious potential abuses of hypnosis.

Putnam, W. H. (1979). Hypnosis and distortions in eyewitness memory. International Journal of Clinical and Experimental Hypnosis, 27 (4), 437-448.

An experiment was conducted to determine whether eye-witnesses questioned under hypnosis are more likely to answer leading questions incorrectly than eyewitnesses questioned in a normal waking state. Ss viewed a videotape-recording depicting a car-bicycle accident and were questioned about the details of the accident. Half of Ss were questioned under hypnosis and half of Ss were questioned in a normal waking state and in each of these conditions, half of Ss were questioned 15 minutes after seeing the videotape-recording and half were questioned after a 24-hour delay. The results revealed that Ss in the hypnosis condition made significantly more errors on leading questions (questions that suggested an incorrect answer) than Ss in the normal waking condition. There were no significant differences between the groups of Ss on objective, non-leading questions. The results are discussed in terms of their implications for the use of hypnosis in police investigations.

Worthington, T. S. (1979). The use in court of hypnotically enhanced testimony. International Journal of Clinical and Experimental Hypnosis, 27 (4), 402-416.

The leading judicial decisions on the use of hypnosis on witnesses are presented. Emphasis is on the increasing use of hypnosis by the police or prosecution with witnesses in criminal cases. Hypnosis has proved to be a valuable tool to learn facts not otherwise available. There is, however, a potential for abuse when the information learned is used directly as evidence in court or when the subjective certainty of the witness is increased to the point where cross-examination becomes ineffective. Safeguards are needed to prevent abuse.

1967

Schneck, Jerome M. (1967). Hypnoanalytic study of a false confession. International Journal of Clinical and Experimental Hypnosis, 15, 11-18.

INVESTIGATED IN HYPNOANALYSIS THE PSYCHOLOGICAL ISSUES INVOLVED IN A CASE OF FALSE CONFESSION. THE PATIENT WAS A COLLEGE STUDENT EXPELLED FROM SCHOOL AFTER HE ADMITTED HIS RESPONSIBILITY FOR STEALING MONEY FROM FRATERNITY BROTHERS. THIS STUDY IN DEPTH IS PERTINENT TO THE INCREASING AWARENESS BY THE GENERAL PUBLIC AND THE PSYCHIATRIC PROFESSION OF THE PROBLEM OF FALSE CONFESSIONS. (GERMAN + SPANISH ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Conn, Jacob H. (1958). Meanings and motivations associated with spontaneous hypnotic regression. Journal of Clinical and Experimental Hypnosis, 6 (1), 21-44.

## NOTES

### "Summary

"The motivational influences and meanings associated with spontaneous regression have been discussed. It is postulated that when a patient spontaneously regresses he has the wish to recreate a previous life situation --one in which he was completely helpless. The clinical material indicates that the patient can be brought out of regression without any attempt being made to re-orient him to the present, and during spontaneous regression the patient can discuss topics which are subsequent to the regressed age level. The patient does not revive old memories but 'memory romances' which are rationalizations and wish fulfilling fantasies.

"The patient in the hypnotic trance is not passive, but is an active agent, who uses the therapist as a means of restoring the patient's feeling of mastery and control. A painful, baffling life situation which formerly had been the source of conflict, guilt or self-depreciation is in this manner mastered, so that the patient can start all over again as if he were 'reborn,' and can go on to a normal, healthy way of life.

"This is in keeping with Whitehorn's view (16) that 'symptoms have meaning in a motivational sense, that morbid patterns of reaction are part of an adaptational struggle, that one of the main tasks in psychiatric work is to conduct an individualized study of each patient to point up the main recurrent theme of dissatisfaction and conflict and to assess the individual's currently unused potentialities for dealing with this issue ...'" (p. 42).

## FAMILY

1995

Guyer, Charles G. II; Van Patten, Isaac T. (1995). The treatment of incest offenders -- a hypnotic approach: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 266-273.

Incest has become more prominent in public awareness over the past 15 years. The major focus of this interest has been on the incest survivor. The incest offender has received less attention. A hypnotic approach to treating incest offenders is outlined that involves a seven-stage approach. A case example is presented and future research directions suggested.

Levitt, Eugene E.; Pinnell, Cornelia Mare (1995). Some additional light on the childhood sexual abuse-psychopathology axis. International Journal of Clinical and Experimental Hypnosis, 43 (2), 145-162.

This exposition is an attempt to unravel the complexities of the relationship between childhood sexual abuse and adult psychopathology. Four facets of the relationship are examined in some detail: (a) the extent of childhood sexual abuse; (b) the probability that sexual abuse in childhood will result in psychopathology in the adult; (c) the reliability of early life memories in later life; and (d) the role of recovered memory of trauma in the healing process. The conclusions of this logico-empirical analysis are that first, government statistics tend to underestimate the extent of childhood sexual abuse, whereas independent surveys tend to overestimate it. Estimating prevalence is further complicated by variations in the definitions of key terms. Possibly the only safe conclusion is that true prevalence cannot be reliably determined. Second, empirical investigations of childhood sexual abuse conclude that not all victims are emotionally injured. A substantial number of these investigations find that a majority of victims suffer no extensive harm. Other variables such as family dynamics are involved; there may be only a few cases in which emotional harm results from sexual abuse as a single factor. Third, memory research suggests that memory in general is a dynamic, reconstructive process and that recall of childhood events is particularly vulnerable to distortion. Memory cannot dependably produce historical truth. Last, there is some clinical evidence that abreaction of a traumatic event in adulthood may have a remediative effect. Similar evidence for childhood trauma is lacking. The belief in the healing effect of recalling and reliving a childhood trauma depends on the therapist's orientation.

Nagy, Thomas F. (1995). Incest memories recalled in hypnosis -- a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (2), 118-126.

Accuracy of repressed memories recovered in hypnosis cannot be reliably determined with any greater certainty than non-hypnotically recalled events. Therefore, the practice of therapists' accepting hypnotically enhanced memories as veridical, absent corroborating evidence, is not advocated. A 52-year-old woman with a 27-year history of panic attacks and sleep disorder inadvertently recovered incest memories in hypnosis. Photographs and remembered events by other family members were thought by the patient to provide general support although they did not constitute actual proof of abuse. Implications are discussed.

Loftus, Elizabeth; Polonsky, Sara; Fullilove, Mindy Thompson (1994). Memories of childhood sexual abuse: Remembering and repressing. Psychology of Women Quarterly, 18, 67-84.

Women involved in out-patient treatment for substance abuse were interviewed to examine their recollections of childhood sexual abuse. Overall, 54% of the 105 women reported a history of childhood sexual abuse. Of these, the majority (81%) remembered all or part of the abuse their whole lives; 19% reported they forgot the abuse for a period of time, and later the memory returned. Women who remembered the abuse their whole lives reported a clearer memory, with a more detailed picture. They also reported greater intensity of feelings at the time the abuse happened. Women who remembered the abuse their whole lives did not differ from others in terms of the violence of the abuse or whether the violence was incestuous. These data bear on current discussions concerning the extent to which repression is a common way of coping with childhood sexual abuse trauma, and also bear on some widely held beliefs about the correlates of repression.

#### NOTES

In previous research, it was reported that violent or incestuous abuse is particularly susceptible to repression. This study differs from previous investigations in the definition of violence. In the present study, 'violence' is defined as any act involving vaginal, oral, or anal sex. Earlier research defined 'violence' as involving sexual assault with physical injury or fear of death.

Depending on the definition of repression, a sizeable minority (31% or almost 1/5) of this sample forgot their earlier abuse for a period of time. The authors state that this suggests there is little 'robust repression' in this sample. They cannot rule out the possibility that some women who were abused still, to this day, do not recall the experience; or that some who continue to have memory loss based on organic causes, including blackouts.

The authors suggest that future research in this area use more specific questions, including assessing whether Subjects respond to statements like: "There was a time when I would not have been able to remember the abuse, even if I had been directly asked about it," or "There was a time when I would not have been able to report the abuse because I had no idea that it had even happened to me." Also, when Subjects report that a memory had emerged after a period in which they had no recall, the Experimenter should enquire about how and when the recovered memory occurred. The authors conclude that remembering abuse is more common than forgetting it.

Lynn, Steven Jay; Myers, B.; Sivec, H. (1994). Psychotherapists' beliefs, repressed memories of abuse, and hypnosis: What have we really learned?. [Comment/Discussion] .

#### NOTES

The authors are responding to an article by Michael D. Yapko in the same issue of AJCH, "Suggestibility and repressed memories of abuse: A survey of psychotherapists' beliefs." They are of the opinion that "Yapko's research and data

analysis do not justify the conclusion that many, if not virtually all, therapists are naive, credulous, and out of touch with the scientific literature, although it is evident that certain therapists can be so described" (p. 184). They state that "Yapko's research is important insofar as it suggests that unfounded stereotypes of hypnosis persist even among Ph.D.- and M.D.-level clinicians" (p. 184).

1990

Rhue, Judith W.; Lynn, Steven Jay; Henry, Stephanie; Buhk, Kerry; Boyd, Patti (1990-91). Child abuse, imagination and hypnotizability. Imagination, Cognition and Personality, 10, 53-63.

Research was designed to provide a rigorous test of J. R. Hilgard's hypothesis that hypnotizability is related to a history of physical punishment and to imaginative involvements. College students who reported a history of physical abuse (N = 21) and sexual abuse (N = 23) were compared with control subjects who either lost a parent by way of death or divorce (N = 20) or who were from intact homes (N = 35), under test conditions that minimized the possibility that context effects would prejudice the findings. No support was found for the hypothesis that increased hypnotizability was associated with a history of physical or sexual abuse: All of the groups were indistinguishable on measures of objective and subjective response to hypnosis. However, consistent with Hilgard's hypothesis, physically and sexually abused subjects were found to be more fantasy-prone than subjects in both nonabused control conditions.

Somer, E. (1990). Brief simultaneous couple hypnotherapy with a rape victim and her spouse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 1-5.

This paper presents a case involving a rape victim and her emotionally affected spouse. Although the assault occurred before the couple met, the husband was too upset to concentrate when the victim wanted to share her rape-related feelings, nor could he provide the much needed empathy and support. This, apparently, was due to his difficulties in handling his own rage. Simultaneous couple hypnotherapy was used to allow the victim to share her experience under conditions safe for both her and her spouse. As he imagined in trance the rape account described by his age-regressed wife, he learned to identify his emotions and experience them in a controlled manner. During subsequent sessions, the husband was encouraged to include himself in his wife's abreaction and reshape the traumatic scene for both of them. The husband's rescuing behavior and the expressions of violent anger towards the perpetrator had several positive consequences. Not only did they change the abandonment component of the victim's traumatic memory, but they also helped the husband deal in better ways with his own feelings of anger. It also provided the couple with a helpful coping mechanism they later effectively applied under different circumstances.

**Zeig, Jeffrey K.; Geary, Brent B. (1990). Seeds of strategic and interactional psychotherapies: Seminal contributions of Milton H. Erickson. American Journal of Clinical Hypnosis, 33 (2), 105-112.**

#### **NOTES**

**Describes history of Erickson's relationship to the Palo Alto group and family therapy practice (both strategic and interactional), and identifies seven philosophical and methodological realms which represent the incorporation of Ericksonian principles into strategic and interactional family therapy models.**

**1989**

**Wallace, Benjamin; Persanyi, M.W. (1989). Hypnotic susceptibility and familial handedness. Journal of General Psychology, 116 (4), 345-350.**

**The possible relationship between hypnotic susceptibility and familial handedness was examined. In a mass testing session of students enrolled in introductory psychology, subjects were administered the Harvard Group Scale of Hypnotic Susceptibility and were also required to complete a questionnaire that ascertained information on their dominant handedness and that of their immediate family relatives. Subjects who had immediate sinistral relatives scored significantly lower in hypnotic susceptibility compared to those who had a history of familial dexterity. When immediate relatives of the original subject pool were tested on hypnotic susceptibility level, sinistral relatives scored lower in susceptibility than dextral relatives. The important implication is that this may indicate the existence of a familial component in hypnotic susceptibility.**

**1986**

**Brink, Nicholas E. (1986-87). Three stages of hypno-family therapy for psychosomatic problems. Imagination, Cognition and Personality, 6, 263-270.**

**In dealing with psychosomatic complaints it has been found useful and necessary to bring together three stages or techniques of psychotherapy. First, along with teaching relaxation, the therapist directs the client to define the symptom in a symbolic or figurative way describing size, shape, color, consistency, smell, and sound. These descriptors assess intensity and, over time, change in intensity of the symptom. Second, several hypnotic techniques are used to determine the dynamic pattern that has created the symptom. Such uncovered patterns have been found to invariably involve family dynamics. Third, hypnotic and family therapy techniques assist the client in changing the pattern. Examples are presented.**

**Miller, Arnold (1986). Hypnotherapy in a case of dissociated incest. International Journal of Clinical and Experimental Hypnosis, 34 (1), 13-28.**

**This case study describes hypnotherapy with a young woman who, in the course of treatment, began to remember her incestuous relationship with her alcoholic father. Her presenting symptoms included self-assaultive masturbation, suicidal fantasies,**

depression, impaired sexual functioning, and inability to resume her education. Different phases of treatment entailed uncovering work, mastering the incest experience with the help of emotionally corrective experiences, the use of part-selves to assist coping, and the integration of several part-selves into a more effective personality. After 4 years of treatment she has successfully resumed her education, has normal sexual functioning, and is no longer incapacitated by depression.

**1985**

Levitan, Alexander A. (1985). Hypnotic death rehearsal. American Journal of Clinical Hypnosis, 27 (4), 211-215.

Death rehearsal is a technique developed to help terminally ill patients and their families deal with anxieties about death. It has proven useful in demystifying the dying process by answering the question "What is it like to die?" Patients, who are able to hypnotically experience the death process, learn to deal with both grief and anxiety with the help of the hypnotherapist. - Author's abstract

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Frauman, David; Rhue, Judith (1985). Hypnotic age regression and the importance of assessing interpersonally relevant affect. International Journal of Clinical and Experimental Hypnosis, 33, 224-235.

The present study was undertaken to replicate an earlier experiment and to clarify which factors in this previous experiment (Nash, Johnson, & Tipton, 1979) were responsible for the obtained child-like behaviors of hypnotically regressed Ss. As in the previous study, 3 characteristics of the transitional object relationship (spontaneity, specificity, and intensity) were used as the primary criteria to investigate the effects of hypnotic age regression when Ss were regressed to age 3 and placed in 3 home situations. While in the previous study E suggested separation anxiety and isolation during the 3 home situations (mother-absent condition), the present study deleted all references to anxiety and isolation, and replaced them with suggestions of security and maternal proximity (mother-present condition). As expected, the mother-present versus mother-absent conditions led to similar hypnotized- simulating differences. In further accord with predictions, hypnotized Ss and simulating Ss requested a transitional object infrequently in the presence of mother. The importance of using dependent measures which index affective processes germane to interpersonal affect-laden experience is discussed.

**1983**

Fung, E. H.; Lazar, B. S. (1983). Hypnosis as an adjunct in the treatment of von Willebrand's disease. International Journal of Clinical and Experimental Hypnosis, 31 (4), 256-265.

Hypnosis has been used to control bleeding, both in normals and hemophiliacs. Case material is presented to demonstrate how hypnosis was used as an adjunct to standard medical treatment of a boy and his mother with von Willebrand's disease,

initially to reduce anxiety and improve self-esteem and the parent-child relationship, and later, to reduce bleeding. This use of hypnosis illustrates the relationship between hemostatic control and psychological adaptation.

**1982**

Oliver, George W. (1982-83). A cancer patient and her family: A case study. American Journal of Clinical Hypnosis, 25 (2-3), 156-160.

In recent years, increasing numbers of mental health workers have been attempting to use techniques of psychotherapy to influence the course of malignant disease. This paper reviews in detail the course of treatment of one female patient with an inoperable malignancy and conveys a sense of the clinical experience of working intensively with a cancer patient and her family. It shows the complex levels of interaction within the patient herself, between the patient and her family, and between the therapist and her family and within the therapist himself during different phases of the therapeutic journey.

**1981**

Query, W. T. (1981). Family size, birth order and hypnotizability: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29 (2), 107-109.

In 2 separate studies (N = 47 and 143), birth order and family size were found not to be associated with group-tested hypnotic susceptibility using the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). The value of cross validation was demonstrated in the failure to verify the association that appeared between susceptibility and larger families for men in the initial study. Discussion focused on the developmental approach to hypnotizability, including birth order and family size as increasing hypnotic susceptibility in the family milieu. Family interaction influencing hypnotizability is immensely complicated and further studies are suggested.

**1976**

Call, Justin D. (1976). Children, parents, and hypnosis: A discussion. International Journal of Clinical and Experimental Hypnosis, 24, 149-155.

Ease of hypnotic induction in children depends on the setting, expectancies and nature of the relationship between the child, parent, and hypnotist. The capacity to center attention seems to be reflected in an increased alpha base rate. The capacity to suspend reality testing and to become subject to the authority of the hypnotist has its counterpart in the child's relationship with idealized authoritarian parents. Hypnotic induction utilizes the child's readiness for regressive object relations in which union of self and idealized parent imago is reactivated leading to high degrees of both suggestibility and feelings of omnipotence in the child. It is hypothesized that the child shares reality testing with the hypnotist as the infant did earlier with the all-powerful parent.

The fact that children can easily be hypnotized by the experienced hypnotist tells us nothing about indication for, dangers of, or potential success of treatment. Brief symptomatic improvement of single symptoms means little and proves nothing. Success of hypnotic treatment with children depends on appropriate articulation of hypnotic procedures with total need-systems of child and family.

Cooper, Leslie M.; London, Perry (1976). Children's hypnotic susceptibility, personality, and EEG patterns. International Journal of Clinical and Experimental Hypnosis, 24, 140-148.

19 boys and 16 girls, aged 7 to 16, were given the EEG and then the Children's Hypnotic Susceptibility Scale, while a parent watched. About 1 week later, after some separate tests and interviews, each child was given a puzzle to solve in the parent's presence, while Es recorded offers and requests for help. Hypnotic susceptibility was positively correlated with the alpha duration with eyes open, but not with eyes closed. Both susceptibility and alpha duration tended to be negatively correlated with age. Highly susceptible children tended to wait longer than low susceptibles before asking parents for help with the puzzle, and their parents tended to be more strict, anxious, and impatient than did the parents of low susceptible children.

Gardner, G. G. (1976). Childhood, death, and human dignity: Hypnotherapy for David. International Journal of Clinical and Experimental Hypnosis, 24, 122-139.

Hypnotherapy can be a significant part of the treatment of a dying child. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to help a terminally ill child and his family cope effectively with problems and enhance their ability to use their own resources for personal growth and mastery throughout the dying process.

1969

Duke, J. D. (1969). Relatedness and waking suggestibility. International Journal of Clinical and Experimental Hypnosis, 17, 242-250.

Volunteering pairs of Ss took 9 waking tests (WT) of hypnotic susceptibility. Pairs included siblings, friends, and strangers. Concordance correlations from 20 sibling pairs were positive for 7 of the 9 WT, 2 significantly so. For 19 pairs of strangers, correlations were insignificant, 5 positive, 4 negative. Data reopen nature-nurture questions about the origins of individual differences in hypnotic aptitude. For 20 pairs of cross-sex friends, 7 of 9 correlations were negative, 1 significant, and 2 approaching significance. 6 of 9 concordance correlations from 16 spouse pairs were also negative, but none was significant. (Spanish & German summaries) (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Nowlis, D. P. (1969). The child-rearing antecedents of hypnotic susceptibility and of naturally occurring hypnotic-like experience. International Journal of Clinical and Experimental Hypnosis, 17, 109-120.

Data pertaining to early and mid-childhood socialization experiences available from a sample of children and their mothers as studied earlier by R. R. Sears, E. E. Maccoby, H. Levin, and others were related to hypnotizability scores and scores of susceptibility to naturally occurring hypnotic-like experiences for a part of the same sample when the children reached late adolescence. As hypothesized by J. R. Hilgard and E. R. Hilgard (see 37:3) after retrospective interviewing with college-age hypnotic Ss, the present study, using a longitudinal method of investigation, indicated some relationship between firm parental discipline in childhood and subsequent susceptibility to hypnosis and hypnotic-like experiences in adolescence. Correlations, however, were low and the overall yield of significant data was judged to be meager. This was particularly true of hypnotizability scores in relation to the other variables available for analysis. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Long, T. E. (1968). Some early-life stimulus correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 16, 61-67.

34 MALE COLLEGE SS WERE PLACED INTO 3 HYPNOTIZABILITY GROUPINGS WITH THE USE OF THE PASCAL TECHNIQUE OF HYPNOSIS. THE PASCAL-JENKINS BEHAVIORAL SCALES WERE USED TO INVESTIGATE STIMULUS SITUATIONS PRESENTED BY MOTHER AND FATHER DURING THE 1ST 10 YR. OF SS' LIVES. THE SPECIFICALLY DEFINED BEHAVIORAL VARIABLES OF ACTIVITIES WITH S AND DISPLAYS OF AFFECTION FOR THE FATHER STIMULUS CATEGORY AND THE VARIABLE VERBAL PUNISHMENT FOR MOTHER SIGNIFICANTLY DIFFERENTIATED THE HIGH HYPNOTIZABLE SS FROM THE COMBINED MIDDLE-LOW HYPNOTIZABLE SS. THE OTHER PHYSICAL CONTACT VARIABLES, WHICH INVOLVE INTIMATE CONTACT BETWEEN S AND THE PARENT, SHOWED CONSISTENT TRENDS IN THE SAME DIRECTION. THUS, EARLY LIFE FAMILY EXPERIENCES OF A MORE POSITIVE AND LESS DEVIANT NATURE SEEM TO BE ASSOCIATED WITH HIGHER SUSCEPTIBILITY TO HYPNOSIS. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Mellenbruch, P. L. (1962). The validity of a personality inventory tested by hypnosis. American Journal of Clinical Hypnosis, 5 (2), 111-114. (In Psychological Abstracts: 63, 5234)

NOTES

The authors found that administration of the California Test of Personality in the

waking and hypnotized state resulted in subjects describing themselves in a better light in the waking state than in the hypnosis condition. The differences were especially noted on the following scales: Self Reliance, Feeling of Belonging, Family Relations, and Occupation Relations. The scales least subject to distortion (in sense of presenting a good image) in waking state are Sense of Personal Worth and Freedom from Anti-Social Tendencies. J. Holroyd

**1960**

Schneck, Jerome M. (1960). Incest experience during hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 8 (3), 147-150.

#### **NOTES**

Author's Summary: "Whereas incest fantasies are not unusual and are mentioned during treatment along with more infrequent reference to actual past incest experience, the occurrence of an incestuous relationship while a patient is in treatment appears to be worth recording. Some of the pertinent facts regarding a sexual contact between brother and sister have been described in connection with the hypnoanalysis of the latter, and the manner in which the patient imparted information during hypnosis has been revealed by direct quotation" (p. 149).

**1959**

Wilcox, Warren; Faw, Volney (1959). Social and environmental perceptions of susceptible and unsusceptible hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 7 (3), 151-160.

#### **Summary**

1. The purpose of this study was to test the hypothesis that hypnotic susceptibility was positively related to the perception of fundamental aspects of the social and environmental milieu and, further, to consider the nature of hypnosis itself.
2. Ss for this study, 44 women and 36 men, were employed from a previous study (Faw and Wilcox, 1958). A mass hypnotic technique was used and susceptibility was operationally defined by the use of rating scales. The susceptible were found to have better personality adjustment than the unsusceptible.
3. New for this study were self-rating scales of the Ss' perception of parents, personal worries and problems, social activities as group or individually oriented, social activities in school, and physical care. The rating scales were administered several months prior to and independently of the hypnotic induction.
4. Interpretation of results support the hypothesis that the susceptible perceived their social and environmental milieu in more positive terms than did the unsusceptible. The susceptible perceived their parents in significantly stronger affectional and supportive relationships than did the unsusceptible. The susceptible were less concerned about adjustment to the opposite sex, not as worried about personal appearance, were more group oriented and more likely to engage in social activities than were the unsusceptible. Susceptible males were less frequently hospitalized than were unsusceptible males while susceptible females were more frequently hospitalized than were unsusceptible females.

5. Hypnosis was defined as a tendency to accept suggestions and to actualize, maintain and affirm them in the form of perceptual experiences activated by the stimulus situation as interpreted by the S and formulated by the hypnotist. The suggestions arouse expectancies or personal hypotheses which become a gauge to test the efficacy of the suggestions. Perceptualization is shaped by motives and past stimulation of the social and environmental milieu" (p. 158).

1956

Solovey, Galina; Milechnin, Anatol (1956). Concerning some points about the nature of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (2), 83-88.

#### NOTES

Two experiments with young children explored the similarity between mothers' sleep inducing speech and hypnotic induction. The first group were six normal children ranging in age from 25 to 37 months. Author interviewed their mothers for details on their sleep inducing behavior. Then "we followed a procedure that as a rule consisted in leaning over the little one, dedicating all our attention to him, repeating the mother's own series of soothing diminutives in a softly-modulated voice, and stroking gently the child's hair, forehead, or arm. In four to thirty-five minutes, the children relaxed, stopped moving, let their eyelids droop, and showed a particularly placid facial expression. Their appearance was completely similar to that of a hypnotized person" (p. 83). Signs of catalepsy (e.g. following suggestions of holding a teddy bear more and more tightly) and concentration of attention to the exclusion of outside stimuli were taken to indicate the hypnotic state.

The second experiment involved infants 3 to 24 months old, lulling them into a state of quiet relaxation. "The difficulty does not consist in producing this special state, but in demonstrating that it is really hypnosis. However, if we consider the identity of the means employed in bringing it about, and the similarity of the results to those occurring at a slightly later age, it would be unreasonable to think that there is a certain reaction up to a certain age and a fundamentally different one from that age on" (p. 85).

The author relates her findings to those of investigators who studied populations of infants and children who, lacking "psychological mothering" failed to thrive or even died. She concludes that the "psychological mothering" in normal families "produces hypnotic states in the infant daily, from the moment of birth" (p. 88).

Erickson, Milton H. (1954). A clinical note on indirect hypnotic therapy. Journal of Clinical and Experimental Hypnosis, 2, 171-174. (Abstracted in Psychological Abstracts 55: 4292)

#### NOTES

Author describes treatment of a young married couple who presented with the problem of life-long enuresis. The treatment involved a prescription: "Each evening you are to take fluids freely. Two hours before you go to bed, lock the bathroom door after drinking a glass of water. At bedtime, get into your pajamas, and then

kneel side by side on the bed, facing your pillows and deliberately, intentionally and jointly wet the bed" (p. 172). (Hypnotic induction was not used.)

The author opines that the procedure was based upon an indirect use of hypnosis. "The instructions were so worded as to compel without demanding the inntent attention of the unconscious" (p. 173).

1053

Beigel, Hugo G. (1953). Prevarication under hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 32-40.

NOTES

Author describes three cases in which hypnosis was used to confirm or disconfirm information provided in the waking state. All three cases involved marital relationships and mistrust. "It is interesting that, awakened from the hypnotic state, none of the subjects made the slightest attempt to deny any of the admissions made" (p. 39).

FANTASY/ FANTASY PRONENESS

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

2002

Linden, Julie H. (2002). Playful metaphors. American Journal of Clinical Hypnosis, 45 (3), 245-250.

The inner world of the child is a community of archetypes potentially available for the child's healthy ego development. Many forces limit and prohibit their utility. Play therapy in the context of a hypnotic relationship can potentiate these archetypes into becoming "playful metaphors" for healing and strengthening ego development. In this article, the author describes her use of playful metaphors in her therapeutic work with two children and explores how metaphor in play therapy is able to connect the child with healing archetypal imagery. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Sapp, Marty (2002). Implications of Barber's Three Dimensional Theory of Hypnosis [Abstract]. Sleep and Hypnosis, 4 (2), 70-76.

Recently, Barber has presented a three dimensional paradigm of hypnosis. He proposed that there are three types of hypnosis clients- the fantasy-prone, amnesic-prone, and positively-set. This paper discusses the major theoretical implications of this new paradigm, and, if Barber is correct, his new theory should bridge a gap between the special process (state) and nonstate theorists. Finally, only research will determine if Barber's new theory will actually unify the previous disagreements between the state and nonstate theorists.

1988

Gibbons, Don (1998). Suggestion as an art form: Alternative paradigm for hypnosis?. [Paper] Presented at annual meeting of American

Psychological Association, San Francisco. ([available online:] <ftp://members.aol.com/gibbonsdon/artform.txt>)

This paper proposes a change in the manner in which we think about suggestion-induced phenomena, moving from primary reliance upon a medical/counseling model to a concurrent view of suggestion as an art form and hypnosis as an artistic medium. the rationale for such an alternative paradigm is discussed, and a procedure for scripting suggestions within the new paradigm -- the Best Me technique -- is presented, along with a specific illustration of its application, possible implications for current clinical practice, and suggestions for transition to the new paradigm.

1995

Bryant, Richard A. (1995). Fantasy proneness, reported childhood abuse, and the relevance of reported abuse onset. International Journal of Clinical and Experimental Hypnosis, 43 (2), 184-193.

This study investigated the relationship between fantasy proneness and the age at which reported childhood sexual abuse occurs. Seventeen adult females who reported having been sexually abused before the age of 7 years, 20 females who reported having been abused after the age of 7 years, and 20 females who reported having never been abused were administered two measures of imaginative involvement (Tellegen Absorption Scale [TAS] and Inventory of Childhood Memories and Imaginings [ICMI]). Participants who were reportedly abused early in childhood obtained higher scores on the TAS and ICMI than participants who were reportedly abused later in childhood, who in turn obtained higher scores than the control participants. Findings are discussed in terms of factors that mediate fantasy proneness and reports of childhood abuse.

Gearan, Paul; Schoenberger, Nancy E.; Kirsch, Irving (1995). Modifying hypnotizability: A new component analysis. International Journal of Clinical and Experimental Hypnosis, 43 (1), 70-89.

The effects of the Carleton Skills Training Program (CSTP) on hypnotizability were compared to those of a modified training program in which instructions for physical enactment of the response were omitted. After training, subjects in the original CSTP reported an increase in the extent to which they intentionally enacted suggested behaviors. In contrast, subjects in the modified training program reported increased fantasy without voluntary physical enactment. Nevertheless, both training programs increased behavioral and subjective responsiveness to suggestion, and there were no significant differences in response enhancement between the two programs. Across conditions, increases in behavioral and subjective responses to suggestion were correlated with increased use of fantasy. In contrast, increases in enactment were correlated only with compliance. The modified training program is recommended as a means of enhancing suggestibility with less likelihood than the original CSTP of engendering compliance.

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

**1994**

Csoli, Karen; Ramsay, Jason T.; Spanos, Nicholas P. (1994, August). Psychological correlates of the out-of-body experiences--a reexamination. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

**NOTES**

12% of population reports an out-of-body experience (OBE) sometime in their lives. They leave their body and can see self from the outside. Awareness is confined to the new point of view, not fragmented; there is unimpaired intellectual ability; feelings of detachment, completeness, well being, and profound relaxation. Can occur under stress or deep relaxation; not while driving a car.

Psychological correlates aren't known. Studies are inconclusive with respect to belief systems (religious, death anxiety, etc.); measures of absorption, hypnosis, imaginative ability, imagery controls. Recent Carlton study with 87 Ss (33 had OBE) got results we didn't expect. They completed questionnaires, were tested for hypnotizability, had an interview re OBE experience.

This study found the OBE-experiencing people had higher levels of anxiety, psychosomatic symptoms, and panic attacks. They were also higher on magical thinking, perceptual aberration, and Schizophrenia scores. They didn't differ on mysticism, levels of drug or alcohol use, or level of self esteem.

Lynn, Steven Jay; Pezzo, Mark (1994, August). Close encounters with aliens? Simulated accounts following a hypnotic interview. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

**NOTES**

A survey of 5900 adults regarding unusual experiences concluded that 1 of 50 Americans may have had UFO experiences.

This study resembles that of Lawson (1977), in which Ss were asked to imagine UFO experiences; their descriptions were difficult to distinguish from real reports. One problem with Lawson's research is that he provided the Ss with information (e.g. to imagine they were abducted by aliens).

Our study differs from Lawson's in that we didn't actually hypnotize subjects. Our Ss' task was to 'simulate hypnosis, in recovered memory research.' We manipulated cues provided to the Ss.

Ss were told their purpose was to role play an excellent hypnotic subject. Standard simulation instructions were given. Then they were told that hypnosis frequently is used to recover experiences that the Ss cannot remember.

Ss were given a description of a Scene: driving on a road in the country, no traffic, etc. They were told that they couldn't remember 2 hours of what happened. Then a second Experimenter used a pseudo hypnotic induction, and told them they were going to recall material regarding events that had happened.

Ss completed an Omni Magazine questionnaire developed by Hopkins, who is an advocate of UFO sightings. They received the questionnaire either after the experiment, before the experiment, or with specific cues.

4 of 21 (19%) of the minimal cue condition Ss identified lights in the sky as a UFO; at the end, 52% saw a UFO. Thus, even with minimal information, subjects report interactive behavior. Almost all medium cue Ss reported the UFO. 17% felt a loss of control, being floated or transported to the spaceship. Only one S said the aliens were cruel. Only one of the role players picked up the word "trondant," a word used by Hopkins to pick up simulators who are hypnotized.

Our findings present a conservative picture. When Ss thought they would be thrown out of the experiment if detected as simulators, they avoided talking about bizarre events. 15% who were told to role play a close encounter failed to do so!

Our findings do not imply that persons who report contacts are simulating; but the basis for such reports are widely available to college students.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

RESULTS. Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This

would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Newman, Leonard S.; Baumeister, Roy F. (1994, August). Who would wish for the trauma? Explaining UFO abductions. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

UFO abduction reports are more frequent than ever before. 1979 200 1984 500 1988 5000 letters [to a magazine?] 1993 55,000 letters, with 200/wk still being sent Hopkins, Jacobs, & Westrum (1992) took a poll: 3.7 million abductees in U.S. were estimated.

These, I maintain, are motivated in attempt to accept the self; the phenomenon relates to masochism on a psychological level. I think we need a more psychological

explanation than other arguments being presented. The other arguments being made are: 1. People are actually being abducted. 2. Abductees are publicity seeking liars. 3. These people cannot distinguish between fantasy and reality (but there is no evidence for that).

The two key questions we should attempt to answer are: 1. Why would people claim to remember things that did not actually happen to them? Most of these reports emerge under hypnosis. They may be creating memories rather than retrieving memories. 2. Why would people claim to remember this in particular?

Maybe abductees are people with knowledge about reports of UFO experiences, with therapists who believe in paranormal experiences? Probably this is not the explanation.

In the '50's there were reports of space aliens who abducted people, taught them about peace, love, etc. and the need for intergalactic harmony. But stories today are very different.

They want to escape the self because the self is "me." They may have done something that makes them feel stupid, unlovable; or it is just because of constantly having to maintain a positive self image. This kind of anxiety pertains to people who have an over-inflated presentation of the self. If you can avoid thinking about the implications of your behavior (e.g. through drinking, vigorous exercise, or masochism) you don't have the anxiety.

Masochism is a bizarre way to obtain pleasure, but it underlines both of these things. It cancels out meaningful aspects of the self (thought, self reflection); and needs of control are denied (bondage); it negates esteem and dignity. People higher paid, in more responsible jobs, are more likely to engage in masochistic activity.

The main features of masochism also apply to abduction stories: 1. Pain 2. Loss of control 3. Humiliation 4. Demographics (abductees seem to come from higher socio-economic classes) 5. International pattern - mostly an American & British phenomenon 6. Concern with "selfhood" 7. Sexual differences. (There are male and female masochists, but the contents are different: females more often talked about humiliation involving display than men did. Abduction cases are the same: alien examination episode (display) are in 50% of male stories but 80% of female stories.)

1993

Elter-Nodvin, Sabette; Lynch, Gregory; Nash, Michael R. (1993, October). Is primary process mentation a feature of hypnotic responding?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

It is difficult to measure primary process; usually measures from Rorschach are used. Recently Steven Lynn and Ken Bowers have done interesting work.

From literary criticism, we took the newer method of lexical pattern analysis--like a fingerprint (e.g. of Shakespeare's language). Wanted to determine whether there are differences between High and Low hypnotizables; or a difference in waking and hypnotic state. Martindale has a measure based on a lexical dictionary.

In Martindale's method, you take a long verbal sample, transcribe it into computer text file (response to TAT cards, and 3 tasks like--"Imagine you are ascending a spiral staircase and see someone at the top; describe what you see"); then do word count.

Rhue, Judith W.; Lynn, Steven Jay (1993, October). Dissociation, childhood sexual abuse, and fantasy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

We are reporting on part of an ongoing study, with results still being analyzed. We are looking at imagination, fantasy, and dissociation in abused and non-abused children. This focuses on the relationship between dissociation and fantasy and imagination.

For Janet, dissociation was the primary defense against trauma. [Quotes D. Spiegel also.] There is a body of research on trauma associated with the development of dissociation. 1. NIH found 97% of multiple personality patients reported trauma in childhood; 83% were sexually abused; 75% were repeatedly physically abused; 68% had both types of abuse. 2. Bliss - studied 70 MPDs and found same results. 3. Ross, Norton, and Noosney [?name] - found same results 4. Coombs & Milstein - same

The incidence of retrospective reports of abuse is much lower in other types of patients.

So, what is going on during child abuse? We wanted to look at children experiencing or who recently experienced abuse. Also looked at a children's scale of dissociation symptoms and validated other studies.

We studied 39 children referred to Ohio University College of Osteopathic Medicine; 12 had primary problem as sexual abuse (8 of whom were female). Non-abused Ss were either behavioral or adjustment disorders. 8 reported severe physical abuse. Parents concurred in presence of abuse. Physical abuse consisted of broken bones, burns, etc. Average age 9-10.

Ss were given the Beck Depression Scale, Children's Fantasy Inventory, Meyers' Children's Creative Imagination Scale, Children's Perception Alteration Scale, Figure Drawings, WISC-R, and 2-3 other measures. Research assistants administering the scales didn't know the children's diagnoses.

We found no support for the hypothesis that sexual abuse in childhood is associated with imagination, fantasy, or dissociative tendencies--not surprising considering that only 4 Ss were abused by their father or stepfather, 2/3 of Ss had fondling as the most severe abuse they had experienced; only 2 had intercourse; 2/3 were abused only 1-3 times. Sexual abuse that is not violent, severe, prolonged, or perpetrated by a parent may not lead to the same problems.

In a sample of women whose assaults were rape, only 25% reported it as rape.

On other hand, physical punishment was more reliably associated with dissociation (.47), imagination and fantasy in absorption scale (.41-.51 with question about using imagination to block awareness of punishment). Physical punishment was associated with increased dissociation.

Sample size is small and the trend is in the predicted direction, so later results may be significant.

**Conclusion:** measures of fantasy, dissociation, and imagination were correlated. Children's Perception Alteration Scale and the measures of fantasy and imagination were validated. Diverse measures of fantasy were highly correlated with one another.

We need a non-abused sample to add to this research.

The clinical sample had a higher dissociation score than Evers, Sanders, and Shostick's cutting score. We use 60 as a cutting score (for an abused sample) while they used 55.

#### **COMMENTS FROM THE AUDIENCE:**

**Jack Watkins:** the sexual abuse for the most part was not painful. Answer by Rhue: The group of sexual abuse cases includes very wide varieties of experiences; we need to examine that in our research. Also, trauma and the perception of trauma is an individual matter.

**Etzel Cardena:** We presented a paper at APA in which sexual abuse was a predictor of psychogenic seizures, and most important, the duration of the abuse.

**Phyllis Alden:** In a recent study in Germany, it was length of time for the abuse that predicted [dissociative symptoms?].

**1992**

**Barrett, Deidre (1992).** Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. *Psychological Reports*, 71, 1011-1014.

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

**Bowers, Kenneth S. (1992).** Imagination and dissociation in hypnotic responding. *International Journal of Clinical and Experimental Hypnosis*, 40 (4), 253-275.

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It

recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

Kunzendorf, Robert; Carrabino, Carlene; Capone, Daniel (1992-93). 'Safe' fantasy: The self-conscious boundary between wishing and willing. Imagination, Cognition and Personality, 12, 177-188.

This experiment tested the hypothesis that a fantasy will impel people to 'act out' only if they fail to distinguish the fantasy from the anticipated reality. In the experiment, one task obtained a baseline measure of how long subjects could resist eating popcorn, then measured how long subjects could resist popcorn while fantasizing its taste. Another task instructed subjects to merge three circular images with three circular percepts of equal vividness, then presented subjects unexpectedly with only two of the three circular percepts. Some subjects thought that there were three circular percepts during the merger, and for these subjects, the length of resistance to popcorn was significantly shorter during the popcorn fantasy. But for subjects who self-consciously differentiated the two real circles from the three merging images, the normal 'boundary' between wishful fantasy and willful eating was intact. NOTES 1:

#### NOTES

This research investigated whether people can fantasize without acting out. The authors place the study in the context of theories proposed by Freud and William James. Kunzendorf's source monitoring theory of self-consciousness suggests that "self-consciousness \_that one is imaging\_ is the phenomenal consequence of neurally monitoring the central source of one's imaged sensations, and self-

consciousness \_that one is perceiving\_ is the subjective quality of neurally monitoring the peripheral source of one's perceived sensations" (p. 178).

The ability to carry out source monitoring varies. Those who have difficulty monitoring whether they are imaging or perceiving may also have trouble distinguishing wishful fantasy from anticipatory imagery, and therefore they might act on it.

This research "identified subjects with poor source monitoring--nondiscerners of reality--and investigated the effect of fantasy on their impulse control" (p. 179).

## **METHODS**

Subjects sat in front of a computer monitor for all tests; they completed Eysenck's seventh impulsivity questionnaire for measures of impulsivity, venturesomeness, and empathy, Marks' Vividness of Visual Imagery Questionnaire (VVIQ).

The study used a test in which subjects maintained in mental imagery a red, green, and yellow filled circle that had been on screen, with eyes closed; were instructed to open eyes and merge their 3 imaginary circles with the 3 on the screen (but when they opened eyes only 2 were there), and they were then asked questions about how many circles they saw when they opened their eyes.

Then they were given a taste of popcorn, told to resist eating any more (but could press a key to receive a little if they couldn't resist), and then were told to resist by imagining that they were eating popcorn.

**RESULTS.** Those who discerned the two real circles while imaging a third circle of equal vividness (the Discerners), could resist eating popcorn for 137 sec in the baseline condition and 132 sec in the fantasy condition. Those who could not discern two real circles while imagining a third (Nondiscerners) could resist eating popcorn for 127 sec in the baseline treatment but only 95 sec in the fantasy treatment.

Discerners could identify the missing circle as the red one, whereas nondiscerners could not do so with any certainty; there was no effect of "image vividness".

"Vivid imagers" whose imagery matched real yellow circles of greater illuminance, exhibited more vivid imagery on the VVIQ as well.

In their Discussion, the authors suggest that "fantasy impels people to 'act out' only if they fail to distinguish fantasized sensations from perceived sensations. ... [the theory] is applicable to sexual fantasy and aggressive fantasy as well. This theory--Kunzendorf's 'source monitoring' theory of self-consciousness--implies that fantasies of the sensory consequences of a behavior should not lead to the behavior, so long as the fantasies are self-consciously known to be imaginal and are not expected to be perceptual... But for people who cannot self-consciously distinguish between wishful images of pure fantasy and anticipatory images of perceptual reality, between wishing and willing, fantasies of gastronomical, sexual, or aggressive sensations are implicitly unsafe.

"Indeed, as Baars notes, 'the issue of voluntary control is at the very core of human psychopathology' [31, p. 254]. But recently, Baars' and others' theories of volition have emphasized the computer-metaphoric distinction between conscious 'willful' behavior and unconscious 'automatic' action [31, 39-40], and have neglected James' distinction between conscious willing and conscious wishing. Decades ago, when pre-computational theorists like Janet used the term 'automatism' to describe

psychopathological behavior, they meant that an abnormally behaving patient was \_consciously 'possessed' by a fantasy\_--a wishful image, a hypnotic suggestion, or a fantasized personality [41]. In reemphasizing the phenomena of wishing, willing, and possession by fantasies, the present article redefines the latter phenomenon as possession by 'unmonitored' fantasies, which are distinguishable from anticipatory images impelling action" (pp. 184-185).

1992

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

#### NOTES

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

1991

Oettingen, Gabriele; Wadden, Thomas A. (1991). Expectation, fantasy, and weight loss: Is the impact of positive thinking always positive?. Cognitive Therapy and Research, 15 (2), 167-175.

Investigated the impact of expectation and fantasy on the weight losses of 25 obese women participating in a behavioral weight reduction program. Both expectations of reaching one's goal weight and spontaneous weight-related fantasies were measured at pretreatment before Ss began 1 year of weekly group treatment. Consistent with the hypothesis that expectation and fantasy are different in quality, these variables predicted weight change in opposite directions. Optimistic expectations but negative fantasies favored weight loss. Ss who displayed pessimistic expectations combined with positive fantasies had the poorest treatment outcome. Expectation but not fantasy predicted program attendance. The effects of fantasy are discussed with regard to their potential impact on weight reduction therapy.

Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginative sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

1990

Council, James R.; Huff, Kenneth D. (1990). Hypnosis, fantasy activity, and reports of paranormal experiences in high, medium and low fantasizers. British Journal of Experimental and Clinical Hypnosis, 7 (3), 9-15.

The personality construct "fantasy-proneness" (Wilson and Barber, 1983a) has important implications for theories of hypnosis, imagination, and paranormal phenomena. The present study compared characteristics of persons who received high, medium or low scores on a self-report measure of fantasy-proneness. Results

revealed that the three groups differed significantly on measures of absorption, daydreaming styles, and reports of paranormal experiences. However, although high fantasizers were significantly more hypnotizable than low fantasizers, they did not differ from the middle group. These results are used to further characterize fantasy-prone persons, and implications of extremely low fantasy-proneness are discussed.

Rhue, Judith W.; Lynn, Steven Jay; Henry, Stephanie; Buhk, Kerry; Boyd, Patti (1990-91). Child abuse, imagination and hypnotizability. Imagination, Cognition and Personality, 10, 53-63.

Research was designed to provide a rigorous test of J. R. Hilgard's hypothesis that hypnotizability is related to a history of physical punishment and to imaginative involvements. College students who reported a history of physical abuse (N = 21) and sexual abuse (N = 23) were compared with control subjects who either lost a parent by way of death or divorce (N = 20) or who were from intact homes (N = 35), under test conditions that minimized the possibility that context effects would prejudice the findings. No support was found for the hypothesis that increased hypnotizability was associated with a history of physical or sexual abuse: All of the groups are indistinguishable on measures of objective and subjective response to hypnosis. However, consistent with Hilgard's hypothesis, physically and sexually abused subjects were found to be more fantasy-prone than subjects in both nonabused control conditions.

1989

Ganaway, George K. (1989). Historical versus narrative truth: Clarifying the role of exogenous trauma in the etiology of MPD and its variants. Dissociation, 2, 205-220.

The author notes a current trend toward viewing multiple personality disorder (MPD) and its variants as a form of chronic post-traumatic stress disorder based solely on exogenous childhood trauma, and cautions against prematurely reductionistic hypotheses. He focuses on Kluft's Third Etiological Factor, which includes the various developmental, biological, interpersonal, sociocultural, and psychodynamic shaping influences and substrates that determine the form taken by the dissociative defense. He hypothesizes a credibility continuum of childhood and contemporary memories arising primarily from exogenous trauma at one end, and endogenous trauma (stemming from intrapsychic adaptational needs) at the other. The author offers alternative multidetermined explanations for certain unverified trauma memories that currently are being accepted and validated as factual experiences by many therapists. He describes some potentially deleterious effects of validating unverified trauma memories during psychotherapy, and recommends that the MPD patients' need for unconditional credibility be responded to in the same manner as other transference-generated productions.

Hoyt, Irene P.; Nadon, Robert; Register, Patricia A.; Chorny, Joseph; Fleeson, William; Grigorian, Ellen M.; Otto, Laura; Kihlstrom, John F. (1989).

**Daydreaming, absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 332-342.**

#### **NOTES**

**It appears that the consistent correlation between hypnotizability and positive-constructive daydreaming is carried largely by three subscales--Acceptance of Daydreaming, Positive Reactions to Daydreaming, and Problem-Solving. Number other subscales consistently correlated with hypnotizability.**

**When absorption was taken into account, daydreaming activity made no independent contribution to the prediction of hypnotizability. "The present results differ from Crawford's (1982) somewhat, however, in terms of the specific aspects of daydreaming activity that are associated with hypnosis. Crawford found that hypnotizability correlated consistently (i.e., in both men and women) with three subscales tapping imagery variables: the presence of visual and auditory imagery in daydreams and the hallucinatory vividness of daydream imagery. In the present study, the imagery subscale, including both visual and auditory items, did not correlate significantly with hypnotizability; unfortunately, the hallucinatory vividness subscale is not represented on the short form (SIPI) of the daydreaming questionnaire used in this study. Crawford (1982) did not find consistent correlations between hypnotizability and scales measuring acceptance, positive reactions, and problem solving--the subscales that consistently yielded significant correlations in the present study. Not too much interpretive weight should be given to any of the correlations between hypnotizability and daydreaming subscales, until a full replication with reliable subscale measurements (such as those provided by the long, original IPI) has been completed. The important point made by Crawford (1982), and confirmed in the present study, is that hypnotizability is related to positive-constructive rather than guilty-dysphoric daydreaming" (p. 338). The two studies agree that absorption and hypnosis are not correlated with daydreaming scales reflecting poor attentional control. Given the theoretical emphasis in both domains on the narrowing of attention and exclusion of potentially distracting input, negative correlations with this aspect of daydreaming might have been expected.**

**Rhue, Judith W.; Lynn, Steven Jay (1989). Fantasy proneness, hypnotizability, and absorption--a re-examination: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 100-106.**

**In a previous study (Lynn & Rhue, Journal of Personality and Social Psychology, 1986) of fantasy-prone persons, "fantasizers" participated in an 8-10 hour, multi-session study. Group selection was based on scoring in the upper 4% of the college population on the Inventory of Childhood Memories and Imaginings (ICMI) of Wilson and Barber (1981) and conforming to the fantasy-prone personality syndrome (Wilson & Barber, 1981) during an interview. Fantasizers differed from nonfantasizers (lower 4% of population) and medium range scorers on measures of hypnotizability (Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962) and absorption (Tellegen Absorption Scale, Tellegen, 1976). In the**

current study, Subject were selected on the basis of their ICMI scores and participated in a 1-session experiment. As in our first study (Lynn & Rhue, 1986), fantasizers differed from both comparison groups on the measure of absorption and from the nonfantasizers on the measure of hypnotizability. Further, the correlations among fantasy proneness, absorption, and hypnotizability were stable across studies. Fantasy proneness and absorption were not found to be truly discriminable constructs. Unlike our initial study (Lynn & Rhue, 1986), fantasy-prone and medium range Subjects were equally hypnotizable. Methodological differences across studies provide a plausible explanation for the disparate results obtained.

1988

Council, James R.; Greyson, Bruce; Huff, Kenneth D. (1988, November). Reports of paranormal experiences as a function of imaginative and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Wilson and Barber (1983) have suggested that some excellent hypnotic subjects ("fantasy prone" persons) may be more likely to report paranormal experiences than the rest of the population. Council and Greyson (1985), studying a sample of subjects who had reported near-death experiences (NDEs), found a significant relationship between fantasy-proneness and NDEs, and a much stronger relationship between fantasy- proneness and reports of paranormal experiences in general. This paper presents new data from the study of NDE reporters and a replication and extension of those findings with a sample not selected for NDEs. These data indicate a strong association between fantasy- proneness and reports of paranormal experiences. Hypnotic susceptibility bears a weaker relationship with such reports that appears dependent upon variance shared with measures of fantasy-proneness. Other data from these studies suggests that both imaginative ability and reports of paranormal experiences may be related to a history of stressful or traumatic childhood experiences.

LeBaron, Samuel; Zeltzer, Lonnie K. (1988). Imaginative involvement and hypnotizability in childhood. International Journal of Clinical and Experimental Hypnosis, 36, 284-295.

2 pilot studies assessed the relationship between hypnotizability in children and extent of involvement in fantasy-related activities during early childhood. The Stanford Hypnotic Clinical Scale for Children and a structured interview questionnaire regarding fantasy activities based on previous work by Singer (1973) were given to 30 medical patients aged 6-18 years in the first study and to 37 healthy children aged 6-12 years from a school population in the second study. In both studies, hypnotizability correlated moderately (.42 and .39, respectively) with extent of involvement in fantasy- related activities. Results support Hilgard's (1979) findings that hypnotizability is related in part to the development of imaginative involvement in childhood.

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

1987

Lynn, Steven Jay; Rhue, Judith W. (1987). Hypnosis, imagination, and fantasy. Journal of Mental Imagery, 11, 101-112.

Considers three questions pertaining to the relationship between hypnotic responsiveness and imaginative processes: Are subjects' nonhypnotic imaginative involvements related to hypnotic susceptibility? Do some fantasy prone subjects share a unique constellation of personality attributes and experiences, including an ability to respond to hypnotic suggestions? What are the childhood developmental antecedents of persons who score at the extremes of hypnotic ability and measures of fantasy and imagination? Reviews literature.

1986

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

1985

Kerry Buhk; Rhue, Judith; Henry, Stephanie; Lynn, Steven Jay (1985, November). Fantasy proneness: Are their word associations richer?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Experimenters screened 7000 students to get 6 samples of fantasy prone Ss (top 2.4% on Wilson and Barber's ICMI). They found less association between fantasy proneness and hypnotizability than did Wilson and Barber.

They had fantasizers hallucinate a second cup next to a first styrofoam cup. Results were that 87% of High fantasizers, < 50% Medium fantasizers, < 25% Low fantasizers could do it, but they didn't describe seeing the hallucinated cup "as real as real" as Wilson and Barber said they did.

Experimenters were concerned about context effects (expectancy) because the Creativity and Fantasy Proneness tests were run proximal in time, so they separated in time the administration of Fantasy Prone and Creativity tests and also looked at word associations.

23 High and 20 Low fantasy prone students selected by ICMI, which was administered to Subjects 18 mos before the creativity study. At the time of the creativity study, Ss were informed they were randomly picked. There were two 90' sessions, counterbalanced.

Sessions: 1. Hallucinate image of R.A. and of styrofoam cup. Other tests were administered for intelligence and personality: Shipley-Hartford, MMPI, Crowne-Marlowe, etc. 2. Creativity tests (Revised Art Scale, Hilgard's Alternate Uses; story production which was scored on detail, imagery and fantasy and on imagery nouns.) Results of this study which was independent of context (i.e. the tests being correlated were administered independently of each other, separated by time). 1. Fantasizers were more creative than low fantasizers on both Creativity Scales. 2. Fantasizers show more divergent thinking on Hilgard Alternate Uses test, but relationship between fantasy proneness and creativity were not strong,  $r = .30$ . 3. Fantasizers and non fantasizers did not differ on the story measures! This diverges from Wilson and

Barber's results. Fantasizers may have more vivid images, but storytelling does not capture that.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Frauman, David; Rhue, Judith (1985). Hypnotic age regression and the importance of assessing interpersonally relevant affect. International Journal of Clinical and Experimental Hypnosis, 33, 224-235.

The present study was undertaken to replicate an earlier experiment and to clarify which factors in this previous experiment (Nash, Johnson, & Tipton, 1979) were responsible for the obtained child-like behaviors of hypnotically regressed Ss. As in the previous study, 3 characteristics of the transitional object relationship (spontaneity, specificity, and intensity) were used as the primary criteria to investigate the effects of hypnotic age regression when Ss were regressed to age 3 and placed in 3 home situations. While in the previous study E suggested separation anxiety and isolation during the 3 home situations (mother-absent condition), the present study deleted all references to anxiety and isolation, and replaced them with suggestions of security and maternal proximity (mother-present condition). As expected, the mother-present versus mother-absent conditions led to similar hypnotized- simulating differences. In further accord with predictions, hypnotized Ss and simulating Ss requested a transitional object infrequently in the presence of mother. The importance of using dependent measures which index affective processes germane to interpersonal affect-laden experience is discussed.

Neufeld, Victor; Lynn, Steven Jay; Jacquith, Leah; Weekes, John (1985, November). Fantasy style, imagination, and hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Authors discuss three fantasy styles: 1. Positive constructive daydreaming 2. Guilt / fear of failure 3. Poor attentional control. Fantasy style has been related to many personality variables, usually based on questionnaires.

They examined subjects in hypnosis and waking states using hypnotic dreams, Short Imaginal Processes Inventory, Tellegen Absorption, Betts QMI Imagery Vividness, Hypnosis (HGSHS and suggested dream) involvement, Wilson and Barber ICI, Nonvoluntary experience, Fantasy Proneness, Content of fantasies.

137 student volunteers participated in the study. 82 had HGSHS-A and hypnotic dream, and gave involuntariness ratings. Ss self-rated pleasant and unpleasant for hypnotic dreams. Experimenter rated dream for 1) positive emotion, 2) negative emotion, and 3) anxiety. Correlations were significant for female Ss, but not for male Ss.

**RESULTS.** Fantasy-style, at least of negative affect, was consistent for waking and hypnotic states. Positive constructive fantasy correlated to HGSHS but the other two fantasy styles did not. [Other results reported are not included in this brief summary.]

**1982**

**Crawford, Helen J. (1982). Hypnotizability, daydreaming styles, imagery vividness, and absorption: A multidimensional study. Journal of Personality and Social Psychology, 42 (5), 915-926.**

**In 25 male and 31 female university student and staff volunteers, the interrelationships between the following measures were studied: hypnotic susceptibility (SHSS:A and C), imagery vividness (VVIQ), involvement in everyday activities (TAS), and daydreaming styles (28 scales of Singer & Antrobus's Imaginal Processes Inventory). Factor analysis produced a factor characterized as a positively vivid and absorptive imagination style. Hypnotic susceptibility, VVIQ, TAS, and positive-affect daydreaming styles all loaded on this factor. Two other factors were a dysphoric daydreaming style and a lack-of-attentional-control style. Stepwise multiple regressions suggested that males and females, at least within this sample, exhibit different relationships between hypnotic susceptibility and predictor variables. Similar differences were found for the VVIQ and the TAS and their daydreaming-scale predictor variables.**

**1981**

**Singer, Jerome L.; Pope, Kenneth S. (1981). Daydreaming and imagery skills as predisposing capacities for self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 271-281.**

**A growing body of empirical literature suggests that daydreaming and related forms of waking reverie are natural-occurring, common experiences in normal individuals. Specific experiments relating daydreaming and the stream of ongoing thought as an alternative source of stimulation to external cues are described. It is proposed that everyday waking consciousness has many features of internal absorption in imagery and adaptive but non-sequential processes that resemble fantasy, hypnosis, and night dreaming. Experiments linking daydreaming, imagery vividness, and hypnosis are cited as suggesting that individuals may develop capacities for control over the stream of thought and that such capacities are closely similar to the skills needed for self-hypnosis.**

**1979**

**Barrett, Deirdre (1979). The hypnotic dream: Its relation to nocturnal dreams and waking fantasies. Journal of Abnormal Psychology, 88 (5), 584-591.**

**A review of the literature in the area of hypnotic dreams suggests that physiological correlates of hypnotic dreams are better established than content characteristics. A study is also reported that examined the content of hypnotic dreams in relation to that of nocturnal dreams and daydreams from the same subjects. Subjects were 16 undergraduates divided into deep-trance and medium-trance groups. Deep trance subjects hypnotic dreams were similar to their nocturnal dreams and different from daydreams on a wide variety of characteristics including length, emotional themes,**

characters, setting, and amount of distortion. Medium trance subjects' hypnotic dreams were found to fall between their nocturnal dreams and daydreams on most of these measures.

**1970**

**Sutcliffe, J. P.; Perry, Campbell; Sheehan, Peter W. (1970). The relation of some aspects of imagery and fantasy to hypnotizability. Journal of Abnormal Psychology, 76, 279-287.**

Studied relations between hypnotic susceptibility and some aspects of imagery and fantasy in a normal population of 95 undergraduates. Vividness of imagery was assessed by a reliable questionnaire adapted from procedures 1st devised by G. H. Betts; dreams were collected by a diary method which studied the incidence of distortion in dream content; and hypnotizability was assessed by the Stanford Hypnotic Susceptibility scale (Form C), a standardized scale devised by the authors, and a rating procedure based on both scales. Results show a positive, curvilinear relationship between vividness of imagery and hypnotic susceptibility, but no significant relationship for fantasy. Evidence suggests that both imagery and fantasy, considered conjointly, lead to a more accurate prediction of deep susceptibility than the imagery variable alone. (34 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1969**

**Nowlis, D. P. (1969). The child-rearing antecedents of hypnotic susceptibility and of naturally occurring hypnotic-like experience. International Journal of Clinical and Experimental Hypnosis, 17, 109-120.**

Data pertaining to early and mid-childhood socialization experiences available from a sample of children and their mothers as studied earlier by R. R. Sears, E. E. Maccoby, H. Levin, and others were related to hypnotizability scores and scores of susceptibility to naturally occurring hypnotic-like experiences for a part of the same sample when the children reached late adolescence. As hypothesized by J. R. Hilgard and E. R. Hilgard (see 37:3) after retrospective interviewing with college-age hypnotic Ss, the present study, using a longitudinal method of investigation, indicated some relationship between firm parental discipline in childhood and subsequent susceptibility to hypnosis and hypnotic-like experiences in adolescence. Correlations, however, were low and the overall yield of significant data was judged to be meager. This was particularly true of hypnotizability scores in relation to the other variables available for analysis. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Neveu gives the name 'Induction' to his own development of the techniques of Bernheim, which he regards as a more comprehensive system than classic hypnosis and as primarily an interpersonal communication with ensuing mobilization of the patient's abilities to modify affective and other psychosomatic aspects of his condition. Neveu uses the method on hospitalized patients as treatment and

research, citing its advantages over psychoanalysis, narcoanalysis, and other therapies which have many limitations. (E.M.E.)

1953

Rosen, Harold (1953). Hypnodiagnostic and hypnotherapeutic fantasy---evocation and acting-out techniques. Journal of Clinical and Experimental Hypnosis, 1 (1), 54-66.

#### NOTES

Developed techniques to reach patients who have little motivation for psychotherapy, sometimes hypnotizing them without their knowledge or conscious consent. "By still other techniques, symptom-formation was then blocked and the inevitable, resultant anxiety reaction repressed, so that underlying fantasies could erupt into conscious awareness even to the point of being acted out" (p. 65). By these means he determined the neurotic or psychotic functions being served by the patient's physical symptoms. The hypnotic interpersonal relationship is "a fantasy-evoking one in which the patient, on the basis of his own experiential background and with more ready access to his pre-conscious, thinks, feels, experiences, reacts and even acts-out exactly as he believes the hypnotist wishes him to, projecting his own impulses, desires and fantasies to the therapist" (p. 66).

#### FEAR

2002

GOW, MICHAEL (2002). Treating dental needle phobia using hypnosis. [Paper] Presented at IFDAS/SAAD 10th International Dental Congress on Modern Pain Control, Edinburgh, June 2003, also at BSMDH (Scot) meeting December 2003.

This case illustrates the effectiveness of short-term hypnosis treatment for a dental needle phobia. What is significant is the dental history of the patient and the longstanding effect of her dental phobias and how quickly hypnosis was able to remove this problem.

**Aim:** To manage dental needle phobia using hypnosis integrated into an anxiety management treatment plan."

**Case History:** Female, 48, had traumatic and painful experience at the dentist when 5, developed phobia of dental injections and treatment. Has had a dozen General Anaesthetics for dental treatment. Experiences psychosomatic pain prior to treatment.

**Methods:** Medical, dental and phobia history explored. Pre-treatment questionnaire assessed dental anxiety, reasons for anxiety, and ascertained management options. Post-treatment questionnaire assessed changes in dental anxiety and attitudes.

**Anxiety management techniques:** Needle Desensitisation, Relaxation, and Hypnosis (Regression, Progressive Muscular Relaxation, Glove Anaesthesia, Future Rehearsal etc.).

**Results:** Pre-treatment questionnaire revealed high level anxiety (26 out of high of 30 modified Corah score; and high anticipation of future pain during dental

treatment (10 out of high of 10 on a Visual Analogue Scale. Post-treatment questionnaire revealed low level anxiety (12/30) and low anticipation of future pain (4/10).

**Conclusion:** Hypnosis was an effective adjunct to anxiety management in this case, demonstrating how a non pharmacological approach can find long term solutions by addressing the causes of the anxiety. Previous pharmacological approach had only addressed the symptoms of the immediate anxiety. Successful completion of prescribed dental treatment plan and changes in patient?s attitudes highlight positive outcome.

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

**1994**

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## **NOTES**

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen- year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of

waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in a an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White,

1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

Wormnes, Bjorn (1994, October). Hypnosis in integrated treatment of dental fear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Research reports from different countries estimate the proportion of adult dental phobic patients to be between 5% to 10%. It represents a large health problem. Helping patients to continue regular treatment by their local dentist and experience it as tolerable is the main treatment goal in our program. The main treatment method is a flexible and integrated exposure training. The psychotherapist works in cotherapy with the dentist. Using hypnosis in the dental chair is of great help, and patients are normally found to be very susceptible and easily hypnotized. Hypnosis helps the patient to experience increased tolerance of treatment and also to perform better than expected in the treatment situation.

1992

Kohen, Daniel P.; Mahowald, Mark W.; Rosen, Gerald M. (1992). Sleep terror disorder in children: The role of self hypnosis in management. American Journal of Clinical Hypnosis, 34, 233-244.

This paper describes four children, ages 8 to 12 years, with frequent, prolonged, or dangerous disorders of arousal. None had any significant psychological or behavioral problems. Each had a polysomnogram that showed sudden arousals out of slow-wave sleep associated with complex behavior. All responded to a short course of imipramine, 20 to 60 mg at bedtime, followed by and in conjunction with training in relaxation and mental imagery (self-hypnosis). Once the correct diagnosis was made, the treatment strategy was to (1) demystify the symptom complex through education, (2) establish prompt control of the symptoms with the use of imipramine, (3) train the children in self-regulation with self-hypnosis, and (4) discontinue the medication while maintaining control of the arousals. Over a 2-3 year follow-up all children remain asymptomatic. This is the first report of successful use of self-hypnosis for the treatment of polysomnogram- proven disorders of arousal in the pediatric population. Also reported are seven additional

children who were treated equally successfully with hypnosis without the use of medication.

1991

Kleinhauz, Moris; Eli, I. (1991). Hypnotic induction in dentistry: Coping with the fear of losing. International Journal of Clinical and Experimental Hypnosis, 39 (3), 125-128.

A common cause of stress among dental patients is the patient's fear of losing control in face of the "helplessness provoking" dental situation. Although hypno-relaxation and hypnosis serve as efficient tools to aid in the administration of dental treatment to such patients, some of them may view hypnosis as a further relinquishing of control to the hypnotist and thus resist hypnotic induction, despite their willingness to try to use hypnosis for therapeutic reasons. To avoid this resistance, a "self-control" induction method is suggested that enables the patient to remain in control throughout the process. This technique minimizes the threat of losing one's autonomy and thus enables treatment of these patients.

Reiss, Steven (1991). Expectancy model of fear, anxiety, and panic. Clinical Psychology Review, 11, 141-153.

The purposes of this article are to summarize the author's expectancy model of fear, review the recent studies evaluating this model, and suggest directions for future research. Reiss' expectancy model holds that there are three fundamental fears (called sensitivities): the fear of injury, the fear of anxiety, and the fear of negative evaluation. Thus far, research on this model has focused on the fear of anxiety (anxiety sensitivity). The major research findings are as follows: simple phobias sometimes are motivated by expectations of panic attacks; the Anxiety Sensitivity Index (ASI) is a valid and unique measure of individual differences in the fear of anxiety sensations; the ASI is superior to measures of trait anxiety in the assessment of panic disorder; anxiety sensitivity is associated with agoraphobia, simple phobia, panic disorder, and substance abuse; and anxiety sensitivity is strongly associated with fearfulness. There is some preliminary support for the hypothesis that anxiety sensitivity is a risk factor for panic disorder. It is suggested that future researchers evaluate the hypotheses that anxiety and fear are distinct phenomena; that panic attacks are intense states of fear (not intense states of anxiety); and that anxiety sensitivity is a risk factor for both fearfulness and panic disorder.

Russell, Christine; Davey, Graham C. (1991). The effects of false response feedback on human 'fear' conditioning. Behaviour Research and Therapy, 29 (2), 191-196.

Describes a human electrodermal conditioning experiment in which 28 students (aged 19-30 yrs) were given false skin conductance feedback during conditioned stimulus/stimuli (CS) presentation. In comparison with attentional control groups, Ss who believed they were exhibiting a strong conditioned response (CR) did actually emit a greater magnitude CR, while Ss who believed they were exhibiting a weak CR emitted a lower magnitude CR. When both self-report and behavioral measures of unconditioned stimulus/stimuli (UCS) evaluation were taken after

conditioning, response feedback (RFB) had not differentially affected Ss' evaluation of the aversiveness of the UCS. The response modulating effects of RFB may not be caused by RFB influencing evaluation of the UCS, but they are consistent with the hypothesis that beliefs about the nature of RFB influence the strength of the UCS representation itself.

Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

Zachariae, Robert; Bjerring, P.; Arendt-Nielsen, L.; Nielsen, T.; Gotliebsen, K. (1991). The effect of hypnotically induced emotional states on brain potentials by painful argon laser stimulation. Clinical Journal of Pain, 7, 130-138.

The relationship between pain perception and emotional states is well known. However, the nature of this relationship and how different emotional states affect sensory and cognitive dimensions of pain remains uncertain. Results from experimental investigations are often contradictory, which may be due to methodological difficulties in inducing pain and monitoring physiological responses. In addition, most studies have focused on a single emotion, and data on the relative effects of different emotional states are lacking. In the present study we attempted to eliminate some of these methodological problems. Laser evoked potentials were used as a quantitative correlate to pain perception and were measured in 12 highly hypnotically susceptible subjects during seven conditions: (a) a prehypnotic baseline condition; (b) a neutral hypnotic control condition; (c-e) hypnotically recalled anger, fear, and depression in randomized order; (f) a hypnotically recalled happy condition, and (g) a posthypnotic awake control condition. The pain evoked potentials were significantly decreased in the angry condition and significantly increased in the depressed condition compared with baseline. No differences could be detected for either the happy or the fear-related condition compared with the baseline or neutral hypnotic condition. A significant positive correlation between the subjective intensity of depression and the increase in evoked potentials was found, but none for the other three emotions. The results support earlier findings that clinical depression is related to increased pain perception, and findings that the expression of anger can inhibit the experience of pain. The lack of changes in pain-related potentials during the neutral and happy condition may indicate that effects

of psychological interventions such as hypnotic analgesia may be due to specific cognitive processes rather than a relaxed or pleasant state in itself.

## NOTES

Hypnosis was used as an experimental condition because the recall of emotion may be more intense and vivid than in nonhypnotized conditions. Pulse was measured as an indicator of arousal. Subjects (9 women, 3 men) scored at least 10 or 11 on the Danish version of the Harvard Group Scale of Hypnotic Susceptibility. Each S was interviewed to determine early life experiences associated with the emotions under study, and the Experimenter noted key words regarding the emotion-arousing situation (time, place, persons involved) to assist in evoking the emotional state.

Pain was evoked with laser stimulus (100 ms) in a 1 x 3 cm. target area, avoiding repeated stimulation at identical points within the area. Pain threshold (prehypnotic) was defined as 'a distinct sharp pin prick without any burning aftersensation.' During the baseline and experimental conditions, evoked potentials were elicited using a stimulus 1.5 times threshold.

Following a standardized 15 minute hypnotic induction, the four emotional states were induced (randomized across Subjects). Each emotion was the focus for 10 minutes, and evoked potentials were recorded during the last five minutes of each. Subjects were instructed to relax and clear their minds of images or emotions in between each emotion condition. No suggestions were given regarding pain or pain perception.

After the hypnosis conditions, Subjects were asked to rate the intensity of each emotion on an analogue scale, and to rate their experience of pain on an analogue scale. (As it turned out, most of the Subjects were not able to recall the intensity of pain during all four emotional states.)

The size of the evoked potentials to painful stimuli increased during depression 35.8% over prehypnosis baseline, but decreased during anger 46.8% below prehypnosis baseline. The difference between prehypnosis baseline and neutral hypnosis was not significant statistically. Also, the differences between the happy condition, the fearful condition, or the posthypnotic condition, and prehypnosis were not significantly different. Pulse increased 6.5% over baseline during anger, decreased 4.1% under baseline in depression, and evidenced no difference from baseline for the other two emotions.

"A significant ( $p < 0.05$ ) positive correlation ( $r = +.60$ ) was found between the subjective intensity of the depressed emotional state as measured on the visual analogue scale and the increase in power of the evoked potentials in the depressed condition compared to the prehypnotic baseline condition. There was a small ( $r = +0.35$ ) nonsignificant positive correlation between the subjective intensity of fear and the increase in power of the evoked potentials in this emotional state compared with baseline. No correlations between the increase in evoked potentials and the condition of happiness ( $r = +0.05$ ) and the condition of anger ( $r = -0.07$ ) could be detected. ... There was a positive correlation between the subjective intensity of happiness and anger ( $r = +0.70$ ,  $p < 0.02$ ). A positive correlation ( $r = +0.56$ ,  $p < 0.05$ ) between the intensity of happiness and the intensity of depression was found. No other correlations between intensity ratings reached significance level" (p. 134).

In their Discussion, the authors present the possibility that the differences in evoked potentials observed between different emotional states might be due to differences in attention/distraction, or differences in arousal/inhibition. They reject the attention/distraction hypothesis because evoked potentials increase more in the depression state than in the anger state, though anger was more intense than depression.

"There are, however, several findings that point toward support for a hypothesis that specific affects, and not attention in itself, may account for the opposite changes in evoked potentials. ... Subjects rated fear as even more intense (87.5%) than anger, but with no similar effects on evoked potentials. ... We also found a significant positive correlation between increase in evoked potentials and intensity of experienced depression; a finding opposite of what could be expected from an attention/distraction hypothesis.

"A simple attention/distraction hypothesis, therefore, cannot explain the opposite directions of evoked potentials in the two emotional states. ...

"The differences in pain evoked potentials therefore could be hypothesized to be more related to mechanisms of arousal and inhibition than attention in itself. ...

"Modulation of pain evoked potentials is most likely not due to the state of hypnosis in itself, but to the specific suggestions given under hypnosis, which may be the reason that previous studies of hypnotic modulation of event-related potentials have been inconsistent.... One must be careful not to assume a direct relationship between pain and evoked potentials. ...

"Based on earlier findings (6-10) one could have hypothesized that an increase in pain perception would be found during the condition of hypnotically induced fear. However our results did not show any significant difference in pain evoked potentials when the emotion of fear was induced. This may be due to the fact that the fear or anxiety did not relate to the painful stimulus in itself, but involved an earlier experienced anxiety or a phobic fear (i.e., of snakes or flying). ...

"Although the state of hypnosis itself does not seem to affect sensory pain perception, the hypnotic state might facilitate the effect of specific suggestions given under hypnosis by affecting cognitive processing. Chapman (44) has suggested that hypnotic analgesia is due to the control of the figure-ground transitions associated with the experience of pain. Likewise, different emotional states may affect figure-ground transitions differently. Whereas outwardly directed anger might prevent inner sensations of pain from emerging as figure, the emotion of depression and helplessness might force the surroundings in the background, letting inner sensations emerge as figure" (pp. 136- 137).

1989

Sansom, Deborah; Rachman, S. (1989). The effect of induced mood on fear reduction. British Journal of Clinical Psychology, 28 (3), 227-238.

I investigated the effect on fear reduction in a laboratory study of fearful people. A musical mood-induction technique was utilized to induce either a happy mood or a sad mood in 84 female undergraduates who were fearful of spiders or snakes. Following the mood induction, Ss' fears were reduced by participant modeling.

Measures of subjective fear and self-efficacy were taken before and after mood induction, after modeling, and 4 weeks later. Compared to the induced sad-mood condition, induced happiness was followed by a decrease in subjective fear and greater self-efficacy. No difference was found in the length of time taken to reduce fear for happy and sad Ss. Fear reduction during a sad mood was associated with greater return of fear than fear reduction during a happy mood.

Van den Bergh, Omer; Eelen, Paul; Baeyens, Frank (1989). Brief exposure to fear stimuli: Imagery ability as a condition of fear enhancement and fear decrease. Behavior Therapy, 20, 563-572.

Examined fear enhancement and fear decrease during brief exposure to fear stimuli. 140 good and poor imagery Subjects (aged 14-18 years) with medium fear levels toward spiders were exposed to a live spider, either by looking at it or by thinking of an invisible, but present spider during either 60, 180, or 360 sec. Control Subjects were given a distraction task. Subjective fear and behavioral approach were measured. Brief exposure hindered fear decrease compared to the control condition. Good imagers showed more fear decrease and were less affected by the mode of exposure. Fear enhancement occurred only in poor imagers at the longer exposure duration (360 sec) during thinking. In that condition, good imagers showed their greatest fear decrease.

1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

1981

Epstein, S. J.; Deyoub, P. L. (1981). Hypnotherapy for fear of choking: Treatment implications of a case report. International Journal of Clinical and Experimental Hypnosis, 29 (2), 117-127.

An eclectic hypnotherapeutic approach consistent with Sacerdote's treatment model was utilized for overcoming the swallowing difficulty of an adult male. Traumatic onset followed an active fellatio experience. Cognitive restructuring preceded

symptomatic improvement, and the client was nearly asymptomatic after 56 sessions. Further improvement was evidenced posttherapy on a 3-year follow-up study. The process of change is emphasized, highlighting the broader case management implications of this single case study. Clinical observations are supplemented with psychological test data, providing a richer framework for understanding client and therapy process.

**Wilson, John F. (1981). Behavioral preparation for surgery: Benefit or harm?. Journal of Behavioral Medicine, 4, 79-102.**

Elective surgery patients were prepared for surgery with training in muscle relaxation or with information about sensations they would experience. Relaxation reduced hospital stay, pain, and medication for pain and increased strength, energy, and postoperative epinephrine levels. Information reduced hospital stay. Personality variables (denial, fear, aggressiveness) were associated with recovery and influenced patients' responses to preparation. Less frightened patients benefitted more from relaxation than did very frightened patients. Nonaggressive patients reacted to information with decreased hospital stay along with increased pain, medication, and epinephrine. Aggressive patients responded to information with decreased hospital stay along with decreased pain, medication, and epinephrine. Patients using denial were not harmed by preparation. A catharsis/moderation model is proposed to explain how information benefits patients. An active coping model is proposed to explain the benefits of relaxation. This study suggests that behavioral preparation benefits even frightened, aggressive, or denying elective surgical patients.

**1978**

**Weerts, Theodore C.; Lang, Peter J. (1978). Psychophysiology of fear imagery: Differences between focal phobia and social performance anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 1157-1159.**

Spider phobics and speech anxious subjects imaged fear scenes with spider and public-speaking content and a series of standard scenes that were constructed to vary in degree of emotional arousal and movement. Heart rate, skin conductance, and ocular activity were recorded. Spider phobics rated all imagery contents as more vivid and reported more scene movement than speech anxious subjects. Both groups responded to their own fear scenes with higher ratings of emotion and a greater physiological response than to the other group's fear scenes. The arousal response of spider phobics to relevant fear scenes was greater than that of speech anxious subjects. The data suggest that the outcome of imagery-based therapies may be partly determined by type of fear.

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

**NOTES**

**Technical Memorandum 23-74 (October 1974), US Army Human Engineering**

Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1973

Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)

#### NOTES

Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2: This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

McReynolds, William T.; Barnes, Allan R.; Brooks, Samuel; Rehagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those

associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

## NOTES

**Summary:** a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience.

Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

1961

Cheek, David B. (1961). Value of ideomotor sex-determination technique of LeCron for uncovering subconscious fear in obstetric patients. International Journal of Clinical and Experimental Hypnosis, 9, 249-259.

(Author's Summary) "Unrecognized subconscious fears can be uncovered while using ideomotor questioning with a Chevreul pendulum or with finger signals. The technique described by LeCron for evaluating knowledge regarding the sex of an unborn child is a most helpful way of approaching subconscious fears. The frightened patient refuses to indicate knowledge of the sex of her unborn child. Uncovered fears can be resolved by appealing to conscious-level understanding with adroit questioning" (p. 258).

FLYING

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

**1981**

Spiegel, David; Frischholz, Edward J.; Maruffi, Brian; Spiegel, Herbert (1981). Hypnotic responsivity and the treatment of flying phobia. American Journal of Clinical Hypnosis, 23, 239-247.

Systematic follow-up data are reported for 178 consecutive flying phobia patients treated with a single 45-minute session involving hypnosis and a problem restructuring strategy. One hundred fifty-eight (89%) of the patients completed follow-up questionnaires between six months and ten and one half years after treatment. Results showed that hypnotizable patients were over two and one half times more likely to report some positive treatment impact than those who were found to be nonhypnotizable on the Hypnotic Induction Profile. In addition, the patients' previous experiences with psychotherapy were found to be significantly associated with treatment outcome. The clinical implications of these findings are discussed.

## **FORENSIC**

**1996**

Maestri, D.; Perry, C.; Laurence, J.-R. (1996, August). Children's memory for a special event: Exploring the effects of repeated questioning on recall, suggestibility, and photo lineup identification. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Recollections of a visit at the Montreal Olympic Stadium from two groups of children (4.5- and 5.5-year-old) were elicited on four occasions with free recall, direct questions, and misleading questions. Recall was evaluated in terms of correct, incorrect, neutral, repeated, omitted, and attributional responses. To study the possibility of children choosing one type of suggestion more readily than the other, the misleading questions were further evaluated in terms of the type of suggestion implied. A photo lineup recognition task of familiar and unfamiliar faces present during the visit was also included. Children displayed high degrees of acquiescence to the misleading questions and a clear preference for the suggestion that did not involve their own person. In the photo lineup identification task, 21-37 percent

(across trials) of the children mistakenly judged familiar and unfamiliar faces as having been present at the event. Results were discussed in a legal context. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

#### NOTES

1:

8025, Ruehle & Zamansky, 1995 ABSTRACT: Neodissociation theory proposes that hypnotic suggestions are performed relatively automatically, whereas sociocognitive theories suggest that effortful cognitive strategies are necessary. To distinguish between the predictions derived from the two theories, we gave hypnotized subjects the suggestion to forget the number eight, and asked them to solve a series of addition problems using that number. It is a well-established finding in cognitive psychology research that subjective estimations of time depend on the amount of cognitive effort expended during that time. Increases in cognitive effort are associated with decreases in subjective time. Accordingly, if hypnotic subjects carry out a suggestion relatively automatically, they should perceive the time taken as longer than if they carry it out using effortful cognitive strategies. Highly hypnotizable subjects under hypnosis and low hypnotizable subjects instructed to simulate hypnosis were given the suggestion to forget the number eight and to replace it with nine. They were then given a page of addition problems, many of which included eights in the solutions, and were instructed to do the problems as quickly and accurately as possible. They were also informed that they would be asked to estimate the time spent completing the problems.

Subjects completed the addition problems and then gave their time estimates. As a control for changes in time estimation brought about simply by being hypnotized, all subjects also completed a series of addition problems without the amnesia suggestion, and again estimated the time. The order of the two conditions (i.e., with and without the amnesia suggestion) was counterbalanced across subjects.

Results showed that the simulators, who intentionally avoided the number eight in their solutions to the problems, perceived the time spent doing these problems as shorter than the time spent doing problems normally, without the suggestion to forget the number eight. The increase in cognitive effort therefore resulted in decreased subjective time, as expected. The hypnotized subjects, on the other hand, showed no difference in their time estimations under the two conditions. The two groups did not differ in their time estimates without the amnesia suggestion, but with the suggestion, the hypnotized group perceived the time as longer than did the simulators. The results, then, are consistent with neodissociation theory, since the hypnotized subjects appeared to expend relatively less cognitive effort in carrying out the amnesia suggestion.. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

#### 1995

Eisen, Mitchell L.; Henn-Haase, Clare (1995, November). Memory and suggestibility for events occurring in and out of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

Resistance to misinformation uses two paradigms: 1. Elizabeth Loftus - expose Subject to slides or videotape, give misinformation with leading or misleading questions 2. Martin Orne - pseudomemory, i.e. age regress people in hypnosis and suggest events occurred.

Each approach yields mixed results. Misinformation is accepted more readily in context of hypnosis; but there is no relationship to hypnotizability. Spanos found that highs were more responsive to social pressure. In general, in the absence of social pressure, when presented subtly and outside the context of hypnosis, the relationship diminishes. Other factors play a more prominent role: source of information, type of information, salience of information, etc.

They examined whether events occurring in context of hypnosis were more prone to distortion when assessed in biased fashion with use of misleading information, than outside hypnosis. Also, form of questions (dichotomous or with 'I don't remember' option).

They gave the Harvard and asked afterwards 3 misleading items (e.g. did you clench your fist, when they didn't do it). Also asked them to circle items if they had no memory of it. Tellegen Absorption Scale and Dissociation scale (DES) were administered a week later. Also a week later asked about events that occurred, including confederate items. Half of Ss had 2 choices, half had also 'I don't remember' as a third option.

In a previous study, resistance to misleading information was related to the strength of the initial memory and not to hypnotizability (article published in AJCH).

## RESULTS

When given 3 choices, the number of misleading items endorsed dropped from .7 to 0.4 which is the most robust finding in the study and affects the rest of the study. Many Ss who endorsed the items reported minutes later that they had no memory for the event (on the check list). While many Ss given only two choices wrote in the margin that the event had never occurred.

Offering an 'I don't know' third option decreased endorsement of the Harvard items also, from 6.4 to 5.2 which is significant. The relationship between hypnotizability and endorsement of misleading items became much weaker when accounting for this.

Scoring high on DES is significantly related to accepting misinformation. Tellegen Absorption Scale also related to accepting misleading information. Harvard Hypnotizability Scale was not related to accepting misinformation.

Total memory on the Harvard (before cue plus after cue) did not correlate with resistance to misleading information. History of abuse was related to hypnotizability. Have to evaluate whether it was traumatizing, multiple abuse, etc.

Eisen, Mitchell L.; Goodman, Gail S.; Qin, Jianjian (1995, November). Child witnesses: Dissociation and memory and suggestibility in abused children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

Our study looked at suggestibility and resistance to suggestion. During 5-day hospitalization for investigation of child abuse. The first day patient gets physical exam; 2nd day a genital exam, heart arousal, stress arousal; a later day had mental status, emotional functioning, cognitive functioning--and gross screen of IQ for age 5 and up and the digit span for 6 and up, plus rating of global functioning and provisional diagnosis. On Day 5 each child was given structured interview that included questions about the anal- genital exam, with some misleading questions included.

35 minutes after the psychological examination they were given questions about the exam, for brief memory. Next exam was forensic examination of memory for abuse. Gave memory for sentences, perceptual alterations scale (PAS), adolescent version of Dissociative Experiences Scale (A-DES); gave questionnaire to parents.

Hypotheses: suggestibility would be negatively related to age (more errors when younger). Sexually and physically abused children would show more dissociation or psychopathology. Dissociation or psychopathology should be inversely related to memory ability. IQ should be related to memory and resistance to misinformation. Wanted to reconcile two models of post traumatic stress disorder (PTSD): one says they have poorer memory, and the other says they are hypervigilant.

Over 100 children in the 200 received the questionnaire on Day 5. 39% were 3-5 years old, 41% 6-10 years old. 76% were African American. 22% had no documented abuse or neglect; 13% had experienced physical abuse; 30% sex abuse; 12% both types of abuse; 15% neglect; 8% parental addiction.

Measuring dissociation in kids is problematic. The concept is used to describe a huge range of phenomena. Scores on the DES are more highly correlated with the F Scale on the MMPI than with any other measure (Michael Nash's research). So the DES measures psychopathology. Also, children have healthy kinds of dissociation--daydreaming, etc. Josephine Hilgard noted that young kids are naturally involved in imagination. Early traumas may lead to this dissociative style. How do we sort out the healthy imaginal involvements of children from the psychopathology? There is not sufficient data at this time.

Available measures are not validated well. The CDC indicates behavior problems in children. The C-PAS conceptualizes dissociation as relating to eating disorders; the A-DES is a self report measure that related to psychopathology.

CDC scores increase, in 3-5 year olds, as the amount of abuse increases. This looks like general psychopathology, and it is a parental rating. The A-DES and C-PAS were not related to abuse or neglect. In the older groups the CDC related to poor performance on memory tests; but only for the 6-10 year olds. (Poorer memories in younger children could have masked the effect in them.)

The main finding for the study was clinician's estimate of Global Adaptive Functioning was significantly related to Resistance to Misleading Information. The effect did not show for the 3-5 yr old group, perhaps because their memory functioning is poor anyway. Also age was related to memory and suggestibility.

Frischholz, Edward J. (1995, November). A critical evaluation of the 1985 AMA Report on hypnosis and memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

JAMA 1985 concluded that hypnotically refreshed memories are less reliable than nonhypnotic recall. There are two problems with their conclusion: 1. No consensually validated definition of 'hypnosis' is identified. They talk about administration of induction, and differences in hypnotic susceptibility. 2. Empirical criteria for discriminating the unique and/or moderating effects attributable to hypnosis are not specified.

For example Loftus showed that memory errors can be created without hypnosis. You should not just add hypnosis to that model.

The criticisms have not led to remedial practices. No research has been done to show how to minimize errors or how to facilitate accuracy.

'What is Hypnosis?' Something that is done vs. something that happens? A procedure or responsivity? Questions like this are relevant to research on whether hypnotically refreshed memories are less reliable than ordinary recall.

Hypnosis is not a 'valid therapeutic modality' (i.e., 'hypnotherapy' is a misnomer). Hypnosis can be used adjunctively with many different types of therapeutic modalities: --psychodynamic therapies --behavior modification treatments --cognitive restructuring strategies --systematic desensitization --flooding --direct suggestion

There is a specious communality: hypnosis is used in a different kind of way with each approach.

If hypnosis is defined in terms of whether an hypnotic induction procedure was administered to the subject, then hypnosis is a universal phenomenon (i.e., everyone can be administered an hypnotic induction procedure). This, in the AMA report, permitted the courts to define it this way, which leads to a number of ridiculous results.

We need to highlight 'What are the variables that are the source of the errors?' The sources are not hypnosis. We can minimize the sources by the way we ask questions, instruct the subjects, etc.

If hypnosis is defined in terms of the nature of the subjects' response to the procedures, then hypnosis is not a universal phenomenon (i.e., there are wide individual differences in hypnotic responsivity). I have shown that it is possible to alter memories, using the Loftus model, in people who are both low and high hypnotizable.

We need to take into account induction procedure, hypnotizability, type of memory, and the retrieval/influence procedure. The demand characteristics re forced responding, expectancies about memory (e.g. video recorder model), expectancies about hypnosis (e.g., everyone remembers) must be accounted for.

Dependent variables in this type of research include memory accuracy, memory errors, and subjective confidence.

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

Spiegel, Herbert (1995, November). Hypnosis and memory: Point/counterpoint. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

Humans need an interactive flow, a ribbon of concentration, that holds people together with self and environment; a healthy continuity of flow. If there are interruptions, that suggests pathology.

Bernheim said there must be some degree of involuntariness to have hypnosis. Many tests of hypnotizability (e.g. the Stanford scales) involve tests of behavioral compliance. The Hypnotic Induction Profile [HIP] incorporates a bio-psycho-social concept, not simply behavioral compliance, and actually measures the degree of involuntariness with arm levitation.

The eye roll item on the HIP relates to a capacity for dissociation.

Hypnosis involves Dissociation, Absorption, and Suggestibility; the degrees of which correspond with the three personality styles.\* [A presentation of the Spiegel and Spiegel theory of Dionysian, Odyssean, and Apollonian personality types followed here.]\*

Trance capacity is a constant. Depression can interfere with it, but when depression is relieved the person is responsive again. This is not so for schizophrenics, who do not improve in hypnosis when their symptoms are clinically contained. Cognitive fragility is always present.

The issue of memory is made interesting because of the phenomenon of intrinsic memory. (He gave an example of single case study of remembering how to do developmental drawing tests.)

Max Weber talked about balancing ethics of responsibility with ethics of conviction. In therapy the former is important; in forensics, the relevance of data for issues central to legal issue is important and external corroboration is essential.

Since we are getting around to believing that we don't need formal induction ceremonies to elicit hypnotic phenomena, we should apply that knowledge in the forensic setting. So isn't it relevant, in investigating a crime, to try to understand veridicality of a memory by understanding the hypnotizability of the subjects involved? Because if they are high hypnotizables and have a goal, there may be a twist in their memory; while lows may not have the same problem, and other things might affect the accuracy of recall for them).

Weitzenhoffer, Andre M. (1995, November). The incorporation of current events among true memories during age-regressions: Another way of creating pseudo-memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

In 1947 while someone else was demonstrating hypnosis, the subject remembered a cat being squeezed and dying; a week later, in hypnosis, she said "That man with a cat is here again." So a pseudomemory became part of an earlier memory, which spontaneously appeared later during age regression.

This event reminds one of Milton Erickson's "February Man" [a case in which pseudomemories were created for purposes of treatment]. So I tried to repeat the 1949 experiment, in a demonstration with a classical somnambulist.

In the demonstration, the other experimenter offered to give the hypnotized Subject a cat; the subject asked him to intercede with her mother. This was during age regression to age 4. Later, regressed to age 5, she spontaneously said that she had a cat and had received it from the other experimenter the year before. The memory had been elaborated into another memory. When not age regressed, she told of a cat having been given to her by "a friend of the family."

We don't know whether, if we regressed these subjects to the same age again, they would still have this memory? I do not view these two experiments as actual replications of the February Man situation. What is in common with that case published by Erickson is the transformation of a current event into a memory in age regression. It is hard to dismiss the possibility of role playing. But these were very highly hypnotizable people.

1994

Ceci, Stephen J.; Loftus, Elizabeth F.; Leichtman, Michelle D.; Bruck, Maggie (1994). The possible role of source misattributions in creation of false beliefs among preschoolers. International Journal of Clinical and Experimental Hypnosis, 42 (4), 304-320.

In this article the authors examine one possible factor in the creation of false beliefs among preschool-aged children, namely, source misattributions. The authors present the results from an ongoing program of research which suggest that source misattributions could be a mechanism underlying children's false beliefs about having experienced fictitious events. Findings from this program of research indicate that, although all children are susceptible to making source misattributions, very young children may be disproportionately vulnerable to these kinds of errors. This vulnerability leads younger preschoolers, on occasion, to claim that they remember actually experiencing events that they only thought about or were suggested by others. These results are discussed in the context of the ongoing debate over the veracity and durability of delayed reports of early memories, repressed memories, dissociative states, and the validity risks posed by therapeutic techniques that entail repeated visually guided imagery inductions.

Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES

1:

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question?

Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

#### NOTES

1:

A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1994). Is the hypnotized subject lying?. Journal of Abnormal Psychology, 103, 184-191.

Do the verbal reports of deeply hypnotized Subjects truthfully reflect their subjective experiences of hypnotic suggestions? Exp 1 established that the electrodermal skin conductance response (SCR) provides an effective method for

detecting deception in the laboratory equally well in hypnotized and nonhypnotized Subjects. In Exp 2, deeply hypnotized and simulating Subjects were administered a number of hypnotic suggestions in a typical hypnotic session, without mention of deception, and were questioned about their experiences while SCR measures were recorded concurrently. Results indicate that 89% of the hypnotized Subjects' reports met the criterion for truthfulness, whereas only 35% of the simulators' reports met this criterion. Implications for the theory of hypnosis are discussed.

Lynn, Steven Jay; Nash, Michael R. (1994). Truth in memory: Ramifications for psychotherapy and hypnotherapy. American Journal of Clinical Hypnosis, 36, 194-208.

In this article we address a number of issues relevant to the practice of psychotherapy and hypnotherapy: How reliable is memory? How are therapists' and clients' beliefs and expectancies related to pseudomemory formation? Are certain clients particularly vulnerable to pseudomemory creation? Does hypnosis pose special hazards for pseudomemory reports? What are the variables or factors that mediate hypnotic pseudomemories? In addition to reviewing the literature on these topics, we intend to sensitize the clinician to the potential pitfalls of critical reliance on the patient's memories, as well as uncritically accepted clinical beliefs and practices.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

1:

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

RESULTS. Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This

would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Martin, D.; Tomak, J.; Lynn, S. J. (1994, October). Detecting simulation with the hypnosis simulation index. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

1:

Orne described demand characteristics of the hypnotic situation, such that some Ss want to either deceive the hypnotist or to please the hypnotist or to help the experiment work. To separate essence of hypnosis he devised an experimental technique, which informs S to role-play, and tells them intelligent Ss will be able to do this. Sheehan & McConkey note that though the model specifies subjective experience, it lacks a way of determining if people are truthful.

We developed a scale assuming hypnotized Ss would be truthful and wouldn't say they had experiences they didn't, but that simulators would exaggerate. The scale included events plausibly reported by highs but not widely reported.

The scale has 31 items, and is titled the Hypnotic Experience Scale. It has 24 items for experiences during hypnosis, 5 for experiences after hypnosis, and 2 for how deeply hypnotized they felt and what kind of hypnotic subject they thought they were.

Ss participated in 2 sessions. They had the Harvard group scale in the first, and simulation instructions in second session. Simulation instructions were read to Low and Medium subjects. To encourage Ss to keep eyes closed, they were told it was essential to keep their eyes closed. We had scores on:

Hypnosis Simulation Index

SCL 90

DES

Tellegen Absorption Scale

Highs did not receive any simulation suggestions. Then the Stanford Scale was administered. Highs and Simulators had to pass at least 9 Harvard items.

Of the predictors, only the Hypnosis Simulation Index discriminated. It correctly classified 94% of the Ss. To eliminate non-useful items, a stepwise discriminate analysis was performed. 15 items remained. These 15 items were used in a series of analyses. They discriminated between the 2 groups from 100% to 70% of the time.

This study is the first to successfully discriminate hypnotized from dissimulating subjects. Simulators' performance indicate they tend to respond in stereotypic ways that exaggerate how hypnotized Ss respond. Hypnotized Ss who passed more than 10 items only rated themselves as average on hypnotizability.

This has potential applications in forensic situations.

Ofshe, Richard; Singer, Margaret T. (1994). Recovered memory and robust repression: Influence and pseudomemory. International Journal of Clinical and Experimental Hypnosis, 42, 391-410.

A subset of the psychotherapists practicing trauma-focused therapy predicate their treatment on the existence of a newly claimed, powerful form of repression that differs from repression as used in the psychoanalytic tradition and from amnesia in any of its recognized forms. Recovered-memory specialists assist patients to supposedly retrieve vast quantities of information (e.g., utterly new dramatic life histories) that were allegedly unavailable to consciousness for years or decades. We refer to the hypothesized mental mechanism as 'robust repression' and call attention to the absence of evidence documenting its validity and to the differences between it and other mental mechanisms and memory features. No recovered-memory practitioner has ever published a full specification of the attributes of this mechanism. That is, the properties it would have to have for the narratives developed during therapy to be historically accurate to any significant degree. This article reports a specification of the properties of the robust repression mechanism based on interviews with current and former patients, practitioners' writings, and reports to researchers and clinicians. The spread of reliance on the robust

repression mechanism over the past 20 years through portions of the clinical community is traced. While involved in therapy, patients of recovered-memory practitioners come to believe that they have either instantly repressed large numbers of discrete events or simultaneously repressed all information about abuse they may have endured for as long as a decade. Patients' therapy-derived accounts are thought by some social influence, memory, and clinical specialists to be inadvertently created iatrogenic effects: inaccurate pseudomemories and confabulations produced due to patient-therapist interaction, the use of leading, (sic) suggestions, hypnosis, and the mismanagement of the dependent relation of the patient on the therapist. Three cases are reported which illustrate how new life accounts predicated by robust repression can develop during therapy with a recovered- memory practitioner.

Schefflin, Alan W. (1994). Forensic hypnosis: Unanswered questions. Australian Journal of Clinical and Experimental Hypnosis, 22, 25-37.

Many courts have mistakenly identified hypnosis as more suggestive than eyewitness testimony or leading questions, and therefore these courts have applied unnecessarily restrictive rulings on hypnosis. The dangers of suggestion in eyewitness and interrogation cases pose reliability problems that are equally as great. In all situations, pre- trial evidentiary hearings on admissibility of 'suggestive' testimony is essential. Expert testimony should be available to assist the judge. The forensic rules to date have failed to clarify some hard cases. In resolving these cases, courts are encouraged to adopt a case- by-case analysis rather than a total prohibition on hypnotically refreshed recollection. Courts have assumed conclusions about hypnosis that the laboratory experiments suggest are incorrect - juries are not overly persuaded by hypnosis testimony, there is no inevitable concreting effect and witnesses do not become impervious to cross-examination. Thus, the restrictive per se disqualification rules for hypnotically refreshed recollection are too severe.

Spiegel, David (1994, October). On patients not remembering abuse when it in fact may have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

1:

False memories and false non-memories may be two sides of the same coin. What is the evidence for repression?

If people are abducted by extraterrestrials, why don't they just keep them? [Joke!] It seems counter-intuitive that people would forget important, arousing things that happen.

The three main components of hypnosis (suggestibility, absorption, and dissociation) are also aspects of memory: 1. Absorption relates to encoding (narrowing attention); also happens during traumatic events (Loftus' "gun memory" which is so clear, while they don't encode what gunman's face looks like). 2. Dissociation relates to memory storage (compartmentalization of information). Traumatized people have symptoms of dissociation, depersonalization. If you are in an unusual mental state,

you may watch the event; the memory is stored without the usual network of associations. 3. Suggestibility relates to retrieval. The way questions are asked influences one's response. But hypnosis is not an infinite influencer; the main damage to memory contributed by hypnosis is "confident errors" (McConkey).

We did research one week after the Loma Prieta earthquake, and found significant cognitive alterations, memory alterations, etc. In our sample, 1/4 of the people felt detached from their body or from the ground right after the earthquake.

Memory alterations were compared with data from other studies after other traumas. Difficulties with memory occurred in 29% of our sample.

The disorganization of memory can follow even just witnessing trauma (e.g. the recent slaying of 8 people in the law office in San Francisco) And people who witnessed the execution of Harris. They were in no danger themselves, yet the level of dissociative symptoms were as high in the former.

The Briere & Cone and Herman & Shatzow studies are based on self report of earlier trauma, and that is a problem in research. But Williams' study does have the age of people when they were abused as children; see her article in Journal of Consulting and Clinical Psychology.

#### COMMENTS FROM THE AUDIENCE

Dabney Ewin: Sex abuse trauma differs from earthquakes because the abuser says, "If you tell anybody I'll kill you." This is like a post hypnotic suggestion, which is carried out compulsively when given to the victim during fear.

Dale: How do we account for the vigor in the attempts of each side to convince the other. The people who have been real victims of sexual abuse need to be able to talk with the people who are victims of False Memory Syndrome. The impact on a family is just as traumatic as the sexual abuse itself.

Response by D. Spiegel: I wouldn't recommend that combination, but the point you make about damage to the falsely accused is relevant. Their lives are shattered but remember the damage done throughout life by sexual abuse.

Yapko, Michael D. (1994). Suggestions of abuse: True and false memories of childhood sexual trauma. New York, NY: Simon & Schuster.

#### NOTES

1:

From the section titled "A Note to Therapists:"

"I would encourage you not to (1) preclude open communication at all times among family members; (2) act as your client's 'hired gun'; (3) act as if corroboration of allegations of abuse were unnecessary; (4) jump quickly to the conclusion abuse occurred simply because it is plausible; (5) suggest a history of abuse to someone who is not your client; (6) refer a client out for hypnotic confirmation or disconfirmation on the false premise that hypnosis is some kind of lie detector; (7) ask leading or suggestive questions; (8) assume repression is in force when someone does not have much memory from childhood; (9) rely on your memory of the interaction. Tape your investigative sessions and review them later for any evidence of possible unintentional contamination of your client's recollections" (p. 217).

1993

Hawkins, Russell (1993). An analysis of hypnotherapist-client sexual intimacy. International Journal of Clinical and Experimental Hypnosis, 41, 272-286.

While sexual interaction between psychologists, physicians, and other health therapists of all kinds and their clients is typically condemned by professional bodies as unethical, the controversy regarding the potential for hypnosis to produce compliant behavior in unwilling or nonconsenting subjects suggests that hypnotherapist-client sex may warrant special attention. Because the experiments required to clarify the potential for hypnosis to potentiate nontrivial compliance are themselves unethical and/or inconclusive, experimental methods cannot be adequately used to clarify this issue. Instead, the matter can be addressed by reference to other forms of evidence, such as the responses of therapists and clients to anonymous surveys and the analysis of cases, that have reached the courts. Consideration of this qualitatively deficient evidence suggests that even if the use of hypnotic suggestion can lead to compliance to sexual demands, overt coercion is seldom used in practice. Social psychological and situational factors are particularly salient in understanding therapist-client sex. The question of whether there are special properties of the dynamics of the hypnotic experience, other than specific coercive suggestion and beyond those typically found in other forms of therapy, is considered. Comparisons are drawn with other examples of socially condemned sex, such as teacher-student sex, sexual harassment in the workplace, incest, and extramarital sex.

Stolar, Donald Sigmund (1993). History of hypnosis in court. [Lecture] UCLA Hypnosis Seminar.

#### NOTES

1:

Disclaimer--The following information is not intended to substitute for professional legal advice and should not be used as such.

The following events led up to our current situation in California, regarding the use of hypnotically elicited information in court:

1968 - Harding vs. the State of Maryland. First case in which the state prosecution requested use of hypnosis. (Prior to this hypnotically refreshed memory was not used in court testimony because the memory was regarded as unreliable.) Police hypnotized a state's witness, and a man was convicted of rape. Hypnosis in this case was considered no different from other memory jogging techniques (Like showing a witness pictures.)

1978 - Reiser published "Hypnosis and it's use in law enforcement." In it he stated that 60% of witnesses hypnotized by police gave important information that helped the case. Reiser is a psychologist working in the Los Angeles Police Department.

1976 - Chowchilla kidnaping case, the driver of the bus was hypnotized, and remembered enough of a license plate to catch the kidnappers.

1980 - Reiser, Handbook of Investigative Hypnosis\_ N=384 cases were investigated using hypnosis. In 67% of these cases, hypnosis was thought to have led to valuable information. Where external corroboration was possible, 90% of the new pieces of

information were accurate. The Society for Investigative and Forensic Hypnosis was established by Reiser.

During this same period, courts were pulling back from permitting hypnotically refreshed memories to be given in court testimony.

1979 Martin Orne (in the International Journal of Clinical and Experimental Hypnosis) proposed safeguards for the use of hypnosis for forensic purposes. 1. Licensed psychologist or psychiatrist does the hypnosis. 2. Hypnotist is independent of prosecution, defense, and investigator. 3. Any information regarding a crime given to the hypnotist before hypnosis must be written down. 4. The hypnotist writes everything the witness says. 5. All interviews, including the pre-hypnosis interview, are recorded. 6. Only the hypnotist and witness are in the room, and 7. independent verification is very important.

Inasmuch as Reiser had been training detectives to do investigative hypnosis, he countered the Orne requirements by noting that: 1. Therapists are not trained investigators; detectives typically work with trauma victims. 2. Reports of adverse side effects following investigative hypnosis are exaggerated 3. Confabulation and fantasy are no more prevalent in hypnosis than in waking state.

Herbert Spiegel, in addressing the reliability of hypnotically refreshed memories, said hypnosis can make an "honest liar" out of a person. That is, they can be personally convinced that they have remembered something that in fact did not happen.

1980 - Bernard Diamond, M.D. (psychiatrist and law professor) wrote an article in the California Law Review, noting that: 1. Hypnotically refreshed testimony is full of fantasy and confabulation. 2. A hypnotist cannot tell if the subject is simulating. 3. A hypnotized subject cannot discriminate between fact and fantasy. 4. A hypnotized subject could become hardened against cross examination because with hypnosis he becomes more confident.

Courts began using the Frye Rule: in order for expert testimony to be admissible, it must be what is generally accepted to be true, in the scientific research literature.

1982 - The Shirley Decision (California Supreme Court) A woman who was raped was hypnotized before the trial. The accused, a man named Shirley, admitted having sex but said it was not forced. The Supreme Court used the Frye Rule to exclude any testimony from either side from anyone who had been hypnotized. (This rule applied to any hypnosis, including hypnotherapy.) Later the Court revised it to say that the defendant could be hypnotized (but not the plaintiff) because nothing should impede their defense.

1982 - Proposition 8 passed (Victim's Rights bill) and allowed hypnotically refreshed testimony to be used.

1986 - Three Justices, including Justice Rose Bird, were removed from the California Supreme Court (by election) and the legislature wrote Section 795 (which represented a middle ground). Hypnotically refreshed memory is allowed if the court testimony is limited to pre-hypnotic recall.

1992

Christianson, S-A (1992). Emotional stress and eyewitness memory: A critical review. Psychological Bulletin, 112, 284-309.

## NOTES

1:

Although not addressing hypnosis specifically, this is a comprehensive review of literature on memory for negative emotional events relevant to issues of hypnosis and memory. The final conclusion is that emotional events are indeed remembered differently than neutral or ordinary events and are well retained with respect to the event itself and concerning central, critical detail (not peripheral detail). Such memories seem less susceptible to forgetting. There is evidence for dissociation between memory for emotional information and memory for specific event information. There is also evidence of amnesia or memory impairment effects after high-arousal events, with memory increasing as more time passes after the event. The functional amnesia effects are probably due to an interaction between altered encoding operations and the specific retrieval circumstances aiding consciously and unconsciously controlled reconstructive processes. There is little evidence to support Loftus' contentions that emotional stress is bad for memory.

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

## NOTES

1:

Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating

effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).

Gravitz, Melvin A. (1992, October). Historical and legal issues. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

The 1976 Chowchilla kidnaping case in California stimulated interest in using hypnosis for forensic investigation; in the same year, it was used in a case of airline hijacking in the Mediterranean to Uganda. Hypnosis is used for obtaining "leads" and doesn't claim to develop "the truth."

Other uses include: lifting amnesia of witnesses and victims of trauma--including but not limited to crime; obtaining additional information in nonamnesic Ss; evaluation of a subject's mental condition (e.g. multiple personality disorder vs malingering, as in the Bianchi case). In each use, hypnosis is not infallible, is not complete. But no procedure is. Motivation, resistance, transference are all critical.

Historic questions: 1. whether coercion is entailed 2. impact of hypnosis on memory 3. possible harm to subject, physically and mentally

The coercion issue dates to Mesmer, whose procedures led to accusations of immoral suggestions. In the 1880s Charcot said no one could be forced to do anything while the Nancy school (Liebeault) said they could. Since then we have seen laboratory studies using student volunteers, fake "poison," rubber daggers, etc., as well as recent "real life" studies where Ss were induced to violate their morals (see Watkins). Review articles include those by Jacob Conn of Baltimore and the 1985 JAMA article written by a panel headed by Martin Orne.

For impact of hypnosis on memory, see the Orne report which did not fully support using hypnosis for memory enhancement.

Regarding possible harm to a hypnotic subject in the 19th century, a young man's death was attributed to nervousness and exhaustion and diabetes due to repeated hypnosis. Other studies of death (of chickens, of a frog) due to repeated hypnotization were published. Now the consensus is that hypnosis is not dangerous (but incompetence using hypnosis may be dangerous).

#### LEGAL PRECEDENTS.

In 1897 a California court refused to accept testimony of a Subject who had been hypnotized. *People vs Eubanks*.

The 1950's Cornell case established that a person can be hypnotized for their own defense.

In 1963 the California supreme court ruled that a lower court made a mistake in not admitting testimony from someone who had been hypnotized.

In *Harding* (a Maryland case), the trauma victim, amnesic, was hypnotized one month later. The testimony was accepted. A 1983 Maryland appeals court overturned it, influenced by the California *Shirley* case.

In 1983 *Hurd* case, a victim, hypnotized, identified her husband as attacker. Lower court didn't permit the testimony; then a higher court reversed it. The court issued what are known as the Hurd rules, governing testimony that is acceptable: 1. hypnotist is licensed psychologist or psychiatrist with training in hypnosis 2. hypnotist must be independent of both the prosecution and defense 3. all information given to the hypnotist about the case must be written 4. hypnotist must obtain a nonhypnotic account of the memory before hypnosis is used. 5. must have taped record of the hypnosis sessions (preferably videotaped) 6. only hypnotist and subject should be present in the room

Soon after, California had the *Shirley* case. The California court ruled hypnosis per se is unreliable because it produces confabulation. This decision had a chilling effect throughout the country for several years.

In 1987 we had *Rock vs Arkansas*, the first and only case involving hypnosis to come before the U. S. Supreme Court. Vicky Rock shot her husband. Under hypnosis, she remembered she did not have her finger on the trigger, and her husband grabbed her and shook her. Lower court wouldn't admit the testimony of the gun expert, who testified the trigger was sensitive to jarring. Supreme Court ruled defendants (not necessarily others) could use hypnosis in their own defense.

Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. *Journal of Abnormal Psychology*, 101 (1), 75-77.

In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.

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NOTES: The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production,

as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.

Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental or social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----

----- False suggestion Group A Group B Group C  
Group D  
result (n=15) (n=15) (n=15) (n=15) -----

Accepted 12 6 7 3

Rejected 3 9 8 12 -----

----- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among

highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Perry, Nancy W. (1992, Summer). How children remember and why they forget. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 1-2; 13-16.

#### NOTES

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My memory is the thing I forget with.' (a child's definition, cited in Grossberg, 1985, p. 60)" (p. 1).

"Unlike the simpler forms of memory retrieval, free recall is strongly age-related... the recall skills of preschool children develop gradually" (p. 2). "...in some cases, younger children can provide more accurate information than adults (Lindberg, 1991). For example, if an event is particularly salient (as sometimes happens in cases of trauma), recall may be exceptionally good (Brainerd & Ornstein, 1991; Lindberg, 1991)" (p. 13).

"Children have limited ability to use memory strategies. For this reason, children often know more than they can freely recall" (p. 13).

"The use of rehearsal as a memory strategy is almost automatic for adults. ... Ten-year-olds also commonly use rehearsal to aid memory. Young children, however, have not mastered rehearsal (Harris & Liebert, 1991).

"Another memory strategy is imagery, which involves (1) mentally picturing a person, place, or object, or (2) visually associating two or more things that are to be remembered. Children develop imagery much later than other memory strategies. Indeed, some people never learn this memory strategy (Flavell, 1977)" (p. 13).

"... stress alone may not impair memory processes. Indeed, stress can lead to arousal, heightened attention, and improved encoding (Deffenbacher, 1983). However, stress that results from intimidation may lead to either impairment in encoding or problems in recalling or reporting memories" (p. 14).

"Because the effect of suggestion on material that has been well encoded tends not to be significantly different across age groups (Cohen & Harnick, 1980), it may be that younger children's inferior performance on suggestive tasks results from inferior encoding" (p. 15).

Summit, Roland C. (1992, Summer). Opinion: Misplaced attention to delayed memory. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 21-25.

## NOTES

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I believe this is the time to cap a century of progress with a monumental achievement in awareness. We must cherish and develop the concept that what we don't know can hurt us. We can establish, for the first time, that our lives and even the nature of our society can be shaped by experiences so terrible that they are, in the words of Josef Breuer a century ago, 'forbidden to consciousness' (1895, p. 225). We may learn that huge chunks of oppositional thought, cruelty, perversity, helplessness, self-destruction and mental illness are derived from this hidden reservoir of suffering, and we could inspire unprecedented achievements in healing, prevention and enlightened peacemaking" (p. 21).

"We have been slow to consider the implications of dissociation for protective awareness of child sexual abuse" (p. 22).

"And we should respect the painful threat that enlightenment poses for our comforting faith in a just and fair society. We would have to consider that we may be capable as a people of hiding our most grotesque activities under the cover of dissociation, so that we don't know we're doing it, our victims can't say it's happening, and as an outer society we will insist that no such thing could possibly exist" (p. 22).

"While it is urgently important to know that dissociation is real, it is doubly important not to endorse as accurate, in fact, details or encounters that may be part of a still unknown process of distortion" (p. 22).

"The most distinguished clinicians, the people who occupy the platform of authority as scientists and educators, are joining with those who, until now, have been recognized mainly for their adversarial positions. Now those two poles are coming together in aroused opposition to the phenomenon of delayed memory, especially when acquired in therapy with young women in their 30's, especially when those therapists lack an M.D. or a Ph.D. diploma. We face, once again, an ageist, sexist, elitist professional standoff around an issue that deserves to be explored in harmony" (p. 24).

"In California and several other states the statute of limitations has been suspended for individuals who can demonstrate delayed discovery of childhood trauma" (p. 24).

"The rush to judgment is not confined to civil litigation. There is no statute of limitations on murder" (p. 24).

"How many kids have hidden the memory of unspeakable assaults which can be unearthed years later to plunge them into courtroom testimony? How many free citizens could be sued or imprisoned by such remote discoveries? What should we do as scientists in support of or in opposition to those delayed memories?" (P. 24).

"We know that skepticism can quash the emergence of dissociated memories. Can we prove that therapeutic zeal cannot enhance such memories? Survivors who gain a clear picture of sexual assault in the climactic period of discovery tend to fade out the sharp edges as they achieve resolution and healing. The most seasoned survivors may discount the intermediate memories which once provided the impetus for their recovery" (p. 25).

1991

Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. Contemporary Hypnosis, 8, 129-140.

The literature relating to whether hypnosis can be used to compel people to perform acts that are dangerous, immoral or criminal is reviewed, some evidence over the past 200 years being discussed. Relevant real-life instances are cited as well as the laboratory studies of the twentieth century. Detailed criticisms of the latter are made, and it is shown that although no really conclusive findings have emerged, such research has strongly implied that hypnosis does not increase compliance. Four past criminal trials concerned with alleged rape and sexual assault are cited. It is concluded that whilst hypnosis may be one among a number of techniques used in sexual seduction, it is not reasonable to claim that rape has ever been effected by means of hypnosis alone.

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Review of literature that concludes that while hypnosis may be one among a number of techniques used in sexual seduction, it is not reasonable to claim that rape has ever been effected by means of hypnosis alone.

Grabowski, Karen L.; Roese, Neal J.; Thomas, Michael R. (1991). The role of expectancy in hypnotic hypermnnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 193-197.

Previous research has yielded equivocal evidence of hypnotic memory enhancement. This study assessed effects of expectancy and hypnotizability on recall for videotaped material under waking and hypnotic conditions. Ss (n = 138) were informed of hypnotic induction either before (expectancy condition) or after (no expectancy condition) watching a videotaped enactment of a crime and completing an initial waking recall test (R1). Both groups then underwent hypnotic induction, and completed the test again (R2). Ss' raw recall scores were significantly greater under hypnotic than waking conditions, but this hypermnnesia was not evident when scores were corrected for mere increase in rate of responding. Ss expecting later hypnosis scored significantly higher than Ss with no such expectations, but again, this different was not evident in corrected scores. Hypnotizability of Ss was, however, related to corrected recall, with high hypnotizability Ss displaying the greatest increase in rate of responding from R1 to R2. No evidence for the hypothesized "suppression effect" underlying hypnotic hypermnnesia was found.

**NOTES**

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NOTES: Thus Ss tended to answer more questions on R2 but most of this increase was error. Moreover, high hypnotizability Ss displayed this pattern to a far greater extent than other Ss, indicating that they were more likely than others to increase the no. of responses made between tests.

The finding of an interaction effect between hypnotizability and corrected recall suggests that hypnosis does play some role in the hypnotic hypermnnesia described in the literature, possibly refuting the findings of several recent studies (e.g., Nogrady, McConkey, & Perry, 1986; Register & Kihlstrom, 1987). High hypnotizability Ss increased the number of responses made from R1 to R2 to a greater extent than other Ss. The lack of an interaction between hypnotizability and expectancy, however, fails to support the suggestion by Salzberg and DePiano (1980) that people of differing hypnotizabilities differ also in their susceptibility to demand biases.

As both Klazky and Erdelyi (1985) and Whitehouse et al. (1988) have noted, however, the use of hypnosis with witnesses of crimes may be useful if it can stimulate individuals to share uncertain recollections, perhaps providing otherwise unconsidered clues. The present data suggest that such guessing may also be increased by mere expectation of hypnosis. The value of forensic hypnosis may, therefore, be in part one similar to placebo: the simple notion of hypnosis placed in witnesses' minds may be sufficient to inspire useful leads.

Smith, William H. (1991). Antecedents of posttraumatic stress disorder: Wasn't being raped enough? A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 129-133.

Many rape victims, like those traumatized by war, accidents, and natural disasters, are able to recover from their ordeal with supportive, crisis-oriented treatment. For others, however, symptoms may persist and require more intensive treatment.

Hypnosis allows a modulated re-experiencing and abreaction of the traumatic event that can help to provide the victim with a relieving sense of mastery, and it fosters a receptive context for reassurance and interpretation regarding the irrational or exaggerated thoughts and feelings involved. 2 case examples are presented in which earlier conflicts appeared to play a role in perpetuating the patients' symptoms. Detecting and addressing these antecedents resulted in complete alleviation of long-standing problems through relatively brief treatment using hypnosis.

Spanos, Nicholas P.; DuBreuil, Susan C.; Gwynn, Maxwell I. (1991). The effects of expert testimony concerning rape on the verdicts and beliefs of mock jurors. Imagination, Cognition and Personality, 11, 37-51.

Mock jurors heard one of 4 versions of a 'date rape' case and deliberated in small groups, to a verdict. Exposure to the direct examination of an expert who testified about rape myths undermined belief in the defendant's testimony that sex with the complainant had been consensual, and increased the frequency of guilty votes. However, exposure to the expert's cross-examination reversed the effects of the direct examination on the frequency of guilty votes. Women jurors disbelieved the defendant and voted him guilty to a greater extent than male jurors, while in both sexes profeminist attitudes correlated with disbelief in the defendant's testimony but failed to correlate significantly with final verdicts. Implications are discussed.

Wagstaff, Graham F. (1991). Hypnosis and harmful and antisocial acts: Some theoretical and empirical issues. Contemporary Hypnosis, 8, 141-146.

## NOTES

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The author analyses paper in same issue of this journal: Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. He presents a critique from the point of view of "state" theorists, and concludes: "Where does this leave us? The area seems to be a potential minefield for any unsuspecting dissociationist. Personally, I think that both parsimony, and what empirical evidence there is, point to a non-state approach to this issue. However, despite the inevitable uncertainties and differences of opinion, there is perhaps a very obvious and important lesson to be gained by all from studies in this area. It has been fashionable to write off experimental studies on this topic on the grounds that subjects in these studies generally perceive the situation as 'safe'; this is not only the case in hypnosis research but also in general social-psychological work on obedience (see, for example, Orne & Holland, 1968; Mixon, 1974). Some have questioned this assumption that subjects only obey the experimenter when they perceive the situation to be safe (see Barber, 1969; Milgram, 1974), but what often goes unnoticed is the significance of this assumption in itself. If labeling a situation as 'hypnosis', or even just an 'experiment', can make subjects think that any apparently harmful act they are requested to perform is safe, think of the implications; here, in itself, is a potentially powerful, even lethal, mechanism by which people in hypnotic contexts may be induced to perform harmful and antisocial acts. They perform them because, given the context, they

think it is safe to do so! In the study of Orne and Evans the venomous snake the subjects were instructed to grasp was placed behind an 'invisible' glass screen, and the acid they were instructed to throw at the experimenter had been, allegedly unknown to them, replaced by a harmless liquid; one wonders, however, if writers would be so dismissive if the liquid that Orne and Evans' subjects threw at the experimenter had actually burned him, or the snake that they picked up had actually killed them" (pp. 144-45).

1990

Coe, William C. (1990). Are the Conclusions Valid? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 237-239.

NOTES

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The authors confounded variables, e.g. hypnotic susceptibility and monetary incentive (in Study IV), and Study IV was different from the other 3 studies, so that any differences/similarities between these studies can't be attributed to susceptibility level, degree of incentive, or interaction between them.

A simulator design would clarify why 50% of Ss in Study IV did not resist and lost \$100; also, postexperimental interviews focusing on Ss' reasons for resisting or not resisting would be helpful. Did nonresisters actually believe that they would receive \$100 for resisting?

The Subject population was not homogeneous in occupation, and students are financially poorer than others--which would affect incentive strength. Were those who resisted the ones who could use the money the most?

Small sample sizes obviating statistical tests is a problem. Coe nevertheless evaluates 4 variables in terms of the 'power' of their effects on hypnosis: 1. Susceptibility level. Studies I, II, and III all show correlations between hypnotizability and compliance with resistance, suggesting that high hypnotizables are not as susceptible to resistance manipulation; however across studies, highs in one study seem to comply at the same rate as lows in another study, and as many as 50% of high hypnotizables in the strong incentive (\$100) study were able to resist suggestions. 2. View of the Hypnotist. Coe states that one can't evaluate the question with the data given. One would need an experimental condition that would also create a negative view of the hypnotist, as all samples tended to view the hypnotist positively. 3. View of Resistance Instructor. Again, one would need a research design that separates the effects of hypnotic susceptibility from effects of Ss' views of the resistance instructor. "Nevertheless, Study IV suggests that for high susceptibles the view of the resistance instructor has little effect. Three resisters viewed him as positive, whereas the other three viewed him as negative; further, nearly all of the nonresisters viewed him as neutral" (p. 238). 4. Degree of Incentive. This too was confounded with susceptibility level, as "the higher value was only offered to the very high susceptibles in study IV. Half of them took it, half did not" (pp. 238-239). Coe also remarks that "the expectational effects on subjects of being in an experiment have not been addressed adequately. It is possible that the experimental paradigm as currently presented is incapable of providing an unambiguous answer

to the question of coercion. In naturalistic settings subjects may react quite differently than they do when they know they are participating in an experiment" (p. 239).

Gwynn, Maxwell I.; Quigley, Celia; Perlini, Arthur; Glatt, Richard; Spanos, Nicholas P. (1990, August). Eyewitness testimony: Effects of hypnotic interrogation and witness preparation. [Paper] Presented at the annual meeting of the American Psychological Association, Boston.

## NOTES

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There is notable absence of empirical research on the effects of witness preparation on subsequent testimony. The present study investigates the separate and combined effects of hypnotic recall procedures and witness preparation on subjects' confidence in, and maintenance during cross-examination, of mug-shot identifications.

Session 1: Subjects viewed a 65 second videotape of a mock crime involving a shooting. The offender in this video was a male approximately 40-50 years old, whose face was partially obscured by the brim of a baseball cap.

Subjects were then taken individually to another room, where a second experimenter presented them with a series of five photographic mug shots. Half of the series contained the mug shot; the other did not. Subjects indicate if any portrayed the offender and then to rate their confidence in their identification.

Subjects for Session 2 were randomly assigned to one of two conditions:

Hypnotic condition ... followed by "reliving" instructions modeled after Reiser's procedures used in training police detectives.

Nonhypnotic condition ... Each subject was then presented with the mug shot lineup and rated their confidence as in Session 1 with the same second experimenter.

Subjects who in Session 2 identified any mug shot as portraying the offender returned about one week after for a mock courtroom appearance. Subjects were randomly assigned to either a "prepared" condition, or a "nonprepared" condition, with the restriction of equal numbers of offender-present vs. offender-absent lineups and hypnotic vs. nonhypnotic subjects in each condition ... The subject-witness was questioned by the third same experimenter under direct examination and then cross-examined by a fourth experimenter in the role of defense attorney.

Subjects in the prepared condition were given pointers concerning their courtroom appearance. These pointers included counseling to answer all of the questions fully, to speak in complete sentences, and to present themselves confidently.

The videotapes of the subjects' testimonies were then shown to independent blind raters who rated the degree of confidence displayed by the subject-witness at two points, first after direct examination, and again after cross-examination.

To summarize the results: 1) As in a number of previous studies, eyewitness confidence was unrelated to mug shot identification accuracy. 2) The use of hypnotic techniques as practiced by many police investigators did not lead to an increase in the frequency or accuracy with which subjects identified a mug shot as portraying a previously viewed offender. 3) Again consistent with previous research, the use of hypnosis did lead to an increase in eyewitness confidence, without a corresponding

increase in accuracy, and this confidence increase was correlated with pretested levels of hypnotic susceptibility. 4) Contrary to the speculation of researchers such as Orne, Laurence & Perry, hypnotic procedures did not lead to the creation of unshakable witnesses who were impervious to cross-examination. And, 5) The usual practice of pre-trial preparation of witnesses did lead to a resistance of witnesses to be broken down under cross-examination.

In conclusion, the key factor found to affect eyewitness confidence and mug shot identification was not the use of hypnotic memory enhancement techniques, but rather the usual practice of pre-trial witness preparation.

Halleck, Seymore L. (1990). Dissociative phenomena and the question of responsibility. International Journal of Clinical and Experimental Hypnosis, 38, 298-314.

There are many controversies regarding the prevalence, causation, possible iatrogenicity, and treatment of multiple personality disorder. Those who view the disorder as much more prevalent than has previously been suspected believe it is caused by experiences of severe child abuse and have used rather unorthodox techniques to help the patient relate the experience of abuse to current problems of dissociation. Other clinicians believe the disorder is overdiagnosed and that it may be created or made worse by therapists who unwittingly reinforce symptoms of dissociation. Many of the controversies about these issues can be clarified by considering the manner in which clinicians attribute responsibility for undesirable conduct associated with the disorder. In dealing with multiple personality patients, clinicians regularly must decide whether their therapeutic approach will emphasize the patient's responsibility for undesirable conduct or will minimize it. Practical and theoretical arguments can be made for both approaches. There are important consequences to patients using either approach, and particularly harmful consequences with inconsistent approaches. Clinical experience and wisdom dictate that until we have more objective data about the results of various forms of treatment, the preferred method of treatment of multiple personality patients should continue to focus upon maximizing their responsibility for any type of undesirable conduct.

Hoencamp, Erik (1990). Sexual abuse and the abuse of hypnosis in the therapeutic relationship. International Journal of Clinical and Experimental Hypnosis, 38, 283-297.

In the Netherlands, individuals charged with rape may be prosecuted only in instances in which the suspect could have known that the victim was unconscious or in a state of powerlessness. Hypnosis might be looked upon as a method by which an unscrupulous person could sustain such a state of powerlessness in a victim. As an expert witness, the present author participated in a court case against a lay hypnotist who was accused of abusing 9 women. The methods and strategy used by the lay hypnotist are presented as well as are the diverse reactions of the women involved in the case. Feelings of nonvolition appear to have been a relevant factor in

the coercion, especially in women who demonstrated hypnotic phenomena such as arm levitation, catalepsy, etc. The basis for sexual coercion was established only after the interpersonal relationship had been redefined as a therapeutic relationship. Introduction within the pseudotherapeutic relationship of a sexual rationale for the presented complaints helped to provide a framework for actual sexual acts to occur. With certain individual patients, the introduction of hypnosis enhanced the subjective experience of nonvolition and with it the vulnerability for abuse. It may be hypothesized that patients with a tendency for external attribution and high hypnotizability are specifically at risk for this kind of abuse when hypnosis is used in the context of a therapeutic relationship.

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

#### NOTES

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A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

Spiegel, David (1990). Theoretical and empirical resistance to hypnotic compliance. Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 243-245.

#### NOTES

1:

Does hypnosis bypass the will, facilitate coercion? The hardest thing for trauma victims to do is to admit helplessness. Furthermore, it is interesting that these same

dissociative phenomena seem to be elicited by traumatic experience, the stark imposition of involuntariness (Stutman & Bliss, 1985; Spiegel, Hunt, & Dondershine, 1988). What, then, are we to make of experiments that purport to show that hypnotizable and hypnotized individuals comply with hypnotic instructions irrationally? At some level this challenges our comfortable belief that we always act in our enlightened self-interest, unaffected by unwanted influence. If that can happen even once, our pride of self-ownership is reduced.

Taken as a whole, the studies show that high hypnotizables comply with hypnotic instructions, even in the face of resistance instructions, whereas low hypnotizables are less likely to, especially when conditions foster a relatively less negative view of the resistance instructor. As the authors note, subjects always viewed the hypnotist more positively than the resistance instructor, which in itself suggests the nonrational influence intrinsic to hypnosis. Free will is not abrogated, it is simply not exercised. The Ss are fundamentally choosing whether or not to comply. Half of the highs in Study IV resisted the hypnotic instruction. However, hypnotized individuals tend to narrow the focus of attention, thereby reducing their ability to consider alternatives such as the resistance instruction.

William James (1890) believed that all ideas were invitations to action. Why, then, do we not act on every idea we have, he pondered on a snowy morning while lying in bed. He observed that he would try to get himself to arise by picturing himself doing so. "Why, then, am I still in bed?" He realized that he was editing the primary idea, reflecting on how cold it was, how long it would take to light a fire, and how much time he had until his classes. In a state characterized by a narrowing of the focus of attention, we are less likely to edit the primary idea, and therefore more likely to act. In the experiments presented, the resistance instructor attempts to act as an external editor on the primary hypnotic instruction. Those capable of focusing attention sufficiently disattend to the editing and comply. These studies show that, thankfully, hypnosis is less than automatic submission to instruction but, interestingly, more than simple conscious response to new information.

1989

Gibson, H. B. (1989). The Home Office attitude to forensic hypnosis: A victory for scientific evidence or for medical conservatism?. [Comment/Discussion].

NOTES

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The author is in agreement with the Home Office Circular (August 1988) that advises against the use of hypnosis in police investigations. However he disagrees with the Circular statement that "'There may be danger that, in some cases, the experience of hypnosis may cause longer term harm to the mental health of the subject...'" This is certainly not true if the proceedings are carried out by a competent health professional" (p. 26).

Lindsay, D. S.; Johnson, M. K. (1989). The eyewitness suggestibility effect and memory for source. Memory and Cognition, 17, 349-358.

Examined the possibility that eyewitness suggestibility reflects failures of the processes by which people normally discriminate between memories derived from

different sources. Misled and control subjects were tested either with a yes/no recognition test or with a "source-monitoring" test designed to orient Ss to attend to information about the sources of their memories. The results demonstrate that suggestibility effects obtained with a recognition test can be eliminated by orienting Ss toward thinking about the sources of their memories while taking the test. Findings indicate that although misled Ss are capable of identifying the source of their memories of misleading suggestions, they nonetheless sometimes misidentify them as memories derived from the original event. The extent to which such errors reflect genuine memory confusions (produced, for example by lay judgment criteria) or conscious misattributions (perhaps due to demand characteristics) remains to be specified.

1989

Pinizzotto, Anthony J. (1989). Memory and hypnosis: Implications for the use of forensic hypnosis. Professional Psychology: Research and Practice, 20 (5), 322-328.

NOTES

1:

The author reviews arguments regarding hypnosis in forensic investigations, offers procedures of a nonhypnotic nature to enhance memory recall, and suggests guidelines for hypnosis in criminal cases. The effects of hypnosis on memory, as well as the concomitant dangers regarding those effects, are discussed.

Sanders, Glenn S.; Gansler, David A.; Reisman, Stephen Jr. (1989). The effects of hypnosis on eyewitness testimony and reactions to cross-examination. American Journal of Forensic Psychology, 7, 33-60.

Investigative hypnosis has been a widely used and valuable police technique, but recent court rulings have expressed reservations about the admissibility of hypnotically related testimony. The proposed research is the first directly relevant evaluation of the most serious of the courts' reservations: the allegation that hypnosis produces excessive and unshakable levels of confidence in witnesses, thereby effectively denying opposing counsel the right of cross-examination. Volunteers from the community witnessed a simulated crime, and were then interviewed by a professional police investigator to obtain evidence and testimony. Two-thirds of these witnesses were randomly assigned to have their memory refreshed by one of two hypnotic induction techniques. All witnesses were subsequently examined and cross-examined by a pair of practicing criminal lawyers, and their videotaped testimony was evaluated by another volunteer sample of community residents serving as jurors. On both objective and subjective measures, hypnotized witnesses provided more complete and internally consistent testimony. However, neither form of hypnotic induction led to greater witness confidence, credibility, or resistance to cross-examination. Our results generally replicate previous findings in a more realistic investigative simulation. The discussion considers artifactual explanations of the confidence null effects, and explores theoretical and policy implications of the data.

## NOTES

People responding to a newspaper ad asking for volunteers who would be paid for participating in psychology research at the State University were later asked to undergo hypnosis. Of 45 who responded to the ad, six (13%) declined to have hypnosis. This rate of refusal has relevance to research on clinical hypnosis that requires paid volunteer participants.

Schuyler, Bradley A.; Coe, William C. (1989). More on volitional experiences and breaching posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 37, 320-331.

Highly responsive hypnotic subjects, who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia, were compared with each other on four physiological measures (heart rate, electrodermal response, respiration rate, muscle tension) during posthypnotic recall. Two contextual conditions were employed: One was meant to create pressure to breach posthypnotic amnesia (lie detector instructions); the other, a relax condition, served as a control. The recall data confirmed earlier findings of Howard and Coe and showed that voluntary subjects under the lie detector condition recalled more than the other three samples that did not differ from each other. However, using another measure of voluntariness showed that both voluntary and involuntary subjects breached under lie detector conditions. Electrodermal response supported the subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis.

## NOTES

The authors suggest that subjects observe themselves not remembering (i.e. not reporting memories) and conclude that they therefore could not remember. Such subjects, they say, are deceiving themselves in so far as they could remember if they were to direct their attention to salient cues.

Watkins, John G. (1989). Hypnotic hypermnesia and forensic hypnosis: A cross-examination. American Journal of Clinical Hypnosis, 32, 71-83.

Early enthusiasm for the hypnotic enhancement of memories of witnesses has faded since publication of a number of experimental studies which cast doubt on its efficacy and reported also that pseudo-memories could be confabulated under hypnosis. This has caused some investigators to assert that hypnosis should never be used to enhance the memories of eyewitnesses testifying in court. Many of these studies are themselves subject to errors in sampling, biases, and ignoring of the 'hypnotic relationship' effect. It is premature to recommend complete elimination of hypnotic hypermnesia in court situations, and several recent Supreme Court decisions seem to agree. Results of some previously unpublished studies are

reported, plus suggestions for improving research approaches to studies of hypnotic memory enhancement.

1988

Coons, P. M. (1988). Misuse of forensic hypnosis: A hypnotically elicited false confession with the apparent creation of a multiple personality. International Journal of Clinical and Experimental Hypnosis, 36 (1), 1-11.

A case is presented in which there was flagrant misuse of forensic hypnosis. The patient, a woman in her early 30s, was accused of shooting her 2 children. During a hypnotic interview, the police hypnotist used an extremely suggestive interrogative technique, and the suspect produced an apparent secondary personality who confessed to the shootings. Subsequently the prosecutor tried to enter the "hypnotic confession" as evidence against the defendant. The evidence was dis-allowed because of the manner in which it was obtained and because of the lack of verification from other sources. The literature regarding the use of forensic hypnosis is reviewed as is the literature regarding multiple personality and the experimental production of multiple personality-like phenomena.

Gudjonsson, Gisli (1988). Interrogative suggestibility: Its relationship with assertiveness, social-evaluative anxiety, state anxiety and method of coping. British Journal of Clinical Psychology, 27 (2), 159-166.

Investigated in 30 adults some of the theoretical components related to individual differences thought by the present author and R. Clark (1986) to mediate interrogative suggestibility as measured by a scale developed by the present author (1984). The variables studied were assertiveness, social-evaluative anxiety, state anxiety, and the coping methods generated and implemented during interrogation. Low assertiveness and high evaluative anxiety correlated moderately with suggestibility, but no significant correlations emerged for social avoidance and distress. State anxiety correlated significantly with suggestibility, particularly after negative feedback had been administered. Coping methods (active-cognitive/behavioral vs. avoidance) significantly predicted suggestibility scores. The findings give strong support to the present author's theoretical model.

McConkey, Kevin M.; Kinoshita, S. (1988). The influence of hypnosis on memory after one day and one week. Journal of Abnormal Psychology, 97, 48-53.

#### NOTES

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High- and low-hypnotizable subjects were given repeated tests in either hypnotic or awake conditions to recall pictures they had seen either one day or one week earlier. Hypnotic procedures were associated with increased memory performance by subjects; specifically, hypnotic subjects reported more correct material. Also, hypnotic procedures were associated with increased confidence in memory reports; in particular, high- hypnotizable Ss tested in the hypnotic condition displayed the most confident errors. The pattern of findings for subjects tested after one day

differed from that of subjects tested after one week, and this difference was related to the subjects' hypnotizability. Findings are discussed in terms of memory performance and the confidence associated with that performance.

Perry, Campbell (1988, November). An interactionist position on hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Success in pain reduction is much greater in clinic (Crasilneck; Melzack et al; Cedercrentz - skull injury) than in lab (Hilgard's studies of highs and lows).

Central to the disagreement about special state/socio-behavioral theories is the question, "What are the origins of beliefs about hypnosis?" The beliefs can be modified by experience, which is mediated by individual differences.

Author suggests trying to predict which individual will respond to which hypnosis item. Since there are at least 3 factors in hypnotizability scales, one needs a number of variables to do this type of research. Nadon et al (Journal of Personality and Social Psychology 1987) predicted hypnotizability with PICS (an imagery control test) and Absorption scale plus Evans' Sleep Questionnaire subscale plus Belief in [paranormal events] subscale: predictions were 63% correct. PICS (as compared with other imagery tests) reflects imagery as a preferred mode of thinking. Now, can we predict who will make highly confident errors when asked to remember details of a crime? Who is more vulnerable when told a pseudomemory is veridical? In a test of this question, mimicking a field setting, the authors weren't able to predict the people who would make errors, who functioned at the same level following neutral instructions ("We don't know what we'll find") and Reiser-type instructions ("You can use a zoom lens to see the scene up close") in hypnosis. Also, the effect of an increase in confident errors was greater for highs than for lows. People with high hypnotizability and low PICS made the most errors. N.B. Since lows also increased in errors, one should be cautious in any case.

Creation of pseudomemory research: Using SHSS:C and PICS one can predict 81% of those who accepted and reported the implanted pseudomemory.

Sheehan, Peter W. (1988). Memory distortion in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 296-311.

This paper presents data from a programmatic series of studies that varied the range of conditions affecting potential increase of recall, memory distortions, and distortions of confidence during and following hypnosis. All the studies used a paradigm that exposed Ss to misleading information some time before memory was tested and applied procedures in the hypnotic setting to analyze memory performance in both recognition and free recall. Results from the program failed to demonstrate any increment in accurate memory due to hypnosis, and the accuracy of memory reports in hypnosis was at times significantly reduced. Further, hypnotic recall was distinctively distorted when false information was introduced after, rather than before hypnosis. Results were discussed in relation to the role hypnotic as opposed to contextual variables may play in explaining Ss' memory test

performances, and some legal implications are drawn from the data.

#### NOTES

This article investigates 3 major questions: 1. whether hypnosis makes recollections more susceptible to error 2. whether hypnosis reliably enhances recall 3. whether hypnosis alters certitude of what is remembered, independent of accuracy

The author reviews earlier literature, noting that different methodologies lead to different, sometimes conflicting, results. He uses Loftus' methods, which "allows for systematic exposure to specific information that is erroneous and examines the after-effects of that exposure on subsequent attempts to remember" (p. 298). The Ss are tested initially for memory of an incident, with subtle introduction of false information; then retested in way that probes for correct recall/recognition by presenting the incorrect information as an alternative for response. (Loftus has presented the position that misinformation is incorporated into waking memory, and this examines whether the addition of hypnosis--especially with Ss who are highly hypnotizable--increases the effects.)

Sheehan reports six studies that varied type of memory test (free recall, recognition); type of instruction (hypnotic, waking, simulating); and level of hypnotizability (high, low). Each study dealt with the same incident that depicted an apparent robbery and three false pieces of information about the incident were presented to Ss in the misleading condition. The studies have been published elsewhere as: --Study 1 Sheehan & Tilden, 1983: High and low hypnotizable Ss tested under hypnosis & waking conditions. False information is given before hypnosis. --Study 2 Sheehan & Tilden, 1984: Real & simulating Ss presented with false information prior to hypnotic induction. --Study 3 Sheehan & Tilden, 1986: High hypnotizable and motivated low hypnotizable Ss presented with false information prior to hypnosis. --Study 4 Sheehan, Grigg, & McCann, 1984: Real & simulating Ss presented with false information after hypnotic induction. --Study 5 Sheehan & Grigg, 1985: High hypnotizable and motivated low hypnotizable Ss presented with false information after hypnotic induction --Study 6 (this article reports): High and low hypnotizable Ss tested under hypnosis and waking conditions. False information is given after hypnosis. Scene shown is described by hypnotist in a congruent (robbery) or incongruent (friendly encounter) way

Ss tended to give incorrect responses along the lines of the false cues, but this effect was not greater when hypnosis occurred after the leading information had been given. In two experiments (#4 and #5) the effect was associated with hypnosis. Thus, when Ss are hypnotized they are more likely to be misled by false information. Study 6 did not demonstrate the incorporation of false information into memory, possibly because there was a longer delay between presentation of the information and the memory test itself. This weakening effect of delay has also been shown by Loftus et al. (1978). High hypnotizable Ss in the hypnosis condition showed more distortion than lows not hypnotized in 4 of the 6 studies evidencing distortion.

The authors note that "confidence may be maintained in the hypnosis setting despite the presence of substantial inaccuracy. ... Simulating Ss performed just as confidently as real Ss ... raising the question that context may determine the results for confidence among real Ss. ... Where expectations were out of phase with stimulus

events [Study 6], confidence effects involving hypnosis did not emerge" (pp. 304-305).

"Overall, data indicated that hypnotic instruction may be more reliably associated with confidence than level of hypnotizability, though both variables are associated with confidence at one time or another. What is not clear, however, is whether hypnosis itself is at issue or the context of which hypnosis forms a part. That context, of course, may include the belief of Ss brought to the formal test situation that hypnosis increases memory. ... Simulating Ss reported higher confidence levels than real Ss when results were analyzed just for the hypnotic setting ..., for recognition testing in Study 4; simulating Ss were not distinct from hypnotic Ss under waking conditions of testing. It seems that the hypnotic setting itself, or expectations about it, obviously communicated that an expression of strong conviction was required. Collectively, results demonstrated that simulating Ss believed that a hypnotized person would be more confident, and they therefore reported greater confidence levels during their act of pretense" (pp. 305-306).

In their discussion, the authors note that there was more evidence for mis-reporting than for accuracy, but that hypnosis did not produce more error unless false information was given during hypnosis. High hypnotizable Ss produce many errors with a high level of confidence, but since simulators feign hypnosis by reporting high levels of confidence, it may be expectations about the ability of hypnosis to improve recall that influences these results. "Such expectations may influence hypnotic recall for all Ss, but this would not explain differential levels of confidence between high and low hypnotizable Ss when both are tested in exactly the same way-that is, when task demands are held constant" (p. 306).

"One major implication of the data is that future research should move away from focusing only on the truth validation or distorting influence of hypnosis to emphasize the role contextual features may play in accentuating memory distortion effects" (p. 307). "The one clear finding across all of the studies in the program was that hypnosis does not increase memory, and the findings provide no basis to justify the forensic application of hypnosis given that the point of forensic application is that hypnosis will help memory. Data also indicate that when leading questions are asked under hypnosis, they are likely to be more effective in distorting memory reports than when such questions are asked without hypnosis. Low resistance to misinformation was present among both hypnotic and waking Ss, but separated the two groups when the false information was given in hypnosis.

"One of the major inferences ... is that the most substantial risk to using hypnosis may lie not only with the tendency to mis-report itself, but with the tendency for hypnotic Ss to be convinced in their reporting no matter what the accuracy of their statements. This effect was pervasive enough that it may offer sufficient grounds for restricting how hypnosis should be used forensically" (p. 308).

Whitehouse, Wayne G.; Dinges, David F.; Orne, Emily C.; Orne, Martin T. (1988). Hypnotic hypermnesia: Enhanced memory accessibility or report bias?. Journal of Abnormal Psychology, 289-295.

Laboratory studies of hypnotic hypermnesia have yielded inconsistent evidence of memory enhancement, and the process responsible for the occasional positive findings have eluded identification. The present experiment assessed delay recall for filmed material under conditions in which subjects were required to answer all questions, by guessing if necessary. They also rated confidence in the accuracy of each response. After an initial wake-baseline forced-recall test, subjects were randomly assigned to hypnosis or waking conditions for a second forced-recall test. Both groups of subjects recalled additional correct details on the second test, but the magnitude of this hypermnesia was no greater for subjects exposed to the hypnosis treatment. Hypnotized subjects did, however, exhibit a significantly greater increase in confidence for responses designated as "guesses" on the prior waking test--a finding consistent with the view that hypnosis engenders a shift in the subjective criterion for what constitutes a "memory". Implications of these findings for the use of hypnosis in forensic situations are discussed.

1987

Geiselman, R. Edward; Machlovitz, Helen (1987). Hypnosis memory recall: Implications for forensic use. American Journal of Forensic Psychology, 1, 37-47.

The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection. NOTES 1: NOTES: The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection.

APA Council of Representatives (1986, December). Resolution on hypnosis. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 1.

NOTES

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The Council of Representatives adopted a motion that opposes the teaching of hypnosis to persons who are not fully trained in a health delivery profession. The motion presented by Dr. Gene Levitt, Division 30 representative to Council of Representatives, was passed by voice vote on August 24, 1986. It read as follows:

"Be it resolved that the American Psychological Association, in the interest of the public, opposes applications of hypnosis by persons who are not fully trained members or advanced students of a health delivery profession and who lack specific, in-depth training in hypnosis. Therefore, be it also resolved that APA opposes the teaching of hypnotic induction techniques or applications of hypnosis that involve

treatment or assessment with patients or clients to persons who are not fully trained members or advanced students of a health delivery profession. Be it resolved further that upon passage of this resolution, its text shall be conveyed to the APA Ethics Committee to consider its incorporation in the APA Code of Ethics. We note that the resolution is consistent with the preamble of Principle 1 of the code as well as the Standards for Providers of Psychological Services (Principles and Implications of Standards, 3)"

Dr. Levitt proposed that the motion be named the "Erik L. Wright Memorial Resolution" in honor of the Division 30 Council representative who introduced the first version of it in 1980.

**1986**

**Laurence, Jean-Roch; Nadon, Robert; Nogrady, Heather; Perry, Campbell (1986). Duality, dissociation, and memory creation in highly hypnotizability subjects. International Journal of Clinical and Experimental Hypnosis, 34, 295-310.**

The present paper reports an initial attempt to create a pseudomemory in a group of highly hypnotizable individuals. It was found that for approximately 50% of Ss tested, recall of a specific event was modified when Ss integrated hypnotically suggested material which then posthypnotically was believed to be veridical. This modification in a previously reported memory was linked to a particular cognitive style found in high hypnotizable Ss, namely dual cognitive functioning. Ss reporting duality in hypnotic age regression, and, to a lesser extent, the hidden observer effect, were found to be the most prone to accept a suggested memory as real. These findings suggest the need to emphasize the importance of a cognitive-phenomenological approach to hypnosis and hypnotizability.

**Schacter, Daniel L. (1986). Amnesia and crime: How much do we really know?. American Psychologist, 41, 286-295.**

Claims of amnesia occur frequently after the commission of violent crimes and can have a significant bearing on the outcome of criminal trials. This article considers the relation between amnesia and crime within the broader context of research on memory and amnesia and provides a critical evaluation of current knowledge concerning the issue. Particular attention is paid to the problem of distinguishing between genuine and simulated claims of amnesia. It is suggested that reliable data concerning the nature of amnesic episodes that occur after the commission of a crime are sparse, and that there is as yet little evidence that genuine and simulated amnesia can be distinguished in criminal cases. The results of several laboratory studies are summarized that indicate that feeling-of-knowing ratings distinguished between genuine and simulated amnesia under conditions in which psychologists and psychiatrists did not.

**Sheehan, Peter W.; Tilden, Jan (1986). The consistency of occurrences of memory distortion following hypnotic induction. International Journal of Clinical and Experimental Hypnosis, 34, 122-137.**

The present study examined a range of circumstances for their effects on the vulnerability of hypnotic Ss to memory distortion. 26 high and 26 low hypnotizable Ss were tested individually in a design in which Ss received information that was either misleading or not misleading about a series of events depicting an apparent robbery. The information was presented prior to Ss being given hypnotic instructions, and low hypnotizability Ss were especially motivated for positive response in the session. Memory for the robbery was studied across a range of measures that included forced choice recognition, free recall, and response to leading questions. Results demonstrated predictably variable effects. The 2 groups performed appreciably differently in free recall, for example, while in recognition testing, data indicated that high and low hypnotizable Ss both incorporated misleading information into their memories to the same degree. Some implications of the data for the forensic context are discussed. NOTES 1: NOTES: 56 Ss were prescreened with Harvard Group Scale of Hypnotic Susceptibility, Form A, defining highs = 9-12, lows = 0-3. Used Loftus materials for testing memory (wallet snatching sequence, on a series of slides). Errors were classified as errors of fact, of inference, or conjectures. Highs had more intrusions that were errors of fact than lows did ( $p < .05$ ), confirming the earlier results published by Sheehan & Tilden, 1984. There was no significant association between hypnotizability level and intrusion of central detail (description of robber and victim), but 57% of highs and only 18% of lows intruded peripheral objects incorrectly into their own narrative reports (i.e. descriptions given of the surroundings),  $p < .01$ .

There were trends for high hypnotizable Ss to recall more objects correctly than low hypnotizable Ss during narrative reporting ( $p < .06$ ) and to recall more central objects ( $p < .06$ ), but not more peripheral objects. There may have been a loosening of criteria for memory among high hypnotizables, because they appeared to produce both greater accuracy and inaccuracy in recall of certain types of detail.

During the recognition testing, high hypnotizables exhibited significantly greater confidence in their responses than low hypnotizable Ss, but there was no group difference for accuracy. "Results for both tests of integration then (recognition and free recall) confirmed the prediction that hypnotic Ss incorporate false information into their memory, and the effect did not differentiate high from low hypnotizable Ss" (p. 131).

When a leading question implied that traffic lights were present in the scene, 34% responded in some way to that suggestion, and 20% said that they could see the lights in their minds eye; but 14% said that "although they could not see the lights, they nevertheless remembered they were there" (p. 132). Response to the leading question did not differ between high and low hypnotizable Ss.

In their discussion, the authors note that hypnosis did not enhance memory in this study. "Results overall suggest that hypnotic induction lowers the correspondence between confidence and accuracy. In the present study, hypnotic Ss were confident about their recall when the degree of accuracy of their reports suggested they should have been quite uncertain. Hypnotic instruction itself would appear, then, to

establish conditions that spuriously facilitate a high degree of confidence in the reports that Ss produce.

"A major point to be made about the present study is that both general distortion and confidence effects observed here cannot necessarily be attributed to hypnosis. There was no independent comparison condition, for example, to contrast results for hypnotic Ss with results for Ss receiving no induction procedures. Effects, then, could be attributed to the hypnotic context as much as to the effects of induction per se, and context rather than state may be responsible for the vulnerability of hypnotic Ss that has been observed. The influence of context is seen at least in the clear evidence for an interaction between situational factors and hypnotizability. In free recall, hypnotizable Ss were more prone to distortions than unhypnotizable Ss, while in recognition, hypnotizable and unhypnotizable Ss were equally prone. Mode of testing is, therefore, a major contextual variable that is related to the nature of the distortion and confidence effects that can be observed. Present data further indicate that the hypnotic context is associated with memory distortion even in Ss who have little capacity for being hypnotized, but who are instructed to believe that they can, in fact, experience much of what is being suggested" (pp. 133-134).

Forensic implications need to be tempered because of difference between laboratory and real life, but practitioners nevertheless should be cautious. "While it is not true that hypnotized persons, by virtue of their hypnotizability level, will always distort their reports more obviously than nonhypnotic Ss, so as to bring their recollections into line with what is implied or suspected, parameters do exist that clearly increase the risks of distortion that can occur after hypnotic instruction. This is evidenced, for example, by the distinctive distortion effects that have been demonstrated for high hypnotizable Ss when they are given induction instructions and later requested to tell their story in their own way. Overall, the present data imply that the law needs to closely evaluate the impact of the different settings in which hypnosis takes place and the different ways in which misleading information can be communicated to persons who are later asked to testify. The potential risks of hypnosis--as well as its utility--will depend critically on how that information has been conveyed, and the way in which Ss' memories are tested" (pp. 134- 135).

1985

Bliss, Eugene L.; Larson, Esther M. (1985). Sexual criminality and hypnotizability. Journal of Nervous and Mental Disease, 173, 522-526.

Investigated 33 17-35 yr old sexual offenders, 18 of whom had been convicted of rape, 9 of pedophilia, and 6 of incest. Ss completed a questionnaire containing a list of 15 factors that might have contributed to their crime, a self-report containing 305 items that are symptoms characteristic of 11 major psychiatric syndromes, and the Stanford Hypnotic Susceptibility Scale. Controls for the self-report were 48 individuals taken from a church group, nurses, technicians, and graduate students. Controls for the hypnotizability scale were cigarette smokers who smoked 1 1/2 pack/day and S data taken from the literature. Results show that two-thirds of the Ss had histories of spontaneous self-hypnotic experiences (dissociations); 7 of these were DSM-III multiples and 6 were probable multiples. This group had very high hypnotizability scores. The other one-third without histories of spontaneous self-

hypnosis had normal scores. It is concluded that spontaneous self-hypnosis contributed to the perpetration of the crimes in many of these cases, although other factors also directed the antisocial behaviors. (22 ref).

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects reported their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension.

Geiselman, R. Edward; Fisher, Ronald P.; MacKinnon, David P.; Holland, Heidi L. (1985). Eyewitness memory enhancement in the police interview: Cognitive retrieval mnemonics versus hypnosis. Journal of Applied Psychology, 70, 401-412.

Compared effectiveness of three interview procedures for optimizing eyewitness memory performance: (a) the 'cognitive interview' based on memory-retrieval mnemonics from current memory theory, (b) the presently controversial hypnosis interview, and (c) the standard (control) police interview. Both the cognitive and hypnosis procedures elicited a significantly greater number of correct items of information from the Ss than did the standard interview. This result, which held even for the most critical facts from the films, was most pronounced for crime scenarios in which the density of events was high. The number of incorrect items of information generated did not differ across the three interview conditions. The observed memory enhancement was interpreted in terms of the memory-guidance techniques common to both the cognitive and hypnosis interviews. Neither differential questioning, time nor heightened subject or interviewer motivation could explain the results.

Orne, Martin T. (1985). The use and misuse of hypnosis in court. In Rosner, Richard (Ed.), Critical issues in American psychiatry and the law (2, ). New York: Plenum Press. (Reprinted from Crime and Justice: An Annual Review of Research, vol. 3, edited by Michael Tonry and Norval Morris, 1981, The University of Chicago Press.)

## NOTES

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An earlier version of this essay appeared in the Monograph Issue of the

**International Journal of Clinical and Experimental Hypnosis on the forensic uses of hypnosis, 27 (4) (1979): 311-41.**

**Spanos, Nicholas P.; Weekes, John R.; Bertrand, Lorne D. (1985). Multiple personality: A social psychological perspective. Journal of Abnormal Psychology, 94, 362-376.**

The part of an accused murderer remanded for pretrial psychiatric evaluation was role played by 48 college students. Role players were assigned to interview treatments that varied in how extensively they cued for symptoms of multiple personality. The most explicit treatment (i.e., Bianchi treatment, n = 16) included a hypnotic interview that was used in diagnosing a suspect in the "Hillside strangler" rape- murder cases as suffering from multiple personality. A less explicit hypnotic treatment (n = 16) and a nonhypnotic treatment (n = 16) were administered to the remaining role players. Most subjects in the Bianchi treatment displayed the major signs of multiple personality (e.g., adoption of a different name, spontaneous posthypnotic amnesia). In a later session subjects who role played as multiple personalities performed very differently on psychological tests administered separately to each role-played identity. Those who failed to enact the multiple personality role performed similarly when tested twice. Findings are discussed in terms of a social psychological formulation that emphasizes the roles of active cognizing, contextual cueing, and social legitimization in the genesis of multiple personality.

**1984**

**Allison, R. B. (1984). Difficulties diagnosing the multiple personality syndrome in a death penalty case. International Journal of Clinical and Experimental Hypnosis, 32 (2), 102-117.**

The problems involved in diagnosing the multiple personality syndrome in a rape-murder suspect are illustrated by the case of Kenneth Bianchi and the Hillside Stranglings. Hypnotic investigations of his amnesia revealed "Steve," who admitted guilt for the rape-murders. "Billy" later emerged, claiming responsibility for thefts and forgeries. Attempts to evaluate Kenneth Bianchi with methods used in therapy yielded an original opinion that he was a multiple personality and legally insane. Later events showed the diagnosis to be in error. A new diagnosis was made of atypical dissociative disorder due to the effects of the examining methods themselves. Warning is given that it may be impossible to determine the correct diagnosis of a dissociating defendant in a death penalty case.

**Deyoub, P. L. (1984). Hypnotic stimulation of antisocial behavior: A case report. International Journal of Clinical and Experimental Hypnosis, 32 (3), 301-306.**

A case study is presented in which a 30-year-old man robbed a bank after being told

by a lay hypnotist that he could rob a bank if he wanted. The case is discussed in light of some of the literature on coercion and dangers in hypnosis.

Orne, Martin T.; Soskis, David A.; Dinges, David F.; Orne, Emily Carota (1984). Hypnotically induced testimony. In Wells, G. L.; Loftus, E. F. (Ed.), Eyewitness testimony: Psychological perspectives (pp. 171-213). New York: Cambridge University Press.

#### NOTES

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This is a modified version of a policy brief prepared for the National Institute of Justice. The Conclusions read:

"The use of guidelines is designed to permit the subsequent evaluation of a hypnosis session by independent experts, in order to determine whether undue suggestiveness was present. Nonetheless, even when hypnosis has been used appropriately in a forensic situation and when the session has been monitored and conducted in a manner that is likely to minimize undetected biasing, inadvertent distortions of memory may still occur. Although the recommended guidelines for conducting the hypnosis session help determine what was done during the session, they do not prevent (nor is there any reliable way to prevent) subjects from confounding distorted hypnotic memories with prior and subsequent nonhypnotic recall or from placing undue confidence in these distorted recollections. Thus, the use of the results of hypnosis applied in forensic situations, as well as the use of the procedure itself, demands extreme caution.

"'Hypnotically refreshed' memories cannot be used to 'verify' facts for which no adequate evidence exists, especially when subsequent investigation has failed to produce any substantial independent corroboration and the individual did not recall the fact or was not confident of it prior to hypnosis. As long as the detail recalled is verified by independent physical evidence, the utility of hypnosis can be considerable and the risk attached to the procedure - if properly conducted - minimal. There is no way, however, by which anyone (including an expert with extensive experience in hypnosis) can for any particular piece of information obtained in hypnosis determine whether it is an actual memory or a confabulation. For these reasons, hypnotically induced testimony is not reliable and ought not be permitted to form the basis of testimony in court" (pp. 210-211).

1983

Loftus, Elizabeth (1983). Whose shadow is crooked?. American Psychologist, ?, 550-563.

#### NOTES

This is a reply to the McCloskey & Egeth reply to Loftus.

1983

Smith, Marilyn C. (1983). Hypnotic memory enhancement of witnesses: Does it work?. Psychological Bulletin, 94 (3), 387-407.

Hypnosis is currently being used extensively by the police and other investigative agencies to "refresh" the memory of witnesses to a crime. The present author reviews the literature and discusses the issue of whether hypnosis can in fact enhance memory. In contrast to the myriad of anecdotal reports extolling the virtues of hypnosis for this purpose, controlled laboratory studies have consistently failed to demonstrate any hypnotic memory improvement. Although the relevancy of these laboratory studies may be questioned because they used verbal, frequently nonmeaningful stimuli in a low arousal environment, several recent studies that have used more forensically relevant, arousal-provoking stimuli persist in showing no hypnosis advantage. Since there is no clear documentation that hypnosis can improve memory, and since the courts have become increasingly reluctant to accept the testimony of witnesses who have undergone hypnosis because of the problem of suggestibility, several nonhypnotic procedures of memory enhancement are considered.

1982

Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)

"Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and showed that voluntary and involuntary Ss did not differ in response to the contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).

1980

Crasilneck, Harold B. (1980). The case of Dora. American Journal of Clinical Hypnosis, 23, 95-97.

NOTES

1:

This is the introduction to a film about a woman who was indicted for murder in the alleged fatal shooting of her husband. The woman was amnesic, had been drinking alcohol before the shooting. The author also provides a verbatim account of what the patient said following suggestions that "you are going to remember every detail." On the basis of the woman's hypnotically refreshed recall, the charge was changed from first degree murder to self-defense.

Erickson, Milton H. (1980). Hypnotic investigation of psychodynamic processes. (3 ). New York: Irvington Publishers, Inc..

NOTES

1:

NOTES: This third volume of four has 2 sections (7 subsections) with chapters as follows. I. General and Historical Surveys of Hypnotism

1. A brief survey of hypnotism

2. Hypnosis: A general review

3. Hypnotism

4. The basis of hypnosis: Panel discussion on hypnosis II. Psychodynamic Processes: Hypnotic Approaches to the Unconscious Section 1: Amnesia

5. The investigation of a specific amnesia

6. Development of apparent unconsciousness during hypnotic reliving of a traumatic experience

7. Clinical and experimental observations on hypnotic amnesia: Introduction to an unpublished paper

8. The problem of amnesia in waking and hypnotic states

9. Varieties of hypnotic amnesia Section 2: Literalness

10. Literalness: An experimental study

11. Literalness and the use of trance in neurosis Section 3: Age Regression

12. Age regression: Two unpublished fragments of a student's study

13. Past weekday determination in hypnotic and waking states

14. On the possible occurrence of a dream in an eight-month-old infant

15. The successful treatment of a case of acute hysterical depression by a return under hypnosis to a critical phase of childhood Section 4: Automatic Writing and Drawing

16. The experimental demonstration of unconscious mentation by automatic writing

17. The use of automatic drawing in the interpretation and relief of a state of acute obsessional depression

18. The translation of the cryptic automatic writing of one hypnotic subject by another in a trancelike dissociated state Section 5: Mental Mechanisms

19. Experimental demonstrations of the psychopathology of everyday life

20. Demonstration of mental mechanisms by hypnosis

21. Unconscious mental activity in hypnosis--psychoanalytic implications

22. Negation or reversal of legal testimony Section 6: Dual Personality

23. The permanent relief of an obsessional phobia by means of communication with an unsuspected dual personality

24. The clinical discovery of a dual personality

25. Findings on the nature of the personality structures in two different dual personalities by means of projective and psychometric tests Section 7: Experimental Neuroses

26. A clinical note on a word-association test

27. A study of hypnotically induced complexes by means of the Luria technique

28. A study of an experimental neurosis hypnotically induced in a case of ejaculatio praecox

29. The method employed to formulate a complex story for the induction of an experimental neurosis in hypnotic subject

Reiser, Martin; Nielson, Michael (1980). Investigative hypnosis: A developing specialty. American Journal of Clinical Hypnosis, 23, 75-84.

#### NOTES

1:

Author describes his involvement with the Los Angeles Police Department, using hypnosis for "enhancing the recall of key witnesses whose memories of the crime were poor" (p. 75). In 1975, the author and other experts in hypnosis trained 11 lieutenants and 2 captains to use hypnosis. The author describes the training program and a one-year demonstration project, during which volunteer witnesses and victims were interviewed by the hypnotist investigators. "In 77% of cases, important information was elicited that had not been available by routine interrogation. Approximately 16% of cases were solved with the aid of hypnosis" (p. 76). "Follow-up with the involved witnesses and victims has not revealed any instance of ill effects stemming from the hypnosis program, while 39.8% of the hypnosis subjects reported some relief or benefit resulting from the hypnosis session" (p. 77). Jean Holroyd

1979

Ault, R. L. Jr. (1979). FBI guidelines for use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 27 (4), 449-451.

The Federal Bureau of Investigation uses hypnosis as a tool for investigative purposes in selected cases where further leads are needed and witnesses or victims are willing to participate in a hypnotic interview. All sessions are tape recorded, preferably by video. A hypnotic interview cannot necessarily provide accurate leads, and therefore careful investigative work is done to verify the accuracy of any information obtained in hypnosis. Psychiatrists, psychologists, or physicians specially trained in hypnotic techniques have been employed to add protection for the witnesses or victims being questioned under hypnosis.

Orne, Martin T. (1979). The use and misuse of hypnosis in court. International Journal of Clinical and Experimental Hypnosis, 27, 311-341.

The various forensic contexts in which hypnosis has been used are reviewed, emphasizing its advantages and pitfalls. The technique may be helpful in the context of criminal investigation and under circumstances involving functional memory loss. Hypnosis has no utility to assure the truthfulness of statements since, particularly in a forensic context, subjects may simulate hypnosis and are able to willfully lie even in deep hypnosis; most troublesome, actual memories cannot be distinguished from confabulations either by the subject or by the hypnotist without full and independent corroboration. While potentially useful to refresh witnesses' and victims' memories to facilitate eyewitness identification, the procedure is relatively safe and appropriate only when neither the subject, nor the authorities, nor the

hypnotist have any preconceptions about who the criminal might be. If such preconceptions do exist -- either based on information acquired before the hypnotic procedure or on information subtly communicated during the hypnotic procedure -- hypnosis may readily cause the subject to confabulate the person who is suspected into his "hypnotically enhanced memories." These pseudomemories, originally developed in hypnosis, may come to be accepted by the subject as his actual recall of the original events; they are then remembered with great subjective certainty and reported with conviction. Such circumstances can create convincing, apparently objective "eyewitnesses" rather than facilitating actual recall. A number of minimal safeguards are proposed to reduce the likelihood of such an eventuality and other serious potential abuses of hypnosis.

1978

Schafer, D. W.; Rubio, R. (1978). Hypnosis to aid the recall of witnesses. International Journal of Clinical and Experimental Hypnosis, 26, 81-91.

14 cases are presented of interrogation under hypnosis of witnesses and victims of crimes. Videotaping is considered essential for use of the court, if necessary. Interrogation of indicted people should be done only as an exception, if at all. The ideal case for hypnosis interrogation is with a witness or a victim where information is obtained which leads to evidence which itself will stand up in court without the need of the hypnosis interrogation to be presented as such. Guidelines for such interrogation are presented.

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

NOTES

1:

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-words in an association word test" (p. 139). Freud's predictions were only partially supported.

Schneck, Jerome M. (1954). The divided personality: A case study aided by hypnosis. International Journal of Clinical and Experimental Hypnosis, 2 (3), 220-232.

NOTES

1:

Summary. Amnesia as a symptom assumes proportions more complex than would appear on the surface and the role of memory loss with specific reference to hypnotic recovery methods has been presented in several reports. Hypnotherapy

would appear to be a preferred technique for resolving the symptom and at times for more extensive investigation of the underlying problems. The case reported now involved an extensive memory loss for past life, including personal identity. This was followed after nearly a year by recall and concurrent amnesia for the intervening time period. The latter amnesia was dispelled by recall at first under hypnosis and then by post-hypnotic extension and elaboration of the nuclear material. The patient's history was outlined and several facts of apparent importance in relation to the memory loss were revealed. The purposive and motivational features were stressed. Therapy was conducted in a medico-disciplinary setting with limitations based on administrative requirements. Military-legal complications of the patient's personality disorder and functioning were outlined. The concept of the divided personality was introduced and related to multiple personality and to another type of behavior which is quite similar to the divided personality except that periods of amnesia are not involved. The divided personality involves major cleavages in the continuity of living with amnesia and the establishment of the individual in a setting where he undergoes extensive, significant operations relating to work, general activities, and even courtship and marriage. Unlike the generally accepted attributes of multiple personality involving considerable overt behavior, affect, and attitude alterations, the divided personality continues to function with his accustomed overt attitudes, interests, affect, and method of relating on an interpersonal level. Descriptively and overtly he is not too different if at all, but he seems to begin life anew in terms of setting and personal contacts. Cases of this type should be studied further with care, whenever possible, for further elicitation [sic] of psychodynamics. Hypnosis as a tool in treatment and investigation should prove helpful and is to be considered important.

## FRANCE

1989

Van der Hart, O.; Friedman, B. (1989). A reader's guide to Pierre Janet on dissociation: A neglected intellectual heritage. Dissociation, 2 (1), 3-16.

A century ago there was a peak of interest in dissociation and dissociative disorders. Janet (1859-1947) was the most important scientific and clinical investigator of this period, whose work is reviewed in this article. The evolution of dissociation theory and its major principles are traced throughout his writings. His introduction of the term 'subconscious' and his concept of the existence of consciousness outside of personal awareness are explained. The validity and reliability of dissociation as the underlying phenomenon in a wide range of disorders is presented. It is proposed that Janet's theory and methodology of psychological analysis and dynamic psychotherapy are cogent and relevant for today.

1985

McConkey, Kevin M.; Perry, Campbell (1985). Benjamin Franklin and mesmerism. International Journal of Clinical and Experimental Hypnosis, 33 (2), 122-130.

This historiographical note reviews Benjamin Franklin's involvement with the practice and investigation of Mesmerism. A survey of material about Franklin's period in Paris (e.g., Lopez, 1966; Lopez & Herbert, 1975) indicates that he had a higher degree of personal involvement with, and a more detailed opinion of, Mesmerism than has been generally considered.

1980

Weitzenhoffer, Andre M. (1980). What did he (Bernheim) say? A postscript and an addendum. International Journal of Clinical and Experimental Hypnosis, 28 (3), 252-260.

When Bernheim (1917) made his pronouncement, "There is no hypnotism, there is only suggestibility" at a scientific congress in London in 1892, he shocked the scientific community, which turned against him for what amounted to heresy. Clearly, his colleagues understood him to deny existence to hypnosis as a state. That he only meant to shock them into viewing suggestion as being the primary agent and hypnosis as being one of its products rather than the other way around, as then held, was made fully clear by him in 1917 in one of his last writings. Recognizing there had been a misunderstanding, Bernheim made this very point and explained further that although hypnosis is sleep, it is only so in an incomplete form, one allowing the subject to be responsive and suggestibility to be elicited. From there he went on to develop the thesis that hypnotic behavior is the result of an integration of elicited automatisms (nonvoluntary acts) and conscious voluntary behavior, and not entirely a pure, non-conscious, nonvoluntary automatism. Bernheim also proposed in this later work that suggested behavior results from automatisms rendered possible by the "credivity," that is, the implicit belief of suggestible persons in the reality of whatever the suggestor states, a belief which is limited to the suggestor. (In contrast, the credulous person believes everyone.) Credivity is a particular outgrowth of the hypnotist-subject relationship. In his final writings, Bernheim thus called attention to the importance of interpersonal factors in hypnotism.

1965

Ellenberger, H. F. (1965). Charcot and the Salpetriere School. American Journal of Psychotherapy, 19, 253-267. (Abstracted in American Journal of Clinical Hypnosis, 1965, 8:2, 148)

Under the influence of Charles Richet, Charcot, in 1878, undertook a scientific study of hypnotism, using as subjects several female hysterical patients out of a hospital population of 5,000. As a result of the French Academy of Sciences' acceptance of his findings in 1882, hypnosis reached the dignity of a scientific modality. Other facets of Charcot's life, including esoteric disappointments and successes, are also mentioned by the author.

1962

Schneck, Jerome M. (1962). William Alanson White on Hippolyte Bernheim - a historical note. International Journal of Clinical and Experimental Hypnosis, 10, 115-117.

(Author's Abstract) At the turn of this century, William Alanson White visited Hippolyte Bernheim and his hospital at Nancy. He commented briefly on both in his autobiography. The latter is not widely known, so it seems appropriate and of interest to publish the account in a journal devoted to hypnosis. White achieved a position of stature as a psychiatrist and served as President of the American Psychiatric Association. Bernheim, a prominent psychotherapist of his day, was associated with Liebeault as a leader of the Nancy School in the Paris-Nancy hypnosis controversy. White's account of Bernheim is reminiscent of the better known description of Liebeault by J. Milne Bramwell in the latter's classic volume on hypnotism.

1957

Conn, Jacob H. (1957). Historical aspects of scientific hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (1), 17-24.

The author relates the history of hypnosis beginning with pre-historic therapeutic suggestion, the trances of Persian Magi and Indian Yogi, and incubation or temple sleep in Egypt and Greece. Touching on practices among Egyptians, Romans, Greeks and the Middle Ages in Europe, he writes in more detail about Mesmer, John Elliotson, James Braid, Ambroise Auguste Liebault, Hyppolyte Marie Bernheim, and Jean Martin Charcot.

Bertrand, A. J. F. (1826). Du magnetisme animal en France et des jugements qu'en ont portes les societes savantes;... (See Notes field for full title). Paris: J. B. Balliere.

NOTES

Entire book title is: Du magnetisme animal en France et des jugements qu'en ont portes les societes savantes; avec le texte des divers rapports faits en 1784 par les commissaires de l'Academie des Sciences, de la Faculte et de la Societe Royale de Medecine, et une analyse de dernieres seances de l'apparition de l'extase, dans les traitements magnetiques. Seconde partie: du somnambulisme artificiel considere comme une variete de l'extase

1785

Mesmer, F. A. (1785/1958). Aphorismes de M. Mesmer [Maxims on animal magnetism]. Paris, France/Mt. Vernon NY: French publisher not given/American publisher Eden Press.

NOTES

Complete title is "Aphorismes de M. Mesmer: Dictes a l'assemblee de ses Eleves, dans lesquels on trouve ses principes, sa theorie et les moyens de magnetiser; le tout formant un corps de Doctrine, developpe en trois cents quarante-quatre

paragaphes, pour faciliter l'application des Commentaires au Magnetisme Animal"

Mesmer, Franz Anton (1785/1958). Aphorismes de M. Mesmer:... [Maxims on animal magnetism ]. Mt. Vernon, NY: Eden Press.

#### NOTES

Complete title of this article is: Aphorismes de M. Mesmer: dictes a l'assemblee de ses eleves, dans lesquels on trouve ses principes, sa theorie et les moyens de magnetiser; le tout formant un corps de doctrine, developpe en trois cents quarante-quatre paragaphes, pour faciliter l'application des commentaires au magnetisme animal

#### FREUD

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

#### NOTES

1:

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

Theories of Hypnosis

Chapter:

1. An Introduction to Hypnosis
2. Hypnosis in the Management of Chronic Pain
3. Hypnosis in Conjunction with Chemical Anesthesia
4. Hypnosis in Conjunction with Regional Anesthesia
5. Hypnosis as the Sole Anesthetic
6. Hypnosis in the Intensive Care Unit
7. Hypnosis in the Emergency Unit
8. Hypnosis in Pediatric Surgery
9. Hypnosis in Obstetrics and Gynecology
10. Perspectives from Physician-Patients

1995

Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.

The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.

Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.

The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.

In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.

Freud presented his theory to his patients and then sought confirmation.

Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.

Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.

Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides

powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years.

1990

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, 10, 117-128.

## NOTES

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly

heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or 'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations.

1988

Nash, Michael R. (1988). Hypnosis as a window on regression. Bulletin of the Menninger : Clinic, 52, 383-403.

Examines the empirical evidence for temporal and topographic regression during hypnosis--which Freud explicitly defined as regressive. A review of more than 100 studies spanning 60 years of research found no convincing evidence that developmentally previous psychological structures are reinstated during hypnosis (temporal regression). In contrast, there is evidence that hypnosis enables subjects to elicit more imagistic, primary process, and affect-laden material (topographic regression). The author recommends a careful reexamination of two core assumptions underlying the concept of temporal regression: (1) that early structures in human development are imperishable, and (2) that regression necessarily involves reinstatement of infantile psychological structures.

1985

Nichols, Michael P.; Efran, Jay S. (1985). Catharsis in psychotherapy: A new perspective. Psychotherapy, 22 (1), 46-58.

Contemporary thinking about catharsis in psychotherapy is still dominated by Breuer and Freud's work with the cathartic method. Psychoanalysts take the fact that Freud abandoned catharsis as evidence of its ineffectiveness, while the emotive

therapies developed in the 1960s returned to Freud's earliest view that neurosis results from repressed affect and can be cured by cathartic uncovering. Emotional memories continue to be thought of as foreign bodies lodged in the human psyche and requiring purgation. Unfortunately, this view divorces people from responsibility for their conduct and encourages a fractionation of human experience into feeling, thought, and action. In the current presentation, emotion is construed instead as a class of blocked or partially blocked actions, and in terms of a two-stage adaptational process. Implications of this view for psychotherapeutic practice are proposed, emphasizing richer self-expression and fuller appreciation of the consequences of responsible vs. disclaimed actions.

1984

Crabtree, Adam (1984, October/1986). Explanations of dissociation in the first half of the twentieth century. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 85-108). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

#### NOTES

In 1907 Morton Prince, Editor of *Journal of Abnormal Psychology*, introduced a symposium by listing 6 meanings of subconscious: 1. that portion of our field of consciousness which is outside the focus of attention 2. (Janet's idea) - split off ideas which may be isolated sensations like the lost tactile sensation of anesthesia, or maybe aggregated into groups or systems. The author quotes Janet as stating that "they form a consciousness coexisting with the primary consciousness and thereby a doubling of consciousness results" (p. 87). The primary consciousness is usually dominant, but sometimes is reduced under exceptional conditions (e.g. automatic writing). 3. the subconscious self or hidden self -- a part of every human, not just seen in psychopathology; this is a personalized entity; every mind has a double, with the unconscious self having powerful effects on feelings, thoughts, and reactions of the conscious self 4. extends #3 to include not only ideas that remain active below surface but also those which are inactive -- forgotten or out of mind 5. Frederic Myers' concept of the 'subliminal self' which had 3 functions:

a) inferior - seen in processes of dissociation

b) superior - seen in works of genius, arising from 'subliminal rush' of information, feelings, and thoughts which lie below consciousness

c) mythopoeic - the unconscious tendency to create fantasies 6. physiological meaning, e.g. William Carpenter's 'unconscious cerebration' in which unconscious phenomena are interpreted in terms of pure neural processes unaccompanied by mental activity.

Prince suggested some redefinitions to clarify unconscious and subconscious. He would replace Janet's subconscious with co-conscious and reserve unconscious for physiological processes that lack the attributes of consciousness. Prince noted that co-conscious ideas have been called unconscious (e.g. by Freud) but said that is confusing and to be avoided.

"Coconscious ideas include states we are not aware of because they are not the focus of our attention, and also pathologically split-off and independently active ideas or

systems of ideas, such as occur in hysteria and reach their most striking form in co-conscious personalities and automatic writing.

"Prince prefers the term coconscious to Janet's subconscious for two reasons. First, because it expresses the simultaneous coactivity of a second consciousness. And second, because the coactive ideas or idea systems may not be outside the awareness of the personal consciousness at all. They may be recognized by the personal consciousness as a distinct consciousness existing alongside it.

"Thus, through his redefinition of terms, Prince makes simultaneous activity of two or more systems of consciousness in one individual the key element in dissociation. He thereby moves the issue of amnesia or lack of awareness by one system of another into the background, making it a secondary, nonessential element. Prince was one of the few to provide a theoretical framework for dissociation in which any combination of interawareness among the coconscious systems was possible" (p. 91). Two researchers at the turn of the century came to opposite conclusions about the nature of the Subconscious Self that every human has. Morris Sidis saw it as "a brutelike consciousness with a tendency toward personalization. Frederic Myers held that it included those functions and much more, being the source of all that is human, including the highest intuitive powers" p. 96.

Bernard Hart, in 1910, did an analysis of Janet and Freud. Janet's work is essentially descriptive: "he is always talking about a consciousness which manifests itself in a way we can \_perceive\_, whether by listening to it talk, reading its written communications, or watching its movements" (p. 97). However Janet's spatial model of dissociation cannot explain the presence of the same material (e.g. memories) in two or more dissociated systems. According to Hart, Freud offered the conceptualization that Janet lacked, in his idea of the Unconscious .

Freud's Unconscious is not in competition with Janet's subconscious. "Janet's subconscious is the arena of dissociated phenomena which manifest in observable form as elements coactive with the personal self. Freud's unconscious is a conceptual, nonobservable construction put forward to explain certain facts of human experience. In this way Hart equates the unconscious with the atomic theory in physics or the theory of heredity in biology" p. 99. But Hart also thought Freud's theory did not do justice to dissociative phenomena. Not only do psychoanalysts show little interest in double personality or multiple personality, they also neglected dissociation on the phenomenal level.

In 1915 Freud denied the existence of a second consciousness and wrote, "there is no choice for us but to assert that mental processes are in themselves unconscious, and to liken the perception of them by means of consciousness to the perception of the external world by means of the sense organs" (p. 101). Janet claimed that Freud had simply taken over his own system and given it a new terminology, and in 1924 Freud wrote an angry rebuttal. For him, "dissociated systems are simply separate groups of mental but unconscious elements. As our consciousness turns now to one group, now to another, as a searchlight shines now on one object and now on another, the dissociated groups manifest in conscious life. ... There exists no doubling of consciousness" p. 102.

Jung's ideas were closer to those of Janet, and like Janet he made dissociation a key concept in his theory. The \_complex\_ is unconscious, has an archetypal core clothed

in personal experience, is like a self-contained psyche within the big psyche, sometimes called a fragmentary personality dwelling inside us. Dissociation for him meant being cut off from the Ego, which is the center of an individual's field of consciousness. "Dissociated or autonomous complexes are those which have no direct association with the ego" (p. 103). If complexes are charged with enough energy they will become manifest--as a neurotic symptom, as projected into idea of a god or demon, or perhaps as an alternate personality. Therefore Jungian treatment aims at assimilating dissociated complexes into the ego.

Decker, Hannah S. (1984, October/1986). The lure of nonmaterialism in materialist Europe: Investigations of dissociative phenomena, 1880-1915. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 31-62). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

## NOTES

Emphasizes spiritism, hypnotism, and the career of Pierre Janet.

Janet's career paralleled an increased interest in dissociation, because he had contact with scientists studying spiritism, used hypnosis, and insisted on a scientific approach. He coined the words "subconscious" and "dissociation." As his sphere of influence declined, so did scientific interest in dissociation--especially multiple personality disorder.

Scientific study of dissociation began with investigations into religious exorcism and spirit possession. For example, at the behest of Prince Max Joseph of Bavaria, Mesmer duplicated the exorcisms of Father Gassner (causing convulsions) using hypnosis. Following Mesmer, there were reports of multiple personalities (e.g. an "exchanged personality" in Germany, reported in 1791 by Eberhardt Gmelin).

"Partly because of this growth of knowledge of multiple personality, a new model of the mind developed during the early 19th century: the mind was dual; there were conscious and unconscious mental states. Later, it was said that there was a dominant conscious personality with a group of underlying subpersonalities. Eventually it was declared that split fragments of personality could act autonomously" p. 37.

The scientific study of these phenomena continued under the leadership of Frederic Myers of The Cambridge Society for Psychical Research. According to William James, Myers was the first to consider the phenomena of hallucination, hypnotism, automatism, double personality, and mediumship as connected parts of one whole subject. The Cambridge Society was involved in the transition from the use of automatic writing by mediums to its use for clinical purposes and experimental research in the 1880's and 1890's.

Increasing numbers of multiple personalities reported in the literature in late 19th century led to increased interest in hypnosis and to the concept of dissociation. The author details the contributions of Janet, and then explains how interest declined in dissociation and in hypnosis due to the following: 1. Experimental psychologists in Germany (e.g. Wundt) refused to deal with anything that resembled the "unconscious," and neglected the point of view of the experiencing person. 2. Those

few psychologists interested in the unconscious found projective tests (Rorschach, TAT) an easier avenue than hypnosis or automatic writing. 3. Many mediums were exposed as frauds, e.g. Flournoy's popular "From India to the Planet Mars". 4. Janet himself was very critical of parapsychology. 5. When Charcot died suddenly, it was discovered that some of his assistants had rehearsed the behavior of hypnotized patients. 6. Hypnotists' extravagant claims (e.g. past life age regression) led to a wave of reaction against them. 7. Questions were raised about the iatrogenic nature of multiple personality. 8. Conscientious hypnotists discovered drawbacks

- not everyone could become good hypnotists (e.g. Freud)
- not everyone could be hypnotized
- some patients faked hypnosis
- extreme sensitivity of hypnotized patients to the hypnotist's wishes led to biased results
- hypnotist sometimes was conditioned to things in certain way by his first patient

9. Janet didn't have the personality of a leader, and he argued with the psychoanalysts about who should get credit for certain ideas

**1980**

Watkins, Helen H. (1980). The silent abreaction. International Journal of Clinical and Experimental Hypnosis, 28 (2), 101-113.

The cathartic release of bound affect is a psychotherapeutic technique whose value has been proved over the years. Although Freud abandoned hypnotic abreactions, it was while working with this approach, in collaboration with Breuer, that he discovered unconscious processes (Breuer & Freud, 1895/1957). In spite of criticisms about the permanence of therapeutic results achieved through abreactions, the procedure continues to be employed in such differing approaches as hypnoanalysis, narcosynthesis, flooding, implosive therapy, primal scream, and gestalt therapy. A considerable limitation to the use of cathartic release lies in the fact that the violent release of powerful emotions is usually accompanied by screams, howling, cursing, or shrieks of fright. Practitioners who conduct their therapeutic sessions within most professional office buildings are often loath to initiate and work through such affective releases, even when therapeutically indicated, because of the sound disturbance to colleagues and other patients in the waiting room. The "silent abreaction" was developed as a procedure for releasing strong angers through perceptual and experiential, but not verbal, channels. It is a hypnotic visualization technique which can be adapted to the patient and to the circumstances in which the abreaction is to be conducted. While no data is yet available comparing its effectiveness with more vocal methods, the technique has been used successfully with a number of treatment cases. The silent abreaction offers an opportunity for the therapist to employ this valuable approach when the treatment setting would not normally accept a loud release of violent angers. The theory, specific techniques for its induction, and clinical case examples are presented.

**1977**

MacMillan, M. B. (1977). The cathartic method and the expectancies of Breuer and Anna O.. International Journal of Clinical and Experimental Hypnosis, 25, 106-118.

Expectancies about the consequences of the suppression of behavior and about the effects of expressing emotions are proposed as sources of the "talking cure" which developed during Breuer's treatment of Anna O. and which later became known as the cathartic method. Although the argument is similar to one proposed by Ellenberger (1970, 1972) it sets out a more rational alternative to his explanation that the method was partly a creation of the mytho-poetic unconscious. The analysis of the interaction between Breuer and Anna O. makes explicit the expectancies underlying each of the steps through which the cathartic method developed and traces these expectancies to the general beliefs and the specific theoretical interests shared by them.

#### NOTES

In summary, in the actual hypnotic relationship, the attitudes of the operator may influence his behavior markedly and are probably even more important than those of the subject in carrying through a successful relationship. It has been indicated in another paper that the subject's impulse handling is more important than his attitude toward hypnosis in actual hypnotizability. This view is a re-interpretation of that of Sarason and Rosenzweig (16) with regard to the same problem. The way the operator handles his own impulses seems in itself a most significant problem, and is expressed in his reactions to the induction and later the trance state of the subject. It is indicated that to some workers, the hypnotic response of the subject offers a rare feeling of power which may have psychosexual implications of a heterosexual or homosexual kind depending on the sex of the patient and the emotional needs of the operator. Child-parent relationship attitudes may also be elicited as well as conflicts about dominance-submission related to earlier experience of the worker.\*\* As suggested by Bruno-Bettelheim (1) for children who cannot participate in relations with others as a result of a fear of their own hostility, it appears that some persons might find the hypnotic situation difficult because of a similar factor. Thus some therapists or research workers might be impelled to reject the use of this measure or to fail in using it, because of a non-verbalized fear of their own impulses toward a 'helpless' subject in their power. This same situational response may be a problem that arises in the psychotherapeutic or even ordinary medical relationship. Its effect may be to limit full exploration and exploitation of therapeutic possibilities, and to hamper treatment of numerous disorders.

"It is perhaps appropriate to point out in conclusion that Freud left hypnosis, it would seem, because of some unresolved problems. Wolstein (23) says because he could not hypnotize all his patients and because of the magical connotations of hypnosis. The hypnosis in transference is still an open field. Are the two phenomena over-lapping or on a continuum? Are the problems of the therapist really the same in both areas? Is transference an aspect of hypnosis" (pp. 66-67).

\*\*\* Data on male-female differences in success as hypnotists with members of the opposite sex might be very illuminating" (p. 66).

1955

Kline, Milton V. (1955). Freud and hypnosis: II. Further observations on resistance and acceptance. Journal of Clinical and Experimental Hypnosis, 3 (2), 124-129.

#### NOTES

Summary. Freud's rejection of hypnosis in the development of psychoanalytic psychology becomes upon closer examination a two fold process. It involves on the part of Freud the conventional recognition that suggestion plays a basic role in the primitive emotional energy that binds people together and influences the acting out of primary libidinal drives. From an ontogenetic (and presumably phylogenetic) point of view, Freud viewed suggestibility as a repressive element in the organization of behavior and one which in effect had to be dealt with indirectly. To deal with it directly was to create a state within which powerful emotions of an unpredictable nature could emerge. Hypnosis to Freud was a 'condition' which led to general heightened suggestibility and was identical with it. To make use of this condition was in essence an attempt to make use of an individual's energies in a dependent and essentially uninhibited manner. It seemed to Freud that having produced the hypnotic 'condition,' one actually had achieved a state of suspension or ablation of certain critical ego functions and this could lead to an intense and perhaps unmanageable interpersonal relationship. It was almost an 'ethical' rather than a scientific view as Freud discussed it in his thinking and theorizing about a general psychology.

"To a great extent the basic concepts of psychoanalysis were developed as the result of Freud's awareness of the existence of hypnotic phenomena and his need to circumvent and indirectly deal with the ego manifestations of this 'condition.' Thus Freud never really rejected hypnosis as a mechanism of human behavior. His comment of the psychosocial development of man (from which psychoanalytic psychology is influenced) was heavily weighted by his awareness of 'suggestibility' and the 'condition' descriptively called hypnosis.

"The simple equation of hypnosis with suggestibility is now scientifically outmoded and incorrect. The role of suggestion and its psychosomatic equations has taken on a drastically changed perspective in social psychology, particularly with regard to the early concepts of Le Bon, Freud and McDougall (5). For these reasons alone, Freud's circumvention of hypnosis becomes increasingly unsound scientifically and adherence to such a perception of hypnosis serves only to obscure theoretical research in psychology and to maintain a rigidity born essentially of emotional ties and ethics alien to the nature of scientific inquiry" (pp 128-129).

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

#### NOTES

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the

suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-words in an association word test" (p. 139). Freud's predictions were only partially supported.

## G RESEARCH

### GALVIN SKIN RESPONSE

2002

Gravitz, Melvin (2002). Hypnosis as a counter-measure against the polygraph test of deception.. Polygraph Journal, 31, 293-297.

This article presents a bibliography of experimental and applied studies for reference by those interested in the use of hypnosis as a counter-measure in the "lie detector" test.

1999

De Pascalis, V.; Magurano, M. D.; Bellusci, A. (1999). Pain perception, somatosensory event-related potentials and skin conductance responses to painful stimuli in high, mid, and low hypnotizable subjects: Effects of differential pain reduction strategies. Pain, 83 (3), 499-508.

In this study, pain perception, somatosensory event-related potential (SERP) and skin conductance response (SCR) changes during hypnotic suggestions of Deep Relaxation, Dissociated Imagery, Focused Analgesia, and Placebo, compared with a Waking baseline condition, were investigated. SERPs were recorded from frontal, temporal, central, and parietal scalp sites. Ten high, 9 mid, and 10 low hypnotizable right-handed women participated in the experiment. The following measures were obtained: (1) pain and distress tolerance ratings; (2) sensory and pain thresholds to biphasic electrical stimulation delivered to the right wrist; (3) reaction time and number of omitted responses; (4) N2 (280+/-11 ms) and P3 (405+/-19 ms) peak amplitudes of SERPs to target stimuli delivered using an odd-ball paradigm; (5) number of evoked SCRs and SCR amplitudes as a function of stimulus repetition. Results showed, high, mid and low hypnotizables exhibited significant reductions of reported pain and distress ratings during conditions of Deep Relaxation/Suggestion of Analgesia, Dissociated Imagery and Focused Analgesia. High hypnotizable subjects displayed significant reductions in pain and distress levels compared to mid and low hypnotizables during Dissociated Imagery, Focused Analgesia and, to a lesser degree, during Deep Relaxation. Placebo condition did not display significant differences among hypnotizability groups. High hypnotizables, compared to mid and low hypnotizables, also showed significant increases in sensory and pain thresholds during Dissociated Imagery and Focused Analgesia. High, mid, and low groups showed significant reductions in P3 peak amplitudes across all hypnosis conditions and, to a lesser degree, during Placebo. The temporal cortical region was

the most sensitive in differentiating SERP responses among hypnotizability groups. On this recording area the subjects highly susceptible to hypnosis displayed significantly smaller P3 and greater N2 peaks during Focused Analgesia than did the other hypnotizable groups. In this condition highly susceptible subjects also reported the highest number of omitted responses and the shortest Reaction Times. These subjects also showed faster habituation of SCRs when compared with mid and low hypnotizables. During Dissociated Imagery and Focused Analgesia, highly hypnotizable subjects also disclosed a smaller total number of evoked SCRs than did mid and low hypnotizable subjects. The results are discussed considering possible common and different mechanisms to account for the effects of different hypnotic suggestions.

Abstract from National Library of Medicine, PubMed

1996

Lee, Lai H.; Olness, Karen N. (1996). Effects of self-induced mental imagery on automatic reactivity in children. Journal of Developmental and Behavioral Pediatrics, 17 (5), 323-327.

The purposes of this research study were: (1) to determine whether changes in cardiac rate, skin temperature, and/or electrodermal activity occur as children change mental imagery and (2) to determine whether such changes are related to age, sex, or other variables.

Children who were evaluated in this study had no previous experience with hypnosis or biofeedback training and were in good health with no learning disabilities. Thirty-eight boys and 38 girls ranging in age from 5 to 15 years were studied in a comfortable setting with a constant room temperature and biofeedback equipment. A Procomp 5DX computer software unit was used to measure autonomic reactivity during baseline and mental processing periods. After baseline monitoring indicated stabilization of autonomic measures, each child was asked to think about being in a quiet, pleasant place for 120 seconds. Pulse rate, skin temperature, and electrodermal activity were recorded. A resting period followed, and each child was then asked to think about an exciting activity, such as a preferred sports activity, for another 120 seconds. At the end of this monitoring, each child was asked to describe what had been his/her mental imagery during the two monitoring periods. Data analysis used paired t tests and repeated measures analysis of variance. For all children, the pulse rates showed significant decreases ( $p < .001$ ) during quiet and relaxing imagery and significant increases ( $p < .001$ ) during active imagery. Skin temperatures increased significantly ( $p < .001$ ) during quiet imagery and active imagery, whereas electrodermal activity decreased ( $p < .001$ ) during active imagery. Observed changes did not relate to age or sex.

The results confirm our clinical observations that deliberate changes of mental imagery by children results in immediate autonomic changes. Questions evolving from this study and similar studies done in adults are: (1) Do average-thinking processes impact on autonomic changes over long periods of time and (2) do these changes ultimately impact on health, such as cardiovascular status?

Wickramasekera, Ian; Pope, Alan T.; Kolm, Paul (1996). On the interaction of hypnotizability and negative affect in chronic pain: Implications for the somatization of trauma. Journal of Nervous and Mental Disease, 184 (10), 628-635.

The high risk model of threat perception predicts that high hypnotizability is a risk factor for trauma-related somatization. It is hypothesized that high hypnotizability can increase experimentally induced threat or negative affect, as measured by skin conductance level, in a linear or dose-response manner. This hypothesized interaction of hypnotic ability and negative affect was found in a consecutive series of 118 adult patients with chronic pain symptoms. Larger increases in skin conductance levels during cognitive threat were significantly related to higher levels of hypnotizability. In addition, individuals with high hypnotizability retained higher skin conductance levels than individuals with low hypnotizability after stress. The clinical implications of the interaction of hypnotizability and negative affect during threat perception and delayed recovery from threat perception are discussed in terms of cognitive mechanisms in the etiology and therapy of trauma-related dissociative disorders.

1995

Olness, Karen N.; Lee, Lai (1995, November). Effects of self-induced mental imagery on autonomic reactivity in children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

One study that shows an IgA increase with hypnotic suggestion has been replicated and is in press.

The present study emerges from work using hypnosis with biofeedback. Morgan's work with athletes has suggested the relationship between imagery and physiological activation. This has been observed clinically but not heretofore documented.

We are not using formal hypnosis. Each child was asked to think about being in a quiet place, doing exciting activities, baseline, etc. The children exhibited no neurological disorders, cognitive dysfunction, nor were they on medications at time of the study.

We confirmed our clinical experience: there was an increase in pulse rate when imagery changed to activity. Skin temperature continued to go up during the period (despite imagery of being active like being on roller coaster). Skin conduction went down during baseline. EDA [electrodermal activities] was higher during active imagery.

How do average daily thinking processes impact on autonomic changes over long periods of time? Do these changes affect cardiovascular status?

Clinically we observed that some children are more labile in different modalities, and under stress they react more in that system.

Wickramasekera, Ian (1995, November). Hypnotic ability, skin conductance, and chronic pain. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

T. X. Barber's book in 1969 states that hypnotizability is unrelated to psychopathology. Hilgard's book states that hypnotic ability and negative reactivity are unrelated. However clinicians working with somatization-type symptoms (headache, irritable bowel disease) may observe a surplus of people very high or low in hypnotic ability. How do we account for the discrepancy between clinic and lab?

Is this a context effect, since I only see people who are sick? It turns out that the low hypnotizable patients present mainly in primary care, medicine and surgery. The highs present with psychophysiological problems.

The author posits that when hypnotic ability and negative affectivity coincide, they lead to physical disease. (He uses "negative affectivity" for what used to be called Neuroticism.) Negative affect is not simply verbal report; one must also consider autonomic physiology as part of it (cf.. Dan Weinberger's research).

Highs are at risk for illness because: 1. They can amplify or attenuate signals of threat. 2. They demonstrate surplus pattern recognition (see meaning in randomly distributed events). 3. They have surplus empathy (poor boundaries).

Lows are at risk because: 1. They deny or attenuate the role of cognitive and emotional events on somatic symptoms. 2. They demonstrate rigidity in information processing; they are locked into critical, sequential, analytical information processing.

Under low stress (mental math), Lows and Highs do not differ on Subjective Units of Distress (SUDS) for mental arithmetic; for high stress (more difficult math) there is a large difference between groups.

High, Medium, and Low hypnotizable Ss with chronic pain and no observable pathology (TMJ, back pain, etc.) were measured on skin conductance (EDR): there were no differences during baseline, but differences emerged during a stress condition. We did not find this kind of difference using muscle tension! Patients were not on medications. GSR is a purely sympathetic nervous system measure, unlike heart rate that also has parasympathetic input. There is almost a dose-response relationship between hypnotizability and reactivity with GSR under stress conditions.

High Hypnotizable and High Negative Emotion Subjects: EDR 12.5 SUDS 63.5 Lie Scale (Marlowe Crowne)

Moderate Hypnotizable and Low Negative Emotion Subjects: EDR 3.77 (p.<.01) SUDS 66.5 (n.s.) Lie Scale 20.7 (p.0001).

Thus, you could not see a difference in these two groups from their verbal report, their MMPI, or an interview. Their distress is out of mind [but not out of body].

We also studied Body Mass Index (weight related to height), which correlates highly with adiposity (Garrow, 1983). We used High Hypnotizable - High Neuroticism Subjects, compared to Medium Hypnotizable - Low Neuroticism Subjects. H-H BMI = 34.6 M-L BMI = 24.1 (significantly different, though preliminary results).

If you just use a correlation you won't see this result. You have to consider both hypnotizability and negative emotion together.

**COMMENTS FROM THE AUDIENCE:**

Question re Marlowe Crowne as a measure of defense.

Wickramasekera's answer: I believe it is orthogonal to hypnotizability and both are pathways to pathology. I look at both the Marlowe Crowne and Neuroticism.

Auke Tellegen: In Weinberger's research you need to see an interaction between test variables. I think you should view them independently, not assume an interaction.

Zamansky, Harold S.; Ruehle, Beth L. (1995). Making hypnosis happen: The involuntariness of the hypnotic experience. International Journal of Clinical and Experimental Hypnosis, 43 (4), 386-398.

The authors tested the hypothesis that hypnotized individuals do not truly experience their responses to suggestions as occurring involuntarily, but instead absorb themselves in imagery that is congruent with the suggestions while avoiding critical thoughts, or even simply comply with suggestions without genuinely experiencing their responses as nonvolitional. Participants were instructed to engage in thoughts and imagery that conflicted with the suggestions given, were urged to pay attention to their behavior, and were questioned regarding the perceived involuntariness of their responses. Simultaneously, electrodermal skin conductance responses provided a measure of the truthfulness of their reports. It was found that responses to all hypnotic suggestions were reported as being involuntary, in spite of the conflicting imagery and increased saliency, and that these reports were truthful. These findings provide disconfirming evidence for the sociocognitive theories of hypnosis.

1994

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1994). Is the hypnotized subject lying?. Journal of Abnormal Psychology, 103, 184-191.

Do the verbal reports of deeply hypnotized Subjects truthfully reflect their subjective experiences of hypnotic suggestions? Exp 1 established that the electrodermal skin conductance response (SCR) provides an effective method for detecting deception in the laboratory equally well in hypnotized and nonhypnotized Subjects. In Exp 2, deeply hypnotized and simulating Subjects were administered a number of hypnotic suggestions in a typical hypnotic session, without mention of deception, and were questioned about their experiences while SCR measures were recorded concurrently. Results indicate that 89% of the hypnotized Subjects' reports met the criterion for truthfulness, whereas only 35% of the simulators' reports met this criterion. Implications for the theory of hypnosis are discussed.

Smith, Julien T. (1994). Hypnosis and distraction in the relief of medical pains in an ethnically diverse population of young children (Dissertation, Washington State

University, Pullman). Bulletin of Division 30, Psychological Hypnosis, APA, 4 (3), 11.

An ethnically diverse sample of children (N = 36) and their parents volunteered for the study and were trained, with the expectation of equal effects, to use both distraction and imaginative involvement to reduce pain and anxiety. Standardized measures of pain, anxiety and hypnotizability were obtained. Skin conductance response confirmed pain stimulation. Half the subjects used imaginative involvement first and the other half used distraction first. All procedures were video taped. Blind raters judged subjects' responses and subjects reported pain on a standardized scale. Data were collected at baseline, during two intervention sessions and at follow-up. Supporting Hilgard's neodissociation theory, hypnotizable subjects significantly reduced both subjective and objective pain and anxiety scores in response to hypnotic imagination involvement in contrast to low hypnotizable Ss. No significant effects were found for the distraction condition. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

Wickramasekera, Ian (1994, August). Chronic pain, hypnotic ability, and skin conductance levels. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

We did two studies on patients with chronic pain which was of severe or moderate intensity for 6 or more months, and was unresponsive to standard medical management.

#### STUDY 1.

We found that sorting patients into high, moderate, and low hypnotizable people, giving them cognitive stress (mental arithmetic), the groups differ. Highs, when not hypnotized, have a dose response relationship to the cognitive stress; they react stronger physiologically and take longer to return to baseline. We also found a relationship between hypnotizability and negative affect. Though their GSR is different, they don't perceive it (as measured by Subjective Units of Distress, or SUDS). We don't know what the relationship between these variables is like pre-morbidly however.

#### STUDY 1.

Predicting from High Risk Model. Predisposers [to illness], triggers (stress and hassles), and buffers interact.

There is evidence for a genetic component in hypnotizability, which is one of the predisposers. Male monozygotic twins  $r = .54$  Female monozygotic twins  $r = .49$  Male dizygotic twins  $r = .24$  Female dizygotic twins  $r = .08$  [May not have heard correct figure?]

Highs are at risk for illness because: 1. They can amplify or attenuate signals of threat. 2. They evidence surplus pattern recognition (see meaning in randomly distributed events). 3. They have surplus empathy (poor boundaries).

Lows are at risk for illness because: 1. They deny or attenuate the role of cognitive and emotional events on somatic symptoms. 2. They demonstrate rigidity in information processing.

Hypnotizability and electrodermal activity were studied in our first study. The highs are hypersensitive, like the princess and the pea. We obtained a statistically significant conditions effect (stress vs no stress) and hypnotizability x conditions effect.

#### STUDY 2.

We studied people high on both Hypnotizability and Negative Affectivity (a stable trait, with a genetic basis) or Neuroticism. This combination leads to problems. These people will amplify negative events. These two personality variables are orthogonal  $r = -.12$ . Tellegen et al, 1988, supports the genetic component. People high on Marlowe-Crowne have lower lifetime report of mental health symptoms. It too is orthogonally related to Hypnotizability.

We studied 138 chronic pain patients. We compared patients high on both hypnotizability and negative emotion to patients who had moderate hypnotizability and low negative affect. Electrodermal response (EDR) is 12.5 vs 3.7; SUDS is 63.5 vs 66.5 (indicating they had no perception of the electrodermal activity). The Lie score (Marlowe Crowne) is 17 vs 13. Patients high on both hypnotizability and negative emotion are more physiologically reactive than patients moderate on hypnotizability and low on neuroticism.

Out of mind (threat) is not out of body. If you give these people an MMPI or the Taylor Manifest Anxiety Scale you couldn't tell the difference between them.

The mechanisms we hypothesize can be used to block consciousness [by different means]: 1. High hypnotic ability (12-9) as in hypnotic analgesia 2. Low hypnotic ability (4-0) [Speaker didn't specify mechanism here.] 3. Repression (Negative emotion = 21 Lie = 67, a low Neuroticism score and high Marlowe Crowne suggest repression).

I focus on a group that is difficult to identify, the "somatacizer," because there is no identifying pathophysiology or psychopathology. To identify this type of patient we look at negative affect, coping skills, hypnotizability [missed notes on 3 other variables].

See recent paper in the journal \_Dissociation\_.

Wickramasekera, Ian (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. American Journal of Clinical Hypnosis, 37, 22-33.

The electrodermal response to cognitive threat of un hypnotized female patients with somatic symptoms and high on both hypnotic ability and neuroticism (H-H) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (M-L). On verbal report the H-H and the M-L groups did not differ, but they were significantly different on a measure of self-deception (L scale) or repression. The above findings are consistent with predictions from the High Risk Model of Threat Perception (HRMTP), which states that people in the H-H group are both chronically and

acutely more reactive to threat than the people in the M-L group. This finding may have important theoretical, clinical, and financial implications for the diagnosis, therapy, and prevention of somatization disorders seen in primary medical care.

Wickramasekera, Ian; Pope, Alan T.; Kolm, Paul (1994, August). Chronic pain, hypnotic ability and skin conductance level. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

The High Risk Model predicts that high hypnotic ability is a risk factor for the development of stress related psychophysiological disorders. It was hypothesized that greater threat perception as measured by skin conductance level (SCL) would be associated with higher levels of hypnotic ability. In a consecutive series of 118 adult patients with chronic pain symptoms, larger increases in SCL during cognitive stress were significantly related to higher levels of hypnotic ability. In addition, high hypnotic ability individuals retained higher SCL than low hypnotic ability individuals after stress. The clinical implications of high hypnotic ability for threat perception and recovery from threat perception are discussed in terms of cognitive mechanisms in the etiology and therapy of chronic stress related disorders. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

**1993**

Wickramasekera, Ian (1993, August). Some psychophysiological and clinical implications of the coincidence of hypnotic ability and neuroticism during threat perception. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

The electrodermal response to cognitive threat (mental arithmetic) of un hypnotized female patients with somatic symptoms, high on hypnotic ability and high on neuroticism (high-high) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (moderate-low). On verbal report or a subjective units of distress scale (SUDs), the high-high and moderate-low groups did not differ, but they were significantly different on a measure of self-deception or repression. The above findings are consistent with predictions from the High Risk Model of threat perception. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1993, Vol. 2, No. 3.)

**1992**

Miller, Scott D.; Triggiano, Patrick J. (1992). The psychophysiological investigation of multiple personality disorder: Review and update. American Journal of Clinical Hypnosis, 35, 47-61.

**NOTES**

A review and methodological critique. Updates Putnam, 1984. Currently, psychophysiological differences reported in the literature include changes in cerebral

electrical activity, cerebral blood flow, galvanic skin response, skin temperature, event-related potentials, neuroendocrine profiles, thyroid function, response to medication, perception, visual functioning, visual evoked potentials, and in voice, posture, and motor behavior. Reviews the new research on the psychophysiological investigation of MPD from published, unpublished, and ongoing studies, and attempts to place current findings into a conceptual framework. Authors note results from unpublished and ongoing studies and include a critical analysis of current research methodology as well as suggestions for future research.

**1991**

**Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1991, August). Is the hypnotized subject lying?. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.**

To determine whether or not hypnotized subjects misrepresent or lie about their hypnotic experiences, electrodermal skin conductance responses were measured while groups of deeply hypnotized subjects and simulators responded to questions about their experiences to a series of suggestion. 89% of the responses of the hypnotic subjects met the criteria for truthfulness, while 65% of the responses of the simulators indicated deception. Differences between "reals" and simulators were highly significant. The relevance of the results for the nature and theory of hypnosis is discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.) NOTES 1: This article is based on an Award Winning Paper presented at the American Psychological Convention in San Francisco, 1991.

**Russell, Christine; Davey, Graham C. (1991). The effects of false response feedback on human 'fear' conditioning. Behaviour Research and Therapy, 29 (2), 191-196.**

Describes a human electrodermal conditioning experiment in which 28 students (aged 19-30 yrs) were given false skin conductance feedback during conditioned stimulus/stimuli (CS) presentation. In comparison with attentional control groups, Ss who believed they were exhibiting a strong conditioned response (CR) did actually emit a greater magnitude CR, while Ss who believed they were exhibiting a weak CR emitted a lower magnitude CR. When both self-report and behavioral measures of unconditioned stimulus/stimuli (UCS) evaluation were taken after conditioning, response feedback (RFB) had not differentially affected Ss' evaluation of the aversiveness of the UCS. The response modulating effects of RFB may not be caused by RFB influencing evaluation of the UCS, but they are consistent with the hypothesis that beliefs about the nature of RFB influence the strength of the UCS representation itself.

**1990**

**Sturgis, Laura M.; Coe, William C. (1990). Physiological responsiveness during hypnosis. International Journal of Clinical and Experimental Hypnosis, 38, 196-207.**

Four physiological measures - electromyogram, respiration rate, heart rate, and skin conductance - were recorded for 11 high and 11 low hypnotizability Ss. It was hypothesized (a) that physiological responsiveness during hypnosis would vary depending on the nature of the task instructions, and (b) that high hypnotizability Ss would show more physiological responsiveness than low hypnotizability Ss. The first hypothesis was substantiated across all 4 measures. Only heart rate levels supported the second hypothesis. The results are discussed as they relate to the 1 hypotheses and to future research.

Wain, Harold J.; Amen, Daniel G.; Jabbari, Bahmann (1990). The effects of hypnosis on a Parkinsonian tremor: Case report with polygraph/EEG recordings. American Journal of Clinical Hypnosis, 33, 94-98.

Although Parkinsonian tremors typically disappear during sleep and are reduced during relaxation periods, the effects of hypnosis on this type of movement disorder have been generally ignored. We observed a patient's severe Parkinsonian tremor under hypnosis and monitored it with EEG and EMG studies. The patient was taught self-hypnosis and performed it three to four times daily in conjunction with taking medication. The results suggest that daily sessions of self-hypnosis can be a useful therapeutic adjunct in the treatment of Parkinsonian tremors. NOTES 1:

#### NOTES

The patient scored low on the Hypnotic Induction Profile scale of hypnotizability and was unable to experience any classical hypnotic phenomena, but was motivated to learn self-hypnosis. For self hypnosis he visualized a relaxing scene.

Griffiths, M. D.; Gillett, C. A.; Davies, P. (1989). Hypnotic suppression of conditioned electrodermal responses. Perceptual and Motor Skills, 69, 186.

#### NOTES

With 5 subjects who had previously been aversively conditioned to a stimulus, during hypnosis previously acquired electrodermal responses were found to be significantly lower than in 12 control Ss. Thus previously conditioned electrodermal responses were suppressed. This contradicts findings of Edmonston (1968) who found that neutral hypnosis does not influence conditioned electrodermal responses and the validity of Pavlov's (1927) conditioning (inhibition) theory of hypnosis.

#### 1988

Davies, Peter (1988). Some considerations of the physiological effects of hypnosis. In Heap, Michael (Ed.), Hypnosis: Current clinical, experimental and forensic practices (pp. 61-67). London: Croom Helm Ltd.

#### NOTES

This chapter reviews literature on physiological correlates of hypnosis, but these notes are limited to only one fact reported in the review. The author writes, 'A recently completed, and as yet unpublished study by C. Gillett and H. D. Griffiths at

Bradford University investigated the relation between hypnosis and classical conditioning of psychophysiological responses. In a complex design involving both normal conditioning and normal test trials and a repetition of both acquisition and test trials under hypnosis, they found not only suppression of the conditioned response but also suppression of skin conductance responses to the half-second bursts of a 115-dB tone used as the unconditioned stimulus. Not to produce a significant autonomic response to such an intrinsically aversive stimulus is a remarkable feat which is probably outside the repertoire of simulators. However, even such results are not conclusive as the design did not include simulator control groups nor even neutrally instructed non-hypnotized group' (pp. 64-65 ).

Gruzelier, John; Allison, James; Conway, Ashley (1988). A psychophysiological differentiation between hypnotic behaviour and simulation. International Journal of Psychophysiology, 6, 331-338.

Psychophysiological differentiation between conditions of hypnosis and simulation were examined with markers evolved from a series of experiments charting neuropsychophysiological accompaniments of hypnotic behaviour. Eighteen subjects participated in two sessions in which bilateral electrodermal activity was monitored to moderate intensity tones. Measurement in Session I, a Baseline-Control, of individual variation in rates of habituation of orienting responses, non-specific responses and tonic levels of skin conductance, enabled allocation of matched groups to Session II in which the same auditory stimuli were mixed with a taped hypnotic induction. Half the subjects were instructed to fake hypnosis and the others to comply. In session II the groups were differentiated as follows: (1) rate of habituation to the tones was retarded in the simulation condition and facilitated in the hypnosis condition compared with baseline; (2) the incidence of non-specific electrodermal responses was elevated in simulators after instructions to 'fake hypnosis'; (3) right-hand levels of skin conductance were elevated in simulators; (4) all but one subject in the hypnosis condition admitted to hearing the tones whereas all but one in the simulation condition claimed not to have heard them.

1987

Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, 7-8.

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10 on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

NOTES

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0.

Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

1986

Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027)

Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic indices as dependent variables. These analyses were performed on the original

sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimediation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

Venturino, Michael (1984, August). Perceptual monitoring and allocation of attention (Dissertation, University of Maine). Dissertation Abstracts International, 45 (2), 707-B.

The processing ability of perceptual monitoring was investigated using a dichotic listening and shadowing task. Individual differences in the effectiveness of perceptual monitoring were also investigated by using susceptibility to hypnosis as a grouping factor. Subjects' skin conductance response (SCR) was conditioned to specific words by an electric shock. These conditioned words, and words semantically and acoustically related to them were presented in the relevant and irrelevant messages of the dichotic listening and shadowing task. Probability and magnitude measures of SCRs and subjects' verbal shadowing accuracy were used to assess performance. SCRs to critical words were significantly greater than to control words in both the relevant and irrelevant messages. However, the SCRs to words in the irrelevant messages were not as great as those responses elicited to words in the relevant message. The pattern of responding to the semantically and acoustically related words was similar for both the relevant and irrelevant messages. Subjects low in hypnotic susceptibility responded to critical words with significantly greater probability and magnitude of response than did subjects high in hypnotic susceptibility. Analysis of the shadowing performance data showed that the

perceptual monitoring process was quite effective. The occurrence of the conditioned word in the irrelevant message caused a shift in attention to the irrelevant message, manifested by a shadowing error. Subjects shadowing the message in their left ear committed significantly more shadowing errors than subjects shadowing the message in their right ear. No differences in shadowing performance were obtained for the hypnosis factor. The results were interpreted in terms of the deployment of attention to the environment, and the relationship of this deployment to the perceptual monitoring process" (p. 707).

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.

1982

Barabasz, Arreed F. (1982). Restricted environmental stimulation and the enhancement of hypnotizability: Pain, EEG alpha, skin conductance and temperature responses. International Journal of Clinical and Experimental Hypnosis, 30, 147-166.

Restricted environmental stimulation procedures were used with 10 Ss. The Stanford Hypnotic Clinical Scale: Adult, modified to include a posthypnotic suggestion for an analgesic reaction, and pain threshold and tolerance tests were administered prior to restricted environmental stimulation technique (REST), immediately after REST, and 10-14 days later. Occipital EEG alpha, skin conductance, and peripheral, core, and chamber temperature data were collected prior to, during, and after REST. A control group of 10 Ss was used to assess the effects of repeated hypnosis upon susceptibility scores and demand characteristics of the experiment. Multivariate analysis of variance results showed SHCS and pain tolerance scores to be significantly enhanced for Ss exposed to REST immediately after and 10-14 days later. Orne's (1959) postexperimental inquiry technique did not reveal experimental demand characteristics which might account for the results. EEG alpha density increased significantly in REST, but the increase was not progressive during the REST period. The maintenance of hypnotizability and pain tolerance at follow-up failed to support Reyher's (1965) theory of brain function and

behavioral regulation. E. R. Hilgard's (1977) neodissociation interpretation combined with J. R. Hilgard's (1974, 1979) imaginative involvement findings is viewed as a possible explanation.

**Brende, Joel O. (1982). Electrodermal responses in post-traumatic syndromes: A pilot study of cerebral hemisphere functioning in Vietnam veterans. Journal of Nervous and Mental Disease, 170, 352-361.**

This paper summarizes the findings of a pilot study which found a relationship between the post-traumatic symptoms of a) psychic numbing, b) intrusive recollections of traumatic events, and c) hypervigilance and lateralization of electrodermal response (EDR) measurements in six victims of psychological trauma. Hypnotically induced imagery of past traumatic events was often associated with left-sided EDR increases, psychic numbing with left-sided EDR decreases or bilateral EDR unresponsiveness, and revivifications of hypervigilant states with right-sided EDR lateralization. In several cases control of the experience of fear was associated with left- sided or bilaterally decreased EDR. These pilot study findings support previously stated hypotheses: a) EDR obtained from an extremity reflects contralateral cerebral hemisphere functioning; b) left hemisphere functioning is associated with hypervigilance; and c) right hemisphere functioning is associated with emotions and imagery. In addition, the pilot study findings suggest additional hypotheses: a) Post- traumatic symptoms are associated with poorly controlled or integrated cerebral hemisphere functioning; b) psychic numbing and intrusive images, flashbacks, and nightmares are associated with abnormal activation, suppression, or integration of right hemisphere functioning in relationship to the left; c) aggressive behavior, hypervigilance, and character pathology are associated with abnormal activation, suppression, or integration of functioning of the left hemisphere function in relationship to the right; and d) "splitting" as a psychological defense in Vietnam veterans with Borderline Personality Disorders is associated with physiologically impaired interhemispheric integration.

#### **NOTES**

The authors report that previous research suggests that electrodermal asymmetry may be related to emotional factors. They further suggest that electrodermal responsiveness reflects contralateral cerebral hemispheric functioning, with lower GSR associated with higher activation of the opposite cerebral hemisphere (see Lacroix and Comper, 1979). They indicate that the right hemisphere, which is involved in experience of emotion, also is associated with depression (when there is abnormal inhibitory function of right hemisphere) and affective disorders. The left hemisphere is involved in vigilance (Dimond & Beaumont, 1974). "Based on these findings, the post-traumatic symptoms hypervigilance, anxiety, and behavior disorders appear to be associated with atypical left hemisphere activation, intrusive recollections of traumatic memories and disturbing emotional states with atypical right hemisphere activation, and psychic numbing or emotional unresponsiveness with diminished right hemisphere activation, or overactivation of the left hemisphere" (p. 354).

In this pilot study, the therapist, who used hypnosis in all but one case, interviewed the patient for 30-50 minutes, focusing on helping the S to recall experiences of a traumatic nature. The therapist was supportive when disturbing emotions were evoked, responding flexibly by monitoring S's anxiety and moving back and forth between uncovering and supportive techniques.

#### **SUMMARY**

There were observably variable changes and bilateral differences in EDR within each of the six subjects in relationship to varying verbal, emotional, and imagery content, postulated to reflect contralateral hemispheric functioning. These observed changes were considered conclusive evidence of such functioning in post-traumatic states" (p. 358). "1. Lateralization of EDR to the left is associated with unpleasant emotions and traumatic imagery. ... "2. Lateralization of EDR to the right is associated with hypervigilance and aggressive outbursts. ... "3. Psychic numbing is associated with inhibition of bilateral EDRs (for example, lack of bilateral EDR activation occurred in every case at times) or with suppression of the left EDR. ... "4. General physiological arousal, a normal response to fear, is associated with increased EDRs bilaterally. ... "5. Relaxation and the subjective experience of safety and well-being, which have been reported to foster interhemispheric integration in normal subjects ... were observed to be associated with bilaterally decreased EDR in case I, an example of a less severe post- traumatic condition, but not observed during attempts at relaxation in Vietnam veterans with more severe post-traumatic symptoms. "6. Voluntary efforts to cognitively control fear were related to left hemispheric functioning, as observed in case IV when the subject attempted to control intrusive thoughts with cognitive activity and in Case III following the revivification of a frightening event when he made a shift from the hypnotic trance state to waking cognitive activity. In both cases, such cognitive activity was associated with a decreased right-sided EDR" (p. 359).

**DISCUSSION:** "The results of this pilot study, which demonstrated frequent EDR differences between hands during subjects' recollections of or attempts to suppress recollections of prior traumatic experiences, alters the traditional belief that increased skin conductance is always a predictable physiological measurement when the electrode is placed on only one hand, as Lacroix and Comper (46) have pointed out.

"The finding of EDR lateralization is consistent with the findings of deBonis and Baque (10) who reported that the degree of anxiety determines the presence of lateralization of EDR responses, of Gruzelier and Venables (30, 32) and Myslobodsky and Horesh (53) who reported that the presence or absence of psychopathology determines the direction of the lateralized response, and of Lacroix and Comper (46) that activation of one hemisphere may suppress contralateral EDR" (p. 359)

Holroyd, Jean; Nuechterlein, Keith; Shapiro, David; Ward, Frederick (1982). Individual differences in hypnotizability and effectiveness of hypnosis or biofeedback. International Journal of Clinical and Experimental Hypnosis, 30 (4), 45-65.

8 high and 8 low hypnotizable Ss used biofeedback and hypnosis to lower blood pressure in one session and forehead EMG activity in another session. Results were analyzed by repeated measures analyses of covariance using baseline physiological level on the dependent variable as the covariate. Electromyographic level was reduced more immediately by biofeedback than by hypnosis. When the task was to lower blood pressure, blood pressure and skin conductance were more effectively reduced by hypnosis than by biofeedback, considering only the first half of each session to eliminate within-session transfer effects. Hypnotizability did not predict overall outcome. Factors which may have prevented demonstrating a clearer relationship between hypnotizability and success using biofeedback or hypnosis are discussed. State and trait anxiety, cognitive strategies used during the tasks, and self-reported hypnotic depth are examined for correlates of successful performance.

On the basis of alternative hypotheses in the literature, 9 invited Ss undergoing wintering-over isolation at Scott Base, Antarctica, were tested for EEG alpha and hypnotizability. 8-channels of EEG, bipolar skin conductance (SC) and hypnotizability data were collected at Scott Base prior to and following the wintering-over isolation. Significant increases in alpha density and hypnotizability were found in Ss following isolation. The previously reported relationship between simple eyes closed alpha density and hypnotizability was not found prior to isolation; however, this correlation approached significance following isolation. The possible influence of psychophysiological arousability on baseline EEG alpha records was considered. Correction of EEG records using SC indices of arousal resulted in a significant correlation between EEG alpha and hypnotizability following isolation. A tendency toward significance was evident in the pre-isolation, SC corrected, correlation. The significant influence of environment on EEG alpha and hypnotizability is discussed as is the use of SC arousal indices to enhance EEG alpha/hypnotizability correlations.

1978

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant

differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables. The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

Weerts, Theodore C.; Lang, Peter J. (1978). Psychophysiology of fear imagery: Differences between focal phobia and social performance anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 1157-1159.

Spider phobics and speech anxious subjects imaged fear scenes with spider and public-speaking content and a series of standard scenes that were constructed to vary in degree of emotional arousal and movement. Heart rate, skin conductance, and ocular activity were recorded. Spider phobics rated all imagery contents as more vivid and reported more scene movement than speech anxious subjects. Both groups responded to their own fear scenes with higher ratings of emotion and a greater physiological response than to the other group's fear scenes. The arousal response of spider phobics to relevant fear scenes was greater than that of speech anxious subjects. The data suggest that the outcome of imagery-based therapies may be partly determined by type of fear.

1975

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

**This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.**

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

**Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.**

**1973**

**Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)**

#### **NOTES**

**Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2: This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify**

and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

**1971**

McAmmond, D. M.; Davidson, P. O.; Kovitz, D. M. (1971). A comparison of the effects of hypnosis and relaxation training on stress reactions in a dental situation. American Journal of Clinical Hypnosis, 13, 233-242.

From Journal of Hypnosis, 1997, Vol. 23, p. 3. Continue typing the Abstract here exactly as found in the source, indenting paragraphs as in the source

#### NOTES

Compared the effectiveness of relaxation, hypnosis, and a control condition in reducing in dental phobics the reaction to pressure-algometer stimulation and the injection of anesthesia. For subjects with high baseline skin-conductance levels, relaxation was most effective in reducing stress reactions. Hypnosis did not differ from the control condition. For subjects with a medium or low skin-conductance baseline, relaxation was not effective. The hypnosis group rated their treatment as most effective, and the controls rated their treatment as least effective. Five-month follow-up indicated that all subjects in the hypnosis group returned for dental treatment and that 5 of 10 in the control group and only 1 of the relaxation group returned for care.

**1963**

Tart, Charles T. (1963). Hypnotic depth and basal skin resistance. International Journal of Clinical and Experimental Hypnosis, 11, 81-92.

This investigation studied the relationship between a self-report scale for measuring the depth of the hypnotic state and basal skin resistance (BSR). The self-report scale accurately predicted the occurrence of hypnotic dreaming and amnesia, traditional criteria for medium and deep hypnotic states. BSR showed a high, positive correlation with the self-report depth scale. The data suggest that both the self-report scale and BSR may be useful measures for detecting changes in hypnotic depth. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

Germann, A. C. (1961). Hypnosis as related to the scientific detection of deception by polygraph examination: A pilot study. International Journal of Clinical and Experimental Hypnosis, 9, 309-311.

Results obtained from 5 college students suggests that hypnotic amnesia does not surreptitiously defeat the polygraphy process, and that hypnotically induced exaggeration of responses may assist the examining process. From Psyc Abstracts 36:04:4II09G. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Kline, Milton V. (1960). Hypnotic age regression and psychotherapy: Clinical and theoretical. International Journal of Clinical and Experimental Hypnosis, 8, 17-35. (Abstracted in Psychological Abstracts, 62: 2 II 17K)

This paper deals with the experiential use of hypnotically induced age regression as a therapeutic process. Treatment successes were attributed to an intensification of the transference relationship. A main focus was the nature of the regressive relationship and its experiential qualities in relation to general hypnosis. Reid polygraph results suggest the perceptual reality of age regression to Ss. The phenomenon is discussed in terms of Piaget's genetic model. From Psyc Abstracts 36:02:2II17K. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Sutcliffe, J. P. (1960). 'Credulous' and 'sceptical' view of hypnotic phenomena. International Journal of Clinical and Experimental Hypnosis, 8 (1), 73-102.

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From Psyc Abstracts 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1959

Barber, Theodore Xenophon; Coules, John (1959). Electrical skin conductance and galvanic skin response during 'Hypnosis'. International Journal of Clinical and Experimental Hypnosis, 7 (2), 79-92.

#### Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'
2. Skin conductance generally increased throughout the remainder of the experiment, i.e., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.
3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'

4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.

5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who showed a GSR stated, during or after the experiment, that they were by no means convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.

6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'-hypnotic behavior.)

"Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1. Ss do not necessarily become more 'passive' or 'relaxed' during the 'hypnotic induction procedure.'

2. Ss often become more and more 'excited' and 'aroused' when they are given a series of 'active' suggestions such as 'sensory hallucinations,' 'age-regression,' etc.

3. Ss often show momentary 'excitement' when they are 'hallucinating.'

4. A pinprick can 'arouse' a S to the same extent during 'hypnotic analgesia' as it can during 'normal waking.' In addition, 'hypnotic analgesic' Ss are often just as much 'aroused' by the threat of a pinprick as they are by an actual pinprick.

5. Many Ss become momentarily 'excited' when they are asked to look directly at an object (or person) which they have been told they will not be able to see. However, some Ss do not show this momentary 'excitement.'

6. Although Ss may state that they do not 'remember' the 'post'-hypnotic suggestion, they often become momentarily 'excited' when the E makes preliminary motions to give the signal for the 'post'-hypnotic act" (pp. 90-92).

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. ( Abstracted in Psychological Abstracts, 61: 6626)

## NOTES

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

**Urogenital System**

**Gastrointestinal System**

**Metabolism and Temperature**

**Endocrine System**

**Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)**

**Special Senses (Hearing, Taste)**

**1958**

**Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.**

**Summary**

**"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.**

**"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).**

**1956**

**Sears, Alden B.; Beatty, Jeanne M. (1956). A comparison of galvanic skin response in the hypnotic and waking state. Journal of Clinical and Experimental Hypnosis, 4 (2), 49-60.**

**Summary.**

**In this experiment an attempt was made to determine whether or not there was a difference in the galvanic skin response between waking and hypnotic questioning. The 24 subjects were randomly assigned to one of four groups, each group following a different sequence of experimental conditions. During the first session, each subject observed a table top setup for 30 seconds and then wrote out what he could remember in both the waking and hypnotic states. During the second session, which followed seven or eight days after the first, each subject was asked a series of 14 questions concerning the table top setup. Half of the subjects answered the questions first in the waking and then in the hypnotic state; for the remaining 12 subjects hypnotic questioning preceded waking questioning. The galvanic skin response was recorded for both the waking and hypnotic questioning of all subjects, and the**

amount of deviation was measured in millimeters. Because the subjects tended to respond more slowly during the hypnotic questioning than during the waking questioning, a direct comparison of the amount of deviation in the two states could not be made. Consequently, two indicators of amount of deviation were considered necessary: mean deviation per second (D/T) and the mean average deviation (D/ND). No significant differences were found between the waking and hypnotic questioning in a comparison of the mean deviation per second for the group and for the males alone. However, there was a difference between waking and hypnotic questioning in the mean deviation per second for females, significant at the .01 level of confidence. The difference between the waking and hypnotic measures of the mean average deviation were also not significant for either the total group or for the males. For females, this difference was significant at the .001 level of confidence. No attempt was made to explain this apparent sex difference in the behavior of the galvanic skin response. It was suggested that further research be done to confirm and account for these results. The differences between the results of male and female subjects in this experiment, where procedures were the same for both, may account for the conflicting reports found in the literature. In many of the reported experiments the sex of the subjects has not been noted" (pp. 57-58). The questions were factual in nature, e.g. "What object is in the lower right hand corner."

1952

West, Louis Jolyon; Niell, Karleen C.; Hardy, James D. (1952). Effects of hypnotic suggestion on pain perception and galvanic skin response. A. M. A. Archives of Neurology and Psychiatry, 68, 549-560.

A study is reported in which pain perception and galvanic skin responses of seven subjects were measured before and during hypnosis. The depths of hypnotic trance varied from light to deep. Stimuli of measured intensity were administered, and changes in pain threshold were measured. Quantitative estimates of pain intensity were made by the subjects. Alterations in ability to discriminate between pains of differing intensities were noted. Quantitative records of galvanic skin responses were utilized, permitting statistical analysis of data from matched pairs. Data were collected at 45 experimental sessions, during which a total of 478 painful stimuli were administered, the stimuli varying in intensity from threshold to blister-producing levels. At each session, the subject's sensations from and responses to stimuli during a control period were compared with sensations from and responses to identical stimuli administered after hypnotic suggestions of anesthesia. The following observations were made: 1. Hypnotic suggestions of anesthesia influence pain perception by causing elevation of pain threshold, hypalgesia, and analgesia. 2. When hypnotic suggestions of anesthesia caused hypalgesia and elevation of pain threshold, ability to discriminate among stimuli of different intensities was impaired. 3. There was a general correlation between the depth of hypnotic trance and the degree to which pain perception was altered by hypnotic suggestion. 4. The galvanic skin response to noxious stimulation was diminished, and it sometimes disappeared, as a result of hypnotic suggestions of anesthesia. The galvanic skin

response was affected even when there was no alteration in pain perception, according to subjective reports. NOTES 1:

NOTES: The authors review literature on the effects of analgesia suggestions on the galvanic skin response and other autonomic nervous system responses. The present study differs from previous studies in the following ways: "1. The subjects were studied in various stages of hypnosis. 2. Quantitatively determined noxious stimuli were used instead of pinching or pinprick. 3. Changes in pain threshold were measured. 4. Quantitative estimates of pain intensity were made by the subject in the hypnotized and the un hypnotized state. 5. Changes in ability to discriminate between pains of differing intensity were noted. 6. Quantitative records of galvanic skin responses in the control and in the hypnotized state were utilized" (p. 552).

Analgesia was defined as "that state in which none of the noxious stimuli administered were reported as painful;" hypalgesia was defined as "a state in which noxious stimuli were reported as less painful than would be expected on the basis of reports of the same subject regarding the same stimuli in control situations" (p. 554).

In their Discussion, the authors state, "As a result of hypnotic suggestions of anesthesia, the following effects on sensation were observed: (1) no alteration in reports of pain intensity; (2) hypalgesia for higher-intensity stimuli without elevation of the pain threshold; (3) definite elevation of pain threshold with hypalgesia; (4) analgesia; (5) disturbances in pain discrimination.

" The third effect was observed in the majority of trials. The threshold elevation in light trances may be similar to that which can be produced by suggestion in the un hypnotized subject, but in deeper trances the effectiveness of hypnotic suggestion is much greater. The progression of effects 1 through 4 appears to be directly related to the depth of trance. The fifth effect was variable and was seen only in conjunction with the third effect. It is described as a separate phenomenon because the disturbance of ability to discriminate relatively between stimuli of differing intensities was only clearly observed when we were remeasuring pain thresholds. In actuality, it may merely represent a facet of altered pain perception, and the variability of its appearance may be related to the variable psychological state of the subject. It must be kept in mind that the hypnotic trance is not a static state" (p. 558). For one Subject, analgesia decreased in successive hypnotic sessions, while for four Subjects analgesia increased; a sixth Subject exhibited overall variability in hypnotic depth and analgesia from session to session.

The authors indicate that their review of the literature found no evidence that hypnosis, absent suggestions for analgesia, affects the galvanic skin response. In the present study, diminishment of the GSR is related to, though not dependent on, the effectiveness of the suggestion of anesthesia. "Thus, in Subject 2, with only moderate hypalgesia, the GSR to noxious stimuli was diminished by 64%; in S 6, with analgesia on nearly all trials, only 57%. It is particularly interesting that S 1 had a reduction in GSR of 26% after hypnotic suggestions which apparently had no effect upon his pain perception, and which seemed even to make him anxious. S 5 showed a direct correlation between depth of trance and decrease of GSR while Subjects 6 and 7 showed no such correlation" (p. 559).

"It is important to realize that on some occasions hypnotic anesthesia apparently led to complete disappearance of the GSR to all stimuli during a given session, such stimuli evoking pain of 6 or 7 dols in the control period. This phenomenon was seen twice with Subject 3, twice with Subject 5, and once with Subject 6. In several trials there was only a very slight GSR to the higher stimuli during hypnosis. In all the control periods there was only one occasion on which a stimulus evoking pain of 6 or 7 dols failed to produce a GSR, while equally intense stimulation failed to produce a GSR on 14 occasions after hypnotic suggestions of anesthesia. This observation is stressed because it suggests a need for caution in the clinical use of the GSR to distinguish organic from hysterical anesthetics" (pp. 559-560).

## GASTROENTEROLOGY

1996

Spiegel, Sharon B. (1996). Uses of hypnosis in the treatment of uncontrollable belching: A case report. American Journal of Clinical Hypnosis, 38 (4), 263-270.

Uncontrollable belching is frequently benign in origin, but can be distressing in its psychosocial consequences. Physicians have little to offer in the way of medical treatment. This is a case report of a 71-year-old woman with incessant eructation of four months duration treated with brief psychotherapy utilizing hypnosis. The patient was symptom-free at termination, and this improvement was sustained at six month follow-up. This paper includes a detailed description of some of the hypnotic suggestions as well as a discussion of the factors that may have contributed to change.

1992

Chantler, Lisa J. (1992). The treatment of irritable bowel syndrome using hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 20, 39-47.

A single case is reported of the hypnobeavioural treatment of a patient with chronic irritable bowel syndrome. The success of this treatment suggests that it has potential over and above relaxation and other behavioural techniques alone.

Whorwell, P. J.; Houghton, L. A.; Taylor, E. E.; Maxton, D. G. (1992). Physiological effects of emotion: Assessment via hypnosis. Lancet, 340, 69-72.

Studied the effects of distal colonic motility of three hypnotically induced emotions (excitement, anger, and happiness) in 18 patients, aged 20-48, with irritable bowel syndrome. Colonic motility index was reduced by hypnosis on its own ( $p < .05$ ), and this change was accompanied by decreases in both pulse and respiration rates ( $p < .001$  for both). Anger and excitement increased the colonic motility index ( $p < .01$  for both), pulse rate and respiration rate ( $p < .001$  for both). Happiness further reduced colonic motility although not significantly from that observed during hypnosis alone. Changes in motility were mainly due to alterations in rate in amplitude of contractions. The results indicate that hypnosis may help in the

investigation of the effects of emotions on physiological functions. The finding that neutral hypnosis strikingly reduces fasting colonic motility may partly explain the beneficial effects of hypnotherapy with functional bowel disorders.

**1991**

Schwarz, Shirley P.; Blanchard, Edward B. (1991). Evaluation of a psychological treatment for inflammatory bowel disease. Behaviour Research and Therapy, 29 (2), 167-177.

Compared the effectiveness of a multicomponent behavioral treatment package, which included inflammatory bowel disease (IBD) education, progressive muscle relaxation, thermal biofeedback, and training in use of cognitive coping strategies, with the effectiveness of symptom-monitoring as a control condition. The treatment group consisted of 11 IBD patients (aged 25-62 yrs); 8 of 10 persons (aged 25-71 yrs) in the control group completed treatment. At posttreatment, the treatment group showed fewer reductions in symptoms (5) than the symptom-monitoring controls (8). However, treated Ss perceived themselves as coping better with IBD and as feeling less IBD-related stress. It is hypothesized that the differences in treatment responses may be related to differences between Ss with ulcerative colitis and Ss with Crohn's disease.

Whorwell, P. J. (1991). Use of hypnotherapy in gastrointestinal disease. British Journal of Hospital Medicine, 45, 27-29.

Recent controlled studies in the field of gastroenterology have shown that hypnotherapy is unequivocally beneficial in conditions such as irritable bowel syndrome and peptic ulceration. There is also some evidence for influence on certain physiological functions. Further research should help to define more clearly the role of this controversial form of therapy. NOTES 1:

#### NOTES

This is a summary of work the authors are doing in gastroenterology. The authors are doing pilot work with inflammatory bowel disease and also ulcerative colitis. Patients are given an idea of the pathophysiology. "First subjects are asked to place a hand on their abdomen and feel warmth and then to relate this sensation to the relief of pain, spasm, bloating etc. Second they are asked to visualize a river and imagine that it is their gut. They are then told to modify the flow in order to achieve a more satisfactory bowel habit. For instance it would be suggested to a subject with loose bowels that a fast-flowing river with broken water is changed into a much more slow, smoothly flowing one. To the trainee therapist these suggestions sound very unconvincing but they do seem to work.

"Patients often take many weeks to respond and this can be very testing for the resolve of both patient and doctor alike. Some patients seem to adopt a very passive approach to treatment, expecting the therapy to work rather akin to taking a tablet-they attend once a week and wait for something to happen." (p. 29). [They have to be taught that they must make the treatment work for themselves.]

1990

Prior, A.; Colgan, S. M.; Whorwell, P. J. (1990). Changes in rectal sensitivity after hypnotherapy in patients with irritable bowel syndrome. Gut, 31, 896-898.

Fifteen patients with irritable bowel syndrome were studied to assess the effect of hypnotherapy on anorectal physiology. In comparison with a control group who received no hypnotherapy, significant changes in rectal sensitivity were found in patients with diarrhoea-predominant irritable bowel syndrome both after a course of hypnotherapy and during a session of hypnosis ( $p < .05$ ). Although patient numbers were small, a trend towards normalization of rectal sensitivity was also observed in patients with constipation-predominant syndrome. No changes in rectal compliance or distension-induced motor activity occurred in either subgroup nor were any changes in somatic pain thresholds observed. The results suggest that symptomatic improvement in irritable bowel syndrome after hypnotherapy may in part be due to changes in visceral sensitivity. NOTES 1:

#### NOTES

This research involved 15 patients diagnosed with irritable bowel syndrome (IBS), which was defined as abdominal pain with abdominal distension and 'an altered bowel habit'--10 had diarrhea mostly and 5 had constipation mostly. Patients with this disease usually have an exaggerated colon sensitivity to many different stimuli, as well as lower threshold to a balloon inflated in the bowel for diagnostic purposes. The patients were treated with ten sessions of hypnosis, 30 minutes each, over a three month period. Dependent variables included self ratings of abdominal pain, abdominal distention, and 'bowel habit disturbance.' Each of the three variables received a score of 0-10; the total score therefore could range from 0-30.

Other ratings were obtained using the inflation of a rectal balloon as stimulus. "After a basal period of at least 15 minutes the rectal balloon was serially inflated with air at intervals of 1 min in 20 ml increments up to 100 ml and then in 50 ml increments up to the sensation of discomfort. The study was repeated after a rest period of 15 minutes. After hypnotherapy the S was restudied first in the waking state and then, after 15 min, following induction of hypnosis" During this procedure they measured balloon volume, rectal compliance (a function of volume and pressure), and presence or absence of repetitive rectal contractions.

In order to learn whether the analgesia being experienced in the rectal or bowel area transferred to other areas, patients experienced cold water immersion induced pain on one hand, for a measure of time until discomfort was felt (pain threshold, essentially).

The control group of 15 patients diagnosed with IBS received the same measures of balloon volume, rectal compliance, and presence or absence of repetitive rectal contractions.

The total symptom score (which might have ranged 0-30) dropped from 23.5 to 9.6, and 13 of the 15 patients rated their symptoms as much improved. The two Ss who did not experience improvement also did not return for the assessment using the

balloon. Therefore, the physiological assessment included only 13 Subjects, the ones who rated themselves as 'improved.'

"In patients with diarrhoea-predominant irritable bowel syndrome a decreased rectal sensitivity occurred after hypnotherapy which was significant for the sensations of gas and urgency. This was most pronounced in patients who could initially tolerate only small rectal balloon volumes (Fig 1). During hypnosis the results for rectal sensitivity in the diarrhoea-predominant group were similar to those noted after the course of hypnotherapy but were of a greater magnitude, reaching significance for all sensations (Fig 2).

"In the constipation-predominant Subjects there was a tendency for rectal sensitivity to move towards normal values both after the course of hypnotherapy and during hypnosis. Patient numbers in this subgroup were small, however, and the changes were not significant (Figs 1 and 2). Rectal compliance and distension induced motor activity were unaffected by hypnotherapy in both the diarrhoea and constipation- predominant patients" (p. 897).

It was noted that of patients who had manifested depression and/or anxiety (8 of 13), most showed psychological improvement--3 of them to a great degree--but there was no correlation between psychological improvement and the degree that visceral sensitivity was diminished. Also, the ten sessions of hypnotherapy did not affect length of time subjects could tolerate hand immersion in cold water.

"In the control group of 15 patients with the irritable bowel syndrome who did not receive hypnotherapy no changes in rectal sensory or motor parameters occurred when manometry was repeated on the same day or on a second study day nine to 12 weeks later (Table II)" (p. 897).

In their Discussion, the authors remark that "hypnotherapy seemed to produce a trend towards normalization of visceral sensitivity (Figs 1 and 2). This was most pronounced in the patients with diarrhoea-predominant irritable bowel syndrome who initially had particularly low sensation thresholds" (p. 898).

They continue, "The pathophysiological abnormalities which lead to the symptoms of the irritable bowel syndrome remain unclear. The increased visceral sensitivity found in the large [7-9] and small intestine [18, 19] in some patients with the irritable bowel syndrome may contribute to their perception of pain. In addition, an increase in rectal sensitivity might also contribute to the symptoms of urgency and frequency of defecation seen in many patients with diarrhoea-predominant irritable bowel syndrome. ... Hypnotherapy also induces an improvement in well being by increasing coping capacities, and may therefore decrease perceived stress" (p. 898).

"The present study suggests therefore that hypnotherapy might operate by a variety of mechanisms in patients with the irritable bowel syndrome. In those with visceral hypersensitivity it seems to alter the perception of rectal sensation, although the mechanism by which this is achieved is unknown. Modification at a cortical level or more locally along afferent pathways are possibilities. This does not, however, explain the symptomatic improvement in all subjects and hypnotherapy is probably also acting in a non-specific psychotherapeutic sense" (p. 898).

Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. Behaviour Research and Therapy, 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

1989

Harvey, R. F.; Hinton, R. A.; Gunary, R. M.; Barry, R. E. (1989). Individual and group hypnotherapy in treatment of refractory irritable bowel syndrome. Lancet, 1 (8635), 424-425.

Thirty-three patients with refractory irritable bowel syndrome were treated with four 40-minute sessions of hypnotherapy over 7 weeks. Twenty improved, 11 of whom lost almost all their symptoms. Short-term improvement was maintained for 3 months without further formal treatment. Hypnotherapy in groups of up to eight patients was as effective as individual therapy. NOTES 1: NOTES:

DISCUSSION: The mechanisms by which hypnotherapy improves symptoms of IBS remain unclear. A placebo effect alone is unlikely, because few patients who improved on hypnotherapy suffered a relapse after formal treatment ended at 7 weeks; many patients continued to improve after the end of formal treatment. There was no disproportionate improvement in the feeling of wellbeing of patients who improved, and most of the patients who became nearly symptom-free had no initial tension or anxiety, as judged by GHQ scores. This suggests that the treatment is not just producing a psychological effect.

The effects... were less striking than those reported by Whorwell and colleagues. Nevertheless, the results were encouraging because all 33 had been refractory to conventional medical treatment."

Klein, Kenneth B.; Spiegel, David (1989). Modulation of gastric acid secretion by hypnosis. Gastroenterology, 96, 1383-1387.

NOTES

"The ability of hypnosis to both stimulate and inhibit gastric acid secretion in highly hypnotizable healthy volunteers was examined in two studies. In the first, after basal acid secretion was measured, subjects were hypnotized and instructed to imagine all aspects of eating a series of delicious meals. Acid output rose from a

basal mean of 3.60 to 6.80 ... with hypnosis, an increase of 89% ( = .0007). In a second study, subjects underwent two sessions of gastric analysis in random order, once with no hypnosis and once under a hypnotic instruction to experience deep relaxation and remove their thoughts from hunger. When compared to the no-hypnosis session, with hypnosis there was a 39% reduction in basal acid output ... and an 11% reduction in pentagastrin-stimulated peak acid output ...  $p < .05$ . We have shown that different cognitive states induced by hypnosis can promote or inhibit gastric acid production, processes clearly controlled by the central nervous system. Hypnosis offers promise as a safe and simple method for studying the mechanisms of such central control."

Tosi, D. J.; Judah, S. M.; Murphy, M. A. (1989). The effects of a cognitive experiential therapy utilizing hypnosis, cognitive restructuring, and developmental staging in psychological factors associated with duodenal ulcer disease: A multivariate experimental study. Journal of Cognitive Psychotherapy, 3, 273-290.

This study evaluated the effects of a Cognitive Experiential Therapy (CET)--in the past referred to as Rational Stage Directed Hypnotherapy--Cognitive Restructuring (CR), Hypnosis Only (HO), and a no-treatment control condition on the duodenal ulcer syndrome. CET is a systematic, stage-directed therapy that employs hypnosis and the cognitive restructuring of self-defeating cognitive, emotional, physiological, and behavioral tendencies. Seven criterion variables were assessed using two standardized instruments and questionnaire data. The standardized instruments included the Millon Behavioral Health Inventory (MBHI) and the Common Beliefs Survey III (CBS). Twenty-five volunteer duodenal ulcer patients were subjects in a 4 x 3 factorial design with repeated measures consisting of the four treatments and pretest, posttest, and follow-up. There was a significant treatment effect, and effects were observed on personality coping styles, beliefs and locus of control scales, and on gastrointestinal disturbance. CET appeared to have an ameliorative effect on psychological factors associated with duodenal ulcer.

1988

Colgan, S. M.; Faragher, E. B.; Whorwell, P. J. (1988, June 11). Controlled trial of hypnotherapy in relapse prevention of duodenal ulceration. Lancet, 1299-1300.

30 patients with rapidly relapsing duodenal ulceration were studied to assess the possible benefit of hypnotherapy in relapse prevention. After the ulcer had healed on treatment with ranitidine, the drug was continued for a further 10 weeks during which time patients received either hypnotherapy or no hypnotherapy. The two randomly selected groups were comparable in terms of age, sex, smoking habits, and alcohol consumption. Follow-up of both groups of patients was continued for 12 months after the cessation of ranitidine. After 1 year, 8 (53%) of the hypnotherapy patients and 15 (100%) of the control subjects had relapsed. The results of this study suggest that hypnotherapy may be a useful therapeutic adjunct for some patients with chronic recurrent duodenal ulceration.

**NOTES:**

"The aetiology of duodenal ulceration is poorly understood but it is probably multifactorial. ... Stress, both psychological and physical, has since been shown to affect gastric emptying and the secretion of acid and pepsin, but attempts to causally link stress and peptic ulcer disease have produced conflicting results.

"Hypnotherapy can modify the response to betazole-stimulated gastric acid secretion, although the mechanism by which this is mediated remains unclear" (p. 1299).

"The active [treatment] group received 7 sessions of hypnotherapy and were given an audio tape for daily autohypnosis; the other group were seen as often, but did not receive any hypnotherapy. The ranitidine was then stopped and both groups were reviewed every 3 months for a further year, with the active group receiving hypnotherapy at their follow-up visits. All subjects had an endoscopy at the end of the study, or sooner if a symptomatic relapse occurred.

"Hypnosis was induced as previously described, with attention focused on the abdomen by the use of the patient's hand. They were asked to imagine warmth beneath the hand and to relate this to the control of gastric secretion. Reinforcement by visualization was used if the patient had this ability" (p. 1299).

At the end of a year, on follow up, the patient relapse rate was 53% and controls relapse was 100%, a difference significant at  $p = 0.01$ .

In their Discussion, the authors state, "This study shows that hypnotherapy is helpful in maintaining remission in those patients with duodenal ulceration who are particularly prone to relapse. ... In this model, hypnotherapy might operate at a variety of levels in the disease process: it could act in a nonspecific psychotherapeutic sense increasing 'coping' capacities and decreasing perceived stress. Alternatively, hypnotically induced relaxation may affect gastric acid secretion, and there is some experimental evidence for this.

"The early relapse rate in the hypnotherapy subjects was similar to that of controls, but subsequently the curves showed a much greater separation. This finding could indicate that there is a subgroup of subjects who are particularly responsive to therapy. However, a detailed review of psychological and clinical parameters did not reveal any specific feature that could be used to predict a response to this form of treatment" (pp. 1299-1300).

**NOTES**

**2:**

Current etiology of duodenal ulcers includes the presence of bacteria *Helicobacter pylori* which is important in relapse. In order to compare treatments we must know what is the status of each group regarding the presence of this bacteria. Current treatment of duodenal ulcer includes metronidazole, amoxicillin and tetracycline to kill it. [Editor's Note: This appears to be a critique of the research methodology rather than notes on the article itself.]

**1984**

Whorwell, P. J.; Prior, Alison; Faragher, E. B. (1984, December 1). Controlled trial of hypnotherapy in the treatment of severe refractory irritable-bowel syndrome. Lancet, 1232-1234.

30 patients with severe refractory irritable-bowel syndrome were randomly allocated to treatment with either hypnotherapy or psychotherapy and placebo. The psychotherapy patients showed a small but significant improvement in abdominal pain, abdominal distension, and general well-being but not in bowel habit. The hypnotherapy patients showed a dramatic improvement in all features, the difference between the two groups being highly significant. In the hypnotherapy group no relapses were recorded during the 3-month follow-up period, and no substitution symptoms were observed.

1977

Schneck, Jerome M. (1977). Hypnotherapy for ptyalism. International Journal of Clinical and Experimental Hypnosis, 25, 1-3.

This paper furnishes a description of brief hypnotherapy with a comment on theory in the case of a 56-year-old man suffering from ptyalism (excessive salivation). He was able to obtain considerable, but not complete relief.

1966

Zane, M. D. (1966). The hypnotic situation and changes in ulcer pain. International Journal of Clinical and Experimental Hypnosis, 14 (4), 292-304.

This is a study of internal and external hypnotic conditions associated with changes in pain developed during 5 hypnosis sessions in a patient with an acute duodenal ulcer. The 12 increases and 8 decreases in pain studied were found to be related to the interaction of coexisting reactions directed toward shifting social and private goals. Pain was associated with conflict among these reactions; intensification of pain occurred as a train of self-propagating internal events increased the conflict; relief of pain accompanied a reduction in the conflict. Increasing bodily disorganization resulted as shifts in focus of attention among social and private goals resulted in the rapid growth of conflicting mental and physical processes. An external stimulus, in the form of a highly individualized hypnotic suggestion, was often required to stop the disorganizing processes.

Dorcus, Roy M.; Goodwin, Phillip (1955). The treatment of patients with the dumping syndrome by hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 200-202.

#### NOTES

Psychological tests (MMPI and Manifest Anxiety Scale) were administered to 20 duodenal ulcer patients with successful outcome following subtotal gastrectomy and 20 with an outcome characterized by "one or more of the following symptoms: lack of appetite, aversion to food, aversion to particular kinds of food, nausea, vomiting, dizziness, sweating, cardiac palpitation, weakness, and weight loss" (p. 200). Since the symptoms are supposedly due to food passing more rapidly through the digestive tract the syndrome is called "dumping."

In the unsuccessful outcome group, four patients with symptoms persisting 8-26 months, received hypnosis (2 to 9 sessions). "The suggestions were directed towards

reducing tension (production of relaxation), removal of fear of this condition, enhancing the olfactory qualities of food, and the feeling of comfort with food or liquid intake" (p. 201). All four patients responded with remission of symptoms.

**1954**

**Kline, Milton V. (1954). Stimulus transformation and learning theory in the production and treatment of an acute attack of benign paroxysmal peritonitis. Journal of Clinical and Experimental Hypnosis, 2 (1), 93-98.**

#### **Summary**

A case episode from the hypnoanalysis of a patient with benign paroxysmal peritonitis has been presented to illustrate the nature of stimulus transformation in symptom formation and maintenance. Perceptual distortion and the role of the perceptual system in facilitating stimulus transformation has been discussed. Hypnotherapeutic intervention was based upon the awareness of the role of perceptual alteration in facilitating differential response and was effective in terminating the attack in its original form and in experimental revivification.

The autonomous factor in learning has been discussed in relationship to the drive for activity and reinforcement and resistance to all possible forms of spontaneous or planned retroactive inhibition. Resistance in neurosis possesses the essentials of all well established learned responses -- strength against extinction. Psychotherapy as a new learning experience will be resisted on a Gestalt basis -- dynamically and neurally. The recognition of the role of involuntary neuropsychological mechanisms in the development and maintenance of neurotic learning is essential in the planning and study of those remedial efforts which we term psychotherapy" (pp. 97-98).

#### **NOTES**

Patient was 30 year old male who had experienced pain attacks since age 10, usually running a course of 3-4 days and requiring bed rest and sedation. With hypnoanalysis attacks were reduced to 3/year. In the therapy excerpt presented, in age regression it was established that an (unconsciously) significant event occurred at a different time than was consciously remembered, and accounted thereby for the onset of an attack.

**1953**

**Kroger, William S. (1953). Hypnotherapy in obstetrics and gynecology. Journal of Clinical and Experimental Hypnosis, 1 (2), 61-70.**

#### **Author's Summary**

"A high percentage of gynecologic complains [sic] are due to psychic factors. Therapeutic efforts, therefore, must be directed primarily toward the psychologic component. Until recently, the principal weapon of the dynamically oriented physician was orthodox psychoanalysis. However, the increased interest for a relatively rapid approach has demonstrated the diagnostic and therapeutic value of hypnoanalysis. This development has been concomitant with the psychoanalyst's [sic] interest in 'brief psychotherapy' and narcosynthesis.

"In many functional gynecologic disorders, hypnoanalysis has supplanted the parent therapy even though this form of treatment utilizes the concepts of dynamic psychiatry.

"The relevant literature on the use of hypnotherapy in functional obstetrical and gynecological disorders has been reviewed.

"Significant areas for research have been pointed out.

"This review emphasizes that hypnosis *per se* is only of value in obtaining symptomatic relief. On the other hand, hypnoanalysis elicits the responsible dynamics behind the symptom, and is effective in reaching all aspects of the personality.

"Hypnoanalysis will be more applicable in obstetrics and gynecology when there is a wider acceptance of its techniques" (p. 68).

## GENDER

2000

Lichtenberg, P.; Bachner-Melman, R.; Gritsenko, I.; Ebstein, R. P. (2000). Exploratory association study between catechol-O-methyltransferase (COMT) high/low enzyme activity polymorphism and hypnotizability. American Journal of Medical Genetics, 96, 771-774.

Only recently have studies of electrocortical activity, event-related potentials, and regional cerebral blood flow begun to shed light on the anatomical and neurobiological underpinnings of hypnosis. Since twin studies show a significant heritable component for hypnotizability, we were prompted to examine the role of a common, functional polymorphism in contributing to individual differences in hypnotizability. A group of 109 subjects (51 male, 58 female) were administered three psychological instruments and tested for the high/low enzyme activity COMT val/met polymorphism. We observed a significant correlation between hypnotizability measured by the Stanford Hypnotic Susceptibility Scale (SHSS:C), ability to partition attention (Differential Attentional Processes Inventory or DAPI), and absorptive capacities (Tellegen Absorption Scale or TAS). The effect of COMT on the various dependent variables was initially examined by multivariate analysis that corrects for multiple testing. The dependent variables were SHSS:C hypnotizability scores, four attentional subscales of the DAPI, and TAS total score grouped by the COMT genotype (val/val, val/met, met/met) as the independent variable. Hotelling's Trace statistic was significant when scores were grouped by the COMT genotype (Hotelling's  $T^2 = 1.88$ ,  $P = 0.04$ ). Post-hoc testing using the Bonferroni correction shows that the only significant difference is between the val/met vs. the val/val COMT genotypes on hypnotizability. This association was significant for men but not for women. As for all case-control studies, these results need to be interpreted cautiously and require replication.

1999

Daniel, Sheryll (1999). The healthy patient: Empowering women in their encounters with the health care system. American Journal of Clinical Hypnosis, 42 (2), 108-114.

Many women's expectancies when they assume the role of patient include the experiences of regression, helplessness, passivity and fear. This paper describes techniques for interrupting this negative set and for facilitating the development of a self-efficacious state in which the woman experiences herself as an active and informed participant in her encounters with medical personnel.

1992

Kvaal, Steven; Lynn, Steven Jay; Myers, Brian (1992, October). The Gulf war: Effects on hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

We did a study that follows the line that volunteers may differ from nonvolunteers for hypnosis experiments (Authors cite 3 studies, including one with Hilgard as later author; Brodsky; Zamansky). Also, Ss who volunteer early in the quarter at the university are motivated for hypnosis; later volunteers want course credit. The former want to experience hypnosis.

Previously we did a study on authoritative vs permissive suggestions with Ss who volunteered early or late in the quarter; Ss were tested twice. For Ss who volunteered in first 2 weeks of the quarter, scores decreased across testing; for Ss volunteering late, scores remained stable across testing. This implies that if an experiment were conducted late in a quarter we would conclude that repeated testing has no effect; if done earlier, we would have concluded repeated testing decreases scores.

This result has been replicated. It is therefore important to run Ss across an entire quarter or year.

The present study differs from the foregoing study. It addresses the question: Do life events affect scores on the Harvard Scale? Do tension, uncertainty, etc. affect scores? Would they depress scores? Are scores reactive to environmental events?

On January 14 the U.S. issued an ultimative to Iraq; that very day we administered a tape recorded version of the Harvard Scale of Hypnotic Susceptibility, preceded by the Tellegen Absorption Scale. The hypnotizability tests were self-scored for involvement and involuntariness. Tension throughout the day escalated, culminating with bombing 2 hours before the hypnosis screening. The graduate student announced war had started and told Ss they could leave if they wanted. All 52 Ss stayed!

Control group was 58 Ss tested at same time of the quarter, one year before (10 days into the quarter).

Analysis was by a 3 x 2 ANOVA. There was no main effect for time of testing, sex, or interaction for any measures on hypnotizability, or subjective involvement.

The Tellegen Absorption scale showed a significant timing x sex interaction: males on outbreak of war scored lower than all other groups (15 vs 21 or more for all other groups). Tensions had no effect on subjective or objective scores of

hypnotizability. Thus the males were affected on the Absorption Scale by outbreak of war.

The fact the Tellegen Scale was more reactive suggests hypnotizability may be more stable than Absorption. Absorption might have been depressed because males were more upset by images of military services.

Little research has been conducted to examine the possible positive effects on hypnotizability of positive events in real life.

1991

Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.

Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts. NOTES 1:

#### NOTES

Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).

This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).

The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."

Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid ( $n = 8$ ) or invalid ( $n = 8$ ). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, Cortex, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

Loewenstein, R. J.; Putnam, F. W. (1990). The clinical phenomenology of males with multiple personality disorder: A report of 21 cases. Dissociation, 3, 135-143.

#### NOTES

There are striking similarities between male and female MPD patients, but males tend to have more alcoholism and antisocial behavior and have more subtle clinical presentations.

Lombard, Lisa S.; Kahn, Stephen P.; Fromm, Erika (1990). The role of imagery in self-hypnosis: Its relationship to personality characteristics and gender. International Journal of Clinical and Experimental Hypnosis, 38 (1), 25-38.

30 volunteer Ss practiced self-hypnosis for approximately 4 weeks and wrote a record of their experiences in a diary following each session. Imagery produced during self-hypnosis was coded in 2 ways: the imagery was either reality oriented or it was fantastic and had primary process qualities. Levels of imagery production remained virtually the same over a 4-week period. Self-hypnotic imagery was significantly greater for the female Ss than for the male Ss, particularly primary process imagery. Verbal expressivity (measured as the average number of words per page of each S diary) was calculated to control for the effects of verbal production on Ss' imagery scores. When imagery scores were standardized based on verbal expressivity, female Ss still produced significantly more primary process imagery than male Ss. Personality characteristics (assessed by standardized personality inventories) were examined in relation to self-hypnotic imagery. "Impulse Expression" was positively related to primary process imagery for the female Ss. "Outgoingness" was positively related to primary process imagery for the entire sample, but especially for the female Ss.

Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100.

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to- easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions. Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

1988

Barrett, D. (1988). Trance-related pseudocyesis in a male. International Journal of Clinical and Experimental Hypnosis, 36 (4), 256-261.

Pseudocyesis has been linked in previous literature to trance phenomena. The present paper presents a case in which pseudocyesis was accidentally induced by hypnotic suggestion, continued by an autohypnotic process, and reversed by informal suggestion. This case has important implications for the role autohypnosis may play in maintaining the phenomenon and for the usefulness of hypnotic techniques in reversing the symptoms.

Spinhoven, Philip; Baak, Diana; Van Dyck, Richard; Vermeulen, Peter (1988). The effectiveness of an authoritative versus permissive style of hypnotic communication. International Journal of Clinical and Experimental Hypnosis, 36, 182-191.

The differential effectiveness of an authoritative versus permissive style of hypnotic communication was investigated, with locus of control as a moderator variable. 44 Ss received in counterbalanced order both the more authoritatively worded Harvard Group Scale of Hypnotic Susceptibility, Form A and the Wexler-Alman Indirect Hypnotic Susceptibility Scale (WAIHS), which is a more permissive scale with the same item content as HGSHS:A. Permissively worded suggestions did not enhance the level of hypnotic responsiveness. Locus of control did not predict the response level on one of the scales. Unexpectedly, significantly more female Ss preferred the WAIHS, and more male Ss preferred HGSHS:A. It is concluded that Ss' characteristics (i.e., hypnotizability) are more important for hypnotic responsiveness than variations in style of hypnotic communication or scale preference."

1986

Zilbergeld, Bernie; Edelstien, M. Gerald; Araoz, Daniel L. (1986). Hypnosis - Questions & Answers. New York NY: Penguin Books.

The editors requested experts in hypnosis to answer common questions that resulted from questionnaires given to over 600 health professionals who had taken a course in hypnosis during the previous three years, as well as a few questions suggested by colleagues. "We do not view this book as providing right answers, but instead as something clinicians can turn to when they have questions or want to learn how a recognized authority handles a particular issue. There are, in fact, no right answers, no one-and-only best way" (p. xviii).

1987

De Sano, Christine F.; Persinger, M. A. (1987). Geophysical variables and behavior: XXXIX. Alterations in imaginings and suggestibility during brief magnetic field exposures. Perceptual and Motor Skills, 64, 968-970.

12 male and 12 female volunteers were evaluated for their suggestibility before and after an approximately 15-min. exposure to either sham, 1-Hz or 4-Hz magnetic fields that were applied across their mid-superior temporal lobes. During the field application subjects were instructed to view a green light that was pulsating at the same frequency as the field and to imagine countering an alien situation. Results were commensurate with the hypothesis that weak brain-frequency fields may influence certain aspects of imaginings and alter suggestibility. NOTES 1: NOTES: "Subjects who had been exposed to the 4-Hz fields showed a significant decrease ... in heart rate compared to those who had been exposed to either the 1 Hz or sham-field conditions. A significant ... interaction of sex by field ... was noted for the change in HIP [Hypnotic Induction Profile] scales. Whereas both men and women in the sham-field condition tended to show less induction (~ 1 unit) on the second occasion ... women showed much greater (8.4 + 1.1) induction (= 3 units) if they had been exposed to the 1-Hz field while men showed much greater (8.0 + 1.5) induction (= 3 units) if they had been exposed to the 4-Hz fields. On the protocols, women reported significantly more fear responses than men. In addition, subjects who were exposed during the imaginings to the 4-Hz field showed more imaginings ... and more references to vestibular experiences (e.g., self or entity rising or floating) ... than those exposed to the other conditions" (p. 969).

"Dissociation scores on the HIP were correlated significantly ... with vestibular (0.44), imagery (0.43), and fear (-0.45) scores from the transcripts. Floating responses on the HIP were correlated with the amount of imagery. (0.46). There was a significant positive Pearson correlation between the compliance measure and the amount of arm levitation during the second induction only. These results suggest that hypnotic susceptibility may be increased following magnetic-field exposure but that the effective frequency is not the same for each sex. In addition, the amount of the imagery (particular vestibular experiences) increased if the person observed a light that was flashing at the same frequency as a 4-Hz applied magnetic field" (p. 969).

Lynn, Steven Jay; Neufeld, Victor; Matyi, Cindy L. (1987). Inductions versus suggestions: Effects of direct and indirect wording on hypnotic responding and experience. Journal of Abnormal Psychology, 96 (1), 76-79.

This study examined the effects of direct wording (authoritative language, specific responses) versus indirect wording (permissive language, choice of responses) of hypnotic inductions and suggestions in measures of behavioral and subjective responding. Subjects experienced suggestion-related involuntariness and suggested effects to a greater degree in response to direct-word suggestions (Harvard Group Scale of Hypnotic Susceptibility; Form A; Shor & Orne, 1962) than in response to indirect-worded suggestions (Alman-Wexler Indirect Hypnotic Susceptibility Scale; Pratt, Wood, & Alman, 1984). No difference in behavioral responding was observed. Furthermore, induction wording did not have an effect on these measures, nor did the wording of the induction and the wording of the suggestion types interact with each other. Female subjects attributed less of their responsiveness to their own efforts when they received direct suggestions, and male subjects were less likely to attribute their responsivity to the hypnotist's ability when they received indirect suggestions. Rapport with the hypnotist did not vary as a function of induction or suggestion wording.

Monteiro, Kenneth P.; Zimbardo, Philip G. (1987). The path from classroom seating to hypnotizability--a dead end: A brief communication. International Journal of Clinical and Experimental Hypnosis, 35, 83-86.

It has been proposed that classroom seating behavior predicts brain functioning involved in hypnotizability and in other cognitive processes. The present authors attempted to test this hypothesis and to replicate some earlier findings. The relationships between classroom seating preference, actual seating location, and hypnotizability in male and female students were investigated. No relationship was found between any of the seating measures and hypnotizability. These findings lend no support for the hypothesis that classroom seating predicts hypnotizability. This failure to replicate is discussed in relationship to the lack of theoretical grounding for the seating-hypnosis connection. NOTES 1:

#### NOTES

The authors review the literature, then present and test specific hypotheses that right-side seating preferences would be correlated with hypnotizability for males, while actual seating on the right side of the class would be associated with higher hypnotizability scores for females. This pattern should be more robust for right-handed than for left-handed students. They found no support for these hypotheses. They suggest that other measures of cognitive processing may correlate with a social behavior such as classroom seating. Monteiro & Zimbardo (unpublished ms.) found that the variables of field independence and field sensitivity predicted actual seating behavior in males and seating preference in females.

1985

Bliss, Eugene L.; Larson, Esther M. (1985). Sexual criminality and hypnotizability. Journal of Nervous and Mental Disease, 173, 522-526.

Investigated 33 17-35 yr old sexual offenders, 18 of whom had been convicted of rape, 9 of pedophilia, and 6 of incest. Ss completed a questionnaire containing a list of 15 factors that might have contributed to their crime, a self-report containing 305 items that are symptoms characteristic of 11 major psychiatric syndromes, and the Stanford Hypnotic Susceptibility Scale. Controls for the self-report were 48 individuals taken from a church group, nurses, technicians, and graduate students. Controls for the hypnotizability scale were cigarette smokers who smoked 1 1/2 pack/day and S data taken from the literature. Results show that two-thirds of the Ss had histories of spontaneous self-hypnotic experiences (dissociations); 7 of these were DSM-III multiples and 6 were probable multiples. This group had very high hypnotizability scores. The other one-third without histories of spontaneous self-hypnosis had normal scores. It is concluded that spontaneous self-hypnosis contributed to the perpetration of the crimes in many of these cases, although other factors also directed the antisocial behaviors. (22 ref).

1983

Johnson, Lynn S.; Dawson, Steven L.; Clark, Janet Lee; Sikorsky, Catherine (1983). Self-hypnosis versus hetero-hypnosis: Order effects and sex differences in behavioral and experiential impact. International Journal of Clinical and Experimental Hypnosis, 31, 139-154.

Recent studies (Fromm, Brown, Hurt, Oberlander, Boxer, & Pfeifer, 1981; Johnson, 1979, 1981; Johnson & Weight, 1976; Ruch, 1975) of self-hypnosis versus hetero-hypnosis are compared. A study is reported addressing unresolved questions about interactions between order of presentation and sex with the 2 types of hypnosis. 90 male and 149 female volunteer college students were proportionally assigned to 1 of 4 groups, each of which received 1 of the following hypnosis-order combinations on successive days: self hypnosis, then hetero-hypnosis; hetero-hypnosis, then self-hypnosis; self-hypnosis, then another self-hypnosis; or hetero-hypnosis, then another hetero-hypnosis. Half of each group of Ss had a male hypnotist; half had a female hypnotist. Analysis of variance of total scores for behavioral and experiential impact showed: (a) a general order effect, a decrease from first to second experience; (b) initial self-hypnosis to facilitate either subsequent experience, mitigating the general decrement; (c) switching modes to also reduce the decrement; (d) a clarification of certain order and sex interactions from earlier studies; (e) self-hypnosis to be behaviorally superior to hetero-hypnosis on later presentations; and (f) crossed-sex training to be experientially facilitory. Conclusions are drawn about unresolved issues in self hypnosis research, including the limits of comparability of self-hypnosis versus hetero-hypnosis, which depend on definitional assumptions of the self-hypnosis state and the allowance for order effects in the design. NOTES 1:

NOTES

In their Discussion, the authors note that self hypnosis and heterohypnosis yield similar results, and that although clinical hypnosis effects may increase with practice, such would probably not be true for hypnosis in the experimental setting. They speculate that "self-hypnosis triggers an 'active involvement' which provides more continuity in responsiveness across experiences, while hetero- hypnosis encourages a more passive mode which is more susceptible to external events (like order effects)" (p. 150).

**1981**

**Yanchar, R. J.; Johnson, H. J. (1981). Absorption and attitude toward hypnosis: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 29 (4), 375-382.**

2 factors which have been found to correlate to a small degree with susceptibility are (a) an individual's attitude toward being hypnotized and (b) an individual's capacity for subjective involvement in an experience (absorption). The present study was an attempt to replicate previous findings by Spanos and McPeake (1975) and to extend these findings to determine if there was a significant interaction between these 2 factors in their relationship to susceptibility. 99 Ss (65 females and 34 males) completed the absorption questionnaire of Tellegen (1979) and the attitude questionnaire of Barber and Calverley (1966). Their hypnotic susceptibility was assessed with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Attitude and absorption were found to have small positive correlations with susceptibility, results which corroborate previous research. The multiple regression analyses indicated that there were no significant interactions between the factors of attitude, absorption, and sex.

**1978**

**Nichols, Michael P.; Bierenbaum, Howard (1978). Success of cathartic therapy as a function of patient variables. Journal of Clinical Psychology, 34 (3), 726-8.**

Treated sample of 42 patients with cathartic psychotherapy and evaluated differential effectiveness on types of patients. Patients without mental disorders experienced more emotional catharsis than all others, and those with obsessive compulsive personality disorders improved more than all others as a result of emotive treatment. Contrary to popular notions, neither women nor hysterics experienced more catharsis or improved more in cathartic therapy. Although women and hysterics may cry more easily in daily life, obsessives are apparently more able to maintain focus on unhappy experiences and are therefore able to express more emotion in cathartic therapy. Furthermore, it seems that cathartic treatment is beneficial by disrupting long-standing defenses against emotional experience, rather than by releasing stored-up affects.

**1976**

Coe, William C. (1976). Effects of hypnotist susceptibility and sex on the administration of standard hypnotic susceptibility scales. International Journal of Clinical and Experimental Hypnosis, 24, 281-286.

Hypnotists' susceptibility and sex were examined for their effects on the administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Neither resulted in different hypnotic responsiveness from Ss. Comparatively inexperienced hypnotists obtained data similar to the normative sample for the Stanford scale. The results suggest that inexperienced hypnotists are capable of administering standardized scales validly, and that characteristics of the hypnotist are relatively ineffective in distorting Ss' responses to these scales.

1975

Aletky, Patricia J.; Carlin, Albert S. (1975). Sex differences and placebo effects: Motivation as an intervening variable. Journal of Consulting and Clinical Psychology, 43 (2), 278.

NOTES

The present findings would suggest that future studies of placebo effects should take into account the nature of the dependent variable and the pertinent differential sex-role expectations" (p. 278). The performance measure was a dynamometer pull task. The placebo was a jelly applied to the forearm "and alleged to relieve muscular fatigue" (p. 278). The motivational instructions were telling Subjects that "individuals in good health and with normal muscle tonus would be expected to show improved performance on the posttreatment trial" (p. 278).

1970

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment. NOTES 1:  
NOTES: The authors used High hypnotizables (SHSS>9) in this investigation.

1966

Cooper, Leslie M.; London, Perry (1966). Sex and hypnotic susceptibility in children. International Journal of Clinical and Experimental Hypnosis, 14, 55-60.

Sex differences in hypnotic susceptibility were investigated in a sample of 240 children. The Children's Hypnotic Susceptibility Scale was administered to 10 boys and 10 girls at each age level for 5-16 yr. There were no differences between the means of the boys and girls at any age for the 3 scores yielded by the measure. The percentage passing each item at each age for each sex was also computed. Of the resulting 264 comparisons only 1 (Item 10, Eye Catalepsy) was found to be significantly different at 1 age level (7 yr. of age) and was attributed to chance. It was concluded that there were no sex differences for the various items at the ages tested. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Beigel, Hugo G. (1965). Three transvestites under hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (2), 71-82.

The literature on transvestism is reviewed. Most authorities agree that it is rarely, if ever, treated successfully. A therapeutic approach is outlined which combines conventional analytically-oriented psychotherapy with appropriate hypnotherapeutic techniques. 3 illustrative cases are presented. Clinical study in the manner described has been proved effective in less than 50 sessions in 10 of the 24 cases seen. It has helped to clarify the etiology of this condition. The widely accepted belief that transvestism cannot be treated successfully appears unwarranted in the light of the findings presented. (18 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Melei, Janet P.; Hilgard, Ernest R. (1964). Attitudes toward hypnosis, self-predictions, and hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 12, 99-108.

Correlation of questionnaire results from a sample of 1326 students with hypnotic susceptibility scores of 340 of these later hypnotized showed (a) that those volunteering for hypnosis were more favorable in attitude than those who did not volunteer; (b) attitudes toward hypnosis were predictive of susceptibility for females, not for males; and (c) self-predictions yielded significant low positive correlations with actual susceptibility for both sexes. Other findings concern differences between those having prior experience with hypnosis and those without such experience. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Rosenhan, D. L.; Tomkins, S. S. (1964). On preference for hypnosis and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 109-114.

44 male and 44 female coerced volunteers, who either preferred or did not prefer to participate in hypnosis experiments, were compared with regard to (a) scores on the

EPPS, (b) birth order, and (c) performance on the Harvard Group Scale of Hypnotic Susceptibility. Sex-specific personality differences were obtained between Ss who preferred and did not prefer hypnosis, but these personality differences were not apparently relevant to hypnotizability. However, for females, preference for hypnosis correlated .41 with hypnotizability; for males no relationship was obtained. Some theoretical and methodological implications of these data are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Deckert, G. H.; West, L. J. (1963). The problem of hypnotizability: A review. International Journal of Clinical and Experimental Hypnosis, 11, 205-235.

This paper summarizes the relatively unsuccessful effort to relate hypnotizability to sex, age, psychiatric diagnoses, suggestibility, and various personality traits. The problems of measurement, subject selection, controls, and experimenter bias are reviewed. Comparison of data is difficult and replication of studies infrequent. This might be attributed to incomplete reporting of methodology, defects in experimental design, and various conceptual problems. Concepts which view hypnotizability as "something" universal, "something" unique, or "nothing" are briefly appraised. Finally, hypnotizability is seen as a "term" describing a relationship between a "route" and a "state"--each identifiable by measurable criteria. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Hershman, Seymour (1963). The clinical practice of hypnosis in the United States: A preliminary survey. International Journal of Clinical and Experimental Hypnosis, 11 (1), 55-65.

A preliminary survey of 301 clinical practitioners of hypnosis who responded to a questionnaire suggests that reported success in inducing hypnosis is unrelated to claimed experience with hypnosis. Children and adolescents are reported to be more susceptible than adults, but there is no sex difference reported. Type of training is generally unrelated to reported success as a hypnotist. Reported percentages of patients who attain various levels of hypnotic depth are generally in keeping with earlier reports. Unexpected reactions to being hypnotized were reported by one out of four respondents.

Levitt, Eugene E.; Lubin, B. (1963). TAT card '12MF' and hypnosis themes in females. International Journal of Clinical and Experimental Hypnosis, 11, 241-244.

Modification of TAT Card 12M, so that the supine figure was a female, did not increase the frequency of hypnosis themes among sophomore student nurses. The hypothesis that difficulty in identifying with a male figure accounted for the card's inability to predict attitudes towards hypnosis in females was, therefore, not supported. The modified card did elicit significantly more identifications of the standing figure as a professional person. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Lubin, Bernard; Brady, J. P. (1962). On the use of TAT Card 12M as an indicator of attitude toward hypnosis. International Journal of Clinical and Experimental Hypnosis, 10 (3), 145-150. (Abstracted in Psychological Abstracts, 63: 5233)

This investigation indicates that responses to TAT Card 12M do not predict attitude toward hypnosis in female Ss, though such predictiveness has been reported for male respondents. The basis for this differential predictiveness may be that the latter give a significantly greater proportion of themes involving hypnosis. An explanatory hypothesis, based on perceptual theory and the stimulus properties of the card, is advanced. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

McCartney, James L. (1961). A half century of personal experience with hypnosis. International Journal of Clinical and Experimental Hypnosis, 9, 23-33.

#### NOTES

(Author's Summary and Conclusions). "After fifty years of experience with hypnosis, it is evident that it is not a superficial and careless technic but should be utilized only by capable, trained physicians, as are the other complex and difficult medical technics. ... In order to induce hypnosis, the patient must be perfectly willing to be hypnotized, he must have confidence in the practitioner, and he must concentrate on doing exactly as he is told. In selected cases, drugs or electrical impulses may be used for the initial induction of hypnotic sleep, but if hypnotherapy is to be continued, the physician must keep in contact with the patient by repeated suggestions. The technic used should fit the individual patient, but in most cases, verbal suggestions are all that is necessary to bring about dissociation. Hypnosis may be used to facilitate the beginning of mental catharsis, the establishment of transference, and may be easily instituted following narcosynthesis, electroshock therapy, minimum stimulus, or Sedac. Suggested activity under hypnosis may be carried out at a designated time, place, and manner after awakening. This is a result of autosuggestion and may be mistaken for psychopathic behavior. Such suggestions may be instituted by television, movies, radio, telephone, or recorded or written instruction. Hypnosis may be used to plant suggestions; if misused, it may create an obsessive-compulsive neurosis, while when properly used, it may overcome many functional symptoms and may be used to supplement other forms of psychotherapy" (p. 32).

1961

London, Perry (1961). Subject characteristics in hypnosis research: Part I. A survey of experience, interest, and opinion. International Journal of Clinical and Experimental Hypnosis, 151-161.

Questionnaire measuring (a) direct and observational experience with hypnosis, and (b) stereotyped attitudes towards hypnosis was administered to 645 undergraduate students of psychology. Results indicate hypnosis considered in generally favorable light. Girls were less willing than boys to be hypnotic Ss. Items regarding the nature of hypnosis reflected a rather sophisticated attitude. From Psyc Abstracts 36:01:3II51L. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1956

Sears, Alden B.; Beatty, Jeanne M. (1956). A comparison of galvanic skin response in the hypnotic and waking state. Journal of Clinical and Experimental Hypnosis, 4 (2), 49-60.

#### NOTES

"Summary. In this experiment an attempt was made to determine whether or not there was a difference in the galvanic skin response between waking and hypnotic questioning. The 24 subjects were randomly assigned to one of four groups, each group following a different sequence of experimental conditions. During the first session, each subject observed a table top setup for 30 seconds and then wrote out what he could remember in both the waking and hypnotic states. During the second session, which followed seven or eight days after the first, each subject was asked a series of 14 questions concerning the table top setup. Half of the subjects answered the questions first in the waking and then in the hypnotic state; for the remaining 12 subjects hypnotic questioning preceded waking questioning. The galvanic skin response was recorded for both the waking and hypnotic questioning of all subjects, and the amount of deviation was measured in millimeters. Because the subjects tended to respond more slowly during the hypnotic questioning than during the waking questioning, a direct comparison of the amount of deviation in the two states could not be made. Consequently, two indicators of amount of deviation were considered necessary: mean deviation per second (D/T) and the mean average deviation (D/ND). No significant differences were found between the waking and hypnotic questioning in a comparison of the mean deviation per second for the group and for the males alone. However, there was a difference between waking and hypnotic questioning in the mean deviation per second for females, significant at the .01 level of confidence. The difference between the waking and hypnotic measures of the mean average deviation were also not significant for either the total group or for the males. For females, this difference was significant at the .001 level of confidence. No attempt was made to explain this apparent sex difference in the behavior of the galvanic skin response. It was suggested that further research be done to confirm and account for these results. The differences between the results of male and female subjects in this experiment, where procedures were the same for both, may account for the conflicting reports found in the literature. In many of the reported experiments the sex of the subjects has not been noted" (pp. 57-58).

The questions were factual in nature, e.g. "What object is in the lower right hand corner."

GENERALIZED REALITY ORIENTATION.

1991

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

NOTES

1:

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Visual conversion disorder: A case analysis of the influence of visual information. Journal of Abnormal Psychology, 98, 326-329.

NOTES

1:

"examined the influence of visual information on a decision task that was administered to an individual with monocular visual conversion disorder. Findings indicated that his performance was influenced by the visual information and by motivation instructions. The findings are discussed in terms of a model of hysterical blindness that recognizes the interplay of cognitive and motivational processes" (p. 326).

Gabel, Stewart (1989). Dreams as a possible reflection of a dissociated self-monitoring system. Journal of Nervous and Mental Disease, 177 (9), 560-568.

Argues that dreams may be thought of as dissociative phenomena of a particular type that reflect a monitoring of and reaction to internal and external conditions within the dreamer. Under conditions of sleep, memories, emotions, information processing, and judgments about internal and external events may occur independently of the usual waking conscious system's information processing. Experimental and/or clinical work, related to hypnosis, REM phenomena, dreams, and hemispheric specialization are discussed to support this view. Dreams are described within the context of dissociation-based theories of personality organization.

1988

**Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.**

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S. NOTES 1:

**NOTES:**

Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups.

There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered

Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

1986

Holroyd, Jean (1986). Hypnosis applications in psychological research. Imagination, Cognition and Personality, 5, 103-115.

It is proposed that hypnosis leads to altered cognition, affect, or motivation as reflected by changes in 1) reality orientation, 2) attention and awareness, 3) imagery, 4) dissociation, 5) suggestibility, and 6) mind-body interaction. Hypnosis may be used as an experimental method to effect such cognitive, affective and motivational changes in order to pursue research in learning, personality, physiological, and social psychology. Examples of possible applications of hypnosis are provided. The influence of individual differences in hypnotic responsivity on research also is discussed. NOTES 1:

NOTEST

he author concludes, "Contributions of hypnosis to research in psychology may have been diminished by the confusion inherent in searching for main effects while giving insufficient attention to interaction effects between personality variables and experimental manipulations. As psychology becomes more cognitive in orientation, the phenomena of hypnosis may seem less bizarre and more amenable to inclusion in psychological research. However great care must be taken not to confuse the contributions of hypnosis with the contributions of the hypnotically responsive personality" (p. 109).

1981

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity.

Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

**1970**

Shor, Ronald E. (1970). The three-factor theory of hypnosis as applied to the book-reading fantasy and to the concept of suggestion. International Journal of Clinical and Experimental Hypnosis, 18, 89-98.

Maintained that many of the conflicting viewpoints in theories of hypnosis parallel the descriptive complexity of the phenomena. A 3-factor theory of hypnosis is surveyed in which hypnotic depth is conceived as a complex of 3 separate but complementary processes or dimensions. The theory is used to illuminate the book-reading fantasy and the concept of suggestion. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1962**

Shor, Ronald E. (1962). Three dimensions of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 10, 23-28.

The writer extends his earlier presentation of a dual-factor theory of hypnosis to include archaic involvement. Although interactions occur among these factors, the depth of each may vary independently. The theory is properly seen as a synthesis and elaboration of many prior theories of hypnosis. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1960**

Conn, Jacob H. (1960). The psychodynamics of recovery under hypnosis. International Journal of Clinical and Experimental Hypnosis, 8, 3-16.

Defines hypnosis as primarily a change in reality testing, and considers it as both an altered state of consciousness and a multilevel dynamic relationship in which the S is always aware of the operator. Hypnosynthesis emphasizes the patient's values and expectations and his freedom to choose what to say and how he should be treated. Preference is given to terms of "more or less" consciousness. The patient does not receive any training in hypnosis and there is no encouragement of acting out in

hypnosynthesis. Attention is directed to repetitive patterns, and the hypnotic experience is utilized as a present dynamic experience. Hypnosynthesis demonstrates that symptom removal is possible without symptom substitution when there is an effective working relationship. The common factor in every psychogenic cure, including hypnotherapy, is the fostering of self-esteem and active participation, both of which are achieved by effective collaboration in the therapeutic situation. (Spanish + German abstracts) (50 ref.) (Psycinfo database record (c) 2002 APA, all rights reserved)

## GENETICS

2000

Lichtenberg, P.; Bachner-Melman, R.; Gritsenko, I.; Ebstein, R. P. (2000). Exploratory association study between catechol-O-methyltransferase (COMT) high/low enzyme activity polymorphism and hypnotizability. American Journal of Medical Genetics, 96, 771-774.

Only recently have studies of electrocortical activity, event-related potentials, and regional cerebral blood flow begun to shed light on the anatomical and neurobiological underpinnings of hypnosis. Since twin studies show a significant heritable component for hypnotizability, we were prompted to examine the role of a common, functional polymorphism in contributing to individual differences in hypnotizability. A group of 109 subjects (51 male, 58 female) were administered three psychological instruments and tested for the high/low enzyme activity COMT val/met polymorphism. We observed a significant correlation between hypnotizability measured by the Stanford Hypnotic Susceptibility Scale (SHSS:C), ability to partition attention (Differential Attentional Processes Inventory or DAPI), and absorptive capacities (Tellegen Absorption Scale or TAS). The effect of COMT on the various dependent variables was initially examined by multivariate analysis that corrects for multiple testing. The dependent variables were SHSS:C hypnotizability scores, four attentional subscales of the DAPI, and TAS total score grouped by the COMT genotype (val/val, val/met, met/met) as the independent variable. Hotelling's Trace statistic was significant when scores were grouped by the COMT genotype (Hotelling's  $T^2 = 1.88$ ,  $P = 0.04$ ). Post-hoc testing using the Bonferroni correction shows that the only significant difference is between the val/met vs. the val/val COMT genotypes on hypnotizability. This association was significant for men but not for women. As for all case-control studies, these results need to be interpreted cautiously and require replication.

1990

Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

1989

Wallace, Benjamin; Persanyi, M.W. (1989). Hypnotic susceptibility and familial handedness. Journal of General Psychology, 116 (4), 345-350.

The possible relationship between hypnotic susceptibility and familial handedness was examined. In a mass testing session of students enrolled in introductory psychology, subjects were administered the Harvard Group Scale of Hypnotic Susceptibility and were also required to complete a questionnaire that ascertained information on their dominant handedness and that of their immediate family relatives. Subjects who had immediate sinistral relatives scored significantly lower in hypnotic susceptibility compared to those who had a history of familial dexterity. When immediate relatives of the original subject pool were tested on hypnotic susceptibility level, sinistral relatives scored lower in susceptibility than dextral relatives. The important implication is that this may indicate the existence of a familial component in hypnotic susceptibility.

1969

Duke, J. D. (1969). Relatedness and waking suggestibility. International Journal of Clinical and Experimental Hypnosis, 17, 242-250.

Volunteering pairs of Ss took 9 waking tests (WT) of hypnotic susceptibility. Pairs included siblings, friends, and strangers. Concordance correlations from 20 sibling pairs were positive for 7 of the 9 WT, 2 significantly so. For 19 pairs of strangers, correlations were insignificant, 5 positive, 4 negative. Data reopen nature-nurture questions about the origins of individual differences in hypnotic aptitude. For 20 pairs of cross-sex friends, 7 of 9 correlations were negative, 1 significant, and 2 approaching significance. 6 of 9 concordance correlations from 16 spouse pairs were also negative, but none was significant. (Spanish & German summaries) (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## GENITOURINARY/UROLOGY

2002

Ginandes, Carol (2002). Extended, strategic therapy for recalcitrant mind/body healing: An integrative model.. American Journal of Clinical Hypnosis, 45 (2), 91-102.

The development of the power therapies, behavioral medicine, and short term interventions have reported such success even with trauma cases that it is relevant to question the justification for lengthy psychotherapy. Yet some patients with complex mind/body conditions impervious to medical treatment/hypnosis may require extended, multi-modal, integrative therapy. This paper details a single complex case of paruresis as a prototype for illustrating a holographic treatment model for recalcitrant conditions: Component features of the proposed model presented include: 1) the sequential utilization of hypnbehavioral and analytic approaches; 2) uncovering work providing access to the somatic ego state associated with the illness condition; 3) the extended treatment time frame required for deep psycho-physiological change; and 4) the stages of counter-transference expectably evoked by such patients (e.g. urgency, exuberant optimism, frustration, discouragement), and the transformation of such reactions to achieve maximum therapeutic efficacy.

NOTES 1:

Paruresis is a social phobia involving urinary retention and "thought to affect some 17 million or 7% of the American population" (p. 92). Also known as "bashful bladder."

1965

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

1958 GENETICS

2000

Lichtenberg, P.; Bachner-Melman, R.; Gritsenko, I.; Ebstein, R. P. (2000). Exploratory association study between catechol-O-methyltransferase (COMT) high/low enzyme activity polymorphism and hypnotizability. American Journal of Medical Genetics , 96, 771-774.

Only recently have studies of electrocortical activity, event-related potentials, and regional cerebral blood flow begun to shed light on the anatomical and neurobiological underpinnings of hypnosis. Since twin studies show a significant heritable component for hypnotizability, we were prompted to examine the role of a common, functional polymorphism in contributing to individual differences in hypnotizability. A group of 109 subjects (51 male, 58 female) were administered three psychological instruments and tested for the high/low enzyme activity COMT val/met polymorphism. We observed a significant correlation between hypnotizability measured by the Stanford Hypnotic Susceptibility Scale (SHSS:C), ability to partition attention (Differential Attentional Processes Inventory or DAPI), and absorptive capacities (Tellegen Absorption Scale or TAS). The effect of COMT on the various dependent variables was initially examined by multivariate analysis that corrects for multiple testing. The dependent variables were SHSS:C hypnotizability scores, four attentional subscales of the DAPI, and TAS total score grouped by the COMT genotype (val/val, val/met, met/met) as the independent variable. Hotelling's Trace statistic was significant when scores were grouped by the COMT genotype (Hotelling's  $T^2 = 1.88$ ,  $P = 0.04$ ). Post-hoc testing using the Bonferroni correction shows that the only significant difference is between the val/met vs. the val/val COMT genotypes on hypnotizability. This association was significant for men but not for women. As for all case-control studies, these results need to be interpreted cautiously and require replication.

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Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

#### Summary

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).

#### GEOGRAPHIC LOCATION

2002

Green, Joseph P.; Rasekhy, Rouhangiz; Johnson, Lissa; Bernhardt, Sarah E. (2002). Cultural views, attitudes, and beliefs about hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.

"The present investigation surveyed attitudes and beliefs about hypnosis across four samples of students attending university at the University of New South Wales, Australia; Dortman University, Germany; The Ohio State University, United States; and Shaheed Behesti University of Medical Sciences, Iran. A total of 280 undergraduate students, ranging in age from 18 to 25 years old, completed three different questionnaires assessing their opinions and beliefs about hypnosis. Our findings show that myths and misconceptions about hypnosis abound and that such beliefs are not culture specific" (Bulletin of Division 30, Psychological Hypnosis, Fall 2002, Vol. 11, No. 3, p. 14).

1999

Kallio, Sakari P.; Ihamuotila, Mikko J. (1999). Finnish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 47 (3), 227-235.

Finnish norms of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) are presented. The aggregate sample of 285 subjects consisted of 3 groups (n = 129, n = 116, and n = 40) that were tested during 1996 and 1997. Comparisons are made with the original normative American sample, an Australian sample, and 3 translated adaptations of HGSHS:A in Danish, German, and Spanish. In the Finnish sample, Items 2 (eye closure), 11 (posthypnotic suggestion), and 12 (amnesia) received high passing percentage in comparison with the reference data, but generally the Finnish normative data were congruent with these index studies.

Rodriguez Sanchez, Rodriguez Rodriguez, Santana Mariqo, Piqueras Hernandez, Alvarez Ramirez (1999). Current tendencies and future directions of hypnosis in Cuba. Newsletter of the Erickson Foundation, Vol 2, 6.

Reviews the history of hypnosis in Cuba and the main tendencies and trends. There were no influences from Ericksonian hypnosis till recently when the first group of Ericksonians came to teach for the first time in Manzanillo, Granma Medicine University. The main approach is still the so called traditional hypnosis in which there is a development mainly in surgery and in some medical conditions. There are some strong places: Santiago de Cuba, where HipnoSantiago Hypnosis Workshop is held regularly, Manzanillo, where there is a Hypnosis Research group with publications in the country and abroad and experience in teaching hypnosis. The Hypnosis Society is located in Habana.

The group from Manzanillo is working in a Clinic Project with such themes as hypnoanesthesia in major surgery, models of groups learning under hypnosis, and some other therapies.

## NOTES

List of Manzanillo's Research group main papers:

Learning under very deep hypnosis. In *Neurology Magazine*, Spain

Current tendencies of Hypnosis in Cuba. In *Newsletter of Erickson Foundation USA*

Breaking hypnosis myths. Communication at the University Forum.

Main Philosophical, Physiological and Methodological Problems in Hypnosis Research. In University Forum

States of consciousness and hypnosis. In *Multimed Magazine*, Cuba.

Memory tests and hypnosis. Psychology Thesis.

Autonomic System and Hypnosis. Psychology Thesis (Master degree)

Hypnosis as the only anaesthetic procedure in major surgery. (Thesis)

1997

Jana, Hrishikesh (1997). The development of hypnosis in India. [Unpublished manuscript]

## NOTES

"Yoga (specially Meditative Yoga or Savasana) and Transcendental Meditation are integral parts of the cultural heritage of Indians. These and the state of hypnosis possess some of the characteristics in common and all these have been grouped under the heading 'Altered States of Consciousness' by the modern psycho-physiological and biological researchers. Hindu saints used to clothe sparsely even in the midst of extreme environmental conditions and the lying down of some yogis on the nail-bed are examples of their super-human tolerance to cold, pain, etc." (p. 2). Author cites the pioneering work of Dr. James Esdaile using hypnosis for surgical anaesthesia at Hooghly Hospital (1845-1850). Despite India's culture and the record of Dr. Esdaile, hypnosis often was regarded with suspicion in India. In the early and mid-20th century, physicians (e.g. Dr. N.V. Mody, an obstetrician) had difficulty having their work accepted, but since the early 1970s Dr. Jana and others have contributed to a renaissance in the use of medical, dental, and psychological hypnosis. This paper chronicles the history of hypnosis in the late 20th century in India.

Perry, Campbell (1997). Admissibility and per se exclusion of hypnotically elicited recall in American courts of law. International Journal of Clinical and Experimental Hypnosis, 45 (3), 266-279.

State v. Mack (1980) ruled that hypnotically elicited testimony is per se excluded from Minnesota law courts; this court also ruled that police could employ hypnosis in an attempt to construct an independently corroborated case. In recent years, there have been moves to rescind this exclusion; this raises a question of the probative value of such additional information when it is uncorroborated. This situation is compared with that of the polygraph as an index of deception: Like hypnosis, it is excluded per se in most American jurisdictions. Some legal decisions

in Wisconsin are used to illustrate one alternative to the per se exclusion approach. Admissibility of scientific evidence in American courts of law has been based on a criterion of "general acceptability within the relevant scientific community," as first elucidated in *Frye v. United States* (1923). Recently, the U.S. Supreme Court overturned the *Frye* decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993), by making general acceptability but one of several admissibility criteria. Three *Daubert*-based decisions, one involving hypnosis and all concerned with "recovered repressed memories," indicate some problems in law posed by *Daubert*. - Journal Abstract.

1996

Cardena, Etzel (1996). "Just floating on the sky:" A comparison of hypnotic and shamanic phenomena. In Quekelberghe, R. V.; Eigner, D. (Ed.), Yearbook of cross-cultural medicine and psychotherapy 1994 (pp. 85-98).

Despite the vastly different cultural contexts of hypnosis and shamanism, a comparison of the phenomenology of the two is warranted.

The author proposes that the two types of very hypnotizable individuals, one exhibiting vivid imagery and the other showing diminished memory and control, corresponds to the classical distinction between soul journey and spirit possession. Other cognitive traits, developmental histories and alternate experiences of hypnotic virtuosos and shamans imply other similarities. The resemblance between hypnotic and shamanic phenomenology strongly suggests a universal disposition that is independent of culture. Western culture should acknowledge, respect and study the potentials and risks of this ability.

Zachariae, Robert; Sommerlund, Bo; Molay, Francine (1996). Danish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 44 (2), 140-152.

Norms for a Danish adaptation of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) are presented. Four samples tested from 1988 to 1991 (n = 166, n = 54, n = 95, and n = 61) were pooled, resulting in an aggregate sample of 376 participants. The normative data were generally congruent with earlier normative studies with regard to score distribution, item difficulty levels, and reliability. Studies using the Danish adaptation of the HGSHS:A as a screening instrument have shown the predictive value of the instrument in a Danish context. Data for a comparable American sample of volunteers (n = 170) tested by the same hypnotist were included in the analysis. A comparison revealed a marked difference for the posthypnotic suggestion item, hinting that cultural differences between the Danish and American samples with regard to expectancies and attitudes toward hypnosis may play a role. Further studies comparing attitudes toward hypnosis across different cultural contexts are needed to clarify this issue. - Journal Abstract

1995

Watkins, John G. (1995). Organization and functioning of ISCEH, the International Society for Clinical and Experimental Hypnosis. International Journal of Clinical and Experimental Hypnosis, 43 (3), 332-341.

The first international society of hypnosis founded in this century, the International Society for Clinical and Experimental Hypnosis (ISCEH), was organized in 1958 as a direct result of societal conflicts between The Society for Clinical and Experimental Hypnosis (SCEH) and the American Society of Clinical Hypnosis (ASCH). Initially, it consisted of National Divisions built around key contributors in 30 different countries. This article describes the inception, organization, and development (including controversies and conflicts) of ISCEH up to 1973. At that time, through the cooperation of SCEH, ASCH, and other international groups, under the leadership of Dr. Ernest R Hilgard, ISCEH was reorganized, reconstituted, and renamed The International Society of Hypnosis (ISH). For the purpose of historical study, the society's voluminous correspondence, directories of officers and committees, awards, photographs, programs of congresses, election records, and other relevant documents have been cataloged and preserved in some 82 files in the Archives of the History of American Psychology at the University of Akron, Akron, Ohio.

1993

Cardena, Etzel (1993, October). Trance and possession as dissociative disorders: How exotic are they?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Joke: "What happened to the possessed patient who didn't pay his exorcist?"  
Answer: "He got repossessed."

Began with a quotation of Lagerkvist's book describing possession of a Sybil in Greek temple. Possession is part of religious experience worldwide, that he is not discussing here.

The revised diagnostic manual, ICD-10, has included "dissociative trance disorders." To diagnose this one must have either trance (narrowing awareness or focusing and stereotyped movements, behaviors) or possession trance (replacement of sense of personal identity by a new identity, with stereotyped culturally-determined behaviors or movements that are experienced as being controlled by the possessing agent), \*and\* full or partial amnesia for the event. Cardena emphasizes it doesn't need to be full amnesia.

To be diagnosed as dissociative trance disorder, the trance or possession state observed cannot be a normal part of a broadly accepted cultural or religious practice, and it must produce distress or maladjustment.

These are the most common type of dissociative disorders in non-Western cultures, e.g. 90% in India. So this diagnosis in India is not "atypical." "Non-Western" applies to 80% of the World and 1/3 of the USA population. DSM is trying to expand cultural relevance.

Also, even in the Western culture Allison and others have published cases of dissociative trance disorder, and others have described trance disorders:

Spiegel & Spiegel's Grade 5 personality is vulnerable to dissociative disorder. Hartman's chronic nightmare patients have "boundary thinness" (i.e. they are not clear if they are awake or asleep, lack separation from themselves and others). Lynn & Rhue's fantasy prone individuals, 22% of people, are vulnerable to maladjustment.

Cardena's recommended change in diagnosis of dissociation is critiqued in Transcultural Psychiatric Research Review (1992). Criticisms of the new diagnosis, published in that journal, are: 1. Culture-bound syndromes cut across Western diagnostic boundaries. 2. The diagnosis may be insensitive to the cultural context in which phenomena occur (e.g. distress may lead a person to participate in a cult of affliction) and it may require anthropological sophistication of diagnosticians or consultation with someone who has that knowledge. 2a. It may disregard considerations such as who has the power to "authorize" the phenomenon, under what circumstances, etc. [That would be true with any diagnosis however.] 3. Dissociative Trance Disorder may assume greater within and across-culture uniformity for the conditions than is warranted. 4. It may give validity to metaphysical explanations for spirit possession. [But in psychiatry we often use terms that don't take into consideration validating metaphysical explanations, e.g. "phantom limb" pain. 5. The medical model that underlies DSM is inappropriate for ontological considerations on the nature of the self. [But those with this diagnosis give us some understanding, not what the ultimate nature of the self and consciousness are. Diagnoses are pragmatic ways of dealing with problems.]

At the present time, the diagnosis of Dissociative Trance Disorder is included in the Appendix of DSM-IV.

For further elaboration of this material, see Cardena, E. (1992). Trance and possession as dissociative disorders. *Transcultural Psychiatric Research Review*, 29, 283- 297.

1993

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

Hilgard, Ernest R. (1993). History of research centers and professional hypnosis societies in the United States. *International Journal of Clinical and Experimental Hypnosis*, 41 (3), 173-190.

The brief history of hypnosis in America begins with William James's chapter in his *Principles of Psychology* that got hypnosis off to a good start as a legitimate part of psychology. In the 20th century, before World War II, the idea of performing scientific investigations of hypnosis took place at Harvard University through William McDougall, at the University of Wisconsin and Yale University under Clark Hull, and, in its clinical aspects particularly, through the personal efforts of Milton H. Erickson. The resurgence after World War II is related to the use of hypnosis with war casualties during the war and with the development of clinical psychology. The aspects of the history emphasized here are the founding of continuing institutes and research centers, some theoretical cleavages that have persisted to this day, and the establishment of hypnosis societies with their journals, annual meetings, and workshops, including an International Society of Hypnosis. The history of Division 30 within the American Psychological Association brings the story up to date.

1990

Adityanjee (1990). 'Multiple personality disorder in India': Reply. *American Journal of Psychiatry*, 147 (9), 1260-1261.

Replies to comments by J. Downs et al (see PA, Vol 78:4589) concerning the article on multiple personality and possession syndrome in India by Adityanjee et al (see PA, Vol 77:12344). Both syndromes reflect parallel dissociative disorder with similar etiologies. The present diagnostic classification for multiple identity phenomena is in need of revision.

Downs, John M.; Dahmer, Sharon K.; Battle, Allen O. (1990). Multiple personality disorder in India. *American Journal of Psychiatry*, 147 (9), 1260.

Comments on the article by Adityanjee et al (see PA, Vol 77:12344) on multiple personality vs possession syndrome in India. The history of the trends of these disorders is presented, and the differences between multiple personality and possession are described. The only fundamental difference between the 2 disorders may be in the voluntary type. NOTES 1: 1887, Dragutinovich & Sheehan, 1986

1989

Lamas, Juan R.; del Valle-Inclan, Fernando; Blanco, Manuel J.; Diaz, Antonio Albo (1989). Spanish norms for the Harvard Group Scale of Hypnotic susceptibility, Form A. *International Journal of Clinical and Experimental Hypnosis*, 37 (3), 264-273.

The results of administering the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) to a Spanish sample are on the whole consistent with those results obtained in other normative studies, especially Bongartz's work with a German sample, and they confirm HGSHS:A's usefulness in non-Anglophone countries. The Spanish HGSHS:A's reliability and validity remain

within the limits reported for other locales, but there are certain discrepancies with respect to the difficulty of two HGSHS:A items. NOTES 1: In the Discussion section the authors note, "the relative difficulty of the items is comparable to that observed in other studies, except for Items 3 and 8. The reliability of the present version is somewhat less than that of the others, both with regard to the individual items and the scale as a whole. This is probably related to the value of the variance, which is likewise smaller than usual. The standard error of measurement and the validity estimate are practically identical to other published values.

"With regard to Item 3, the increase in the proportion of Ss passing the hand lowering suggestion seems to be attributable to the modifications of the usual English instructions, which were effective in making it clear to Ss that they had to raise their arms deliberately. Even so, only 60% of Ss passed this item, which contrasts with the fact that nearly all Ss administered SHSS:C lowered their arms 15 cm or more, the criterion for passing the suggestion. This discrepancy suggests that Ss may underestimate the distance they lower their hands. ... The problem with Item 8 seems more difficult. In the pilot study, its difficulty was somewhat less than in other studies but, since the difference was not very striking, no change was introduced to the first version. The Ss seemed to understand perfectly well what was being asked of them, and their efforts to move their heads were usually obvious, but they just did not seem to be able to do so. It is interesting, however, that the unusual easiness of the item does not affect its relative reliability .... As is usually found, suggestions that involve a challenge to Ss have the greatest correlation with the total hypnotizability score, and this was the case in the present study with Item 8" (p. 271).

Mackett, John (1989). Chinese hypnosis. British Journal of Experimental and Clinical Hypnosis, 6, 129-130.

#### NOTES

This is a brief report of observations made by the author during a tour of China. The author states, "Subsequent enquiries on our tour revealed that Qi Gong was a rare type of therapy and used in no other hospital or medical school that we visited. Lewis (1985) has confirmed the apparent absence of knowledge and practice of hypnosis as we know in China. He mentions the use of Qi Gong which he describes as an 'old Buddhist exercise'."

1987

Dobkin de Rios, Marlene; Friedmann, Joyce K. (1987). Hypnotherapy with Hispanic burn patients. International Journal of Clinical and Experimental Hypnosis, 35 (2), 87-94.

This paper examines a culturally sensitive hypnotherapeutic intervention for Hispanic burn patients who suffer symptoms of the post-traumatic stress disorder and discusses the outcome of 27 patients seen by the authors (a medical anthropologist and a clinical psychologist), over a 3.5-year period. Given the

difficulties of recent monolingual, Mexican migrants in responding to psychological interventions that are not culturally sensitive, the hypnotherapeutic interventions and procedures developed by the authors provide a plan for systematic desensitization and cultural concordance to make rehabilitation of Hispanic burn patients more effective.

Jana, Hrishikesh (1987). History and present state of hypnosis in India. [Lecture] Presented at the Department of Psychiatry, UCLA.

#### NOTES

Hypnosis is discussed in relationship to traditional Indian medical and psychological treatments. The following Table illustrates some of the relationships among Asian approaches, which also include philosophical and religious elements.

1985

Fellows, Brian J. (1985). Hypnosis teaching and research in British psychology departments: Current practice attitudes and concerns. British Journal of Experimental and Clinical Hypnosis, 2 (3), 151-156.

#### NOTES

The author mailed a questionnaire to 58 departments of psychology to determine the extent/nature of hypnosis teaching and research, and attitudes toward teaching and research on hypnosis. The author noted a general anxiety about teaching students how to do hypnosis (as contrasted with learning about hypnosis). "Some of the anxieties which departments have about the teaching of hypnosis seem to stem from some rather ancient and invalid conceptions about the nature of hypnosis and what it can do" (p. 153). The author also relates his personal experience teaching undergraduates "something about the procedures and phenomena which have been traditionally associated with hypnosis" (p. 153). They may use one of the standard hypnotizability scales, study a particular hypnotic phenomenon such as ideomotor action or age regression, or study an empirical issue such as facilitation of recall. He reports not meeting with "any particular difficulties," but also that he has seen two problems: the student who is anxious about doing the procedure, and an occasional subject who reports the experience was unpleasant or disturbing--e.g. during age regression. He reports teaching students to handle these events in a normalizing manner. J. Holroyd

Suryani, L. K. (1984). Culture and mental disorder: The case of bebainan in Bali. In Culture, medicine and psychiatry. D. Reidel Publishing Company.

#### NOTES

Bebainan is a form of dissociation which is culturally associated with Bali. Thought to be caused by sorcery, a bebainan attack lasts up to an hour and is manifested by confusion, crying, screaming, and shouting, with inability to control one's actions. However, it seems most victims maintain awareness of their own behavior and are not amnesic for it afterwards.

In this study, the author interviewed 27 people, mostly female, most of whom experienced their first attack between 16-30 years of age. The author concluded that the attacks permitted release of feelings of frustration and anger without stigma. Author concluded it is not a form of psychosis, is not organic, and is not a neurosis.

1983

Barabasz, Marianne; Barabasz, Arreed F.; Mullin, C. S. (1983). Effects of brief antarctic isolation on absorption and hypnotic susceptibility - preliminary results and recommendations: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (4), 235-238.

Absorption scores were found to increase significantly for Ss exposed to brief summer Antarctic isolation. Contrary to wintering-over research, no significant increases in hypnotic susceptibility were found.

This paper reviews Soviet approaches to the unconscious and to hypnotic phenomena, before examining psychoanalytic theories of hypnosis which are generally based on transference. The author believes the existing theories are inadequate, arguing that there is a psychophysiological dimension to hypnosis; but what unconscious processes does this conceal? Psychoanalysis opened one road to the unconscious, but affect, nonverbal communication, and psychophysiological process are still uncharted territories towards which hypnosis may yet prove to be another royal road. NOTES

The author concludes, "hypnosis and the unconscious ... are closely linked. Historically, experiments on posthypnotic suggestion were in fact the starting point for the discovery of the unconscious. Posthypnotic suggestion is in effect one of the most irrefutable proofs that psychical contents can influence behavior, albeit eluding the subject's consciousness.

"In this paper, the present author provides a description of Soviet researchers' conceptions of the unconscious, and of the point of view from which they approach hypnotic phenomena. Psychoanalytic theories of hypnosis are then presented, which are essentially based on transference. It is shown why this notion seems to the present author powerless to account for the specific nature of the hypnotic relationship. There is, in effect, a psychophysiological dimension to hypnosis. It lies at the crossroads between the instrumental and the relational dimension. But nothing is known about what unconscious processes hide at the psychophysiological level. Psychoanalysis has brought to light the laws governing the functioning of unconscious representations. But the realm of the affect, the nonverbal communication, and bodily processes still remain beyond our knowledge. This is a hidden side of the unconscious, in relation to which hypnosis may serve as another 'royal road'" (pp. 104-105).

1982

Laurence, Jean-Roch; Perry, Campbell (1982). Montreal norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 30 (2), 167-176.

Norms are presented for the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGS: A) of Shor and E. Orne (1962). Comparisons are made on HGS: A between 3 Montreal samples (N = 220, N = 178, & N = 137) and the aggregate sample (N = 535). These are compared additionally with a normative group of Harvard students (Shor & E. Orne, 1963), a normative group of University of California at Berkeley students (Coe, 1964), a normative sample of Australian students (Sheehan & McConkey, 1979), and the original Stanford University normative sample which was tested individually on the Stanford Hypnotic Susceptibility Scale, Form A (Weitzenhoffer & Hilgard, 1959). Although the Montreal groups were heterogeneous in ethnic origin and first language, the present normative data are generally congruent with earlier studies.

**1981**

Hilgard, Ernest R.; Sheehan, Peter W.; Monteiro, K. P.; Macdonald, Hugh (1981). Factorial structure of the Creative Imagination Scale as a measure of hypnotic responsiveness: An international comparative study. International Journal of Clinical and Experimental Hypnosis, 29, 66-76.

The factor structure of the Creative Imagination Scale (CIS) of Wilson and Barber (1978) was investigated in two studies by correlating scores on it with scores on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the Absorption scale of Tellegen and Atkinson (1974), and Sheehan's (1967) revision of Betts' (1909) imagery scale. One of the studies was conducted at the University of Queensland in Australia (N = 237), the other at Stanford University in California (N = 92). The major finding, consistent in both investigations, was that two factors accounted for the major portion of the variance, one factor designated as a Hypnotic Performance factor, the other designated as an Absorption/Imagination factor. The CIS was weighted highly on both factors, the data bearing on earlier claims that CIS represents a single-factor scale.

**1979**

Sheehan, Peter W.; McConkey, Kevin M. (1979). Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27, 294-304.

Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) are presented and results relating to score distributions, item difficulty level, reliability, and validity are considered for 3 distinct samples of Australian students. Data are compared with both the original norms (Shor & E. Orne, 1963) and additional American (Coe, 1964) normative data. Results indicated that, in the Australian context, HGS: A functions as a reliable, effective predictor of hypnotic susceptibility. The psychometric properties of the scale were uniform across all of the different samples and reference groups that were considered. The accuracy of the scale appears to be most obviously limited when it is employed as a sole predictor of Ss' special aptitude for hypnosis.

1966

Hoskovec, J. (1966). Hypnopedia in the Soviet Union: A critical review of recent major experiments. International Journal of Clinical and Experimental Hypnosis, **14**, 308-315. (Abstract in Psychological Abstracts 41: 149, and in American Journal of Clinical Hypnosis, 1967, 4, 295)

Major Soviet hypnopedia (sleep-learning) experiments were conducted by Balkhashov (1965); Khil'chenko, Moldavskaya, Kol'chenko, and Shevko (1965); Kulikov (1964); Svyadosch (1962); Zavalova, Zukhar', and Petrov (1964); Zukhar', Kaplan, Maksimov, and Puskna (1965). The results of these experiments show that learning during sleep is possible when a 'suggested set' to perceive and remember the learning material during sleep is involved. Selection of Ss according to hypnotizability or primary suggestibility seems to be an important prerequisite. The influence of hypnopedia on the mental health of Ss is evaluated. (Author's abstract, in AJCH.)

1965

Vasilev, L. (1965). Mysterious phenomena of the human psyche. New York: University Books. (Abstracted in American Journal of Clinical Hypnosis, 1965, 8:2, 146-147)

#### NOTES

The review of this book by Leo Wollman (American Journal of Clinical Hypnosis, 1965, vol. 8, pp. 146-147) states, "Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B. N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

" An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent" (pp. 146-147).

1964

Ludwig, Arnold M. (1964). An historical survey of the early roots of mesmerism. International Journal of Clinical and Experimental Hypnosis, **12** (4), 205-217.

Many believe that Franz Anton Mesmer helped lay the foundations upon which modern hypnotic theory and practice evolved. However, as one views the history of healing through suggestion prior to Mesmer, it becomes apparent that neither his theories nor his practices showed much originality. In fact, there is good evidence that Mesmer plagiarized the work of others. With this in mind, it appears that Mesmer's contribution to later psychological healing and theory was related more to his personality than to his originality. (Journal Abstract)

1962

Hallaji, J, Ja'far (1962). Hypnotherapeutic techniques in a central Asian community. International Journal of Clinical and Experimental Hypnosis, 10, 271-274. (Abstracted in Index Medicus, 63, Mar. S-543)

The semimonastic Sufi practitioners of Afganistan treat physical as well as psychosomatic disorders by a method which is reminiscent of Mesmerism, and they claim cures even for illnesses such as tuberculosis and cancer. A treatment session for 18 patients is described. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Bowers, Margaretta K. (1961). Hypnotic aspects of Haitian voodoo. International Journal of Clinical and Experimental Hypnosis, 9, 269-282.

The voodoo ritual is analyzed within the framework of hypnosis and hypnotically induced secondary personalities. The author contends that "If the hypnotic nature of voodoo and similar religious rites were better understood the problem of discarding the evil and nurturing the good in the cultural life of people would be facilitated." From Psyc Abstracts 36:04:4II69B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## GERONTOLOGY

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery,

hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-be patient/client that he or she has something to offer that can help take away pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1981**

Elkind, Leonard (1981). Effects of hypnosis on the aging process. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (4), 132-137. (Also presented at the annual meeting of the Am Soc of Psychosomatic Dentistry and Medicine in San Francisco, CA)

This study investigated the possibility of altering physiological measures associated with aging through the use of posthypnotic suggestions of increased youthfulness and vitality. Subjects were 20 women ranging in age from 39 to 56 years old. They were tested individually on Morgan's Adult Growth Examination, the AGE. Test-retest scores of the Control group were not significantly different, the median change being zero. The Experimental group, however, showed a decrease in Body Age for all of the subjects, the range of change from -3 to -18 years with a median change of -11 years.

## **GOAL DIRECTED FANTASY**

**2001**

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. ([available online:] <http://www.iuniverse.com/bookstore/marketplace>)

## **NOTES**

**1:**

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert

induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

**1999**

Comey, Gail; Kirsch, Irving (1999). Intentional and spontaneous imagery in hypnosis: The phenomenology of hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 47 (1), 65-85.

Students were given 1 of 2 versions of the Carleton University Responsiveness to Suggestion Scale (CURSS): (a) the original version, which contains instructions to intentionally imagine goal-directed fantasies, and (b) a modified version, in which instructions for suggestion-related imagery were deleted. Participants were asked to report their goal-directed fantasies and to indicate whether these occurred spontaneously or were generated intentionally. They were also asked whether they had tried intentionally to generate the suggested experience and to indicate whether they had believed that the suggested states of affairs were real (e.g., whether they thought a hallucinated cat really existed). The deletion of instructions for goal-related imagery significantly increased responsiveness to CURSS suggestions. Spontaneous goal-directed imagery was significantly correlated with behavioral response, but intentional imagery was not. Most successful responders tried to generate suggested experiences intentionally, indicated that they could have resisted challenge suggestions if they really wanted to, and reported believing in the reality of suggested ideomotor and challenge experiences but not of cognitive suggestions. Voluntary attempts to generate suggested experiences were correlated with subjective responding.

**1992**

Bowers, Kenneth S. (1992). Imagination and dissociation in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 40 (4), 253-275.

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high

hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

Kirsch, Irving; Mobayed, C. P.; Council, J. R.; Kenny, D. A. (1992). Expert judgments of hypnosis from subjective state reports. Journal of Abnormal Psychology, 101, 657-662.

Suggestibility was assessed in 60 student subjects after a traditional hypnotic induction, an alert induction, progressive relaxation training, or instruction in goal-directed imagery. Responsiveness to suggestion did not differ between groups. Subjects also generated open-ended reports of their states of awareness and of their experience of three hypnotic suggestions. A sample of these reports from 24 moderately to highly suggestible subjects was evaluated by 18 experts in the field of hypnosis. Expert ratings of subjects' open-ended reports indicated that (a) traditional hypnotic inductions produce a state of consciousness that is indistinguishable from nonhypnotic relaxation training, (b) the subjective experience of hypnotic suggestions after imagination training is indistinguishable from that after hypnotic inductions, and (c) suggestibility is unrelated to state of consciousness as assessed by experts.

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

## NOTES

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These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply

involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

1990

Heyneman, Nicholas E. (1990). The role of imagery in hypnosis: An information processing approach. International Journal of Clinical and Experimental Hypnosis, 38 (1), 39-59.

Imagery is widely agreed to be an important component of hypnosis. The theoretical framework from which to conceptualize the role of imagery in hypnosis, however, has remained controversial. A model is presented which attempts to reconceptualize hypnotic imaginal processing in terms of current theory and research in cognitive psychology and psychophysiology. This model draws from a propositional approach to imagery (e.g. Pylyshyn, 1973), particularly as adapted by Lang's (1979) bioinformational theory. It is argued that the hypnotic image is fundamentally more complex than simple iconic mental representation, containing instead both stimulus and response components. It is proposed that the critical properties of the hypnotic image are not the stimulus components or propositions which give rise to the experience of the image but instead are response propositions which are associated with overt behavior. Processing of these response propositions is conceptualized as a negative feedback system between the brain and effector site. Some preliminary sources of support as well as implications and research suggested by this model are discussed.

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## NOTES

The author notes that the brain does not store a kind of "photograph," but rather stores "meanings" (Anderson, 1978); and that images actually represent response processes, as observable in physiological concomitants (Lang, 1977).

The hypnotic suggestion that a Subject's arm is being pulled up into the air by a large helium balloon is represented by two separate propositions: "There is a helium balloon tied to your arm" (a stimulus proposition) and "Your arm is moving up into the air" (a response proposition). According to Peter Lang (1979), an image is not a mental stimulus to which a response is made, but is in itself an active response process, accompanied by physiological activity. Verbal instructions to a Subject determine whether they will access stimulus propositions or response propositions. "Lang et al. (1980) found that only those Ss given response training coupled with response proposition scripts showed significant physiological arousal. These Ss were presumably better able to access and process that portion of the propositional network which controls visceral and motoric responding" (p. 46).

This author proposes that cognitive processing of a hypnotic image involves (internal) responding, and that 'responsive propositions' provide the basis for understanding the function of imagery in hypnosis, and are more important to hypnotic imagery than stimulus propositions. "In other words, the experience of a visual image and thus the vividness or controllability of that image is not critical for hypnosis. What is important to note is that the hypnotic behavior is not a response to a visual image but is instead a function of the processing of the image itself (cf. Lang, 1979)" (pp. 47-48).

In explaining how an image might facilitate amplification of a subtle response (such as in arm levitation), the author suggests that physiological and external feedback systems are involved--principally a neural feedback loop between brain and target organ (in this case, arm muscles). "Efferent signals, which are activated by processing response propositions, initiate the overt behavior while afferent signals feed back to the brain and modulate further input to the effector system. The process progressively reduces the mismatch between the image instructions and behavior until the hypnotic task is completed" (p. 48). The feedback loop "provides information on the discrepancy between desired behavior and actual behavior:  $e = B_d - B_a$ , where  $e$  = error,  $B_d$  = desired behavior, and  $B_a$  = actual behavior (Arbib, 1972). The error signal generated by this discrepancy modifies the efferent output so as to eventually approximate  $e = 0$ " (p. 49). The author notes that this complex process of physiological feedback may be "augmented by external feedback such as modified verbal instructions or vocal intonations of the hypnotist and self-observation by S" (p. 49).

The author's model is summarized as: "1. The context, setting, and expectations implied by being hypnotized as well as the wording of the hypnotic suggestions provides S with: (a) explicit or implicit instructions to use imagery, (b) repetitious wording which may increase the probability of fully accessing the relevant propositions, and (c) instructions that task completion is expected. This may function to increase the probability that the deep structure of the response propositions will be processed. 2. The hypnotic suggestion proper is composed of stimulus and response propositions embedded within a propositional network. 3.

Stimulus propositions give rise to the phenomenological characteristics or the percept- like experience of the image but may be unimportant in determining hypnotic behavior. 4. Processing of the response propositions includes an active response. This response process is facilitated by S's expectation to become actively involved in the imagined scene. Response propositions are the critical features of hypnotic imagery. 5. During hypnosis, the propositional network may be systematically modified by physiological or external feedback regarding the relative progress of the behavior toward task completion. This processing of response propositions is conceptualized as a negative feedback system. Efferent signals are delivered to the appropriate effector site while afferent signals feed back to the brain in order to modify further neural input, functioning to reduce the error between image and behavior. While the initial feedback is probably physiological, additional feedback may be obtained from the hypnotist's instructions and S's self-observations. 6. If stimulus propositions are simultaneously accessed, S experiences an image" (p. 51).

1989

Lynn, Steven J.; Rhue, Judith W.; Weekes, John R. (1989). Hypnosis and experienced nonvolition: A social-cognitive integrative model. In Spanos, N.P.; Chaves, J.F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 78-109). Buffalo, NY: Prometheus.

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The authors present a model to account for the subjective experience of nonvolition. The model rests on four observations: (1) nonvoluntary responses "have all of the properties of behavior that is typically defined as voluntary" (p. 108); (2) "hypnotizable subjects can resist suggestions when resistance is defined as consistent with the role of a 'good' hypnotized subject" (p. 108); (3) "Hypnotic behaviors are neither reflexive/automatic ... nor manifestations of innate stimulus-response connections" (p. 108); (4) "Hypnotic performances consume attentional resources ... in a manner comparable to nonhypnotic performances" (p. 108). They continue, "At the same time, many of the cognitive operations and affective reactions that accompany hypnotic responding are not readily accessible to consciousness" (pp. 108-109).

1988

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be

expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

1984

Crouse, Eric; Kurtz, Richard (1984). Enhancing hypnotic susceptibility: The efficacy of four training procedures. American Journal of Clinical Hypnosis, 27, 122-136.

In this study, we have compared the effects on hypnotic susceptibility of several components of training procedures based on a social learning model, which have been reported to be successful in enhancing hypnotic susceptibility. These included: 1) attitude-conception of hypnosis information, 2) involvement instructions, 3) goal-directed fantasy instructions, and 4) practice vs. no practice in responding to hypnotic suggestions. A 3 x 2 x 2 repeated measures factorial design was used for the experiment with 60 female volunteers serving as subjects in the study. Contrary to expectations, no differential treatment effects were obtained on either objective or subjective measures of hypnotizability. Furthermore, it was questionable whether or not any of the three information-based components even produced gains in hypnotic susceptibility. None produced clinically significant gains. They also were not found to alter either the subjects' attitudes or their use of hypnosis-related skills. Similarly, practice was found to be ineffective in enhancing responsiveness to suggestions. Taken as a whole, the results of this study suggest that the gains in hypnotic susceptibility reported for social learning-type training procedures may be due to causes other than those posited by social learning theory.

#### NOTES

Diamond (1977) posited 3 core components to modification procedures: attitudinal and set factors, cognitive strategy factors, and optimal learning factors (specific ways subjects are taught the internal responses).

"The present study was undertaken to more fully clarify the extent to which each of the critical components hypothesized by Diamond contributes to increasing susceptibility. It was predicted that subjects receiving attitude-conception of hypnosis information and subjects receiving involvement instructions would show a significantly greater gain in hypnotizability than Ss receiving goal-directed fantasy instructions. Secondly, it was predicted that a significantly greater gain in subjects' hypnotizability would result from an opportunity to practice responding to hypnotic suggestions when coupled with involvement instructions than when accompanied by goal-directed fantasy instructions or attitude-conception of hypnosis information" (p. 125).

A revised SHSS:C was used; it deleted words that explicitly suggested goal directed fantasies (GDF's) on several items: hand lowering, moving hands apart, taste

hallucinations, arm rigidity, arm immobilization. Experimenters used audiotaped presentation. Subjects in 3 of 6 experimental groups were also given opportunity to practice 30 minutes on 3 occasions spaced no more than one week apart. They were given 2 practice trials on each of 5 hypnotic suggestions taken from several different scales.

"While differential treatment effects were not found, there was a general facilitation of hypnotic responsiveness for all Ss across treatment conditions on both objective and subjective hypnotizability measures. The mean change in the objective hypnotizability score for all subjects was +.68, ... $p < .001$ ; the corresponding mean change in the subjective hypnotizability scores was +3.11 ...  $p < .001$ . Although statistically significant, neither of the shifts appear to indicate clinically significant shifts in hypnotic responsiveness" (p. 129).

The changes in the positive direction in hypnotizability were not correlated with hypnotizability. Subjects appear to change in their conceptualization of hypnosis, in the direction of it being more a self-induced phenomenon ( $p < .001$ ).

In their Discussion, the authors write, "Taken as a whole, results of this study challenge assumptions which have been made about how training procedures based on a social learning model affect gains in hypnotic susceptibility" (p. 131). Each experimental manipulation was intended to influence a mediating variable, and that apparently did not happen. Teaching subjects to use GDFs on a few items did not generalize so that subjects would generate GDFs on novel items. The results suggest "caution against assuming that social learning base training procedures are effective in altering subjects' attitudes and/or their use of skills thought to mediate hypnotic responsiveness" (p. 133). Nevertheless, the correlational data support previous studies that relate hypnotizability to the mediating factors under investigation.

Continuing their Discussion, the authors write, "Clearly, more attention should be paid in future studies to assessing changes in mediating variables produced by such training procedures. This is particularly important in terms of subjects' use of GDF's and their use of cognitive strategies to increase the extent of their involvement in the hypnotic experience. It is significant that in this study neither involvement instructions nor GDF instructions were found to alter subjects' use of cognitive strategies. Changes in these skill-related factors need to be demonstrated if social learning based training procedures are to be proven effective in altering subjects' hypnotic abilities rather than simply in raising subjects to their optimal level of responsiveness.

"One explanation which has been offered for the reported success of such training procedures is that they work by changing subjects' attitudes, motivation and/or expectations of hypnosis while leaving any aptitudinal component to hypnosis unaltered (Perry, 1977). From this point of view the gains in susceptibility reported for such procedures result from subjects moving closer to their optimal or 'plateau' level of responsiveness rather than from real changes in subjects' hypnotic abilities" (p. 134).

Alternatively, it is possible that the increases observed following training programs have something to do with the hypnotist-subject relationship. For example, increases in hypnotizability are more modest when the training is given in written instructions than when it is given in person by a hypnotist.

1976

Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, 18, 254-262.

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

NOTES 1:

NOTES: The suggestions were for arm levitation, arm rigidity, and amnesia.

1975

Barber, Theodore Xenophon (1975). Responding to 'hypnotic' suggestions: An introspective report. American Journal of Clinical Hypnosis, 18 (1), 6-22.

The author first presents an introspective report which describes some of his attitudes, motivations, and expectancies and ongoing thought processes while he is responding to 'hypnotic' suggestions. The introspective report indicates that (a) suggested effects are experienced when a person thinks with and imaginatively focuses on those things that are suggested and (b) a person imaginatively focuses on the suggestions when he sees the test situation as useful and worthwhile and when he wants to and expects to experience those things that are suggested. It is then argued that the responsive subject in a hypnotic situation differs in every important respect from the sleepwalker and closely resembles the person who is involved in reading an interesting novel or in observing an interesting motion picture. Finally, the author outlines a course, now being developed, that aims to teach individuals how to respond to suggestions.

1974

Spanos, Nicholas P.; Barber, Theodore Xenophon (1974). Toward a convergence in hypnosis research. American Psychologist, 29 (7), 500-511.

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The authors believe that there is general agreement that "responding to suggestions involves at least two interrelated factors. The first can be conceptualized as a willingness on the part of the subject to cooperate with the experimenter in fulfilling the aims of the suggestions. The second can be described as a shift in cognitive orientation from an objective or pragmatic perspective to one of involvement in suggestion-related imaginings" (p. 500).

They suggest that the two major theoretical positions lead to different approaches to research. "The construct trance or hypnotic state, despite its inherent vagueness and lack of amenability to operational definition, continues to dominate state conceptualizations of hypnosis. This construct seems to refer to a state that differs, not simply quantitatively, but in some basic, qualitative way, from waking states and from states of sleep. As Bowers (1966) noted, 'Most [present-day] investigators interested in hypnosis believe that there is an hypnotic state which fundamentally differs from the waking state [p. 42].' This belief makes it much more likely that it will be state theorists who will conduct studies aimed at establishing a physiological basis for the hypothesized fundamental alteration. The state theorists are also more likely than the nonstate theorists to pursue research that might indicate that hypnotic performance involves unique or highly unusual changes in perceptual functioning or in cognitive functioning, such as trance logic (Orne, 1959). Although studies of this type have generally produced negative or inconclusive findings (Barber, 1979, 1970a, 1973; Barber & Ham, 1974; Hilgard, 1972; Johnson, 1972; Johnson, Maher, & Barber, 1972; Sarbin & Slagle, 1972), they have on occasion yielded some provocative results (Graham, 1979).

"On the other hand, the guiding assumption of the nonstate theorists -- that the good hypnotic subject is not fundamentally different from the normal individual who is cooperating in a social situation in which he is asked to experience suggested effects -- will lead these investigators to continue their studies of situational and social-psychological antecedents of hypnotic performance. The nonstate investigators may be expected to probe further into the effects of such variables as how the situation is defined to the subject, what attempts are made to remove fears and misconception, and how the suggestions are worded (Barber & DeMoor, 1972; Spanos, 1973). The basic assumption of the nonstate theorists will also continue to influence their conceptualization of hypnotic performance as a set of socially influenced cognitive skills or abilities. However, despite these differences in the research proclivities of state and nonstate investigators, theoretical convergences of the type outlined in this article indicate that a good deal of the future research carried out by proponents of both paradigms will dovetail in focusing on the role of imaginative processes in hypnotic performance" (pp. 508-509).

1972

Barber, Theodore Xenophon; de Moor, Wilfried (1972). A theory of hypnotic induction procedures. American Journal of Clinical Hypnosis, 15 (2), 112-135.

The first part of the paper delineates nine variables in hypnotic induction procedures that give rise to heightened responsiveness to test-suggestions: (a) defining the situation as hypnosis; (b) removing fears and misconceptions; (c) securing cooperation; (d) asking the subject to keep his eyes closed; (e) suggesting relaxation, sleep, and hypnosis; (f) maximizing the phrasing and vocal characteristics of suggestions; (g) coupling suggestions with naturally-occurring events; (h) stimulating goal-directed imagining; and (i) preventing or reinterpreting the failure of suggestions. Data are presented to support the theory that the nine variables augment responsiveness to test-suggestions by giving rise to positive

attitudes, motivations, and expectancies which, in turn, tend to produce a willingness to think with and vividly imagine those things that are suggested. The second part of the paper specifies situational variables and variables involved in induction procedures that produce a trance-like appearance, changes in body feelings, and reports of having been hypnotized.

## **GROUP HYPNOSIS**

**2001**

**Sapp, Marty; Hitchcock, Kim (2001). Harvard group scale with African American college students. Sleep and Hypnosis, 3 (3), 111-117.**

## **NOTES**

See also [www.sleepandhypnosis.com](http://www.sleepandhypnosis.com)

**1998**

**Bowers, Kenneth S. (1998). Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C: Manual and Response Booklet. International Journal of Clinical and Experimental Hypnosis, 46 (3), 250-268.**

The manual and response booklet for the Waterloo-Stanford Group Scale of Hypnotic Susceptibility, Form C (WSGC) is presented. The WSGC is a group adaptation of the individually administered Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C).

**Kirsch, Irving; Milling, Leonard S.; Burgess, Cheryl (1998). Experiential scoring for the Waterloo-Stanford Group C Scale. International Journal of Clinical and Experimental Hypnosis, 46 (3), 269-279.**

A scale is presented that assesses subjective experiences associated with the test suggestions contained in the Waterloo-Stanford Group C scale (WSGC), a group adaptation of the Stanford Hypnotic Susceptibility Scale: Form [C] (SHSS:C). This scale, along with the standard behavioral scoring system of the WSGC, was given to 926 students at the University of Connecticut. Normative data from this sample indicate that the experiential scoring scale is both reliable and valid as a measure of suggestibility. It is suggested that it may be useful to supplement behavioral scoring with experiential scoring when the WSGC is used.

**1993**

**Bowers, Kenneth S. (1993). The Waterloo-Stanford Group C (WSGC) Scale of Hypnotic Susceptibility: Normative and comparative data. International Journal of Clinical and Experimental Hypnosis, 41 (1), 35-46.**

The Waterloo-Stanford Group C (WSGC) hypnotic susceptibility scale was developed as a substitute for the individually administered Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). A first investigation with WSGC reports

normative data on 259 subjects, and the results indicate that it is comparable in most important respects to the norms of SHSS:C. A second investigation directly compared WSGC and SHSS:C in a counterbalanced design on 65 subjects, and the two scales correlated .85. It is argued that, when used as a follow-up to the Harvard Group Scale of Hypnotic Susceptibility, Form A, WSGC provides a valid criterion of hypnotic ability.

**1990**

**Kirsch, Irving; Council, James R.; Wickless, Cynthia (1990). Subjective scoring for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 38 (2), 112-124.**

A scale is presented which assesses subjective experiences associated with the test suggestions contained in the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962). This scale, along with the standard HGSHS:A self-scoring test booklet, was administered to 479 students at the University of Connecticut and 618 students at North Dakota State University, and normative data from these samples are reported. Correlational analyses indicated that the scale was both reliable and valid as a measure of hypnotic responsiveness. It is suggested that it may be useful to supplement behavioral scoring of hypnotizability with subjective scoring.

**1989**

**Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. American Journal of Clinical Hypnosis, 31, 173-180.**

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego-strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

**Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.**

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood

disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

1988

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing.

Bowers, Patricia G.; Laurence, Jean-Roch; Hart, David (1988). The experience of hypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 36, 336-349.

The experience of nonvolition in response to hypnotic suggestions was investigated for 126 Ss. 2 different scales, a new scale providing discrete options for response and a previously used volition rating scale, gave Ss an opportunity to describe some of their subjective experiences after completion of a 12-item adaptation for group administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Ratings of depth of hypnosis were also obtained. Ss had been previously administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Distribution of descriptions of experience for passed and failed items were obtained. Total scores on subjective indices were found to be highly correlated with the behavioral score on the Waterloo-Stanford Scale of Hypnotic Susceptibility: Group C. Items differed, however, in the degree to which responses seem to occur effortlessly. Some suggestions have a substantial number of passed responses lacking the "classic suggestion effect," but only 7% of Ss have more than 2 such responses. NOTES 1: NOTES: Earlier research on the subjective perception of voluntary enactment of suggestions found from 20% (K. Bowers, 1981; P. Bowers, 1982) to 55% (Spanos, Radtke, Hodgins, Stam, & Bertrand, 1983) of hypnotic responses were described as voluntary in nature. Methodological differences could account for the range in

probability levels, and rating scales used did not provide for absence of behavioral response to a particular suggestion.

This research investigated three issues: "1. Using a choice format to describe experiences during hypnosis, what is the distribution of the different descriptions used to index the construct of nonvolition? When S gives a mid-point rating on a volition rating scale, to what experiences does he/she refer? 2. How do two aspects of subjective experience: nonvolitional experience descriptions and hypnotic depth reports, covary with behavioral passing and failing of items and with levels of hypnotizability? 3. How frequently does S pass an item behaviorally but indicate either that he/she did not experience the response or that he/she purposefully enacted it? On what items is this a more or less frequent occurrence? Are there just a few people who pass items in this fashion or is it a common observation?" (p. 339). The Ss were seen in small groups. Immediately after hypnosis they scored their own hypnotizability scales. Then they were asked to rate their subjective response to each suggestion: - how much they had experienced the suggestion (1-5) - how involuntary their response had been (1-5) (These two items comprised the Voluntary Rating Scale (VRS) used by K. Bowers, 1981, and P. Bowers, 1982.) - how deeply hypnotized they had felt (1-10, Perry & Laurence format, 1980) - Choice Scale (example from the hand magnetism item below) "Choice Scale of Nonvolitional Experience:

Listed below are various ways people experience the hands together item. Please check the description(s) that most closely describe your experiences: (1) My hands did not move together at all. (2) I purposefully directed the movement of my hands most of the time. (3) I found I directed the movement of my hands and then later they continued to move together with no effort on my part. (4) I found my hands moving together without my helping them. (5) During this experience, the feelings of purposefully moving my hands were completely mixed with feelings that they were moving on their own. None of the above" (p. 340).

Considering both the passed and failed items, and after excluding the 'None of the above' category, "37% of items [on the W-SGSHS:C] were not experienced, 12% were enacted purposefully, 14% were experienced as intertwined volition and nonvolition, 17% were experienced as beginning purposefully but becoming nonvolitional, and 20% 'happen by themselves'" (p. 341). See Table 2, taken from the article.

Table 2 Average Percent of Ss per Item Choosing Each of the Options Begins

No Purposeful Completely Purposefully; Happened Itself

Exper. Enactment Mixed Continues On NoTryng

Own Passed 7.5 12.2 21.8 26.2 32.2 Failed 60.4 13.9 10.4 9.3 5.9

Passed Items 3.0 10.7 30.0 47.2 9.1 Rated 3 on Volition Rating Scale

Thus of those failing an item, 60% reported that they did not experience the suggestion, while almost 26% reported some level of subjectively experienced nonvolition.

This research demonstrated that the Choice Scale is an improvement over the Voluntary Rating Scale, which has an ambiguous midpoint of '3' between voluntary and nonvoluntary extremes (on a 5-point scale). Almost half of the ambiguous '3'

responses on the VRS were associated with a more meaningful response on the Choice Scale, indicating that the response started off voluntarily but then continued 'on its own.' Another third of the Ss indicated that there was an intertwining of volition and nonvolition.

The Choice Scale (transformed into an ordinal scale) was correlated with the VRS and hypnotizability and depth estimate scales. The correlations were "consistently high, suggesting that typically one reports feeling more deeply hypnotized when many suggestions are performed and passed, and more deeply hypnotized Ss report feeling that suggestions occur more 'by themselves' than do less hypnotizable Ss" (p. 342).

The authors note the complex relationship between behavioral and subjective experience. High hypnotizables report experience of nonvolition even with some failed items, and rate themselves as deeply hypnotized even when failing items. This is not true for low hypnotizables, whose self-rated depth varies directly with passing or failing items.

Mismatches were defined as passing an item behaviorally but reporting either that it was not experienced (Choice 1) or purposefully enacted (Choice 2). 93% of Ss had less than 3 mismatches; of the 8 Ss exhibiting 3 or more mismatches, 3 were medium-low hypnotizables, 4 were medium-highs, and 1 was highly hypnotizable. When one corrects their total hypnotizability score for the mismatch, people remain close to their original score however.

Some items had many more mismatches than others (See Table 6). The 'classic suggestion effect' reflected in a low percentage of mismatches (3-9%) was found for five items; three items had a moderate level of mismatches (16-22%); but four suggestions had mismatches on 34-41% of the passed responses. Item difficulty could not account for whether the classic suggestion effect occurred: two very difficult items were at opposite ends of the spectrum--positive music hallucination had the fewest and negative visual hallucination the most frequent mismatches. "One might speculate that the nature of one's ordinary imaging during the day makes some hallucinations well practiced and easier to produce, while others are rarely practiced and seem to require cognitive effort to reconstruct. ... Thus, instead of a mismatch representing 'faked' responses, it may at times represent S's report of a hallucination's seeming real while simultaneously requiring effort. Ideomotor suggestions have few mismatches. If they feel 'real,' it is by virtue of their seeming to occur without effort or volition" (pp. 346-347).

Table 6 Item % Mismatch Hand Lowering 2.9 Hands Together 4.8 Arm Rigidity 5.6 Music Hallucination 7.7 Dream 8.7 Arm Immobilization 15.5 Amnesia 21.6 Age Regression 21.8 Taste Hallucination 33.8 Negative Hallucination 34.6 Mosquito 38.1 Post-hypnotic Suggestion 40.8

Since highly hypnotizable people experience nonvoluntariness even when they fail items, tested hypnotizability must reflect more than simply passing test items on suggestion. "Research focusing exclusively on the nonvolitional aspect of hypnotic experience may be somewhat 'off the mark,' at least for some types of suggestions. Reports of nonvolition may be tracking the experience of effortless responding which may be just one aspect of a complex hypnotic response to cognitive suggestions. ... It may be that studies using free reports from Ss responsive to

hallucination suggestions would be necessary prior to devising an appropriate 'choice' scale for these items. The work of Sheehan and McConkey (1982) provides a solid basis for such a task. The Choice Scale in the present study was derived from an understanding of the 'classic suggestion effect,' the concept of which is closely tied to ideomotor suggestions. This concept may or may not prove to be of central relevance to hypnotic hallucinations or more generally to cognitively demanding suggestions" (p. 347).

**1988**

Neufeld, V.; Lynn, Steven Jay (1988). A single-session group self-hypnosis smoking cessation treatment: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36 (2), 75-79.

This study was designed to assess the efficacy of a manual-based, single-session group of self-hypnosis intervention. At 3 months follow-up, 25.92% of the total number of participants (14 male, 13 females) reported continuous abstinence, and at 6 months, 18.52% of the participants reported continuous abstinence. Reported social support and motivation to quit were both associated with successful outcome. Comparison of the current data with other findings reported by the American Lung Association (Davis, Faust, & Ordentlich, 1984) suggests that treatment effects may not be solely attributable to the use of a maintenance manual, education, and attention. Limitations of the research associated with issues of experimental control, generalizability of the findings, and outcome measures are discussed.

Spinhoven, Philip; Baak, Diana; Van Dyck, Richard; Vermeulen, Peter (1988). The effectiveness of an authoritative versus permissive style of hypnotic communication. International Journal of Clinical and Experimental Hypnosis, 36, 182-191.

The differential effectiveness of an authoritative versus permissive style of hypnotic communication was investigated, with locus of control as a moderator variable. 44 Ss received in counterbalanced order both the more authoritatively worded Harvard Group Scale of Hypnotic Susceptibility, Form A and the Wexler-Alman Indirect Hypnotic Susceptibility Scale (WAIHS), which is a more permissive scale with the same item content as HGSHS:A. Permissively worded suggestions did not enhance the level of hypnotic responsiveness. Locus of control did not predict the response level on one of the scales. Unexpectedly, significantly more female Ss preferred the WAIHS, and more male Ss preferred HGSHS:A. It is concluded that Ss' characteristics (i.e., hypnotizability) are more important for hypnotic responsiveness than variations in style of hypnotic communication or scale preference."

**1986**

Radtke, H. Lorraine; Spanos, Nicholas P.; Malva, C. Lori Della; Stam, Henderikus J. (1986). Temporal organization and hypnotic amnesia using a modification of the Harvard Group Scale of Hypnotic Susceptibility. International Journal of Clinical and Experimental Hypnosis, 34, 41-54.

The Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) was modified to permit better assessment of amnesia and changes in temporal organization during amnesia. First, a baseline measure of recall was obtained before administration of the amnesia suggestion. Second, on the recall trial following cancellation of the suggestion, Ss recalled everything they could remember. Amnesia was assessed by comparing recall during the suggestion with recall before it and after it was canceled. Temporal organization was assessed by correlating the order of item administration with Ss' recall orders. Hypnotic susceptibility and amnesia were independently related to temporal organization. Overall, high hypnotizable Ss organized less than medium or low hypnotizables, and amnesics showed less temporal organization than nonamnesics, but neither of these variables interacted with recall trial. The results are discussed in terms of recent theories of hypnotic amnesia.

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#### NOTES

Subjects in general tended to use less temporal organization during the suggestion compared to the baseline and postsuggestion trials. Although they did not obtain a disorganization effect comparable to that found in the clustering studies (e.g., Spanos & Bodorik, 1977), the results "replicated past studies that found differences in the recall organization of high and low hypnotizables during an amnesia suggestion" (p. 50), while suggesting that "the previous findings were not due to hypnotic amnesia" (p. 50).

"The baseline differences replicated Schwartz (1980) who found similar differences between high and low hypnotizable Ss following a hypnotic induction procedure but in the absence of an amnesia suggestion. Since we also found differences posthypnotically, it is questionable whether the hypnotic induction procedure was a causal factor in the Schwartz study. Furthermore, the presence of such differences on the postsuggestion trial represents a failure to replicate Evans's (1980) finding of no differences between high and low hypnotizable Ss under comparable nonhypnotic conditions. The present results are also contrary to those of two other studies that found no differences between high and low hypnotizables on rho scores on the amnesia trial (Radtke & Spanos, 1981; St. Jean & Coe, 1981) and a recent study using word stimuli which found a significant correlation between hypnotizability and temporal organization only during the amnesia suggestion (Kihlstrom & Wilson, 1984). Taken together these studies suggest that temporal organization (at least when hypnotic experiences are recalled) varies as a function of hypnotizability and therefore may be attributed to an individual difference factor" (p. 50).

The authors go on to say they have replicated other studies (p. 50), noting that the Harvard may not be the best method for investigating this issue, and individual testing of memory may be better (p. 51).

1985

Bongartz, Walter (1985). German norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 33 (2), 131-139.

German norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) are presented. 3 samples (N = 108, N = 103, and N = 163) were pooled resulting in an aggregate sample of 374 Ss which was in general congruent with earlier normative studies (Laurence & Perry, 1982; Sheehan & McConkey, 1979; Shor & E. Orne, 1963) with regard to score distribution and item difficulty level. Reliability of the German adaptation of HGSHS:A was somewhat lower than the reliabilities reported by the 3 cited studies, but in terms of standard error of measurement (estimated for each study by using the corresponding reliability coefficient), the German and the other studies were quite comparable. Results show that HGSHS:A is a useful instrument for initial screening of hypnotizability in a German context.

Jeffrey, Timothy B.; Jeffrey, Louise K.; Greuling, Jacquelin W.; Gentry, William R. (1985). Evaluation of a brief group treatment package including hypnotic induction for maintenance of smoking cessation: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33 (2), 95-98.

Hypnotic, cognitive, and behavioral interventions were used in a 5-session treatment program to assist 35 Ss with maintenance of smoking cessation. 63% of the treated Ss discontinued smoking, and 31% maintained abstinence for 3 months ( $p < .005$ ). These results include 13 dropouts, all of whom were smoking at 3 months follow-up. No S in the waiting-list-control group quit smoking. The results demonstrate that a brief, group treatment program, including hypnotic techniques, can be effective for smoking cessation.

Jupp, J. J.; Collins, J. K.; McCabe, M. P. (1985). Estimates of hypnotizability: Standard group scale versus subjective impression in clinical populations. International Journal of Clinical and Experimental Hypnosis, 33 (2), 140-149.

The relationship between hypnotic responsiveness as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) and global depth estimates derived from an 11-point scale were explored in 2 clinical samples. In one case, depth estimates were made just before, and in the other, immediately following the patients' focus on aspects of hypnotic responsiveness. The responsiveness-depth relationship was moderate and consistent across both samples, a finding which in itself is consonant with previous findings employing experimental Ss. When HGSHS:A performance and depth estimates were less proximate, the relationship between them remained significant but was substantially reduced in magnitude. Data suggest that low hypnotizable Ss increase their estimates of depth, and that higher hypnotizable Ss retain relatively stable estimates with increased exposure to hypnosis in a clinical context.

1983

Saavedra, Ramon Luis; Miller, R.J. (1983). The influence of experimentally induced expectations on responses to the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 31, 37-46.

A sample of 75 female and 63 male undergraduates were told that their hypnotizability was predictable through the application of a battery of questionnaires and physiological measures. Three levels of hypnotizability expectations were created, with 3 groups of Ss informed that they were highly hypnotizable, moderately hypnotizable, or low in hypnotizability, respectively. A control group received no such expectations. All Ss were then administered the Harvard. Results indicated a significant main effect due to the assigned hypnotizability expectations. Only Ss in the low expectation group, however, scored significantly differently from the other groups on the Harvard. Four other variables were examined as covariates: locus of control, attitude toward hypnosis, absorption, and self-predictions of hypnotizability. All but locus of control correlated significantly with the Harvard. It also was shown that the degree to which assigned expectations influenced Harvard scores was a function of the confidence Ss had in those expectations.

#### NOTES

The authors state that research has shown that it is easier to lower hypnotizability scores by providing negative expectancies than to increase hypnotizability scores through provision of positive expectancies. In this study, very little of the variance of hypnotizability scores was accounted for by the expectancy manipulation

Farthing, G. William; et al. (1982, October). Voluntariness-involuntariness on the Harvard Group Scale of Hypnotic Susceptibility. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

#### NOTES

Challenge items were equal to ideomotor items in percentage of Ss who felt the (passed) response was at least 75% nonvoluntary.

1982

Laurence, Jean-Roch; Perry, Campbell (1982). Montreal norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 30 (2), 167-176.

Norms are presented for the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSH:A) of Shor and E. Orne (1962). Comparisons are made on HGSHS:A between 3 Montreal samples (N = 220, N = 178, & N = 137) and the aggregate sample (N = 535). These are compared additionally with a normative group of Harvard students (Shor & E. Orne, 1963), a normative group of University of California at Berkeley students (Coe, 1964), a normative sample of Australian students (Sheehan & McConkey, 1979), and the original Stanford University

normative sample which was tested individually on the Stanford Hypnotic Susceptibility Scale, Form A (Weitzenhoffer & Hilgard, 1959). Although the Montreal groups were heterogeneous in ethnic origin and first language, the present normative data are generally congruent with earlier studies.

**1980**

McConkey, Kevin M.; Sheehan, Peter W.; Law, H. G. (1980). Structural analysis of the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 28 (2), 164-175.

Multiple samples of Ss were tested on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne, (1962) to examine the nature of the dimensions underlying the scale. Data were analyzed by the principal components method, the alpha factoring technique, and the Rasch model of analysis. The Rasch model was used to specifically test the hypothesis that HGSHS:A measures just one dimension with items varying along a difficulty continuum. Results indicated that either a 2- or 3-factor solution is appropriate to HGSHS:A and that performance on the test cannot be explained in terms of a single dimension even when item difficulty is taken into account. Greatest instability of structure across both samples and methods of analyses was evident for the cognitive-delusory items on the scale. Implications for hypnotic theory and test construction are discussed.

**1979**

Araoz, Daniel L. (1979). Hypnosis in group-therapy. International Journal of Clinical and Experimental Hypnosis, 27 (1), 1-13.

Therapeutic groups are defined to include both therapy groups and enrichment or extensional groups, either goal-specific or goal-individualized. After reviewing the literature, 3 modalities for the use of 6 hypnotherapeutic techniques are presented. These modalities are: (a) simultaneous group hypnosis, (b) working with one member and then fostering group interaction, and (c) cooperative group self-hypnosis. The 6 group hypnotherapy techniques are: (a) relaxation, (b) positive revivification, (c) dream production, (d) age regression and recovery of early recollections, (e) age progression and mental rehearsal, and (f) ego strengthening. The need for research in group hypnotherapy is stressed, especially in the areas of transference, countertransference, and 'co-transference.'

McConkey, Kevin M.; Sheehan, Peter W.; White, K. D. (1979). Comparison of the Creative Imagination Scale and the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27 (3), 265-277.

237 Ss were administered both the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962), and the Creative Imagination Scale (CIS) of Barber and Wilson (1977) and Wilson and Barber (1978) in separate

testing sessions. Results were analyzed to assess the extent of relationships between the 2 scales and particular attention was paid to the question of whether, or not, CIS can be said to be an index of hypnotizability as traditionally measured by HGSHS:A. Data indicated that performance on CIS relates positively ( $r = .28$ ) to success on HGSHS:A, but the 2 tests are independent in their underlying dimensions. The CIS appears to tap primarily the processes of imagery and imagination which are only partly related to performance on the more complex scales which measure hypnosis as generally conceptualized.

Sheehan, Peter W.; McConkey, Kevin M. (1979). Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27, 294-304.

Australian norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962) are presented and results relating to score distributions, item difficulty level, reliability, and validity are considered for 3 distinct samples of Australian students. Data are compared with both the original norms (Shor & E. Orne, 1963) and additional American (Coe, 1964) normative data. Results indicated that, in the Australian context, HGSHS:A functions as a reliable, effective predictor of hypnotic susceptibility. The psychometric properties of the scale were uniform across all of the different samples and reference groups that were considered. The accuracy of the scale appears to be most obviously limited when it is employed as a sole predictor of Ss' special aptitude for hypnosis.

1976

Ihalainen, O.; Rosberg, G. (1976). Relaxing and encouraging suggestions given to hospitalized chronic schizophrenics. International Journal of Clinical and Experimental Hypnosis, 228-237.

3 groups of hospitalized chronic schizophrenic patients received "the taped hypnotic treatment" twice a week for 4 weeks. The treatment differed for each of the 3 groups of 18 patients, but neither the patients nor the nursing staff were informed of this difference. The first group was exposed to music only, the second group was given music with superimposed hypnotic suggestions, and the third group heard music with superimposed hypnotic suggestions for improving self-confidence. The staff filled in an evaluation form about the patient's health beforehand, immediately afterward, and then 1 month after the treatment program. No difference between the groups was found if the comparison was based only upon the directions of the changes. However, twice as many positive changes as negative ones were observable in every group after the control period. If the changes noted are restricted only to those attaining the statistically significant ( $p < .05$ ) level, the majority of positive ones was more evident. From this point of view, the reactions of the groups to the treatments were also different. Improvement appeared directly after the treatment of the Music and Self-confidence groups, but was not evident during the observation time 1 month later. In the Relaxing group, there was, on the contrary, only slight improvement directly after the treatment, but 1 month later during the follow-up

observation time, the improvement was considerable. Thus, while encouraging hypnotic suggestions proved on the follow-up to be ineffective, hypnosis appeared to have a real influence when only relaxing suggestions were used. NOTES 1:

#### NOTES

This is a controlled clinical outcome study of psychotherapy involving the use of hypnosis

Illovsy, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97.

This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).

#### NOTES

The paper is reprinted from Med. J. Aust., 1971, 2, 675-676 with permission of Editor. The author discusses theoretical concepts, techniques and patient selection for this method. "I avoid all logical communication, as this would only keep the patient alert, and so prevent the atavistic regression which is the essential factor in hypnosis" (p. 139). He moves from patient to patient, saying little except "Good--easy--natural" etc. and he uses touch to reinforce their development of hypnotic state. To ratify the trance and make sure they are hypnotized, not just relaxed, he places a clip on forearm skin for a few moments. "This potentially painful stimulus has the effect of further deepening hypnosis" (p. 139). After about 35-40 minutes he alerts the group. Patients are taught self hypnosis to extend the results into daily life.

#### 1970

Kline, Milton V. (1970). The use of extended group hypno-therapy sessions in controlling cigarette habituation. International Journal of Clinical and Experimental Hypnosis, 18, 270-282.

Results of the present experimental approach to the treatment of smoking habituation tend to be consistent with the view of smoking habituation as a dependence reaction, parallel to drug addiction, and with the concept that habituation must be examined as a psychosomatic entity. Therapeutic approaches must take into account the psychophysiological characteristics of deprivation behavior. Hypnosis, and particularly extended periods of hypnotherapy involving the reduction and control of deprivation behavior, seems to offer a promising approach to the therapeutic treatment of smoking habituation. (German & Spanish summaries) (17 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Swiercinsky, Dennis; Coe, William C. (1970). Hypnosis, hypnotic responsiveness, and learning meaningful material. International Journal of Clinical and Experimental Hypnosis, 18 (3), 217-222.

Compared 3 antecedent conditions for their ability to enhance recall of meaningful material. Ss were 35 male and 10 female upperclass undergraduates. The conditions were: (a) group hypnotic instruction followed by posthypnotic suggestions of enhanced concentration and recall ability, (b) task motivation instructions to Ss to imagine and try their best, and (c) no special instructions (control). No differences in recall ability were found. Also, high and low susceptible Ss performed essentially the same. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Vingoe, Frank J. (1968). The development of a group alert-trance scale. International Journal of Clinical and Experimental Hypnosis, 16, 120-132.

PRESENTS A VERBATIM ALERT-TRANCE INDUCTION PROCEDURE IN WHICH SUGGESTIONS FOR MIND ALERTNESS ARE MADE CONCURRENTLY WITH SUGGESTIONS FOR BODY RELAXATION. DIRECT AND INDIRECT SUGGESTIONS OF SLEEP ARE AVOIDED. A DISCUSSION OF MIND AND BODY IS THUS SUGGESTED WITH THE STIPULATION THAT IN DOING THIS S''''''''''''''''S BODY WILL MAINTAIN ITSELF WITHIN THE LIMITS OF NORMAL PHYSIOLOGICAL FUNCTIONING AND, IN AN EMERGENCY, WILL REACT SO AS TO ENSURE SELF-PRESERVATION. EMPHASIS IS PLACED ON S''''''''''''''''S MIND BEING ALERT SO AS TO ENGAGE IN ANY MENTAL WORK EITHER DURING OR AFTER THE HYPNOTIC TRANCE. DATA OBTAINED FROM 150 SS WHO RESPONDED TO A SHORT SELF-REPORT SCALE ARE PRESENTED. (SPANISH + GERMAN SUMMARIES) (21 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Evans, Frederick J.; Schmeidler, D. (1966). Relationship between the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility

Scale: Form C. International Journal of Clinical and Experimental Hypnosis, 14, 333-343.

3 SUBGROUPS OF 20 SS WITH HIGH, MEDIUM, OR LOW SCORES ON A SLIGHTLY MODIFIED, TAPE-RECORDED VERSION OF THE HARVARD GROUP SCALE OF HYPNOTIC SUSCEPTIBILITY, FORM A (HGSHS:A) WERE LATER ADMINISTERED THE STANFORD HYPNOTIC SUSCEPTIBILITY SCALE, FORM C (SHSS:C). THE 2 SCALES CORRELATED .59, WHICH IS LOWER THAN WOULD BE PREDICTED BY SCALE RELIABILITIES. THIS, TOGETHER WITH OTHER DATA BASED ON ITEM CHARACTERISTICS, INDICATES THAT THE 2 SCALES ARE NOT EQUIVALENT, BUT IN PART MEASURE DIFFERENT ASPECTS OF HYPNOTIC PERFORMANCE. SCORES ON HGSHS:A FOR LOW SS ARE PREDICTIVE OF SHSS:C SCORES, BUT THE STABILITY OF PERFORMANCE BETWEEN HGSHS:A AND SHSS:C IS NOT AS MARKED FOR MEDIUM AND HIGH SS ON HGSHS:A. THIS IS PARTLY A RESULT OF THE FAILURE OF PASSIVE MOTOR (PRIMARY) SUGGESTIBILITY TO DISCRIMINATE BETWEEN LEVELS OF SUSCEPTIBILITY, ALTHOUGH CHALLENGE ITEMS DO. THE 2 CLUSTERS OF ITEMS CORRELATE .23 AND .43 IN HGSHS:A AND SHSS:C, RESPECTIVELY. THE PASSIVE SUGGESTIBILITY ITEMS DETRACT FROM THE VALIDITY OF THE 2 SCALES. (SPANISH + FRENCH SUMMARIES) (20 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kramer, E. (1966). Group induction of hypnosis with institutionalized patients. International Journal of Clinical and Experimental Hypnosis.

25 hospitalized mental patients, mainly with schizophrenic diagnoses, were tested in group sessions for hypnotic susceptibility. The hypnotic induction and the susceptibility tests were part of the Harvard Group Scale of Hypnotic Susceptibility, a scale which has been standardized on a nonpsychiatric population. Os scored the patients' behavior; the patients filled out self-report forms. Contrary to some reports in the literature, the average hypnotic susceptibility of these patients was similar to that of normals. Self-reports of their behavior during the hypnosis session were significantly correlated with O ratings, but less highly than has been reported for normals. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Scott, E. M. (1966). Group therapy for schizophrenic alcoholics in a state-operated outpatient clinic: With hypnosis as an integrated adjunct. International Journal of Clinical and Experimental Hypnosis, 3, 232-242.

Because Alcoholics Anonymous has been so unsuccessful with the schizophrenic alcoholic, no therapeutic modalities structured to fit this population have reached the literature. For 3 yr. specific therapeutic techniques, among them hypnosis, have

been employed, and the results appear to be rather encouraging. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Vasiliev, L. (1965). Mysterious phenomena of the human psyche. New York NY: University Books. (Reviewed by Leo Wollman in *American Journal of Clinical Hypnosis*, 1965, 8 (2), 146-147)

#### NOTES

AJCH Abstract by Leo Wollman: Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B.N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep-inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent.

Dr. P. P. Podyapolsky, in 1905, wrote 'I tried unsuccessfully to induce in a peasant a reddening of the skin from a mock mustard plaster not only was there no reddening, there wasn't even any appropriate sensation of burning or smarting. I surmised that this simple man had probably never experienced a mustard plaster; therefore, his mind lacked the corresponding images and the ability to reproduce them with all their consequences... And so it turned out--he had never experienced a mustard plaster. It happened that he later had occasion to put a mustard plaster on his chest, and when I hypnotized him thereafter, suggestion quickly created not only the appropriate burning sensation but also reddening of the skin where the mock mustard plaster was applied.' This phenomenon is explained by the fact that the connection between the skin and cerebral cortex by means of neural conductors may, under certain circumstances, alter the activity of different organs. The alteration operates, apparently, in the category of conditioned-reflex formation.

This book is interesting reading and from a historic point of view is worth having in one's library.

#### 1964

Coe, William C. (1964). Further norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 12 (3), 184-190.

The Harvard Group Scale of Hypnotic Susceptibility, Form A was administered to 168 upper level college students. Findings are congruent with the original normative data reported by Shor and E. C. Orne. Differences between the 2 samples' mean scores and distributions are discussed in terms of sample composition. Further support for the group scale as an accurate predictor of hypnotic susceptibility was indicated by a significant relationship between the group scale and the individually-administered Stanford Hypnotic Susceptibility Scale, Form C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Ludwig, Arnold M.; Lyle, William H., Jr.; Miller, Jerome S. (1964). Group hypnotherapy techniques with drug addicts. International Journal of Clinical and Experimental Hypnosis, 12 (2), 53-66.

This study was designed to investigate the appropriateness of a number of group hypnotherapeutic techniques which might be used in the treatment of addict patients. It is the belief of the investigators that the more "magical," "authoritative," and practical-oriented techniques seem more appropriate and useful than techniques designed to elicit deep, insightful understanding of the emotional problems underlying drug addiction. Many of the specific hypnotherapeutic techniques used are described, and some of the difficulties and advantages of group hypnosis as a treatment method are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Bentler, P. M.; Hilgard, Ernest R. (1963). A comparison of group and individual induction of hypnosis with self-scoring and observer-scoring. International Journal of Clinical and Experimental Hypnosis, 11, 49-54. (Abstracted in Index Medicus, 63, June, S-1599)

45 volunteer Ss were hypnotized in small groups and were subsequently hypnotized in individual sessions. In both sessions observer- and self-scores were recorded for all suggestions of the Harvard Group Scale adaptation of the Stanford Hypnotic Susceptibility Scale. The correlation between observer- and self-scores indicated that hypnotic susceptibility in the 2 sessions was very similar. Group self-scores were also found to predict quite accurately objective hypnotist scores of the subsequent individual session. A 2nd sample of 34 nonvolunteer male Ss were hypnotized individually following Form A of the Stanford scale. Self-scoring was found to be remarkably similar to observer ratings, and the results of group administration very comparable to those of individual administration of hypnotic susceptibility tests. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Shor, Ronald E.; Orne, Emily C. (1963). Norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 11, 39-48.

Norms are presented on an adaptation for group administration with self-report scoring of Weitzenhoffer and Hilgard's Stanford Hypnotic Susceptibility Scale, Form A. Comparisons are made between a sample of 132 undergraduates given the new group-administered version and 4 reference samples including the original Stanford University normative group. Findings indicate that the group-administered version yields norms congruent with the individually-administered original. Diagnostic evaluations of hypnotic depth after one or more additional hypnotic training sessions tentatively indicate that the adapted scale is an effective predictor of subsequent hypnotic depth. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## **GUIDED IMAGERY**

**2001**

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. ([[available online:] <http://www.iuniverse.com/bookstore/marketplace>])

## **NOTES**

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

**1998**

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

## **NOTES**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative

experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

The effectiveness of different pain-distraction tasks was compared as a function of level of hypnotizability, using the cold-pressor pain-testing procedure. Selected high, medium, or low hypnotizable participants first underwent a 1-minute baseline immersion of a hand in ice water, with periodic pain ratings. Independent groups were then given 4-minute test immersions under one of five conditions. Analgesia suggestion and guided imagery were conceived to be internal distractors, whereas word memory and pursuit-rotor tasks were external distractors. Placebo-control groups were given permission to let their minds wander. All four experimental treatments reduced pain significantly for highly hypnotizable participants, compared to the control group, whereas none of the experimental treatments were effective for low hypnotizables. The different treatment instructions did not produce different preimmersion anxiety state ratings, so the treatment effects on pain ratings could not be explained in terms of their effects on anxiety. It appears that high hypnotizables are more effective than low hypnotizables at diverting attention to control pain, regardless of whether internal or external distractor tasks are used. Treatment effects on pain ratings did not change between 1 and 4 minutes of test immersion.

1994

Sapp, Marty (1994). The effects of guided imagery on reducing the worry and emotionality components of test anxiety [Abstract]. Journal of Mental Imagery, 18 (3&4), 165-180.

This study investigated the effects of guided imagery on reducing the worry and emotionality components of test anxiety. Subjects receiving guided imagery were compared to a Hawthorne control group on the worry and emotionality components of test anxiety and academic achievement. The guided imagery subjects showed significant reductions in levels of worry and emotionality, and a significant increase

in academic performance. The treatment gains were maintained at a 6-week follow-up.

1988

Donovan, David (1988). Factor analytic structure of attitudes towards hypnosis, guided imagery, and relaxation. [Unpublished manuscript] (Paper written for Comrey's Factor Analysis Course, UCLA) Keywords: attitudes, factor analysis, guided imagery, relaxation

NOTES

Factor analysis of semantic differential responses of 212 adults regarding 3 terms (hypnosis, imagery, relaxation) placed imagery in an intermediate position between the extremes of hypnosis and relaxation. Both common and unique factors extracted are discussed.

1986

Thompson, Cynthia K.; Hall, Howard R.; Sison, Cecile E. (1986). Effects of hypnosis and imagery training on naming behavior in aphasia. Brain and Language, 28, 141-153.

The effects of hypnosis and imagery training on the naming behavior of three subjects with Broca's aphasia were investigated using a multiple baseline design across subjects. Treatment consisted of the induction of hypnosis, followed by guided imagery focused on the physical and functional attributes of stimulus objects. Measures of naming ability on both trained and untrained items were taken at baseline, after every training session, and a few hours after training each day. Measures were also taken of imagery ability, hypnotic susceptibility, and psychological state. Results indicated that treatment facilitated improvement in naming ability, over baseline level, for two subjects. In the case of the third subject, the verbal label was incorporated into the imagery procedure following 10 training sessions. Subsequently, this subject's naming behavior improved over baseline level. The results are discussed in terms of current theory and research in neuropsychology and cognitive psychology.

1983

Schandler, Steven L.; Dana, Edward R. (1983). Cognitive imagery and physiological feedback relaxation protocols applied to clinically tense young adults: A comparison of state, trait, and physiological effects. Journal of Clinical Psychology, 39, 672-681.

Examined changes in targeted and general tension behaviors as well as reductions in physiological tension associated with cognitive imagery and electromyographic biofeedback relaxation procedures. Three groups of 15 female college students participated. During three weekly sessions each person received either guided cognitive imagery relaxation, frontalis muscle feedback relaxation, or a self-rest control procedure. The Anxiety Differential was administered before and after each session, while frontalis EMG, heart rate, and skin temperature were monitored

continuously. A second Temperament Analysis was administered after the final session. The imagery procedure was associated with moderate reductions in physiological tension and significant reductions in state anxiety and three tension-related personality dimensions. Self-rest persons displayed lesser reductions in general tension with little physiological change. While biofeedback persons showed the largest reductions in physiological tension, they displayed only small and variable changes in state anxiety and personality dimensions. The data raise continued questions about the application of physiologically based operant relaxation procedures and support the use of cognitively mediated protocols for the treatment of specific or general anxiety behaviors.

1982

Brown, Daniel P.; Forte, Michael; Rich, Philip; Epstein, Gerald (1982-83). Phenomenological differences among self hypnosis, mindfulness meditation, and imaging. Imagination, Cognition and Personality, 2 (4), 291-309.

A survey of 122 subjects was conducted to investigate the differences in the phenomenological quality of the experiences engendered by three types of awareness discipline: self-hypnosis (21 Ss), waking dreaming (49 Ss) and mindfulness meditation (25 Ss from a 2-week retreat, and another group of 27 Ss from a 2-day weekend retreat). A questionnaire, the profile of Trance, Imaging, and Meditation Experience (TIME) was used in the survey. Discriminant analyses were used to construct models of the differences in the phenomenological quality of the experiences among the three groups. A number of phenomenological dimensions, in the major areas of attention, thinking, memory, imagery, body sensations, emotions, time sense, reality sense, and sense of self, were found which could accurately distinguish among the experiences of practitioners of the three types of awareness training. Results show that while self hypnosis involves self-referential thinking, memory changes, and intense emotions, waking dreaming emphasizes the immediate impact of emerging images, which unfold in a thematic manner and have a sense of their own reality. Mindfulness meditators have difficulty managing distractions, but with experience learn greater awareness of bodily processes, and experience changes in the perception of time and self; mental processes seem to slow down, and awareness assumes an impersonal quality. No attributions as to the causes or sources of these phenomenological differences are made, as the survey was not large enough to provide comparison groups, subject matching, or other statistical controls necessary for causal analyses. NOTES 1: (Information taken from a pre-publication manuscript.)

Lyles, Jeanne Naramore; Burish, Thomas G.; Krozely, Mary G.; Oldham, Robert K. (1982). Efficacy of relaxation training and guided imagery in reducing the aversiveness of cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 509-524.

Fifty cancer patients receiving chemotherapy, 25 by push injection and 25 by drip infusion, were assigned to one of three conditions for their chemotherapy treatments: (a) progressive muscle-relaxation training plus guided-relaxation imagery; (b) therapist control, in which a therapist was present to provide support and encouragement but did not provide systematic relaxation training; and (c) no-treatment control. Patients participated in one pretraining, three training, and one follow-up session. Results indicated that during the training sessions, patients who received relaxation training, relative to patients in either of the other two conditions, (a) reported feeling significantly less anxious and nauseated during chemotherapy, (b) showed significantly less physiological arousal (as measured by pulse rate and systolic blood pressure) and reported less anxiety and depression immediately after chemotherapy, and (c) reported significantly less severe and less protracted nausea at home following chemotherapy. The attending nurses' observations during chemotherapy confirmed patient reports. In general, patients in the therapist control condition and the no-treatment control condition did not differ significantly from each other. The differences among conditions generally remained significant during the follow-up session. The data suggest that relaxation training may be an effective procedure for helping cancer patients cope with the adverse effects of their chemotherapy.

1978

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (19656) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

## H RESEARCH

Habit

2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

1996

Spiegel, Sharon B. (1996). Uses of hypnosis in the treatment of uncontrollable belching: A case report. American Journal of Clinical Hypnosis, 38 (4), 263-270.

Uncontrollable belching is frequently benign in origin, but can be distressing in its psychosocial consequences. Physicians have little to offer in the way of medical treatment. This is a case report of a 71-year-old woman with incessant eructation of four months duration treated with brief psychotherapy utilizing hypnosis. The patient was symptom-free at termination, and this improvement was sustained at six month follow-up. This paper includes a detailed description of some of the hypnotic suggestions as well as a discussion of the factors that may have contributed to change.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

NOTES

1:  
"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in

treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1994

LaCrosse, M. B. (1994). Understanding change: Five-year follow-up of brief hypnotic treatment of chronic bruxism. American Journal of Clinical Hypnosis, 36 (4), 276-281.

In this paper I describe the treatment of a 63-year-old woman with a 60-year history of nocturnal bruxism. Treatment included assessment, two psychotherapy sessions, including a paradoxical behavior prescription to reduce daytime worrying, hypnotic suggestions for control of nocturnal grinding, and reinforcement of the patient's expectations for success. This case demonstrates how enduring change may occur rapidly in spite of the chronicity of a patient's complaint. Follow-up assessments at 2, 3, and 5 years revealed that she continued to be symptom-free with her self-reports corroborated by her spouse and family dentist. I discuss implications for understanding the role of hypnosis in therapeutic change.

Wagstaff, Graham F.; Royce, C. (1994). Hypnosis and the treatment of nail biting: A preliminary trial. Contemporary Hypnosis, 11, 9-13.

A clinical trial was conducted examining the relative efficacy of therapeutic suggestions preceded by and without a hypnotic induction in the treatment of nail biting in 17 students. Outcomes showed a hypnotic induction added significantly to therapeutic benefits and was the only condition that resulted in symptom improvement. Results from only one session showed that 7 of 11 hypnosis subjects stopped nail biting compared to only 1 of 6 control subjects. Reports of "believed in efficacy" predicted treatment success better than ratings of motivation, hypnotic induction per se, or scores on the Creative Imagination Scale. However, within the group receiving hypnotic induction, hypnotic- depth scores significantly correlated with treatment success, suggesting that state factors such as dissociation might be involved.

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The hypnotized Ss were given the T. X. Barber (1969) induction, a request for their depth estimate on a scale of 0-10, and then a set of suggestions to discourage nail biting. The suggestions were of four types: (1) to have a positive attitude, that nail biting is a habit that can be broken and that stopping will enhance attractiveness and self esteem; e.g., 'With just a little self control you will stop biting your nails and feel better about yourself.' (2) to stop the habit; e.g. to say to themselves, 'I will not bite my nails today/tomorrow,' five times each morning and at night, and whenever the temptation arose. (3) to improve feelings of self-efficacy; e.g., 'If you ever feel the urge to bite your nails tell yourself that you want to break the habit and that you are perfectly capable of doing so. You are not weak.' (4) that the results would be

outstanding; e.g. 'After only ten days or so ... you will have no desire to bite your nails, indeed the very thought of doing so will repulse you.'

Control subjects received the same instructions, without a hypnotic induction; the procedure was labeled a 'positive attitude for self discipline' technique.

Judges rated improvement without being aware of the Ss' self-report on whether they had stopped biting their nails. Judges' ratings correlated  $r = .94$  with Ss' statements about whether they had stopped the habit. Improvement scores also correlated significantly with belief the treatment would be effective ( $r = .60$ ) and Creative Imagination Scale scores ( $r = .53$ ), but not with motivation. The hypnosis group had significantly higher belief scores than the control group. Within the hypnosis group itself, hypnotic depth was the only variable to correlate significantly with improvement.

The Discussion stated, "However, taken together, the findings indicate that hypnotic induction added significantly to the therapeutic benefits of suggestions for the cessation of nail biting, and that Johnson and Barber's (1978) concept of 'believed-in efficacy' was more important in accounting for therapeutic success than motivation (at least as measured here), hypnotic induction per se, or the subject's proclivity for imaginative involvement. Nevertheless, belief still accounted for less than 40% of the variance in improvement. This may have been due to measurement error or insensitivity in the measures. Alternatively, or additionally, other factors may have been influential. For example, if CIS scores are considered to be indirect measures of hypnotic susceptibility, then belief was more influential than hypnotic susceptibility; however, from a hypnotic state theory perspective, the significant correlation between hypnotic depth (LSS scores) and improvement within the hypnosis group might suggest that some further feature of the 'hypnotic state' could still have been at work, such as a dissociative process (Hilgard, 1986). On the other hand, from a non-state perspective, perhaps subjects receiving hypnotic induction and reporting high depth scores might have felt more obliged to respond to the demand characteristics of the study, and tried harder to please the experimenter (Wagstaff, 1981); the general motivation questions used here could have been insensitive to such an effect" (p. 12).

1993

LaGrone, Randy G. (1993). Hypnbehavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. American Journal of Clinical Hypnosis, 36, 132-136.

A 10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnbehavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress.

1992

Page, Roger A. (1992). Clark Hull and his role in the study of hypnosis. American Journal of Clinical Hypnosis, 34, 178-184.

## NOTES

1:

The contributions of Hull include his attempts to dispel misconceptions about hypnosis, comparisons of capacities in the hypnotic state with those in the awake state, a sampling of early findings that are still valid today, and examples of his contributions to methodology. Additionally, the roots of many modern-day models and concepts are to be found in his early works.

"Bernheim (1902) had believed hypnosis was identical to natural sleep, while Braid (1899) had believed the resemblance between hypnosis and natural sleep was just superficial. Pavlov (1923) held an intermediate position; he hypothesized that hypnosis was a transition to true sleep involving selective inhibition of certain brain centers" (p. 179).

"His proposition that hypnosis conforms to the basic principles of habit formation was supported by his own work (1933) and, with few exceptions, holds true today. For example, many studies have found that hypnotic responding improves with practice and eventually reaches a plateau (e.g., As, Hilgard, & Weitzenhoffer, 1963; Evans & Schmeidler, 1966). Parenthetically, one can see a resemblance here to the later notion of 'plateau hypnotizability' (Shor, Orne, & O'Connell, 1966). Although Barber and Calverley (1966) did demonstrate that an exception to this proposition will occur if subjects become bored and disinterested, it is still true that hypnosis is generally facilitated by practice" (p. 181).

"Yet another example from the same work can be found in the following description of the results of a conditioning experiment: '... it is possible that the hypnotic group were conditioned more readily because they were the kind of individuals who are susceptible to hypnosis rather than because they were actually in the trance when subjected to the conditioning procedure.' (p. 219) In this statement, one can see the now taken-for-granted distinction between hypnotic susceptibility and being hypnotized, as discussed, for example, by Graham and Leibowitz (1972)" (p. 182).

"Still other now familiar concepts can be gleaned from his 1933 book. One would be the notion of trance having a kind of 'inertia.' Yet another stems from his hypothesis that hypnotic suggestions produce relaxation, which in turn suppresses '... the spontaneous activity of the symbolic or thought processes.' (p. 310) This may well be the first conceptualization of what most recently has been referred to by Plotkin and Schwartz (1985) as the lack of a disposition or capacity to generate final-order appraisals" (p. 183).

## 1991

Clarke, J. H.; Reynolds, P. J. (1991). Suggestive hypnotherapy for nocturnal bruxism: A pilot study. American Journal of Clinical Hypnosis, 33, 248-253.

Although one can find many case reports of hypnotherapy for bruxism, there is a paucity of scientific research on the subject. This study describes the use of suggestive hypnotherapy and looks at its effectiveness in treating bruxism. Eight subjects who reported bruxism with symptoms such as muscle pain and complaints

of bruxing noise from sleep partners were accepted into the study. An objective baseline of the bruxing was established using a portable electromyogram (EMG) detector attached over the masseter muscle during sleep. Hypnotherapy was then employed. Both self-reports and posttreatment EMG recordings were used to evaluate the hypnotherapy. Long-term effects were evaluated by self-reports only. The bruxers showed a significant decrease in EMG activity; they also experienced less facial pain and their partners reported less bruxing noise immediately following treatment and after 4 to 36 months.

Somer, Eli (1991). Hypnotherapy in the treatment of the chronic nocturnal use of a dental splint prescribed for bruxism. International Journal of Clinical and Experimental Hypnosis, 39, 145-154.

A behavioral medicine case is described in which the patient was treated with a combined approach involving both hypnoanalytic and hypnbehavioral techniques. A 55-year-old man with bruxism was referred after 10 years of craniomandibular treatment because of his dependency on a dental splint prescribed for nocturnal use. A projective hypnoanalytic exploration helped to uncover and consequently resolve an earlier conflict that had been reactivated in the patient's work situation and which had become a constant source of mental and muscular tension. The hypnoanalytic exploration was followed by a cognitive-behavioral hypnotic intervention that was tape-recorded and prescribed for bedtime practice. Pre- and posttherapy psychological, physiological, and self-report measurements corroborated the patient's sense of well being that came with his newly found ability to sleep without the dental splint. The importance of considering multiple etiological factors in the treatment of such psychosomatic disorders as bruxism is discussed.

1989

Holroyd, Jean; Maguen, Ezra (1989). And so to sleep: Hypnotherapy for lagophthalmos. American Journal of Clinical Hypnosis.

We used hypnosis to facilitate eye closure during sleep for a 44-year-old woman whose nocturnal lagophthalmos prevented use of a contact lens following cataract surgery and could have resulted in severe corneal damage. On three separate occasions the symptoms remitted following a very brief course of treatment. We discuss the results in terms of alternate theories of hypnotic performance.

#### NOTES

The Discussion section notes, "There was an excellent correlation between the onset of hypnotherapy and the cessation of the recurrent corneal erosion secondary to nocturnal lagophthalmos. Healing of corneal erosion, disappearance of the superficial punctate keratopathy, and alleviation of ocular foreign body sensation occurred promptly following hypnotherapy (with two separate therapists)" (pp. 267-268). The authors present the view that "heightened suggestibility, more vivid imagery, and more specific influence of thoughts upon organ systems probably came into play (Brown &

Fromm, 1986; Holroyd, 1987). Social influence explanations (role taking, expectancy, compliance) seem less relevant as explanations. This highly motivated patient had not been able to keep her eyes closed during sleep despite her conscious efforts, her "good-patient" role, her positive expectations about the benefits of standard treatments, and respectful incorporation of the assistance provided by her ophthalmologist" (p. 268).

Jupp, J. J.; Collins, J. K.; Walker, W. L. (1989). Relationships between behavioural responsiveness to hypnotic suggestions and estimates of hypnotic depth following 11 sequential instances of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 17, 93-98.

Behavioral responsiveness to suggestions was assessed in an initial hypnosis session, and hypnotic depth was assessed in this session, followed by 10 weekly standardized hypnotic experiences. Correlations were calculated between behavioral responsiveness, initial and subsequent depth estimates, and between successive trance depth estimates. Levels of trance depth estimates were found to increase through weeks 1 to 11. Significant positive correlations were found between behavioral responsiveness scores and trance depth estimates to the fourth week but not beyond. Significant positive relations were found between successive estimates of trance depth except for the correlation between estimates for the fourth and fifth weeks. These results are discussed in terms of the estimates of trance depth being attributions from self-observations of behavioral responsiveness to hypnotic suggestions.

1987

Barabasz, Marianne (1987). Trichotillomania: A new treatment. International Journal of Clinical and Experimental Hypnosis, 35 (3), 146-154.

The details of easily replicable interventions using hypnosis and restricted environmental stimulation therapy in the treatment of 4 cases of trichotillomania are presented. Hypnosis or hypnosis combined with brief restricted environmental stimulation appeared to be effective in 3 of the 4 Patients were given practice with hypnosis and also restricted environmental stimulation sessions to maximize response to hypnotic suggestions, as previous research indicated that only highly hypnotizable people responded to hypnotherapy for trichotillomania. The treatment itself consisted of simple posthypnotic suggestions, as "You will be acutely aware whenever you put your hand to your head, then it is entirely up to you, you have the power, the control, no one else, no habit controls you. You can pull your hair if you want to or you can choose to control the habit" (p. 149).

1983

Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal.

1980

Bornstein, P. H.; Rychtarik, R. G.; McFall, M. E.; Winegardner, J.; Winnett, R. L.; Paris, D. A. (1980). Hypnobeavioral treatment of chronic nailbiting: A multiple baseline analysis. International Journal of Clinical and Experimental Hypnosis, 28 (3), 208-217.

3 highly hypnotizable Ss were administered a hypnobeavioral treatment package in an attempt to alleviate chronic nailbiting behavior. The combined hypnotic and behavioral procedures included standard induction and deepening techniques, motivation enhancement, time-projection, self-reinforcement, aversion-relief, coping self-instructions, and posthypnotic suggestion. A multiple baseline design across Ss was employed as a means of evaluating the treatment intervention. Results for all Ss indicated immediate and dramatic increase in fingernail lengths concomitant with the introduction of treatment. At 3-month follow-up, 1 S demonstrated a moderate reversal effect while the remaining 2 Ss continued to indicate substantial progress. These findings were discussed with regard to the efficacy of hypnobeavioral treatment strategies and utilization of single-case experimental designs in future hypnotherapy research.

1977

Barkley, R. A.; Hastings, J. E.; Jackson, T. L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. International Journal of Clinical and Experimental Hypnosis, 25 (1), 7-17.

29 Ss were assigned to one of 3 treatment conditions and treated for their cigarette smoking over a 2-week period. These conditions were: group rapid smoking, group hypnosis, and an attention-placebo control group. All treatments produced significant reductions in average daily smoking rates during the treatment phase but all Ss returned to near baseline levels of smoking by the 6-week follow-up. The rapid smoking and hypnosis groups did not differ from the control group in smoking rates at treatment termination or at the 6-week follow-up. They also did not differ from the control group in the number of Ss abstaining from smoking by treatment termination but did differ at follow-up. Eventually, at the 9-month follow-up, only Ss from the group rapid smoking condition had significantly more

abstainers than the control group. The results suggested that rapid smoking can work as effectively in group procedures as previous individualized approaches had demonstrated. Group hypnosis, while less effective than some previous individualized approaches had indicated, was nevertheless only marginally less effective than the group rapid smoking procedure. The use of abstinence rates as opposed to average rates of smoking was strongly recommended as the best measure of treatment effectiveness for future research in this area.

1976

Laguaite, J. K. (1976). The use of hypnosis with children with deviant voices. International Journal of Clinical and Experimental Hypnosis, 24, 98-104.

Hypnosis was used with 18 children aged 4 years, 7 months to 10 years, 1 month, with a mean age of 6 years, 8 months. All children had deviant voices -- 7 had vocal nodules, 4 had hypertrophy of the vocal bands, 5 had normal larynges, and 2 could not be visualized adequately. All but 1 of the children responded by entering some degree of trance state. The younger children responded better when eye closure was not suggested. Post-therapy judgments of voice quality and laryngeal examinations showed that only 2 had shown no improvement. The 2 were the least responsive to hypnosis. Factors thought to be important in influencing the children's responses are discussed.

1966

Barber, Theodore Xenophon; Calverley, David S. (1966). Toward a theory of hypnotic behavior: Experimental evaluation of Hull's postulate that hypnotic susceptibility is a habit phenomenon. Journal of Personality, 34, 416-433.

NOTES

Examines Hull's 1933 theory that hypnotic susceptibility is a habit phenomenon, which he derived from a review of the literature and an experiment. Also presents his own experiment to test it.

1965

Gruenewald, Doris (1965). Hypnotherapy in a case of adult nailbiting. International Journal of Clinical and Experimental Hypnosis, 13 (4), 209-219.

A middle-aged female nailbiter was treated in short-term hypnotherapy. Hypotheses and observations postulated in the literature for the dynamics of the symptom in children and young adults were shown to be valid in this case of more advanced age. Light-to-medium trance proved adequate for exploration and resolution of conflicts of which nailbiting was symptomatic. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Vasilev, L. (1965). Mysterious phenomena of the human psyche. New York: University Books. (Abstracted in American Journal of Clinical Hypnosis, 1965, 8:2, 146-147)

The review of this book by Leo Wollman (*American Journal of Clinical Hypnosis*, 1965, vol. 8, pp. 146-147) states, "Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B. N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

" An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent" (pp. 146-147).

1955

Hart, Hornell (1955). Measuring some results of autohypnosis. *Journal of Clinical and Experimental Hypnosis*, 3 (4), 229-242.

#### NOTES

The author developed self ratings for mood (euphoria-dysphoria) and alertness-fatigue, which were administered to college students in neutral conditions and after self-hypnosis conditions. The self hypnosis, or "auto-conditioning" usually involved deep relaxation self suggestions followed by other suggestions. The suggestions involved using the word 'you' to be able to re-instate the autoconditioning more and more effectively; suggestions for attitude change (e.g. that 'No matter what comes, we will grapple with it courageously'); and euphoria auto-suggestions (e.g. that 'you will come out of this deep relaxation, feeling rested, alert, cheerful and courageous'). In both single session experiments, as with a class of nurses who experienced an 8 minute auto-conditioning procedure, and in experiments extending over time, depression decreased. He noted that "for various reasons, the students who participated in autoconditioning experiments between February and May, 1955, were in many respects less successful than some of the previous experimental groups had been" (p. 235).

Increased alertness and diminished fatigue was also observed.

Many students chose to give themselves suggestions to correct the habit of procrastination. Two-thirds of the participants reported complete success, up to the level specified, and only one of 43 experiments on correcting procrastination was a "flat failure."

McCord, Hallack (1955). Hypnotherapy and stuttering. Journal of Clinical and Experimental Hypnosis, 3, 210-214. (Abstracted in Psychological Abstracts, 57: 1368)

#### NOTES

Reviews literature and concludes: "On the basis of the evidence presented, it would seem indicated hypnotherapy is a technique deserving further attention by research-minded speech pathologists with hypnotherapeutic training and skill.

"In this connection, no doubt, special attention should be given to the relative permanency of the so-called 'cures,' for frequently the hypnosis literature is not clear on this point. ...

"Also, it is indicated speech pathologists who research in hypnotherapy should select and report on their techniques with care. Many hypnotherapists agree, for example, that a straight suggesting-away-of-symptoms technique seldom results in a lasting behavior change with many subjects. Unfortunately, this relatively 'weak' technique is often the only one known to persons not familiar [sic] with the hypnosis literature.

"However, authorities indicate more lasting behavior changes are often brought about when more sophisticated hypnotherapeutic techniques are used -- techniques such as psychotherapy under hypnosis, abreaction, hypnoanalysis, emotion intensification, projective hypnoanalysis, memory change during age regression, attitude modification, etc. ...

"Finally, research workers should investigate the possible value of providing even temporary freedom from stuttering symptoms for some patients. Perhaps some individuals would find it desirable to return for further hypnotherapy periodically, even as the hayfever sufferer returns to his allergist each year for a shot in the arm with the onset of the ragweed season" (pp. 212-213).

1931

Krueger, R. G. (1931). The influence of repetition and disuse upon rate of hypnotization. Journal of Experimental Psychology, 14, 260-269.

#### NOTES

In this research, Krueger and his advisor, Clark Hull, used good hypnotic subjects to demonstrate that such selected Ss close their eyes more and more quickly when given standardized suggestions of relaxation, sleep, and eye-closure in repeated sessions.

#### HALLUCINATIONS

2003

Whalley, Matthew; Oakley, David (2003). Psychogenic pain: A study using multidimensional scaling. Contemporary Hypnosis, 20, 16-24

Hypnotic suggestions designed to induce a sensation of pain were given to eleven highly hypnotisable participants and produced the intended effect in six of them.

Subjective aspects of the pain experiences were investigated using conventional pain questionnaires and a multidimensional scaling technique. The implications are discussed in terms of a model of consciousness and the aetiology of chronic pain.

**1999**

**Kirsch, Irving; Wickless, Cynthia; Moffitt, Kathie H. (1999). Expectancy and suggestibility: Are the effects of environmental enhancement due to detection?. International Journal of Clinical and Experimental Hypnosis, 47 (1), 40-45.**

This study replicated the effect of Wickless and Kirsch's experiential expectancy manipulation, in which lights and music from hidden sources were used to convince participants that they were responding successfully to suggestions for visual and auditory hallucinations. The hypothesis that the effect is mediated by detection of the manipulation was tested by providing some participants with cues that their experiences were due to actual changes in the physical environment rather than to their responses to suggestion. This hypothesis was not confirmed. A significant effect on suggestibility was obtained only among participants not given cues aimed at enabling detection of the manipulation, and among those provided with the cues, suspicion of the manipulation was negatively correlated with response to suggestion.

**1998**

**Perugini, Eve Marie; Kirsch, Irving; Allen, Sarah T.; Coldwell, Eleanor; Meredith, Janelle M.; Montgomery, Guy H.; Sheehan, Julia (1998). Surreptitious observation of responses to hypnotically suggested hallucinations: A test of the compliance hypothesis. International Journal of Clinical and Experimental Hypnosis, 46 (2), 191-203.**

Suggestions for arm levitation and for visual, auditory, tactile, and taste hallucinations were administered twice via audiotape to a group of high suggestible students and low suggestible simulators. During one of the administrations, participants were led to believe they were alone, but their behavior was surreptitiously recorded on videotape and observed on a video monitor. During the other administration, they were observed openly by an experimenter who had not been informed about group assignment. When unaware that they were being observed, simulators were significantly less responsive to suggestion and engaged in substantially more role-inappropriate behavior. In contrast, the responsiveness of nonsimulating students was not affected by the presence of an experimenter, and they exhibited little role-inappropriate behavior even when alone. These data indicate that the responses of suggestible individuals reflect internally generated changes in experience and are not due to simple intentional compliance (i.e., faking).

**1995**

**Spiegel, David (1995, November). Neurophysiological effects of hypnotic perceptual alteration. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

## NOTES

1:

We studied the relationship between selective attention and hypnotic processes. Michael Posner's theory has different centers for different kinds of attentional processes. Posterior (anterior to the occipital) cortex seems related to arousal. Anterior system has 2 loci: anterior cingulate and [missed words] pole, which relates to the narrowing of attention in hypnosis. We used cued target detection tasks, with MRI measures.

We think hypnotic attention is related to the anterior system.

In an earlier study we used 10 Highs, measured their visual ERPs, with both hypnotic obstructive hallucination and normal attention conditions. We found early and late evoked potential wave component differences: P100, P200, and P300. We were surprised by the P100 or attentional component.

Steven Hilliard's work used an ERP model, and an attentional paradigm with only 1/2 visual field involved. Usually N1 and P1 loci of EEG are the most affected in attentional studies using the evoked response potential measure.

He compared hypnotic attention with hypnotic obstruction (which was a suggestion that a brick wall was "covering" the L or R visual field). They found a difference between attended and ignored stimuli in the Frontal area ERP!

However, there are problems with ERPs and localization due to diffusion of signal throughout the scalp.

In a hypnotic obstruction condition the effect is a bit later than in selective inattention; and it is more posterior than in selective inattention. Thus, if we find a difference due to hypnotic obstruction at P100, it may be due to selective inattention. The difference we can produce with hypnotic obstruction comes at P200 and posterior in the occipital cortex, where a visual stimulus is processed. Generation of internal images may contribute. Are there differences if you tell yourself not to see vs to see something obstructing the image?

Ability to do the hypnotic obstruction is related to the eyeroll item on the Hypnotic Induction Profile (HIP). (High eyeroll score makes it easier to reduce P200 amplitude in response to the obstruction suggestion.) So eyeroll score on the HIP has some validation as a biological marker.

Effects of supportive group therapy for cancer patients study: anxiety and depression modulate the pain more than the location of the cancer. Melzack's theory indicates input from cortex can modulate pain. We taught Self Hypnosis for pain control: used metaphors that induce relaxation, suggestions to filter hurt out of the pain, not fight the pain, focus on a competing sensation. By end of year the intervention group had half the pain that the non-intervention group had. The frequency and duration of pain attacks were not different.

We are now in year 5 of a 10 year replication study.

1994

DePascalis, Vilfredo (1994). Event-related potentials during hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 42 (1), 39-55.

Event-related potentials were elicited by visual stimulation and recorded at frontal, central, and posterior scalp sites so as to study the psychophysiological process

associated with hypnotic hallucination. Subjects were screened using two measures of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Form A and the Stanford Hypnotic Susceptibility Scale, Form C). Seven high and 9 low hypnotizable right-handed females participated in the experiment. Eight intermediate hypnotizable right-handed females served as controls. Peak amplitudes and latencies of P1, N1, P2, N2, and P3 components were compared in two hypnotic conditions (obtained by means of hypnotic suggestions): stimulus enhancement and stimulus elimination. High hypnotizable subjects displayed a significant attenuation of the P1 and N1 amplitudes of the evoked response while experiencing stimulus elimination. The effect for the P1 component was greatest at the posterior sites compared to that found at the anterior and central sites. A similar trend across condition was also observed for P3 peak amplitude, even though the Group x Condition interaction was only marginally significant ( $p < .07$ ). During negative hallucination, P3 peak latency for high hypnotizables was shorter than that obtained during stimulus enhancement. This effect was more pronounced across the right hemisphere. These results are discussed in light of previous findings.

1992

Page, Roger A.; Handley, George W. (1992). Effects of 'deepening' techniques on hypnotic depth and responding. International Journal of Clinical and Experimental Hypnosis, 40, 157-168.

The present study attempted to assess the effectiveness of commonly used deepening techniques and of surreptitiously provided stimulation on hypnotizability scores, in-hypnosis depth reports, retrospective realness ratings, and the Field Inventory of Hypnotic Depth (Field, 1965). High, medium, and low hypnotizables were assigned in equal numbers to 1 of 3 groups, each containing 54 Subjects. Controls were compared to Subjects receiving 2 deepening techniques or 2 suggestions for positive and negative hallucinations that were surreptitiously enhanced. Of the 4 dependent measures employed, the only significant difference between groups related to a change in depth reports for the manipulation items themselves, leading to the conclusion that the effect of the techniques was at best minimal and transient. Some methodological and conceptual issues are also discussed.

Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion

were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

1991

Kunzendorf, Robert G.; Beltz, Susan McLaughlin; Tymowicz, Gina (1991-92). Self-awareness in autistic subjects and deeply hypnotized subjects: Dissociation of self-concept versus self-consciousness. Imagination, Cognition and Personality, 11, 129-141.

By refining past tests of self-awareness in mirrors, current testing demonstrates that autistic subjects' percepts are dissociated from self-concept, whereas hypnotized subjects' sensations are dissociated from self-consciousness. In the current test of self-concept, subjects could not directly see a line inside the box on their lap, but subjects could see the line indirectly in a televised mirror image. When instructed to touch the line, autistic subjects reached towards the televised line, whereas nonautistic subjects reached towards the actual line occluded inside the box. This first result suggests that the autistic subject's visual percept of the televised line is dissociated from its spatial relationship to the subject's self-concept. In the current test of self-consciousness, subjects were told to use a televised mirror-image to move their hands together until touching, but were not told that they were actually seeing a pre-recorded tape of their hands struggling unsuccessfully to touch. When queried, hypnotized subjects denied that their tactually joined hands were touching, whereas nonhypnotized subjects confirmed that their hands were touching. This latter result suggests that the hypnotized subject's hand-touching sensations are dissociated from the immediate and incontrovertible self-consciousness that one is perceiving the hands touching (not imaging them touching).

1990

Ross, Colin A.; Miller, S. D.; Reagor, P.; Bjornson, L.; Fraser, G. A.; Anderson, G. (1990). Schneiderian symptoms in multiple personality disorder and schizophrenia. Comprehensive Psychiatry, 31, 111-118.

#### NOTES

Schneiderian first-rank symptoms of schizophrenia were equally common among 102 patients with multiple personality disorder in all four centers where data was collected. The average multiple personality disorder (MPD) patient had experienced 6.4 Schneiderian symptoms. When these 102 cases are combined with two previously reported series of MPD cases, an average of 4.9 Schneiderian symptoms in 368 cases of MPD is noted. This compared with an average of 1.3 symptoms acknowledged by 1,739 schizophrenics in 10 published series. Schneiderian symptoms are more characteristic of MPD than of schizophrenia.

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

#### NOTES

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Bryant, Richard A.; McConkey, Kevin M. (1989). Visual conversion disorder: A case analysis of the influence of visual information. Journal of Abnormal Psychology, 98, 326-329.

#### NOTES

"examined the influence of visual information on a decision task that was administered to an individual with monocular visual conversion disorder. Findings indicated that his performance was influenced by the visual information and by motivation instructions. The findings are discussed in terms of a model of hysterical blindness that recognizes the interplay of cognitive and motivational processes" (p. 326).

Spanos, Nicholas P.; Lush, Nancy I.; Gwynn, Maxwell I. (1989). Cognitive skill-training enhancement of hypnotizability: Generalization effects and trance logic responding. Journal of Personality and Social Psychology, 56 (5), 795-804.

Compared low-hypnotizable subjects who simulated hypnosis, underwent cognitive skill training, or served as no- treatment controls to subjects who scored as high hypnotizables without training (natural highs) on response to analgesia, age-regression, visual hallucination, selective amnesia, and posthypnotic suggestions. Subjects who attained high hypnotizability following skill training (created highs) did not differ from natural highs on any response index. Natural and created highs scored lower than simulators but higher than controls on the behavioral and subjective aspects of test suggestions. Simulators, however, were significantly less likely than natural highs or skill- trained subjects to exhibit duality responding or incongruous writing during age regression or transparent hallucinating. Results suggest that the hypnotic responses of natural and created highs are mediated by the same cognitive variables and that enhancements in hypnotizability produced by skill training cannot be adequately explained in terms of compliance.

1988

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

Spiegel, David; Barabasz, Arreed F. (1988). Effects of hypnotic instructions on P300 event-related-potential amplitudes: Research and clinical applications. American Journal of Clinical Hypnosis, 31, 22-27.

Apparently conflicting findings in two recent studies of the effects of hypnotic hallucination on the P300 component of cortical event-related potentials are examined. In one study, Barabasz and Lonsdale (1983) found an increase in P300 amplitude in response to hypnotic anosmia instructions. However, Spiegel, Cutcomb, Ren, and Pribram (1985) obtained a decrease in P300 amplitude after instructing high hypnotizables that an imaginary cardboard box blocked their view of the stimulus generator. These differences are reconciled on the basis of differences in the hypnotic instructions given. The former study employed language which emphasized negation ("You will not smell anything at all"), while the latter had subjects focus on a competing obstructive hallucination. The anosmia subjects were surprised when they smelled anything at all, leading to an enhanced P300

response, while the subjects in the visual study were so absorbed in the hallucinated obstruction that perception of the stimulus was reduced. Clinical implications of these two studies are examined.

1987

Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

#### NOTES

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to

be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259).

The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern-masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies.

Simulator response deviated significantly from hypnotized and baseline control responses.

#### NOTES

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials

Response Category S Group N Related Unrelated Total

Hypnotized 9 7.22 10.78 18

(40.13%) (59.88%) (100%)

Simulating 15 12.13 5.87 18

(67.43%) (32.61%) (100%)

Baseline 19 8.79 9.21 18 Controls (48.82%) (51.17%) (100%)

Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials

Related Responses S Group Phonetic Semantic Hypnotized 1.78 5.44

(9.89%) (30.24%) Simulating 7.07 5.07

(39.27%) (28.16%) Baseline 4.21 4.58 Controls (23.38%) (25.44%)

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either

the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.) In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

1985

Spiegel, David; Cutcomb, Steven; Ren, Chuan; Pribram, Karl (1985). Hypnotic hallucination alters evoked potentials. Journal of Abnormal Psychology, 94 (3), 249-255.

Brain electrical potentials evoked by visual stimulation were analyzed to study the neurophysiological mechanism associated with hypnotic hallucination. The visual evoked responses of 6 high- and 6 low-hypnotizable subjects were compared in three hypnotic conditions: stimulus enhancement, stimulus diminution, and stimulus elimination (obstructive hallucination). High-hypnotizable individuals demonstrated significant suppression of the later components of the evoked response (N1 and P3) while experiencing obstructive hallucinations, indicating a change in information

processing. This effect was significantly greater in the right, as compared to the left, occipital region.

#### NOTES

In the stimulus enhancement condition, Ss were told that one of two colored stimuli would appear unusually bright and interesting. In the stimulus diminution condition, Ss were told that the alternate color stimulus would appear drab, dull, uninteresting. In the obstructive hallucination condition, Ss were told to visualize a box that blocked their view of the TV monitor, making it impossible to see anything on the TV screen. The stimuli were 8 cm x 8 cm squares (colored gratings) presented 1 meter in front of S: 50% were blue vertical gratings, 50% were pink horizontal gratings.

Ss were told to press a button in response to any stimulus they happened to see; hence all stimuli were potential targets. To control for the effect of motor potentials when they pressed the button, a button-pressing/passive-attention control group was added. Only results significant beyond this control group were attributed to a hypnotic hallucination effect. A second control group of medium level hypnotizable Ss were required to (a) button press after each stimulus presentation and (b) attend passively to the TV monitor screen without button pressing. "Thus, we had three control conditions: (a) for attentional demands, comparing the performance of high hypnotizables in the obstructive hallucination versus the hypnotic stimulus enhancement condition, (b) for hypnotizability, in comparing the high hypnotizables in the obstructive hallucination condition versus the low hypnotizables in the same condition, and (c) for button-pressing behavior, comparing the performance of the high hypnotizables to that of control subjects in press versus no-press conditions" (p. 250).

In their discussion, the authors state, "Our results are consistent with the hypothesis that an hypnotic instruction of obstructive hallucination among high- hypnotizable subjects is accompanied by a decrease in the amplitude of the P3 component of the evoked response throughout the brain, and of the N2 and P3 components in the occipital region. This dampening of amplitude is particularly notable among high hypnotizables in the right, as compared with the left, occipital area, suggesting greater inhibition of scalp-recorded response to a visual stimulus in the right hemisphere.

"These data show that while experiencing an obstructive hallucination blocking the stimulus, high-hypnotizable subjects demonstrate a change in the information-processing components of the evoked response (Baribeau-Braun, Picton, & Gosselin, 1983), rather than primarily in channel selection, which is reflected more by P1 and N1 (Ford, Roth, Dirk, & Kopell, 1978; Hillyard & Picton, 1979). Although there were differences at P1 and N1 between high and low hypnotizables, they were not significantly greater than those observed in the press/no-press control group. These observations make it possible to address several alternative explanations for the findings, such as the possibility of differences in nonspecific arousal leading to a differential preparation (Naatanen, 1969), which should be reflected primarily in changes in the early components, as would any differences in pupil size. Drowsiness or inattention in this condition should be associated with an increase, rather than a

decrease, in response amplitudes (Schacter, 1976). The possibility that high hypnotizables might have defocused their view of the monitor (Schulman-Galambos, & Galambos, 1978) is made less likely by the fact that defocusing is accompanied by increases in P1 latency (Sokol & Moskowitz, 1981), whereas there were no P1 latency differences in the obstructive hallucination condition" (p. 254).

Zamansky, Harold S.; Bartis, Scott P. (1985). The dissociation of an experience: The hidden observer observed. Journal of Abnormal Psychology, 94 (3), 243-248.

Addressed methodological weaknesses in previous studies of the hidden observer phenomenon presented by E. R. Hilgard (1977) using a modified procedure with 11 undergraduates highly susceptible to hypnosis. The critical modifications were that no prior practice in dissociation was given before the hidden observer was assessed, the notion of hidden information was introduced only after the stimulus was no longer present, and independently verifiable stimuli were employed. Despite this more rigorous procedure, a hidden observer response was still observed in more than 90% of Ss. This finding makes much less tenable interpretations that attribute the hidden observer effect solely to social expectancies and situational demands. It is concluded that it is possible for some hypnotized individuals to monitor the actual state of events while experiencing a variety of perceptual distortions.

1983

Nash, John (1983). Negative visual hallucination and concomitant changes in cortical event-related potentials (Dissertation, University of California, Santa Barbara). Dissertation Abstracts International, 45 (2), 716-B. (Order No. DA 8411224)

"The purpose of this investigation was to examine the effects of negative visual hallucination (NVH) on cortical event-related potentials (ERPs), and to compare these effects with those of selectively attending to and ignoring stimuli. Five highly hypnotically susceptible subjects, four female and one male, were trained to block from subjective experience, i.e., negatively hallucinate, a ring of strobe-illuminated circles surrounding a central, independently strobe-illuminated circle. This stimulus array was modeled after part of the Titchener-Ebbinghaus circle illusion, since previous research had shown that subjects could attenuate the effects of the optical illusion via NVH of the outer, illusion-producing circles. "Analysis of the ERP data revealed amplitude and latency changes in various ERP components across the three experimental conditions (Attend, Ignore, NVH) for the four female subjects, a negative result which is explained in motivational terms. "The most noteworthy finding was the selection of the P3 amplitude variable at C2 by stepwise discriminant analysis for the four females, and the fact that this amplitude systematically decreased across conditions from largest in Attend to smallest in NVH. A variety of individual patterns were observed in terms of other ERP components which allowed discrimination (successful classification) among the three conditions. The results suggest that both Ignoring and NVH of a stimulus result in a decrease in the subjective certainty of perception of the stimulus. Individual

differences in patterns of ERP changes are interpreted in terms of differing strategies for execution of the experimental instructions. The results support the view that NVH instructions produce distinctive ERP effects and that NVH generally can be viewed as an extreme level of ignoring" (p. 716).

1982

Cunningham, Paul V.; Blum, Gerald S. (1982). Further evidence that hypnotically induced color blindness does not mimic congenital defects. Journal of Abnormal Psychology, 91, 139-143.

Six undergraduate women, highly skilled in hypnotic techniques, were trained under hypnosis with a color mixer to experience red, green, blue, and total color blindness and were then programmed for the same responses in the posthypnotic state under conditions of amnesia. After awakening they were shown pseudoisochromatic plates as a preliminary check on the efficacy of the prior hypnotic instructions. The experiment consisted of successive administrations of the Farnsworth-Munsell 100-hue test, initially under normal baseline viewing conditions followed by each of the color-blind conditions in turn. Results indicate that although the observers subjectively experienced the varieties of color blindness as instructed, their responses differed from specimen responses of individuals with congenital defects in color discrimination. Implications for interpreting hypnotic alterations of perception are discussed.

Spanos, Nicholas P.; Bridgeman, M.; Stam, H. J.; Gwynn, M. I.; Saad, C. I. (1982-83). When seeing is not believing: The effects of contextual variables on the reports of hypnotic hallucinations. Imagination, Cognition and Personality, 2, 195-209.

When administered a hallucination suggestion most high susceptible hypnotic and task-motivated subjects reported that they "saw" the suggested object. When asked what they meant by "saw," however, almost all indicated that they had imagined the object but did not believe that it had actually been present. On the other hand, simulating subjects maintained that the suggested object had been "really there." Simulators were also more likely than non-simulators to provide "life-like" descriptions of the suggested object (e.g., solid rather than transparent, colored, highly vivid). These findings are consistent with the view that hypnotic hallucinations are context-generated imaginings. They also indicate that unique or unusual psychological processes like "trance logic" need not be posited to account for the descriptions of "hallucinatory" experiences proffered by hypnotic subjects.

#### NOTES

It was observed that hypnotized Ss reported more vivid (and longer sustained) imagery than task motivated Subjects. Hypnotized Ss did not differ from high susceptible simulators on vividness of imagery or how long they experienced the imagery, but did report shorter and less vivid imagery than simulators who were low hypnotizables.

1981

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.

#### NOTES

Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.

Experiment 1. Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.

The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15, 16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.

The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.

Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in

which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments.

In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

Experiment 2. The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

Results. "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a

consistency of responses over experimental sessions that were widely separated in time, making conscious or unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

N.B. None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, 133 (3), 161-169.

"The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was

induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding S2 differed only after the most intense S1. Hypnotic suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

Erickson, Milton H. (1980). Hypnotic alteration of sensory, perceptual and psychophysical processes. (2 ). New York: Irvington Publishers, Inc..

NOTES: This second volume of four has five sections, with chapters as follows. I. Visual Processes

1. The hypnotic induction of hallucinatory color vision followed by pseudonegative afterimages (written with E. M. Erickson)
2. Discussion: Critical comments on Hibler's presentation of his work on negative afterimages of hypnotically induced hallucinated colors (written by E. M. Erickson)
3. The induction of color blindness by a technique of hypnotic suggestion
4. An experimental investigation of the hypnotic subject's apparent ability to become unaware of stimuli
5. The development of an acute limited obsessional hysterical state in a normal hypnotic subject
6. Observations concerning alterations in hypnosis of visual perceptions (written by E. M. Erickson)
7. Further observations on hypnotic alteration of visual perception (written by E. M. Erickson)
8. An investigation of optokinetic nystagmus
9. Acquired control of pupillary responses II. Auditory Processes
10. A study of clinical and experimental findings on hypnotic deafness: I. Clinical experimentation and findings
11. A study of clinical and experimental findings on hypnotic deafness: II. Experimental findings with a conditioned response technique
12. Chemo-anaesthesia in relation to hearing and memory
13. A field investigation by hypnosis of sound loci importance in human behavior
- III. Psychophysiological Processes
14. Hypnotic investigation of psychosomatic phenomena: Psychosomatic interrelationships studied by experimental hypnosis
15. Hypnotic investigation of psychosomatic phenomena: The development of aphasiatic reactions from hypnotically induced amnesias (written with R. M. Brickner)
16. Hypnotic investigation of psychosomatic phenomena: A controlled experimental use of hypnotic regression in the therapy of an acquired food intolerance
17. Experimentally elicited salivary and related responses to hypnotic visual hallucinations confirmed by personality reactions

18. Control of physiological functions by hypnosis
19. The hypnotic alteration of blood flow: An experiment comparing waking and hypnotic responsiveness
20. A clinical experimental approach to psychogenic infertility
21. Breast development possibly influenced by hypnosis: Two instances and the psychotherapeutic results
22. Psychogenic alteration of menstrual functioning: Three instances
23. The appearance in three generations of an atypical pattern of the sneezing reflex
24. An addendum to a report of the appearance in three generations of an atypical pattern of the sneezing reflex IV. Time Distortion
25. Time distortion in hypnosis, I (written by L. F. Cooper)
26. Time distortion in hypnosis, II (written with L. F. Cooper)
27. The clinical and therapeutic applications of time distortion
28. Further considerations of time distortion: Subjective time condensation as distinct from time expansion (written with E. M. Erickson)
29. Clinical and experimental trance: Hypnotic training and time required for their development
30. Laboratory and clinical hypnosis: The same or different phenomena?
31. Explorations in hypnosis research (with a discussion by T. X. Barber, R. Dorcus, H. Guze, T. Sarbin, and A. Weitzenhoffer)
32. Expectancy and minimal sensory cues in hypnosis
33. Basic psychological problems in hypnotic research
34. The experience of interviewing in the presence of observers

Wallace, Benjamin (1980). Autokinetic movement of an imagined and an hypnotically hallucinated stimulus. International Journal of Clinical and Experimental Hypnosis, 28 (4), 386-393.

Autokinetic movement (AKM) of an imagined or an hallucinated stimulus was assessed as a function of hypnotic susceptibility level. 3 groups of Ss were asked to produce an image of a small, pinpoint spot of light and to monitor any activity of the stimulus. The stimulus was produced by imagination for a group of Ss judged high in hypnotic susceptibility and for a second group of Ss judged low in hypnotic susceptibility. A third group of Ss, highly susceptible to hypnosis, was asked to hallucinate the pinpoint spot stimulus with the aid of instructions administered by E. Instructions by which movement reports were elicited were kept equal and open-ended for all 3 groups of Ss. Results indicated that form of the stimulus (imagined or hallucinated) did not affect reports of AKM. Hypnotic susceptibility level, however, was a major factor in influencing resultant reports. The Ss judged high in hypnotic susceptibility reported a significantly greater number of direction changes of AKM than Ss low in hypnotic susceptibility. The data are interpreted in terms of the possible differences in stimulus monitoring ability as a function of hypnotic susceptibility level.

1979

**Karlin, Robert A. (1979). Hypnotizability and attention. Journal of Abnormal Psychology, 88 (1), 92-95.**

**An attentional explanation of cognitive hypnotic phenomena (e.g., hallucinations and amnesia) based on the ability to shift the pertinence of stored information was developed. It was hypothesized that individuals who were successful at a difficult attentional task would also succeed on cognitive hypnotic items. The Harvard Group Scale of Hypnotic Susceptibility, Form A was used to assess hypnotizability. To measure pertinence-shift ability, two tape recordings made by the same person were played through a single sound source. One tape was designated the target tape. Amount remembered and perceived task ease were summed to form an additive score of task success. Subjects above the median on the task were assigned to the good pertinence shift group (GP); those below the median were assigned to the poor pertinence shift group (PP). As predicted, GP subjects passed significantly more cognitive hypnotic items than did PP subjects ( $p < .05$ ). When task difficulty and compliance were controlled for, the results remained significant ( $p < .05$ ). These results were replicated in a second study. NOTES 1: A brief version of this paper was presented at the Annual Meeting of the Society for Clinical and Experimental Hypnosis, Asheville, North Carolina, October, 1978**

**1978**

**Blum, Gerald S.; Porter, M. L.; Geiwitz, P. J. (1978). Temporal parameters of negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 26, 30-44.**

**Negative visual hallucination was investigated by hypnotically programming two highly trained undergraduates not to see the colored lines of consonants while perceiving clearly a set of dots superimposed on the lines in another color. Effects of three temporal parameters were noted in tachistoscopic presentations of the consonants: priming time, i.e., opportunity for the subject to prepare to execute the negative visual hallucination after the posthypnotic cue was flashed and before the consonant appeared; duration of consonant exposure; and intensive practice over protracted periods of time. Signal strength and inhibitory skill emerged as significant variables.**

**NOTES**

**This paper reports 4 experiments with two highly trained subjects. The authors conclude, "From these observations, signal strength and inhibitory skill emerge as major determinants of the outcome in NVH. The stronger the input, the greater the likelihood of insufficient inhibitory action. Differences in skill show up at both the intra- and inter-individual levels of analysis. Even the initially skilled F1 improved her NVH ability with practice, as inferred from the disappearance of undercalling. The lesser skill of F2 was evidenced in her longer required priming time, higher accuracy of color guesses, greater number of color breakthroughs, and reported feeling of mental strain" (p. 42).**

1976

Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations.

1970

Gray, Arne L.; Bowers, Kenneth S.; Fenz, Walter D. (1970). Heart rate in anticipation of and during a negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 18 (1), 41-51.

Gave 10 stimulating control and 10 hypnotic undergraduates a suggestion to negatively hallucinate. Heart rate responses recorded prior to and including the hallucination period indicated consistent differences between groups. Hypnotic Ss responded with heart rate acceleration in anticipation of the hallucination, while controls responded with heart rate deceleration during the same period. It is suggested that these differences reflect differences in the subjective experiences of hypnotic and simulating Ss. (Spanish & German summaries) (PscINFO Database Record (c) 2003 APA, all rights reserved)

Sarbin, Theodore R.; Juhasz, Joseph B. (1970). Toward a theory of imagination. Journal of Personality, 38 (1), 52-76.

Imagination refers to (1) forming mental pictures (imaging) and creative innovating. The authors focus on "the more literal meaning of imagining, that is, 'having mental pictures,' for [they] believe that a clarification of that concept is basic to any further discussion of the psychology of the imagination.

"Before continuing, let us establish some reference cases for what a psychologist would call instances of imaging or imagining.

1. In a psychophysical experiment, a subject declares that he hears an auditory signal when no signal is presented. The experimenter scores the response as a 'false alarm.'
2. A patient in a mental hospital reports seeing the Mother of God. The psychiatrist classifies the report as a hallucination.

3. A novelist describes his work habits as involving conversations with imaginary characters. The critic calls this creative work.
4. A three-year-old child engages in play with a fictitious invisible rabbit. She is said to have an imaginary playmate" (p. 54).

1969

Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, 12 (2), 100-130.

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3 in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Barber, Theodore Xenophon; Calverley, David S. (1968). Toward a theory of 'hypnotic' behavior: Replication and extension of experiments by Barber and co-workers (1962-65) and Hilgard and Tart (1966). International Journal of Clinical and Experimental Hypnosis, 16, 179-195.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH

TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS" CAPABILITIES AND DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Scheibe, Karl E.; Gray, Arne L.; Kleim, C. Stephen (1968). Hypnotically induced deafness and delayed auditory feedback: A comparison of real and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 16, 158-164.

PRELIMINARY RESEARCH INDICATES THAT HYPNOTICALLY INDUCED DEAFNESS MAY REDUCE THE SPEECH INHIBITING EFFECTS OF DELAYED AUDITORY FEEDBACK (DAF). REAL AND SIMULATING HYPNOTIC SS WERE COMPARED WITH RESPECT TO THE IMPROVEMENT IN SPEECH CONSEQUENT TO THE SUGGESTION OF DEAFNESS. RESULTS INDICATE VERY SIMILAR IMPROVEMENTS OF DAF SPEECH FOR BOTH GROUPS. AN INCIDENTAL FINDING IS THAT REAL SS HAD LONGER SIMPLE READING TIMES UNDER HYPNOSIS THAN DID SIMULATING SS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Bowers, Kenneth S. (1967). The effect for demands of honesty upon reports of visual and auditory hallucinations. International Journal of Clinical and Experimental Hypnosis, 15, 31-36.

SS, UNSELECTED FOR HYPNOTIC SUSCEPTIBILITY AND SIMPLY TOLD TO HALLUCINATE, MADE PRETEST RATINGS ON THE REALITY OF VISUAL AND AUDITORY HALLUCINATIONS. ALL SS WERE THEN TASK MOTIVATED TO HALLUCINATE. BEFORE THE RETEST RATINGS WERE MADE, 1/2 OF THE SS WERE CONFRONTED BY A 2ND E WITH DEMANDS FOR REPORT HONESTY. FOR BOTH SENSORY MODALITIES, THE MEAN CHANGE IN RATINGS FROM PRETEST TO RETEST WAS SIGNIFICANTLY GREATER FOR THE TASK-MOTIVATED THAN FOR THE HONESTY-REPORT CONDITION. RATINGS OF THE REALITY OF HALLUCINATIONS

ARE EVIDENTLY HIGHLY SUSCEPTIBLE TO THE CONTEXT OF DEMANDS IN WHICH THE REPORT IS MADE. IT IS ARGUED THAT, IN THIS AND PREVIOUS EXPERIMENTS UTILIZING UNSELECTED SS, REPORTS OF HALLUCINATORY ACTIVITY ARE LESS APT TO REFLECT PERCEPTUAL ALTERATIONS THAN RESPONSE MODIFICATION IN ACCORDANCE WITH REGNANT EXPERIMENTAL DEMANDS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Davison, Gerald C.; Singleton, Lawrence (1967). A preliminary report of improved vision under hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (2), 57-62.

REPORTS AN ACCIDENTAL FINDING WHICH WAS FELT TO BE PROVOCATIVE AND WORTHY OF FURTHER, MORE CONTROLLED, INVESTIGATION. THE EMPHASIS IS ON DETAILED DESCRIPTION OF THE PHENOMENON, WITH A MINIMUM OF THEORIZING. WHILE IN A VERY DEEP HYPNOTIC TRANCE, S WAS INDUCED TO HAVE BOTH POSITIVE AND NEGATIVE HALLUCINATIONS. ON THE FOLLOWING DAY, HE REPORTED SPONTANEOUSLY THAT HE HAD BEEN STRUCK BY THE CLARITY OF BOTH THE VISIONS AND THE PERCEPTIONS OF ACTUAL OBJECTS WHILE HYPNOTIZED; HE HAD NOT, HOWEVER, BEEN WEARING HIS GLASSES AT THE TIME, THOUGH, UNDER NORMAL CIRCUMSTANCES HE WORE HIS GLASSES AT ALL TIMES. NO SUGGESTIONS FOR IMPROVED VISION OR EXTRA EFFORT HAD BEEN GIVEN. 2 CAREFUL OPHTHALMOLOGICAL EXAMINATIONS WERE MADE DURING THE FOLLOWING 2 WK., CONFIRMING THE FACT THAT S'S EYESIGHT SHOWED A SIGNIFICANT IMPROVEMENT DURING HYPNOSIS AS OPPOSED TO THE WAKING STATE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kramer, E.; Tucker, G. R. (1967). Hypnotically suggested deafness and delayed auditory feedback. International Journal of Clinical and Experimental Hypnosis, 37-43.

A PILOT STUDY INVESTIGATED HYPNOTICALLY INDUCED DEAFNESS USING DELAYED AUDITORY FEEDBACK (DAF). THE FOLLOWING TENTATIVE CONCLUSIONS ARE OFFERED: (1) INSTRUCTIONS TO PRETEND DEAFNESS DID DECREASE THE NUMBER OF SPEECH ERRORS PRODUCED IN THE DAF SITUATION WITH SOME SS, ALTHOUGH THE RESULTS WERE BY NO MEANS THOSE OF COMPLETE DEAFNESS; (2) HYPNOTICALLY INDUCED DEAFNESS ALSO PRODUCED A REDUCTION IN THE NUMBER OF ERRORS CAUSED BY DAF, THOUGH HERE, TOO, THE RESULTS DID NOT APPROACH THOSE OF COMPLETE DEAFNESS; AND (3) ADDITIONAL TRAINING OR EXPERIENCE IN HYPNOSIS SEEMED TO PRODUCE AN INCREASED ABILITY OF HYPNOTICALLY SUGGESTED

**DEAFNESS TO REDUCE SPEECH ERRORS UNDER THESE CONDITIONS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1965**

**Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.**

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

**Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.**

The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Vasiliev, L. (1965). Mysterious phenomena of the human psyche. New York NY: University Books. (Reviewed by Leo Wollman in American Journal of Clinical Hypnosis, 1965, 8 (2), 146-147)**

**NOTES**

**1:**

**AJCH Abstract by Leo Wollman: Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B.N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep-inducing effect. For the experimental**

animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent.

Dr. P. P. Podyapolsky, in 1905, wrote 'I tried unsuccessfully to induce in a peasant a reddening of the skin from a mock mustard plaster not only was there no reddening, there wasn't even any appropriate sensation of burning or smarting. I surmised that this simple man had probably never experienced a mustard plaster; therefore, his mind lacked the corresponding images and the ability to reproduce them with all their consequences... And so it turned out--he had never experienced a mustard plaster. It happened that he later had occasion to put a mustard plaster on his chest, and when I hypnotized him thereafter, suggestion quickly created not only the appropriate burning sensation but also reddening of the skin where the mock mustard plaster was applied.' This phenomenon is explained by the fact that the connection between the skin and cerebral cortex by means of neural conductors may, under certain circumstances, alter the activity of different organs. The alteration operates, apparently, in the category of conditioned-reflex formation.

This book is interesting reading and from a historic point of view is worth having in one's library.

Brady, J. P.; Levitt, E. E. (1964). Hypnotically-induced 'anosmia' to ammonia. International Journal of Clinical and Experimental Hypnosis, 12, 18-20.

The procedure to demonstrate anosmia by the inhalation of ammonia is discussed. Deeply hypnotized Ss who are not knowledgeable of the relevant facts of physiology may fail to respond to ammonia fumes when it is suggested that they have no sense of smell (anosmia). However, persons who, in fact, are anosmic do respond to ammonia fumes because they are a powerful stimulus to the pain fibers in the nasal mucosa. This procedure illustrates that the crucial factor in the response of the hypnotized S is not the actual facts of anatomy and physiology, but the S's concept of them. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Brady, J. P.; Levitt, E. E. (1964). Nystagmus as a criterion of hypnotically induced visual hallucinations. Science, 146, 85-86.

Hypnotized Ss who report hallucinating a visual situation which would ordinarily elicit optokinetic nystagmus demonstrate nystagmus under these conditions. They and control Ss are unable to feign nystagmus in the waking state, either by imagining the situation or by direct efforts to simulate the eye movements. Thus an

objective criterion is provided for the presence of visual hallucinations. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Barber, Theodore Xenophon; Deeley, Douglas C. (1961). Experimental evidence for a theory of hypnotic behavior: 1. 'Hypnotic color-blindness' without 'hypnosis'. International Journal of Clinical and Experimental Hypnosis, 9 (2), 79-86.

Barber hypothesizes that a formal hypnotic induction procedure is unnecessary in eliciting alterations in sensory functioning ordinarily thought to characterize hypnotic behavior; similar performances can be elicited from normal persons by instructing them to remain inattentive to visual or auditory stimuli. Substantiating evidence is presented in the area of "hypnotic color-blindness." From Psyc Abstracts 36:02:2II79B. (PsycINFO:

### Conclusions

1. Normal persons who have been instructed to concentrate away from red and green give as many "color-blind" responses on the Ishihara as "deeply hypnotized" subjects who have been given elaborate suggestions to induce color-blindness.

1. Further experiments are necessary to determine if other behaviors which are considered as characteristic of "deeply hypnotized" subjects and which supposedly involve "sensory-perceptual alterations" -- e.g., "hypnotic deafness," "hypnotic blindness," "negative hallucinations" -- can be performed by persons who are simply asked to try to remain in-attentive to visual or auditory stimulation" (pp. 84-85).

Halpern, Seymour (1961). On the similarity between hypnotic and mescaline hallucinations. International Journal of Clinical and Experimental Hypnosis, 9, 139-149.

The hypnotically-induced visual percepts of one subject are presented and discussed. These percepts reputedly bore a close resemblance to mescaline hallucinations. It is argued that no essential qualitative difference exists between psychogenic and toxicogenic hallucinations. It was hypothesized that all perceptions including dreaming, hallucinating, imagining and hypnotic perceiving are explainable in terms of perceptual-conceptual reciprocity understood as a neuropsychological function of consciousness. From Psyc Abstracts 36:01:3II39H. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Sutcliffe, J. P. (1961). 'Credulous' and 'Skeptical' views of hypnotic phenomena: Experiments on anesthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189-200.

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic

trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From *Psyc Abstracts* 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1960**

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From *Psyc Abstracts* 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1959**

Barber, Theodore Xenophon; Coules, John (1959). Electrical skin conductance and galvanic skin response during 'Hypnosis'. *International Journal of Clinical and Experimental Hypnosis*, 7 (2), 79-92.

#### Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'
2. Skin conductance generally increased throughout the remainder of the experiment, i.e., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.
3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'
4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.
5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who

showed a GSR stated, during or after the experiment, that they were by no means convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.

6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'-hypnotic behavior.)

"Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1. Ss do not necessarily become more 'passive' or 'relaxed' during the 'hypnotic induction procedure.'

2. Ss often become more and more 'excited' and 'aroused' when they are given a series of 'active' suggestions such as 'sensory hallucinations,' 'age-regression,' etc.

3. Ss often show momentary 'excitement' when they are 'hallucinating.'

4. A pinprick can 'arouse' a S to the same extent during 'hypnotic analgesia' as it can during 'normal waking.' In addition, 'hypnotic analgesic' Ss are often just as much 'aroused' by the threat of a pinprick as they are by an actual pinprick.

5. Many Ss become momentarily 'excited' when they are asked to look directly at an object (or person) which they have been told they will not be able to see. However, some Ss do not show this momentary 'excitement.'

6. Although Ss may state that they do not 'remember' the 'post'-hypnotic suggestion, they often become momentarily 'excited' when the E makes preliminary motions to give the signal for the 'post'-hypnotic act" (pp. 90-92).

Schneck, Jerome M. (1954). A hypnoanalytic investigation of psychogenic dyspnea with the use of induced auditory hallucinations and special additional hypnotic techniques. Journal of Clinical and Experimental Hypnosis, 2, 80-90.

" Summary. This paper describes in detail and with discussion the hypnoanalytic session which was instrumental in relieving a patient of severe dyspnea and fatigue based on intense, long standing psychological conflict. The conflict entailed the intermingling of past concerns and current pressing problems. These had to do with the patient's long repressed feelings about having been told that her birth had been unplanned. They related to current indecision about becoming pregnant. Attitudes toward her parents were significant and these involved mixed feelings with the significance of her conscious and unconscious images of them. Into this picture there were projected the patient's attitudes toward herself and her methods of functioning somatically as well as psychologically. The symbolic connotation of her symptoms as deterioration and dying in relation to needs for self-destruction were clarified. The symptoms of one and a half to two years duration were dissipated within a few hours and improvement had been maintained for more than a year at the time of writing.

"The use of induced music associations in order to make inroads into the core of the conflict is described. The dynamic significance of spontaneous choice of such theme [sic] is discussed. Other hypnotic techniques involve visual imagery with dream-like qualities and in the form of scene visualizations (8, 9). Attention is centered on

induced auditory hallucinations and interesting facets of such experiences are discussed in relation to subjective and objective qualities of such hallucinations and the issue of dynamic validity" (p. 90).

Schneck, Jerome M. (1954). An experimental study of hypnotically induced auditory hallucinations. Journal of Clinical and Experimental Hypnosis, 2, 163-170.

"Summary. An experimental study of hypnotically induced auditory hallucinations was incorporated into therapeutic contact with a patient at a time when an exploratory phase of treatment process seemed appropriate. The study was divided roughly into ten parts, nine of which involved attempts to induce hallucinations on an auditory level following an initial control procedure involving 'imagined' conversation. Choice of persons to be hallucinated was made at times by the therapist and at times this was left for spontaneous development by the patient. Some of the episodes involved marked emotional participation by the patient. Others were less intense. 'Imagined' conversations were distinct from hallucinated comments. Her own voice when hallucinated emanated from within herself. Other hallucinated voices had external origins. Some were far away. Her aunt's voice was in the same room. Spatial and temporal elements were divorced from their conventional relationships and distorted in keeping with psychodynamic needs. The patient was able to discuss her experiences and evaluate certain descriptive and dynamic qualities. Certain parts of the total experience served as controls in the evaluation of other parts. The beginning of hallucinatory behavior did not set a pattern for continuous similar activity. Responsive behavior varied from time to time. A hallucinatory episode might be followed by an 'imagined' conversation, although instructions remained the same. Deceased persons were hallucinated on an auditory level. This type of episode with her mother had considerable emotional impact. Her aunt died twenty years ago. Her husband was not hallucinated. Responses involving her daughter showed greater complexity.

"Further studies are in order in connection with the neuropsychological and neurophysiological elements in such hypnotic hallucinatory activity. Such elements as they play a role in visual imagery as described here and in visual hallucinations are also to be examined further. Aside from extensions of the type of investigation presented here, inroads may be made into an understanding of spontaneous hallucinatory activity among psychotic patients through the utilization of hypnotic exploratory methods. This would have to be preceded by more extensive studies of hypnosis in relation to psychotic patients than have been attempted thus far. The procedure discussed here and many potential ramifications makes possible a wide variety of investigations which can be planned for the future" (pp. 169-170).

1953

Naruse, Gosaku; Obonai, Torao (1953). Decomposition and fusion of mental images in the drowsy and post-hypnotic hallucinatory state. Journal of Clinical and Experimental Hypnosis, 1 (4), 23-41.

The following is the authors' summary.

Summary of Part I

"From the above we can conclude the following main facts.

- 1) When one sensory stimulus is given to a subject in a drowsy state, images of other objects associated with it often appear.
- 2) These images sometimes have forms, and sometimes are devoid of forms, only light and color being present. This phenomenon resembles the experience of color-hearing, and is called a new type of synaesthesia [sic] by Bachen.
- 3) These images are sure to disappear when they are observed attentively, a passive attitude being necessary for the image observation.
- 4) The remarkable character of these images are such that elements of forms and colors of various objects have been disjointed and connected with each other in different relationships which construct new images.
- 5) The longer and stronger persistence of stimulus, the more easily and clearly conditioned images appear. Conversely if the stimulus is momentary, the recalled images appear also momentarily.
- 6) Not only the visual images but also the sensory images can be elicited in a similar way" (p. 25).

#### Summary of Part II

"The chief results of Naruse's experiments with the various subjects are as follows:

1. When one stimulus (C.S.) is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in deep hypnotic trance, a mental image corresponding to the other stimulus (U.C.S.) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears.
2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images.
3. Such images tend to disappear when subjects try to observe them attentively.
4. Images which are broken into elements of the original figure appear as distinct images.
5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image.
6. When two C.S.'s, which were already conditioned individually to two U.C.S.'s are presented at the same time, the images corresponding to each stimulus appear to overlap. This is the composed image.
7. In image composing, which involves the strong-weak stimulus relationship or the spatial positions of two C.S.'s, the clear-vague or positional relationships of the composed images are changed.
8. In the complex of meaningful images, there are two types, primarily. The one grasps the image as a whole, the other observes it in many mosaic elements. The latter can recall the original figure more correctly in an image form than the former.
9. Some positive and negative reports on sensory conditioning in the normal waking state are reviewed" (p. 36).

#### NOTES

1:

The investigators do not show that hypnosis enhances imagery, compared with the waking state. They studied sensory-sensory conditioning under hypnosis, with amnesia suggestions, followed by testing for the conditioning effect. This study is

relevant to studies of amnesia, "repression." In some studies they paired sound of a buzzer or metronome (the Conditioned Stimulus) with images (the Unconditioned Stimuli) as in [Oo, X]; other studies compared a color patch (CS) with an image (Oo, X). Some studies presented both CS's together, in different spatial arrangements (in the instance of the color patch CS).

Results (partial) included: "1. When one stimulus (CS.) Is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in a deep hypnotic trance, a mental image corresponding to the other stimulus (UCS) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears. 2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images. 3. Such images tend to disappear when Ss try to observe them attentively. ... 5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image. 6. When two CS's, which are already conditioned individually to two UCS's, are presented at the same time, the images corresponding to each stimulus appear to overlap. ..." (P. 36).

Schneck, Jerome M. (1953). Hypnotic hallucinatory behavior. Journal of Clinical and Experimental Hypnosis, 1 (3), 4-11.

It would appear to be important to refer to experiences as hallucinatory only when the eyes of the percipient are open, in the case of visual hallucinations, or when he "hears" with the impression that the sound is of external origin rather than localized within (as an experience on the level of imagining) in the case of auditory hallucinations. In such hallucinatory occurrences, incidentally, the subject may in certain instances question the nature of his experience and evaluate it critically even though the stimulus retains its validity as an apparently externally centered event. Negative visual hallucinations involving avoidance reactions are apparently an order of experience different from negative hallucinations which do not involve such avoidance reactions. Although sensory end-organ functioning may be the same in both such occurrences, there are apparently as yet poorly understood differences in functioning on a neurophysiological and neuropsychological level wherein cortical integration is in operation.

Explicit description of hallucinatory activity in hypnosis enables the reader to know exactly what the writer is saying and thus avoids confusion in the literature. Hallucinatory experience and the more simple type of mental imagery may both be used in therapy, and comparisons may be attempted in relation to goal directed therapeutic efficacy. The issue of hallucinatory experiences and the mental imagery functioning, as described, have bearing on the study of perception where the exact nature of the events may affect considerably the plan of study, the description of events, the subjective evaluation of the events, and the final interpretation of the experimental situation. Examples of visual and auditory hypnotic hallucinations have been given and they have been discussed insofar as they relate to the current problem. The description of nocturnal dreams as hallucinations has probably fostered current confusion in terms.

## HEADACHE

**2000**

**Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

**This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.**

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

**NOTES**

**1:**

**"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.**

**The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible**

to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1994

Culbert, Timothy P.; Reany, Judson B.; Kohen, Daniel P. (1994). Cyberphysiologic strategies for children: The clinical hypnosis/biofeedback interface. International Journal of Clinical and Experimental Hypnosis, 42 (2), 97-117.

This article presents an in-depth discussion of the integrated use of self-hypnosis and biofeedback in the treatment of pediatric biobehavioral disorders. The rationale for integrating these techniques and their similarities and differences are discussed. The concepts of children's imaginative abilities, mastery, and self-regulation are examined as they pertain to these therapeutic strategies. Three case studies are presented that illustrate the integrated use of self-hypnosis and biofeedback in the treatment of children with psychophysiologic disorders. The authors speculate on the specific aspects of these self-regulation or "cyberphysiologic" techniques that appear particularly relevant to positive therapeutic outcomes.

Ter Kuile, Moniek M.; Spinhoven, Philip; Linsen, A. Corry G.; Zitman, Frans G.; et al. (1994). Autogenic training and cognitive self-hypnosis for the treatment of recurrent headaches in three different subject groups. Pain, 58 (3), 331-340.

The aims of this study were to (a) investigate the efficacy of autogenic training (AT) and cognitive self-hypnosis training (CSH) for the treatment of chronic headaches in comparison with a waiting-list control (WLC) condition, (b) investigate the influence of subject recruitment on treatment outcome and (c) explore whether the level of hypnotizability is related to therapy outcome. Three different subjects groups (group 1, patients (n = 58) who were referred by a neurological outpatient clinic; group 2, members (n = 48) of the community who responded to an advertisement in a newspaper; and group 3, students (n = 40) who responded to an advertisement in a university newspaper) were allocated at random to a therapy or WLC condition. During treatment, there was a significant reduction in the Headache Index scores of the subjects in contrast with the controls. At post-treatment and follow-up almost no significant differences were observed between the 2 treatment conditions or the 3 referral sources regarding the Headache Index, psychological distress (SCL-90) scores and medication use. Follow-up measurements indicated that therapeutic improvement was maintained. In both treatment conditions, the high-hypnotizable subjects achieved a greater reduction in headache

pain at post-treatment and follow-up than did the low-hypnotizable subjects. It is concluded that a relatively simple and highly structured relaxation technique for the treatment of chronic headache subjects may be preferable to more complex cognitive hypnotherapeutic procedures, irrespective of the source of recruitment. The level of hypnotic susceptibility seems to be a subject characteristic which is associated with a more favourable outcome in subjects treated with AT or CSH.

1992

Zitman, Frans G.; Van Dyck, Richard; Spinhoven, Philip; Linszen, A. Corrie G. (1992). Hypnosis and autogenic training in the treatment of tension headaches: A two-phase constructive design study with follow-up. Journal of Psychosomatic Research, 36, 219-228.

: Tension headaches can form a chronic (very long duration) condition. EMG biofeedback, relaxation training and analgesia by hypnotic suggestion can reduce the pain. So far, no differences have been demonstrated between the effects of various psychological treatments. In a constructively designed study, we firstly compared an abbreviated form of autogenic training to a form of hypnotherapy (future oriented hypnotic imagery) which was not presented as hypnosis and secondly we compared both treatments to the same future oriented hypnotic imagery, but this time explicitly presented as hypnosis. The three treatments were equally effective at post-treatment, but after a 6- month follow-up period, the future oriented hypnotic imagery which had been explicitly presented as hypnosis was superior to autogenic training. Contrary to common belief, it could be demonstrated that the therapists were as effective with the treatment modality they preferred as with the treatment modality they felt to be less remedial. NOTES 1:

#### NOTES

An earlier review by these authors found that EMG biofeedback and relaxation training were equally effective with headache [Zitman, 1983, Biofeedback and chronic pain, In *Advances in Pain Research and Therapy* (Edit by Bonica, Lindblom, Iggo) V. 5, pp 794-809. N. Y.: Raven Press]. Other authors also found that hypnotic suggestion, EMG biofeedback and EMG biofeedback plus progressive relaxation training were equally effective [Schlutter, Golden, Blume, 1980, A comparison of treatments for prefrontal muscle contraction headache. *Br J. Med Psychol*, 53, 47-52.]. The authors raise the question whether any treatment element or perhaps combination of elements can enhance a basic relaxation training procedure, with respect to chronic headache.

The first phase of this research compared autogenic training (AT) and future oriented hypnotic imagery (FI) which was not labeled as hypnosis. Results were the same for both groups, and were reported earlier [van Dyck, Zitman, Linszen et al. *International Journal of Clinical and Experimental Hypnosis*, 1991, 39, 6-23]. The current study added a third group which received future oriented hypnotic imagery but also was told that they were getting hypnosis (FI-H). Thus the AT and FI groups were 'historical' comparison groups for the FI-H group in this study.

Patients were described as having headache complaints of at least 6 months (76% had been suffering for >2 years), were over 18 years old, had no drug dependence

and no psychiatric disorder, and no previous therapy with autogenic training or hypnosis; no other treatment during the project; fluent in Dutch.

The autogenic training consisted of six exercises learned in a fixed order. The FI method, in which the hypnotized patient imagines himself in a future, pain-free, situation, had been described by Milton Erickson [1954, Pseudo-orientation in time as a hypnotherapeutic procedure. *JCEH*, 2, 261-283]. For that future situation the investigators used descriptions that the patients provided. Both kinds of intervention taught patients muscular and mental relaxation. Both methods required home practice of the technique, using audio cassettes.

In order to substantiate the labeling of the hypnotic procedure as hypnotic future oriented imagery (FI-H) "hand levitation induction was employed during session two with the purpose of inducing positive expectancies concerning hypnosis as a procedure capable of changing ordinary experiences in an unexpected way [17]. This hand levitation procedure, however, was not presented on tape. Except for the labeling as hypnosis and the hand levitation induction, the hypnotic future oriented imagery procedure was identical to the future oriented imagery procedure in the first phase" (p. 221).

Treatment lasted for 8 weeks and provided 2 12 hours of therapist and 24 1/2 hours of home training with taped instructions. The outcome measures included: 1. Budzinsky-type headache index (mean daily sum of intensity rating for each hour of headache activity recorded during 3 separate days of the week of an assessment session) 2. State Anxiety 3. Zung-type Self-rating Depression Scale 4. Perceived credibility of treatment (4 Question's developed by Borkovec & Nau using a visual analogue scale) 5. Neuroticism from the CPI

**RESULTS.** Of 96 patients who agreed to participate, 17 dropped out before the post-treatment assessment. Of the remaining 79, 28 completed AT treatment, 27 FI, and 24 FI-H. Sixty-six attended the follow-up assessment; there were no dropouts from the FI-H, and the drop-outs were equally divided between the AT and FI condition. The headache index scores were logarithmically transformed because the distribution was positively skewed.

Using ANOVA, in terms of post-treatment scores, there were no significant main effects for therapist or treatment, nor were there any significant interaction effects when analyzing headache index, state anxiety, and depression. There was a significant main effect for Time for three outcome measures: headache index score, state anxiety, and depression.

Post-treatment, neither amount of medication used nor subjective estimates of headaches differed by treatment or by therapist. However, over time there were beneficial results for both treatment groups. "Patients rated their headaches as significantly reduced compared to pre-treatment (a mean pain reduction of 40%). ...they had significantly reduced their use of analgesic medication (a mean decrease of 14%)" (p. 224).

Using ANOVA, in terms of follow-up scores, again there were no significant main effects for Treatment or Therapist on the outcome measures of headache index, state anxiety, or depression. There now were three time periods (pre-, post-, and follow-up), and once again there was significant main effect for Time for headache index (though not for state anxiety). That is, people benefitted over the time of the

treatment and follow-up. Moreover, there was a significant interaction effect between Therapy and Time on the headache index measure. "A posteriori contrasts revealed that the patients from the FI-H condition showed a greater reduction in their headaches between pre-treatment and follow-up than patients from the AT condition" (p. 225).

The authors write in their Discussion, "Our data indicate that at least in tension headache patients, defining a procedure explicitly as hypnotherapy may not lead to greater effects at post-treatment, but does lead to longer lasting effects" (p. 226).

"The paucity of differences between the three conditions may be a consequence of the study design: the small number of patients and the large SD may have prevented the detection of more differences in effect between the three conditions" (p. 226).

"Other critical remarks are related to the difference in headache reduction at follow-up between AT and FI-H. Firstly, the differences at follow-up were found only with respect to the headache index and not with respect to the subjective estimate of the pain. Secondly, in defining future oriented hypnotic imagery explicitly as hypnosis, we hoped to enhance the efficacy via increased credibility. We found increased efficacy, but we did not find enhanced credibility. Therefore, the differences in effect at follow-up must have another cause. The different effects at follow-up could be linked to the fact that the FI-H condition was the only one without drop-outs. This absence of drop-outs was due to a new research assistant who tried extraordinarily hard to make the patients return for follow-up. By doing so, she may have prevented the patients who gained much from the treatment from dropping out as well as those who gained little" (p. 226-227).

"In this study, despite the differences in therapists' preferences, both therapists were equally effective with all three treatments. This is an intriguing finding which goes against the belief commonly held by clinicians that therapists are more effective with the type of therapy they prefer" (p. 227).

"The effects were modest, but it must be kept in mind that most of our patients referred by a neurologist were chronic headache sufferers (76% had been suffering for > 2 yr). In such a group of patients even small effects are important, especially when these effects are long-lasting" (p. 227).

1991

Madrid AD, Barnes SH. (1991, Oct). A hypnotic protocol for eliciting physical changes through suggestions [Abstract]. American Journal of Clinical Hypnosis, 34 (2), 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning and behavior.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

#### NOTES

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.'

'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Van Dyck, Richard; Zitman, Frans G.; Linssen, A. Corry G.; Spinhoven, Philip (1991). Autogenic training and future oriented hypnotic imagery in the treatment of tension headache: Outcome and process. International Journal of Clinical and Experimental Hypnosis, 39, 6-23.

The aim of the present study was (a) to investigate the relative efficacy of autogenic training and future oriented hypnotic imagery in the treatment of tension headache and (b) to explore the extent to which therapy factors such as relaxation, imagery skills, and hypnotizability mediate therapy outcome. Patients were randomly assigned to the 2 therapy conditions and therapists. 55 patients (28 in autogenic therapy and 27 in future oriented hypnotic imagery condition) completed the 4 therapy sessions and 2 assessment sessions. Patients were to practice at home. No significant main effect or interaction effects for treatment condition or therapist was revealed. A significant effect for time in analyzing scores for headache pain, pain medication usage, depression, and state anxiety was found. In the self-hypnosis condition, pain reduction proved to be associated with depth of relaxation during home practice (as assessed with diaries) and capacity to involve in imagery (as assessed with the Dutch version of the Creative Imagination Scale). After statistically controlling for relaxation and imagery, hypnotizability scores (assessed by Stanford Hypnotic Clinical Scale) were significantly correlated with ratings of pain reduction. Results are discussed in the context of the neo- dissociation and

social-cognitive models of hypnoanalgesia. The clinical relevance and the methodological shortcomings of the present study are also critically assessed.  
NOTES 1:

#### NOTES

Unexpectedly, pain reduction occurring in AT [autogenic training] appears to be brought about by different means than in hypnotic treatment. Not only imagery skills and hypnotizability, but also level of relaxation were unrelated to pain reduction achieved during AT. Since the first two therapy sessions of AT and hypnosis were identical and in both treatment conditions patients are explicitly instructed to relax, the absence of a relationship between depth of relaxation and pain reduction in AT cannot be easily explained" (p. 19).

1988

Spinhoven, Philip (1988). Similarities and dissimilarities in hypnotic and nonhypnotic procedures for headache control: A review. American Journal of Clinical Hypnosis, 30 (3), 183-194.

Similarities and differences between hypnosis and similar psychological procedures in the treatment of headache are reviewed. A brief outline of various hypnotic and nonhypnotic interventions for headache reduction shows that none of these procedures has consistently proved to produce superior results. Possible common denominators such as control of physiological processes, placebo factors, and the alteration of cognitive factors are discussed. The positive relationship between hypnotic susceptibility and hypnotic pain reduction indicates that the value of hypnosis seems to be less a matter of therapeutic procedure per se than of which context activates a patient's hypnotic potential for pain reduction. NOTES 1: NOTES: The author summarizes literature on biofeedback and relaxation: "(a) biofeedback with home practice of relaxation is, at least in some cases, effective in reducing migraine and tension headache; (b) relaxation training alone has also produced some success in reducing migraine and tension headaches; and (c) there is not sufficient evidence that biofeedback in the treatment of these pain problems yields results superior to relaxation training" (p. 184). Hypnotherapy for headache is not reviewed in detail, but he provides a table showing various controlled studies and their results. "With the exception of the methodologically problematic study of Anderson, Basker, and Dalton (1975), no differences in effect are found between hypnosis and biofeedback (Andreychuck & Skriver, 1975; Schlutter, Golden, & Blume, 1980; Friedman & Taub, 1984) and hypnosis and relaxation (Friedman & Taub, 1984; Spinhoven, Van Dyck, Zitman, & Linnsen, 1985)" (p. 184). He notes that there are no studies that directly compare hypnosis and nonhypnotic relaxation interventions for headache.

"In all the studies in which hypnotizability was related to outcome, irrespective of patient selection method of measurement, and hypnotic procedure used, a significant positive relationship between hypnotizability and therapy results was found in more than 350 patients (Andreychuck & Skriver, 1975; Cedercreutz, Lahteenmaki, & Tulikoura, 1976; Cedercreutz, 1978; Friedman & Taub, 1984;

Spinhoven et al., 1985). If we consider the level of hypnotizability rather than the details of the hypnotic procedure, it seems that headache patients who are highly hypnotizable benefit more from hypnosis in the reduction of headache.

"However, little reliable information is available concerning the underlying dimensions of hypnotic susceptibility relevant for pain reduction. In the neodissociation theory of Hilgard it is suggested that highly hypnotizable patients register pain covertly outside conscious awareness (Hilgard, 1977, 1979). In the social learning model of Spanos and his coworkers (Spanos, Radtke-Bodorik, Ferguson, & Jones, 1979; Spanos, Kennedy, & Gwynn, 1984), it is assumed that high susceptibles show a relatively greater preference for focusing attention on internal thoughts and images as a way of attenuating pain than low susceptibles.

"A recent experimental study of Miller and Bowers (1986), which directly compared hypnotic analgesia, cognitive-behavior therapy, and cognitive-behavior therapy defined as hypnosis in high and low susceptibles, suggests that pain reduction achieved by highly hypnotizable subjects during hypnosis is not mediated by the deliberate use of cognitive strategies (such as imaginative inattention). Cognitive strategy use resulted in pain reduction only during behavior therapy. Clinical studies about the experiential aspects of high and low susceptible headache patients during hypnosis, biofeedback, relaxation training, and cognitive-behavior therapy are urgently needed. If process research in a clinical setting validates that hypnotic analgesia involves the activation of a subsystem of pain control temporarily dissociated from conscious executive control, a therapy component specific for hypnosis will have been identified" (pp. 189-190).

1987

Olness, Karen N.; Libbey, Patricia (1987). Unrecognized biologic bases of behavioral symptoms in patients referred for hypnotherapy. American Journal of Clinical Hypnosis, 30, 1-8.

Twenty patients referred for hypnotherapy had organic conditions which explained their symptoms. Each had been evaluated previously by physicians. Eleven had also been in psychotherapy; two of these had been hospitalized on child psychiatry inpatient units. Presenting symptoms included five with nocturnal enuresis, four each with headaches and recurrent abdominal pain, three with recurrent headaches, two with anxiety, and one each with sleep problems and tics. Diagnoses included hyperthyroidism, diabetes, diastometamyelia, partial oxalotranscarbamylase deficiency, sinusitis, carbon monoxide poisoning, vitamin overdose, food allergy, amebiasis, constipation, urinary tract infection, paroxysmal atrial tachycardia, and seizures. Each child had complete remission of symptoms with treatment of his/her underlying disease. Morbidity related to delayed diagnoses included parental anxiety and guilt, child anxiety, growth delays, family financial difficulties, loss of parental work time, loss of school days, and loss of confidence in child health professionals by families.

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

1986

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

1984

Fogel, Barry S. (1984). The 'sympathetic ear': Case reports of a self-hypnotic approach to chronic pain. American Journal of Clinical Hypnosis, 27 (2), 103-106.

Secondary gain issues may limit the success of hypnotherapeutic approaches to chronic pain. A self-hypnotic suggestion that promotes patients' awareness of the interpersonal aspects of their pain complaints was used in the treatment of two patients with chronic headache. Hypnotic suggestions that help make secondary gains conscious may be a useful addition to hypnotic techniques of pain management.

1983

Bassman, S. (1983). The effects of indirect hypnosis, relaxation and homework on the primary and secondary psychological symptoms of women with muscle contraction headache (Dissertation). Dissertation Abstracts International, 44, 1950-B.

Compared the effects of indirect hypnosis (e.g., metaphors, stories, vague suggestions, and implied directives) on muscle contraction headaches with a relaxation and a no-treatment control condition. Both hypnosis and relaxation conditions reduced symptoms more than did the no-treatment condition. Unlike relaxation, indirect hypnosis did not reduce the intensity and duration of headaches, although it did reduce the amount of medication and also benefitted sleep.

Classen, Wilhelm; Feingold, Ernest; Netter, Petra (1983). Influence of sensory suggestibility on treatment outcome in headache patients. Neuropsychobiology, 10, 44-47.

In 45 headache patients the relationship between sensory suggestibility and three measures of treatment effect-ratings on (1) intensity of headaches; (2) efficacy of drugs, and (3) physician's competence - was investigated in a double-blind long-term crossover study. Subjects scoring high on sensory suggestibility clearly showed more relief of headaches upon the analgesic as well as upon the placebo. The physician's competence was rated higher by high-suggestible patients, whereas ratings on drug efficacy were low in all patients. The seemingly controversial behavior of high-suggestible patients was interpreted as a call for continuation of the physician's efforts in spite of the relief the patients already achieved.

1982

Howard, L.; Reardon, J. P.; Tosi, D. (1982). Modifying migraine headache through rational stage directed hypnotherapy: A cognitive-experiential perspective. International Journal of Clinical and Experimental Hypnosis, 30 (3), 257-269.

Recent techniques designed to modify migraine headache have emphasized physiological modification via hypnosis only or biofeedback. Psychological factors, however, have been identified as causal in many psychophysiological disorders such as migraine. The present case study describes the results of utilizing Rational Stage Directed Hypnotherapy (RSDH) of Tosi (1974), Tosi and Marzella (1975), and Tosi (1980a) in the treatment of an individual suffering from severe migraine headaches. RSDH, designed to attend to both physiological and psychological factors, is a cognitive-experientially based, stage directed, systematic psychotherapeutic regimen which utilizes hypnosis and hypnotic imagery to enhance the rational restructuring of negative cognitive/emotional/physiological/behavioral states.

In the present case study, RSDH demonstrated superior effects over the hypnosis only treatment and baseline in reducing migraine headaches. The client demonstrated improvement on both self-report measurement (frequency of migraine headaches) and objective test results (MPI, Hathaway & McKinley, 1951; Tennessee Self-Concept Scale, Fitts, 1979). In describing this case, particular

attention was given to analyzing cognitive distortions via hypnotic imagery in a temporal framework. Analysis and restructuring of past traumatic events which were symbolically affecting the client's current behavior were particularly significant aspects of the treatment process.

1981

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. *American Journal of Psychiatry*, **138**, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive <sup>133</sup>Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

Cott, A.; et al. (1981). The long-term therapeutic significance of the addition of electromyographic biofeedback to relaxation training in the treatment of tension headaches. *Behavior Therapy*, **12**, 556-559.

Eight tension headache sufferers seeking traditional medical treatment from a neurologist participated in either a therapist-delivered relaxation training (RT) condition or an RT plus EMG feedback condition. Mean hours of pain/day, headache severity, and medication ingestion were significantly lower in both groups following treatment. Results were maintained at a 1-year follow-up for hours of pain/day and medication ingestion. Findings thus indicate no benefit of adding EMG feedback to relaxation training.

1980

Adams, Henry E.; Feuerstein, Michael; Fowler, Joanne L. (1980). Migraine headache: Review of parameters, etiology, and intervention. *Psychological Bulletin*, **87** (2), 217-237.

The migraine headache is a disorder of much interest to clinicians and researchers in the areas of psychology and medicine. Research that has investigated various characteristics of this disorder and the factors contributing to its etiology and a variety of treatment techniques have appeared in both the medical and the psychological literature. The present article provides a comprehensive critical appraisal of this literature, with particular emphasis on psychological intervention. Theoretical issues involving biological and psychological factors in migraine etiology are discussed, and a psychobiological model for the migraine disorder is proposed. Areas requiring further basic and clinical research are identified. Major conclusions

include (a) that etiological factors of migraine remain unclear; (b) that pharmacological intervention does not constitute an adequate treatment method in terms of headache elimination; (c) that although a number of psychological treatment approaches have been reported in the literature, there are few well-controlled evaluations, and definitive conclusions regarding differential effectiveness of the various techniques are difficult; and (d) that a biofeedback approach directed at modifying the peripheral pain mechanism in migraine appears to be a promising treatment technique for this disorder.

1979

Di Piano, Frank A.; Salzberg, H. C. (1979). Clinical applications of hypnosis to three psychosomatic disorders. Psychological Bulletin, 86, 1223-1235.

Studies of hypnosis in the treatment of skin disorders, headaches, and asthma were reviewed in terms of outcomes and methodological soundness. Some studies focused on changing physiological functions, others on increasing insight in their patients, and still others on altering patients' perceptions of their symptoms. Methodological weaknesses included lack of control groups, nonrandom assignment of patients to treatment conditions, and confounding of treatment effects or lack of control for placebo effects. Additional weaknesses centered around the use of single outcome measures and the failure to assess the specific roles of mediating variables. Most of the studies reviewed showed positive treatment effects. However, there is equivocal evidence that hypnosis can directly influence autonomic functioning. Hypnosis may be valuable in facilitating one's capacity to gain insight into how one's symptoms developed and are maintained. In addition, hypnotic procedures have resulted in some success when used to indirectly alleviate symptoms by altering how individuals perceive their disorders and how these disorders affect their lives.

Turk, Dennis C.; Meichenbaum, Donald H.; Berman, William H. (1979). Application of biofeedback for the regulation of pain: A critical review. Psychological Bulletin, 86 (6), 1322-1338.

The biofeedback literature for the regulation of pain is reviewed and found wanting on both conceptual and methodological grounds. In particular, studies on the use of biofeedback for the treatment of tension and migraine headaches and chronic pain indicate that biofeedback was not found to be superior to less expensive, less instrument-oriented treatments such as relaxation and coping skills training. The relative absence of needed control comparisons was noted, and the need for caution in promoting biofeedback was stressed. Suggestions for future research are offered.

1978

Acosta, Frank X.; Yamamoto, Joe; Wilcox, Stuart A. (1978). Application of electromyographic biofeedback to the relaxation training of schizophrenic, neurotic, and tension headache patients. Journal of Consulting and Clinical Psychology, 46 (2), 383-384.

This study examined the effects of electromyographic (EMG) biofeedback on tension reduction by schizophrenic, neurotic, and tension headache patients. Fourteen patients participated voluntarily in at least 10 weekly EMG biofeedback sessions at a public outpatient clinic. All had complained of chronic tension. Patients showed significant decreases in their muscle tension levels with successive biofeedback training sessions. No significant differences were found between the schizophrenic, neurotic, and tension headache groups. A further contribution was the finding that patients with diverse socioeconomic and educational levels benefitted similarly from EMG biofeedback training.

1977

Ansel, Edward Leslie (1977). A simple exercise to enhance response to hypnotherapy for migraine headache. International Journal of Clinical and Experimental Hypnosis, 25 (2), 68-71.

A common method of hypnotherapy for migraine headache utilizes suggestions of warmth for the hands and coldness for the head. This procedure reverses the abnormal pattern of vasodilation and excess supply of blood in the head and decreased supply in the extremities associated with this type of headache, thereby relieving the pain. A simple exercise, utilizing centrifugal force to dramatically increase blood flow to the hands, is described. It promotes relief in itself and provides a vivid background experience to enhance productivity of this effect in hypnosis. It appears to be especially useful in patients exhibiting lesser degrees of trance capacity.

Wickramasekera, Ian (1977). The placebo effect and biofeedback for headache pain. [Paper]

NOTES

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"The strength of the placebo response is hypothesized to be primarily a function of the following variables:

1. Credibility of the therapist.
2. The credibility of the placebo per se.
3. The credibility of the setting in which the placebo is administered.
4. The credibility of the administration ritual.
5. The level of emotional arousal of the patient.
6. The patient's level of attention to the placebo elements.
7. The baseline suggestibility of the patient" (P. 197).

"I suggest that more careful attention to the placebo and hypnosis literatures and to the isolation of the conditions which potentiate the context of treatment, the rituals of treatment, the instructions that accompany treatment, and the relationship within the therapeutic unit, will significantly increase the reliability and the power of biofeedback effects. It will do this by a more systematic arrangement of conditions for motivated patient behavior" (p. 198).

1976

Cedercrentz, C.; Lahteenmaki, R.; Tulikoura, J. (1976). Hypnotic treatment of headache and vertigo in skull injured patients. International Journal of Clinical and Experimental Hypnosis, 24, 195-201.

Symptoms of headache and vertigo were treated using direct hypnotic suggestions of symptom relief in 155 consecutive skull injured patients. Posttraumatic headache and vertigo were completely relieved after an average observation period of 1 year 10 months in 50% and 58% of the patients, and partially relieved in 20% and 16% respectively. Most of the relief was achieved after about 4 weekly sessions and, particularly with the headaches, only if treatment began within a few weeks of the injury. Therapeutic outcome was correlated with depth of hypnosis achieved for both headache ( $r = .44$ ,  $p < .0001$ ) and vertigo ( $r = .47$ ,  $p < .0001$ ) symptoms. Patients who could not even achieve light hypnosis obtained no therapeutic improvement, but patients who experienced only light hypnosis were as clinically responsive as those achieving deep hypnosis.

NOTES

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Outcome of hypnosis treatment was studied in relationship to hypnotizability

1975

Anderson, J. A. D.; Basker, M. A.; Dalton, R. (1975). Migraine and hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 23 (1), 48-58.

Therapeutic measures for migraine are largely ineffective. Prophylaxis by hypnosis (including autohypnosis) and prochlorperazine is difficult to assess because of the intermittency of the disease and the subjective nature of the disabling symptoms. A method of studying this problem is described in this article. Random allocation of 47 patients was made to one or other prophylactic measure. This was followed by monthly assessments and independent evaluation of 1 year of continuous care. Criteria of improvement were the number of attacks per month, number who had Grade 4 attacks, and complete remission. Results showed that the number of attacks and the number who suffered blinding attacks were significantly lower for the group receiving hypnotherapy than for the group receiving prochlorperazine. For the group on hypnotherapy, these 2 measures were significantly lower when on hypnotherapy than when on previous treatment. Prochlorperazine seemed about as effective as previous treatment. 10 out of 23 patients on hypnotherapy achieved "complete remission" during the last 3 months of the trial as opposed to only 3 out of 24 on prochlorperazine. It is concluded that further trials of hypnotherapy are justified against some other treatment not solely associated with the ingestion of tablets.

Andreychuk, Theodore; Skriver, Christian (1975). Hypnosis and biofeedback in the treatment of migraine headache. International Journal of Clinical and Experimental Hypnosis, 23 (3), 172-183.

A study was made to explore the effects of subject hypnotizability in response to 3 treatment procedures applied to 33 migraine headache sufferers. These treatment procedures included biofeedback training for hand-warming, biofeedback training for alpha enhancement and training for self-hypnosis. The Hypnotic Induction Profile (HIP) of Spiegel & Bridger (1970) was given to each S to determine degree of hypnotizability and the MMPI was administered to all Ss. All 3 treatment groups showed significant reductions in headache rates and there were no significant differences between groups. Cutting across treatment groups, high hypnotizable Ss (N - 15) showed significant reductions in headache rates when compared with low hypnotizable Ss (N - 13). There was no correlation between HIP scores and the hysteria scale of the MMPI. NOTES 1:

#### NOTES

This research investigated the relationship between hypnotizability and treatment outcome.

**Graham, George W. (1975). Hypnotic treatment for migraine headaches. International Journal of Clinical and Experimental Hypnosis, 23, 165-171.**

2 patients with a long clinical history of migraine headaches were treated with hypnosis coupled with the hand-warming technique of Sargent, Green, and Walters (1973). Both patients were followed up (1 for 12 months and 1 for 9), and the treatment was extremely effective in reducing the intensity, frequency, and duration of their migraine headaches.

1972

**Cedercrentz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.**

In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne] NOTES 1:

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

Meares, Ainslie (1972). Group relaxing hypnosis. Journal of the American Society of Psychosomatic Dentistry and Medicine, 19, 137-141.

#### NOTES

1:

The paper is reprinted from *Med. J. Aust.*, 1971, 2, 675-676 with permission of Editor. The author discusses theoretical concepts, techniques and patient selection for this method. "I avoid all logical communication, as this would only keep the patient alert, and so prevent the atavistic regression which is the essential factor in hypnosis" (p. 139). He moves from patient to patient, saying little except "Good--easy--natural" etc. and he uses touch to reinforce their development of hypnotic state. To ratify the trance and make sure they are hypnotized, not just relaxed, he places a clip on forearm skin for a few moments. "This potentially painful stimulus has the effect of further deepening hypnosis" (p. 139). After about 35-40 minutes he alerts the group. Patients are taught self hypnosis to extend the results into daily life.

1967

Elkind, Arthur H.; Friedman, Arnold P. (1967). Recent advances in medicine and surgery: Review of headache, Part III. New York Journal of Medicine, 552-559.

#### NOTES

1:

This article mentions only three papers dealing with hypnotherapy used with migraine headache and none used with tension headache or headaches of other etiologies. The papers are:

Hanley, F. W. (1964). Hypnotherapy of migraine, *Canad. Psychiat. Ass. J.*, 9, 254 (June).

Krogen, W. S. [Kroger?] (1963). Hypnotherapeutic management of headache, *Headache*, 3, 50.

Blumenthal, L. S. (1963). Hypnotherapy of headache, *Headache*, 2, 197.

1953

Erickson, Milton H. (1953). The therapy of a psychosomatic headache. Journal of Clinical and Experimental Hypnosis, 1 (4), 2-6.

The author presents a case in which the patient complained of headaches to illustrate a theoretical position, described as follows in the Introduction: "For example, many psychotherapists regard as almost axiomatic that therapy is contingent upon making the unconscious conscious. When thought is given to the unmeasurable role that the unconscious plays in the total experiential life of a

person from infancy on, whether awake or asleep, there can be little expectation of doing more than making some small parts of it conscious. Furthermore, the unconscious as such, not as transformed into the conscious, constitutes an essential part of psychological functioning. Hence, it seems more reasonable to assume that a legitimate goal in therapy lies in promoting an integrated functioning, both singly and together, and in complementary and supplementary relationships, as occurs daily in well-adjusted living in contrast to the inadequate, disordered and contradictory manifestations in neurotic behavior" (p. 2).

Horan, John S. (1953). Hypnosis and recorded suggestions in the treatment of migraine: Case report. Journal of Clinical and Experimental Hypnosis, 1 (4), 7-10. (Abstracted in Psychological Abstracts 54: 6399)

## NOTES

1:

Author's Discussion: "The case above is presented because of its rather bizarre features. It is notable in that in the hypnotic sessions no attempt was made to explore the dynamics of the patient's resentment or her illness, no insight was given into psychic mechanisms connected with the migraine. This had been done before, in conventional psychiatric interviewing, without much result. Under hypnosis, the only suggestions given were concerned with direct symptomatic relief of headache, insomnia and anorexia. For the patient's purposes, these were sufficient. Just how the pathological physiological state causing the migraine attacks was altered by direct and recorded suggestion is a mystery to this writer. It may be that hypnotic states can cause a dissociation of the subject from the emotional stress related to the attacks. Or perhaps the strangeness and the mystery of hypnosis was sufficient. It would be absurd to make any claims about the efficacy of hypnosis in migraine patients in general on the basis of this one case. In a disease which causes as much disability and suffering as migraine, however, it is profitable to report any safe means that gives a satisfactory result" (pp. 9-10).

## HEADACHE

Haddock CK. Rowan AB. Andrasik F. Wilson PG. Talcott GW. Stein RJ. Home-based behavioral treatments for chronic benign headache: a meta-analysis of controlled trials. *Cephalalgia* 1997;17(2):113-8 Controlled clinical trials have consistently demonstrated that behavioral treatments for chronic benign headache produce clinically beneficial outcomes both post-treatment and at follow-up. Given these results there is interest in cost-reduction and redesign of these treatments to improve their accessibility. One promising approach in this regard is home-based headache treatment. These treatments seek to provide the same amount of treatment as clinic-based treatments; however, some of the material typically presented to the patient by a clinician is presented through home-study materials (e.g., manuals, audiotapes). To date, the published literature contains 20 controlled clinical trials which have examined the outcomes produced by home-based treatments. This article presents the first comprehensive meta-analysis of these clinical outcome studies. Results of the quantitative analyses suggest that home-based treatments produce comparable, or with certain outcome measures, superior results to clinic-based treatments. Moreover, costeffectiveness scores of home-based

treatments were found to be more than five times larger than those of clinic-based therapies. Methodological analyses are also presented along with suggestions for future research.

Johnson PR. Thorn BE. Cognitive behavioral treatment of chronic headache: group versus individual treatment format. *Headache* 1989;29(6):358-65 Two hypotheses were tested in this study: (1) that a short course of cognitive behavioral therapy (CBT) is effective in the treatment of chronic headache; and (2) that group CT is as effective as individually administered CBT. Twenty-two chronic headache sufferers were randomly assigned to one of three treatment conditions: group administered CBT, individually administered CBT, or no treatment (wait list) control. Wait list subjects ultimately received treatment identical to that offered to subjects in the group treatment condition. Treatment outcome measures included the Brief Symptom Inventory, the McGill Pain Questionnaire, and several measures calculated from self-monitoring data. Tentative support was found for the hypothesis that CBT as provided in this study is effective in the treatment of chronic headache. There was no evidence that group versus individually treated subjects differed significantly on any of the measures used, although the small N and large variance among subjects limit us to preliminary conclusions for our findings. Clinical implications and suggestions for future research are discussed.

Llaneza-Ramos ML. Hypnotherapy in the treatment of chronic headaches. *Philippine Journal of Psychology* 1989;22:17-25. 35 chronic headache patients were assessed on frequency, duration, intensity, amount of medication, and number of difficulties associated with headaches. 25 Subjects were randomly assigned to 2 psychotherapists who administered Ericksonian hypnotherapy; 10 Subjects became the comparison group. Prior to treatment, all 25 Subjects were nonsignificantly different on their baseline measures. Posttreatment measures showed all Subjects with complete relief from headaches. Two months later, 20 Subjects experienced complete recovery while 5 had a single attack of headache. For the 2 experimental groups, there were no significant differences in symptomatic manifestations before and after treatment. At the delayed posttreatment period, post hoc test analysis evidenced a shared pattern of significant differences between each of the 2 treatment groups and the comparison group.

Melis PM. Roomans W. Spierings EL. Hoogduin CA. Treatment of chronic tension-type headache with hypnotherapy: a single-blind time controlled study. *Headache* 1991;31(10):686-9 We investigated the effectiveness of a special hypnotherapy technique in the treatment of chronic tension-type headache. A waitinglist control group was used to control for the changes in headache activity due to the passage of time. The results showed significant reductions in the number of headache days (p less than 0.05), the number of headache hours (p less than 0.05) and headache intensity (p less than 0.05). The improvement was confirmed by the subjective evaluation data gathered with the use of a questionnaire and by a significant reduction in anxiety scores (p less than 0.01).

Passchier J. Hunfeld JA. Jelacic M. Verhage F. Suggestibility and headache reports in schoolchildren: a problem in epidemiology. *Headache* 1993;33(2):73-5 In a sample from the general population of school children of 15 years of age, we studied whether receiving information about the prevalence of headaches had any effect on

their subsequent headache report. Sixty children in the fourth year at four secondary schools were allocated at random to two conditions: a biased condition emphasizing the high prevalence of headaches and a neutral condition. Subjects in the biased condition reported more headaches but they did not report more other physical symptoms than the subjects in the neutral condition. The results are discussed.

Reich BA. Non-invasive treatment of vascular and muscle contraction headache: a comparative longitudinal clinical study. *Headache* 1989;29(1):34-41 The purpose of this investigation was to evaluate the long-term course of non-invasively treated chronic headache. A total of 1015 adult patients with primary diagnosis of vascular/migraine or muscle contraction headache participated in the study investigating symptom frequency and severity over a 36 month period after receiving treatment. Treatment consisted of either: relaxation training (stepwise relaxation/hypnosis/autogenic training/cognitive behavior therapy); biofeedback (thermal/photoplethysmograph/EMG); micro-electrical therapy (TENS/Neurotransmitter Modulation) or multimodal treatment (combination of any of the above two treatments). Seven hundred and ninety-three patients returned sufficient data to be included in the analysis. Patients were randomly assigned to treatment groups and received either short term intervention (15 or less treatments) or long term intervention (greater than 15 treatments). Results indicate that all treatment conditions significantly reduced frequency and intensity of cephalalgia. Repeated measure analysis of variance indicated that grouping variables of Biofeedback treatment, symptoms being evidenced less than 2 years and receiving over 15 treatment sessions best predicted successful intervention.

## I RESEARCH

### IDEPMOTOR

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

NOTES

1:

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

Theories of Hypnosis

Chapter:

1. An Introduction to Hypnosis
2. Hypnosis in the Management of Chronic Pain
3. Hypnosis in Conjunction with Chemical Anesthesia
4. Hypnosis in Conjunction with Regional Anesthesia
5. Hypnosis as the Sole Anesthetic
6. Hypnosis in the Intensive Care Unit
7. Hypnosis in the Emergency Unit
8. Hypnosis in Pediatric Surgery
9. Hypnosis in Obstetrics and Gynecology

## 10. Perspectives from Physician-Patients

2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40.

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

1999

McConkey, Kevin M.; Wende, Vanessa; Barnier, Amanda J. (1999). Measuring change in the subjective experience of hypnosis. International Journal of Clinical and Experimental Hypnosis, 47 (1), 23-39.

The authors indexed the subjective experience of hypnosis through the use of a continuous behavioral measure of the strength of the participant's experience at the time of the suggestion. Specifically, subjects turned a dial to indicate changes in their experience of the suggested effect during that experience. Thirty-three high, 47 medium, and 28 low hypnotizable subjects were asked to use the dial during the suggestion, test, and cancellation phases of three hypnotic items: arm levitation, arm rigidity, and anosmia. The pattern of ratings differed according to the nature of the suggestion. Also, across the items, subjects who passed according to behavioral criteria experienced the suggested effect to a greater degree than those who failed. Notably, whereas the ratings of highs and mediums did not differ for any item, they differed from lows on all three items. The authors discuss the implications of these findings in terms of the potential for this method to provide insight into the experience of hypnosis.

Temes, Roberta (Ed.) (1999). Medical hypnosis: An introduction and clinical guide. New York, NY: Harcourt Brace, W. B. Saunders.

## NOTES

1:

Contributors to text include Dabney Ewin, Melvin Gravit, Elvira Lang, Dorothy Larkin, Al Levitan, Karen Olness.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

## NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-be patient/client that he or she has something to offer that can help take away pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1995

Green, J. P.; Lynn, Steven J. (1995, August). Dissociation, hypnotic amnesia and automatic writing: Is there an association?. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

This study examined whether differences in self-reported dissociative experiences (DES, Bernstein & Putnam, 1986) and past performance on hypnotic amnesia (HGSHS: A, Shor & Orne, 1962) influence the frequency of passing an automatic

writing suggestion. Participants (N = 112) were divided into high hypnotizable ('real') and simulating groups. Results from a log linear analysis indicated that automatic writing was independent of both dissociation status and past performance on an ostensibly dissociative hypnotic suggestion (i.e., amnesia). Simulators were more than six times as likely to pass the automatic writing suggestion than reals. Findings were discussed in light of other research regarding the relation between the DES and hypnotizability. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

1994

Lynn, Steven Jay (1994, October). Toward an integrative theory of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

This is a re-evaluation of neodissociation and cognitive models of hypnosis, and an attempt to be integrative. This paper focuses more on ideomotor behaviors but we will extend the model to other hypnotic behaviors in the future.

Automaticity of behavior in hypnosis can be accounted for without using a concept of divided consciousness or weakened consciousness. Parapraxes (doing one behavior while intending another) are not instances of decreased control of behavior, but relate to where attention is drawn. This requires a different use of the hierarchy concept from Hilgard's model (which in turn comes from Hull's concept of habit hierarchy).

Here hierarchy is a concept drawn from Miller, Galanter, & Pribram: acts are comprised of molecular units, that are comprised of even more molecular units. Behavior only needs to be processed at an executive level when unusual events occur. But one or more hierarchies may be set into motion at the same time. Dissociation is not an infrequent event. Behavior is controlled by subroutines rather than by an executive control structure; subroutines operate in parallel rather than in a hierarchy. Parapraxes are due to an overlap between two subfunctions.

Parapraxes are different from ideomotor responses, where we pay close attention and involuntariness is reported not just post facto but as part of the experience.

1992

Somerville, Wayne R.; Jupp, James J. (1992). Experimental evaluation of a brief 'ideodynamic' hypnotherapy applied to phobias. Contemporary Hypnosis, 9, 85-96.

This study used a test-retest design to investigate the effectiveness of a brief 'ideodynamic' hypnotherapy which notionally located and reformulated memories in the treatment of simple phobia disorder. Subjects were 19 phobics randomly assigned to treatment (n = 10) and waiting control groups (n = 9). Rapid, significant, and sustained relief from phobic fear and avoidance was reported by 50% of treatment subjects. A number of symptoms and therapy process variables were correlated with treatment outcome. These included a negative association with hypnotizability and a positive association with hypnotic depth estimates. The

ramifications of these and other associations are discussed and it is concluded that the 'ideodynamic approach' investigated may have contributed a therapeutic effect beyond the operation of treatment non-specific factors. NOTES 1:

## NOTES

Treatment consisted of: 1. Hypnotic induction. 2. Establishment of ideomotor signals described to clients as a means of communicating with the 'inner unconscious mind'. 3. Beyond the first therapy session, a review of work done in previous sessions. 4. Gaining signaled permission from clients to work on their problem and for the 'inner mind' to review relevant memories. 5. Location of the 'earliest critical event' by the 'inner mind'. 6. Review of the located memory by the 'inner mind'. 7. Establishing age at the occurrence of the 'critical' event. 8. Ideomotor signaling indicating suitability of a visual imagoic processing of the event.

If visual processing was chosen, the dissociated viewing procedure (step 9A) was used next, otherwise the ego-state procedure (step 9B) was employed.

The authors describe each treatment step in detail. Each subject received at least two sessions of therapy, or a maximum of three sessions if signaling indicated the presence of further unresolved memories after two sessions.

They present a case illustrating that the approach is possible with minimally hypnotizable subjects, in the apparent absence of imagoic experience, 'desensitization', catharsis, unpleasant affect, talking through or 'insight'.

"There was a positive correlation between changes in phobic fear and capacity for mental imagery which suggests that this may be one relevant variable in predicting response to memory reformulating therapy.

"There was a negative correlation between changes in fear and hypnotic responsiveness. So, successful therapeutic outcome was obviously not limited to highly hypnotizable subjects. Hypnotizability was assessed in a careful and standardized manner but testing was conducted 10 weeks following therapy. This meant that subjects had a substantial experience in hypnotherapy at assessment. Furthermore, at the time of assessment subjects were aware of the outcome of therapy and of the kinds of memories located during therapy. It has been suggested that an association between level of hypnotizedness achieved during treatment and outcome rather than an association between degree of hypnotizability possible during therapy and outcome, taps an hypnotic effect (Spiegel & Spiegel, 1978).

"All therapy sessions were of equal duration and, as the inductions were standardized, all subjects had an approximately equal opportunity to engage in memory reformulation. However, there were individual differences in the number of memories located and a strong significant association was found between reduced fear and the number of these critical memories that were dealt with. This result suggests that the therapeutic effect may have derived either from factors specific to the therapy cycle or from differing levels of motivation among subjects to undertake the necessary 'work'.

"Maximum discomfort experienced during session two of treatment was negatively correlated with relief from phobic fears. This relationship may again reflect the influence of unresolved problematic memories on subjects who had not achieved

relief by that time. It is clearly consistent with relief not being associated with painful abreaction.

"The therapy permitted a pervading privacy through the options of non-imaginative processing of recalled material (which was used by a substantial minority of subjects) and conscious withholding of the content of memories from the therapist (which was employed to a large extent by all subjects). Their reports indicated that this 'privacy' was seen as attractive by both successfully and unsuccessfully treated subjects. Taken with other results mentioned above these process findings suggest that the treatment studied stood up quite well against other brief but highly stressful exposure treatments for phobia currently in use (e.g. Ost, 1989).

"Further research needs to address the complex question as to what are the necessary and sufficient features of this procedure in producing therapeutic change. Unsolicited comments by subjects about their experience during treatment suggested that some of them were surprised by the 'involuntary' nature of their ideomotor signaling while others said that signaling was under their voluntary control. Some expressed surprise at the nature of the memories that came to them 'suddenly' during therapy. Some memories were of traumatic childhood experiences that were unexpected and considered to have 'nothing to do with my phobia'" (pp 93-94).

**1991**

**Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.**

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior. NOTES 1: NOTES: They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates

with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 35, 48-58.

#### NOTES

Regional cerebral blood flow (rCBF) was measured by means of the 133-Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

Jupp, James J.; Collins, John K. (1985). Hypnotic responsiveness and depth in a clinical population. Australian Journal of Clinical and Experimental Hypnosis, 13 (1), 37-47.

Two samples of clinical subjects estimated depth during procedures which allowed their estimates to be related to aspects of responsivity. In Sample 1, subjects estimated depth after they scored their responsivities and tested their post-hypnotic recall. In Sample 2 subjects estimated depth before they had completed these tasks. Results suggested that subjects use the range of available information in making depth estimates and that they may be more influenced by the more obvious ideomotor challenge performances than by the cognitive distortion responses, aspects of amnesia, or impressions of involuntariness.

1986

Crabtree, Adam (1984, October/1986). Explanations of dissociation in the first half of the twentieth century. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 85-108). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

#### NOTES

In 1907 Morton Prince, Editor of Journal of Abnormal Psychology, introduced a symposium by listing 6 meanings of subconscious: 1. that portion of our field of consciousness which is outside the focus of attention 2. (Janet's idea) - split off ideas which may be isolated sensations like the lost tactile sensation of anesthesia, or maybe aggregated into groups or systems. The author quotes Janet as stating that "they form a consciousness coexisting with the primary consciousness and thereby a doubling of consciousness results" (p. 87). The primary consciousness is usually dominant, but sometimes is reduced under exceptional conditions (e.g. automatic writing). 3. the subconscious \_self\_ or hidden self -- a part of every human, not just

seen in psychopathology; this is a personalized entity; every mind has a double, with the unconscious self having powerful effects on feelings, thoughts, and reactions of the conscious self 4. extends #3 to include not only ideas that remain active below surface but also those which are inactive -- forgotten or out of mind 5. Frederic Myers' concept of the 'subliminal self' which had 3 functions:

a) inferior - seen in processes of dissociation

b) superior - seen in works of genius, arising from 'subliminal rush' of information, feelings, and thoughts which lie below consciousness

c) mythopoeic - the unconscious tendency to create fantasies 6. physiological meaning, e.g. William Carpenter's 'unconscious cerebration' in which unconscious phenomena are interpreted in terms of pure neural processes unaccompanied by mental activity.

Prince suggested some redefinitions to clarify unconscious and subconscious. He would replace Janet's subconscious with co-conscious and reserve unconscious for physiological processes that lack the attributes of consciousness. Prince noted that co-conscious ideas have been called unconscious (e.g. by Freud) but said that is confusing and to be avoided.

"Coconscious ideas include states we are not aware of because they are not the focus of our attention, and also pathologically split-off and independently active ideas or systems of ideas, such as occur in hysteria and reach their most striking form in co-conscious personalities and automatic writing.

"Prince prefers the term coconscious to Janet's subconscious for two reasons. First, because it expresses the simultaneous coactivity of a second consciousness. And second, because the coactive ideas or idea systems may not be outside the awareness of the personal consciousness at all. They may be recognized by the personal consciousness as a distinct consciousness existing alongside it.

"Thus, through his redefinition of terms, Prince makes simultaneous activity of two or more systems of consciousness in one individual the key element in dissociation. He thereby moves the issue of amnesia or lack of awareness by one system of another into the background, making it a secondary, nonessential element. Prince was one of the few to provide a theoretical framework for dissociation in which any combination of interawareness among the coconscious systems was possible" (p. 91). Two researchers at the turn of the century came to opposite conclusions about the nature of the Subconscious Self that every human has. Morris Sidis saw it as "a brutelike consciousness with a tendency toward personalization. Frederic Myers held that it included those functions and much more, being the source of all that is human, including the highest intuitive powers" p. 96.

Bernard Hart, in 1910, did an analysis of Janet and Freud. Janet's work is essentially descriptive: "he is always talking about a consciousness which manifests itself in a way we can \_perceive\_, whether by listening to it talk, reading its written communications, or watching its movements" (p. 97). However Janet's spatial model of dissociation cannot explain the presence of the same material (e.g. memories) in two or more dissociated systems. According to Hart, Freud offered the conceptualization that Janet lacked, in his idea of the Unconscious .

Freud's Unconscious is not in competition with Janet's subconscious. "Janet's subconscious is the arena of dissociated phenomena which manifest in observable

form as elements coactive with the personal self. Freud's unconscious is a conceptual, nonobservable construction put forward to explain certain facts of human experience. In this way Hart equates the unconscious with the atomic theory in physics or the theory of heredity in biology" p. 99. But Hart also thought Freud's theory did not do justice to dissociative phenomena. Not only do psychoanalysts show little interest in double personality or multiple personality, they also neglected dissociation on the phenomenal level.

In 1915 Freud denied the existence of a second consciousness and wrote, "there is no choice for us but to assert that mental processes are in themselves unconscious, and to liken the perception of them by means of consciousness to the perception of the external world by means of the sense organs" (p. 101). Janet claimed that Freud had simply taken over his own system and given it a new terminology, and in 1924 Freud wrote an angry rebuttal. For him, "dissociated systems are simply separate groups of mental but unconscious elements. As our consciousness turns now to one group, now to another, as a searchlight shines now on one object and now on another, the dissociated groups manifest in conscious life. ... There exists no doubling of consciousness" p. 102.

Jung's ideas were closer to those of Janet, and like Janet he made dissociation a key concept in his theory. The complex is unconscious, has an archetypal core clothed in personal experience, is like a self-contained psyche within the big psyche, sometimes called a fragmentary personality dwelling inside us. Dissociation for him meant being cut off from the Ego, which is the center of an individual's field of consciousness. "Dissociated or autonomous complexes are those which have no direct association with the ego" (p. 103). If complexes are charged with enough energy they will become manifest--as a neurotic symptom, as projected into idea of a god or demon, or perhaps as an alternate personality. Therefore Jungian treatment aims at assimilating dissociated complexes into the ego.

1981

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

## NOTES

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance

during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

**1977**

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

**1969**

Garmize, L. M.; Marcuse, F. L. (1969). Some parameters of body sway. International Journal of Clinical and Experimental Hypnosis, 17, 189-194.

Investigated the effects of 4 variables on body sway with 160 undergraduates. A 4-dimensional analysis of variance was performed on the body sway scores obtained. None of the main effects were significant. 1 of the interactions was significant, but might have been due to chance. Results are consistent with those of past researchers. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1965**

Das, J. P. (1965). Relationship between body-sway, hand-levitation, and a questionnaire measure of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (1), 26-33.

67 randomly selected college students were administered the body-sway test, a questionnaire measure of tranceability, and an induction procedure utilizing hand-levitation to determine hypnotic susceptibility. The 6 Es varied in age, sex; 5 of them had little experience as hypnotists. All reference to "hypnosis" was omitted from the induction procedure. Significant phi-coefficients between body-sway and levitation (.52), levitation and tranceability frequency (.28) and intensity (.25), and body-sway and tranceability intensity (.33) were obtained. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

**Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, 11, 163-166.**

**The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**LeCron, Leslie M. (1963). Uncovering early memories by ideomotor responses to questioning. International Journal of Clinical and Experimental Hypnosis, 11, 137-142.**

**The author argues for the veridicality of birth and prenatal memories elicited by hypnosis, and in any event states they are therapeutically useful fantasies. He also advocates use of ideomotor signalling as a means of access to unconscious material. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Cheek, David B. (1961). Value of ideomotor sex-determination technique of LeCron for uncovering subconscious fear in obstetric patients. International Journal of Clinical and Experimental Hypnosis, 9, 249-259.**

**(Author's Summary) "Unrecognized subconscious fears can be uncovered while using ideomotor questioning with a Chevreul pendulum or with finger signals. The technique described by LeCron for evaluating knowledge regarding the sex of an unborn child is a most helpful way of approaching subconscious fears. The frightened patient refuses to indicate knowledge of the sex of her unborn child. Uncovered fears can be resolved by appealing to conscious-level understanding with adroit questioning" (p. 258).**

## **ILLUSION**

**1995**

**Dywan, Jane (1995). The illusion of familiarity: An alternative to the report-criterion account of hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 43 (2), 194-211.**

**Hypnosis increases the likelihood that participants will report incorrect material at higher levels of confidence. One interpretation of such data is that hypnosis induces individuals to lower the criterion they use to make memory reports. A lowered report criterion could account for the increase in items that participants are willing to report as memories but not for the increase in confidence that typically**

accompanies hypnotic retrieval. Although some participants may indeed lower their report criterion, this alone should not result in the highly confident confabulation so often observed. An alternative perspective is that for some participants, hypnosis alters the experience of retrieval such that items generated during retrieval attempts are more likely to have the qualities (e.g., perceptual fluency, vividness) usually associated with remembering. This illusion of familiarity would account for the higher levels of confidence that are so frequently observed in hypnotic recall, and adopting this perspective should lead to even greater caution in the use of hypnosis as an aid to retrieval.

1994

Lynn, Steven Jay; Pezzo, Mark (1994, August). Close encounters with aliens? Simulated accounts following a hypnotic interview. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

1:

A survey of 5900 adults regarding unusual experiences concluded that 1 of 50 Americans may have had UFO experiences.

This study resembles that of Lawson (1977), in which Ss were asked to imagine UFO experiences; their descriptions were difficult to distinguish from real reports. One problem with Lawson's research is that he provided the Ss with information (e.g. to imagine they were abducted by aliens).

Our study differs from Lawson's in that we didn't actually hypnotize subjects. Our Ss' task was to 'simulate hypnosis, in recovered memory research.' We manipulated cues provided to the Ss.

Ss were told their purpose was to role play an excellent hypnotic subject. Standard simulation instructions were given. Then they were told that hypnosis frequently is used to recover experiences that the Ss cannot remember.

Ss were given a description of a Scene: driving on a road in the country, no traffic, etc. They were told that they couldn't remember 2 hours of what happened. Then a second Experimenter used a pseudo hypnotic induction, and told them they were going to recall material regarding events that had happened.

Ss completed an Omni Magazine questionnaire developed by Hopkins, who is an advocate of UFO sightings. They received the questionnaire either after the experiment, before the experiment, or with specific cues.

4 of 21 (19%) of the minimal cue condition Ss identified lights in the sky as a UFO; at the end, 52% saw a UFO. Thus, even with minimal information, subjects report interactive behavior. Almost all medium cue Ss reported the UFO. 17% felt a loss of control, being floated or transported to the spaceship. Only one S said the aliens were cruel. Only one of the role players picked up the word "trondant," a word used by Hopkins to pick up simulators who are hypnotized.

Our findings present a conservative picture. When Ss thought they would be thrown out of the experiment if detected as simulators, they avoided talking about bizarre events. 15% who were told to role play a close encounter failed to do so!

Our findings do not imply that persons who report contacts are simulating; but the basis for such reports are widely available to college students.

Newman, Leonard S.; Baumeister, Roy F. (1994, August). Who would wish for the trauma? Explaining UFO abductions. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

1:

UFO abduction reports are more frequent than ever before. 1979 200 1984 500 1988 5000 letters [to a magazine?] 1993 55,000 letters, with 200/wk still being sent Hopkins, Jacobs, & Westrum (1992) took a poll: 3.7 million abductees in U.S. were estimated.

These, I maintain, are motivated in attempt to accept the self; the phenomenon relates to masochism on a psychological level. I think we need a more psychological explanation than other arguments being presented. The other arguments being made are: 1. People are actually being abducted. 2. Abductees are publicity seeking liars. 3. These people cannot distinguish between fantasy and reality (but there is no evidence for that).

The two key questions we should attempt to answer are: 1. Why would people claim to remember things that did not actually happen to them? Most of these reports emerge under hypnosis. They may be creating memories rather than retrieving memories. 2. Why would people claim to remember this in particular?

Maybe abductees are people with knowledge about reports of UFO experiences, with therapists who believe in paranormal experiences? Probably this is not the explanation.

In the '50's there were reports of space aliens who abducted people, taught them about peace, love, etc. and the need for intergalactic harmony. But stories today are very different.

They want to escape the self because the self is "me." They may have done something that makes them feel stupid, unlovable; or it is just because of constantly having to maintain a positive self image. This kind of anxiety pertains to people who have an over-inflated presentation of the self. If you can avoid thinking about the implications of your behavior (e.g. through drinking, vigorous exercise, or masochism) you don't have the anxiety.

Masochism is a bizarre way to obtain pleasure, but it underlines both of these things. It cancels out meaningful aspects of the self (thought, self reflection); and needs of control are denied (bondage); it negates esteem and dignity. People higher paid, in more responsible jobs, are more likely to engage in masochistic activity.

The main features of masochism also apply to abduction stories: 1. Pain 2. Loss of control 3. Humiliation 4. Demographics (abductees seem to come from higher socio-economic classes) 5. International pattern - mostly an American & British phenomenon 6. Concern with "selfhood" 7. Sexual differences. (There are male and female masochists, but the contents are different: females more often talked about humiliation involving display than men did. Abduction cases are the same: alien examination episode (display) are in 50% of male stories but 80% of female stories.)

1993

Atkinson, Richard P. (1993, October). Shifts in Muller-Lyer Illusion difference thresholds: Are high hypnotizables more sensitive than lows in hypnosis?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

1:

Refers to Wallace (1979) finding that hypnotizability correlates with afterimage persistence. Atkinson showed highs perform better than lows in perceptual tasks in hypnosis only. Also studies indicate highs are more susceptible to illusions. Our study showed difference in threshold and point of subjective equality for highs and lows.

32 undergraduates had Harvard and Group Stanford Form C, were 9-12 or 0-3 on both scales. Counterbalanced conditions of waking and hypnosis. Used computer monitor to compare length of lines. Waking condition Ss had to close eyes for 15 minutes before the trials, same length of time as for hypnosis condition.

Significant interaction between hypnotizability and sessions was observed: highs had significantly decreased difference thresholds in hypnosis compared to waking, and significantly decreased difference thresholds compared to lows in hypnosis. Thus they had greater sensitivity than lows.

The point of subjective equality ANOVA did not yield significant effects.

Highs show higher sensitivity to illusion in hypnosis than in waking, and more than the lows.

1992

Atkinson, Richard P.; Crawford, Helen J. (1992). Individual differences in afterimage persistence: Relationships to hypnotic susceptibility and visuospatial skills. American Journal of Psychology, 105 (4), 527-539.

To investigate the moderating role of individual differences in hypnotic susceptibility and visuospatial skills on afterimage persistence, we presented a codable (cross) flash of light to 40 men and 46 women who had been dark adapted for 20 minutes. In an unrelated classroom setting, subjects had previously been given two standardized scales of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Shor & Orne, 1962; Group Stanford Hypnotic Susceptibility Scale, Form C, Crawford & Allen, 1982) and the Mental Rotations Test (Vandenberg & Kuse, 1978). The first afterimage interval and the afterimage duration correlated significantly with hypnotic responsiveness, supporting Wallace (1979), but did not show the anticipated relationships with mental rotation visuospatial skills. Individuals in the high hypnotizable group had (a) significantly longer afterimage intervals between its first appearance and first disappearance than did those in low groups, but those in medium groups did not differ significantly from the other groups. Discriminant analysis using the afterimage persistence measures classified correctly 65.2% of high hypnotizables, 37.5% of medium hypnotizables, and 54.8% of low hypnotizables. Hypothesized cognitive skills that assist in the maintenance of afterimages and underlie hypnotic susceptibility include abilities to maintain focused attention and resist distractions over time and to

maintain vivid visual images.

#### NOTES: DISCUSSION

"Because there is no apparent evidence for physiological differences of the visual system between low and high hypnotizables (e.g., Wallace, 1979), cognitive factors are suggested as possible moderators of afterimage persistence.

"Hypnotic susceptibility per se is not the moderator of afterimage duration. Rather, we argue that hypnotic susceptibility represents a constellation of underlying cognitive skills (e.g., for reviews, see Crawford, 1989; Kihlstrom, 1985) that assist an individual to respond to hypnotic suggestions as well as assist in the persistence of afterimages by interacting with more primary causal mechanisms that are physiological in origin. These cognitive skills are thought to include the abilities to focus attention selectively upon both external stimuli and internally generated images, to maintain vivid visual images, to sustain attention over time and remain absorbed in the experience at hand, and to resist distractions. The relationships between these cognitive skills and hypnotic susceptibility are reported in a large body of literature (e.g., Crawford, 1982, 1989; Crawford et al., 1991; Crawford & Grumbles, 1988; Finke & Macdonald, 1978; Grumbles & Crawford, 1981; Mitchell, 1970; Tellegen & Atkinson, 1974)....

"Sustained and selective attention without interference from extraneous stimuli plays an important role in hypnosis. Individuals who are responsive to hypnosis demonstrate greater skills in extremely focused and sustained attention (e.g., Crawford et al., 1991; Tellegen & Atkinson, 1974). Electrophysiological research had found that high hypnotizables often generate substantially more theta electroencephalogram (EEG) power than do low hypnotizables (e.g., Crawford 1990, 1991; Crawford & Gruzelier, 1992; Sabourin, Cutcomb, Crawford, & Pribam, 1990). Such a relationship may be interpreted as further evidence of greater attentional skills in highs, because certain theta waves have been correlated with enhanced problem solving and attentional task performance (e.g., Crawford & Gruzelier, 1992; Schacter, 1977)....

"Hypnosis is seen often as a condition of amplified attention, where attention can be either more focused or diffuse dependent upon set (e.g., Krippner & Binder, 1974). Increases in vigilant performance during hypnosis have been reported, albeit inconsistently (e.g., Barabasz, 1980; Fehr & Stern, 1967; Kissen, Reifler, & Thaler, 1964; Smyth & Lowy, 1983). Fehr and Stern's results suggest that hypnotized subjects devote more attention to a primary task with less available attentional resources for a secondary task. Hypnosis has been found to have an enhancing effect on the imaginal processing of information-to-be-remembered that consists of literal or untransformed representations of pictorial or nonverbal information for high but not low hypnotizables (Crawford & Allen, 1983; Crawford, Nomura, & Slater, 1983; Crawford, Wallace, Nomura, & Slater, 1986). This may possibly be the result of increased attention and/or shifts in cognitive strategies. Supportive of the hypothesis that sustained attention can be enhanced during hypnosis, Atkinson (1991) recently found that high but not low hypnotizables report significantly more persistent afterimages in hypnosis than in waking.

"Although we have argued for a cognitive explanation for individual differences in afterimage persistence and their possible relationship to hypnotic susceptibility and sustained attentional abilities, as has Wallace (1979, 1990), we must point out the possibility that high hypnotizables may be more suggestible to imagery instructions or more willing to discuss or experience imagery than low hypnotizables, particularly in the context of hypnosis and hypnotic susceptibility testing (e.g., Zamansky, Scharf, & Brightbill, 1964). A contextual account of the longstanding relationship between hypnotic susceptibility and absorption was raised by Council, Kirsch, and Hafner (1986), but was not supported by two independent, and more methodologically sound, studies reported by Nadon, Hoyt, Register, and Kihlstrom (1991). The context of hypnosis was not an issue in the present study, because none of the subjects was aware of the investigated relationship between afterimage persistence and hypnotic susceptibility at the time of recruitment or participation" (pp. 533-535).

Perry, Campbell (1992, October). J. Phillip Sutcliff's contributions to the field of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

Sutcliff did research that led him to conclude that the high hypnotizable was deluded rather than truly perceiving things, and he said the high is simply strongly emotionally invested in the suggested belief.

Wallace, Benjamin; Kokoszka, Andrzej (1992). Experience of peripheral temperature change during hypnotic analgesia. International Journal of Clinical and Experimental Hypnosis, 40, 180-193.

Many Subjects who experience hypnotic analgesia in a portion of their body often report that it is accompanied by sensations of coldness in the affected area. Experiments were conducted to determine if such reports are the result of a physical change in peripheral temperature or are due to psychological factors. When analgesia was induced in a limb or in the back of the neck, a concomitant physical change in temperature was not observed. Subjects did report experiencing coldness, however, in the affected body part. Such experiences were attributed to associations that Subjects developed between numbness or analgesia and a drop in peripheral temperature. As a result, coldness as an associate of hypnotic analgesia is suggested as a manipulation check for the presence of such sensation reduction. NOTES 1:

#### NOTES

When a limb feels numb, there also appears to be degradation of proprioceptive abilities (Wallace & Garrett, 1973, 1975; Wallace & Hoyenga, 1980). When Ss are asked to touch their nose with finger, either subjects miss the nose or they take longer to do the task. This kind of proprioceptive decrement has also been reported by Spanos, Gorassini, and Petrusic (1981) and Welch (1978, p. 27).

This study used highly hypnotizable Ss (10-12 on Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) and low hypnotizables (0-2) in Experiment 1 which established temperature variability in an arm and sites for measuring temperature during hypnotic analgesia.

In Experiment 2, 40 subjects (20 highs and 20 lows by above standards, with group assignment confirmed by Stanford Hypnotic Susceptibility Scale, Form C, on which highs  $M = 10.4$ , lows  $M = 1.2$ ) were given relaxation imagery (e.g. to imagine a white, fluffy cloud gently moving across a deep, blue sky during a count of 20, while at the same time, listening only to the voice of E describing the scene to them.

The analgesia suggestion was that "their right arm had been injected with massive doses of Novocain, that Novocain had been injected in their shoulder, in their elbow, in their forearm, in their hand, and in their fingers ... their arm would become progressively more and more numb as E counted backward from 20 to 1" (p. 185; for more details see Wallace & Hoyenga, 1981). They were asked to perform the nose touch test as confirmation of the analgesia suggestion response.

Highs and lows who served as control subjects had the same treatment except instead of analgesia instructions they were told their arm would become progressively more and more relaxed as E counted backwards from 20 to 1.

The peripheral skin temperature was monitored during the procedures, and following the experimental manipulation Ss completed a questionnaire on their experience of numbness, heaviness, changes in limb temperature (very warm to very cold), and changes in mobility.

Analyses of variance were used to analyze the results. Although there were no objective skin temperature changes, there was a significant interaction effect for pointing error. Highs who received analgesia suggestions were off 4.35 cm; the other 3 groups had mean error of .45 cm or less. There was also an interaction effect for latency of response: highs with analgesia instructions took 3.05 seconds longer than in relaxation condition, while other three groups only took .27 sec longer, on average. Additionally, there was a correlation between receiving analgesia instructions and feeling limb heaviness for the high hypnotizables ( $r = .68$ ) but not for lows or for any Ss asked to relax their arm during the procedures.

The sensation of coldness was reported by the majority of highs receiving analgesia suggestions (7 of 10), but 2 Ss scoring 12 on the SHSS:C did not report coldness. Cold sensation was not reported by any S in any of the three other groups. The correlations between cold sensation and heaviness ( $r = .65$ ,  $p < .05$ ) and cold sensation and immobility ( $r = .79$ ,  $p < .05$ ) were found only in the High hypnotizable, analgesia suggestion group.

The authors performed a third experiment to determine whether temperature change could be used to confirm analgesia. This would be useful when one cannot confirm with inability to move the body part, e.g. when the analgesia is being developed in a part of the body that usually doesn't move. The design for Experiment 3 was the same as for Experiment 2.

Analgesia rated on a 7-point scale was reported as 6.1 by high hypnotizables and 1.2 by low hypnotizables. "Reports of a temperature change during the induction were also related to hypnotic analgesia and being classified as high in hypnotizability. Such a relationship was only significant, however, for a feeling of coldness ( $r = .63$ ,  $p$

<.05), and 7 of the 10 high hypnotizable Subjects assigned to the analgesia group reported the aforementioned sensation. A significant experiencing of a temperature change (cold or warm) was not reported by the other three groups of Subjects" (p. 189).

In their Discussion, the authors suggest that expectancy might account for the results, since during post-experiment interviews many Ss said that they expected their arm would become cold when it was numb. That was based on their previous experience, e.g. in placing ice on the skin. Notable, people did not exhibit this association if they were not able to develop the analgesia in response to suggestion.

The authors also take note of the fact that none of the Subjects reported associating cold with pain, though cold and pain often are concurrently experienced. This might be because only extreme cold is painful, and coolness might actually be perceived as pleasant.

### 1991

von Kirchenheim, Clement; Persinger, Michael A. (1991). Time distortion: A comparison of hypnotic induction and progressive relaxation procedures. International Journal of Clinical and Experimental Hypnosis, 39 (2), 63-66.

Hypnotic experiences are frequently associated with alteration in temporal perception. 24 male and 24 female Ss were asked to estimate the interval associated with hypnotic, relaxation, or control procedures. Only the group that received the hypnotic condition displayed significant distortions in time estimations. These were primarily underestimations (temporal constriction or "time loss") compared to the more normal distributions of estimations for the other 2 groups of Ss. The hypnotic treatment explained about 35% of the variance in the absolute distortion of time estimates. The present study demonstrates that subjective distortions of time experience during a hypnotic procedure are more than an artifact of deep relaxation or instruction.

### 1990

Wallace, Benjamin (1990). Imagery vividness, hypnotic susceptibility, and the perception of fragmented stimuli. Journal of Personality and Social Psychology, 58, 354-359.

Two experiments were conducted to determine the role of hypnotic susceptibility level (high or low) and imaging ability (vivid or poor) in the performance of gestalt closure tasks. In Experiment 1, subjects were required to identify fragmented stimuli in the Closure Speed Test and in the Street Test. In Experiment 2, subjects reported on fragmented stimuli that were projected to the right eye and subsequently produced an afterimage. Individuals were asked to identify the composite if possible and to report on the duration of the afterimage. In both experiments, hypnotic susceptibility level and imaging ability affected reports of gestalt closure. The greatest number of correct closures was reported by those who were both high in hypnotic susceptibility and vivid in imaging ability. In addition, in the second experiment, this group also reported the longest enduring afterimage.

These results are discussed in terms of the processes required to perform in a gestalt closure task.

1989

Heap, Michael (1989). Antecedent imagery in a case of Gilles de la Tourette syndrome. British Journal of Experimental and Clinical Hypnosis, 6 (1), 55-56

NOTES

1:

Author presents a male teenager diagnosed with Gilles de la Tourette syndrome, who was treated without noticeable success using a variety of techniques (relaxation, suggestion, hypnoanalysis, video-feedback, paradoxical injunction).

Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.

Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self-consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

1988

Jones, Lynette A. (1988). Motor illusions: What do they reveal about proprioception. Psychological Bulletin, 103 (1), 72-86.

Five illusions involving distortions in the perception of limb position, movement, and weight are described in the context of their contribution to understanding the sensory processes involved in proprioception. In particular, these illusions demonstrate that the position sense representation of the body and the awareness of limb movement results from the cross-calibration of visual and proprioceptive signals. Studies of the vibration illusion and phantom-limb phenomenon indicate that the perception of limb movement and position are encoded independently and can be dissociated. Postural aftereffects and the illusions of movement induced by vibration highlight the remarkable lability of this sense of limb position, which is a necessary feature for congruence between the spatial senses. Finally, I discuss the role of corollary discharges in the central processing of afferent information with respect to the size-weight and vibration illusions.

Wallace, Benjamin (1988). Hypnotic susceptibility, visual distraction, and reports of Necker cube apparent reversals. Journal of General Psychology, 115, 389-396.

Subjects, either susceptible (n = 50) or resistant (n = 50) to hypnotic suggestion, were asked to report on frequency of apparent reversals (ARs) to the Necker cube illusion. Such reports were made in the presence or absence of various types of visual, geometric surrounds (squares, triangles, crosses, or parallelograms). In agreement with a number of previous experiments, susceptible subjects reported perceiving more ARs than did resistant subjects. This difference held whether visual surrounds were present or absent. The presence of surrounds did serve to reduce AR reports regardless of hypnotic susceptibility level. The results are examined in terms of the ability of subjects to selectively attend when confronted with potential visual distractors.

1986

Wallace, Benjamin (1986). Latency and frequency reports to the Necker cube illusion: Effects of hypnotic susceptibility and mental arithmetic. Journal of General Psychology, 113 (2), 187-194.

An experiment (N = 32) was conducted to assess latency of first apparent reversal (AR) and AR frequency while observing the Necker cube illusion. Subjects who were either high in hypnotic susceptibility (susceptibles) or low in hypnotic susceptibility (resistant subjects) observed the cube either while performing or not performing mental addition problems. Susceptibles reported perceiving the first AR more quickly and a greater frequency of ARs than did resistant subjects. Also, latency of the first AR was negatively correlated with AR frequency. These results were interpreted in terms of the ability of susceptibles to allocate concentrative or selective attention in a manner that was conducive to faster performance when faced with competing tasks.

1983

Nash, John (1983). Negative visual hallucination and concomitant changes in cortical event-related potentials (Dissertation, University of California, Santa Barbara). Dissertation Abstracts International, 45 (2), 716-B. (Order No. DA 8411224)

"The purpose of this investigation was to examine the effects of negative visual hallucination (NVH) on cortical event-related potentials (ERPs), and to compare these effects with those of selectively attending to and ignoring stimuli. Five highly hypnotically susceptible subjects, four female and one male, were trained to block from subjective experience, i.e., negatively hallucinate, a ring of strobe-illuminated circles surrounding a central, independently strobe-illuminated circle. This stimulus array was modeled after part of the Titchener-Ebbinghaus circle illusion, since previous research had shown that subjects could attenuate the effects of the optical illusion via NVH of the outer, illusion-producing circles." Analysis of the ERP data

revealed amplitude and latency changes in various ERP components across the three experimental conditions (Attend, Ignore, NVH) for the four female subjects, a negative result which is explained in motivational terms. "The most noteworthy finding was the selection of the P3 amplitude variable at C2 by stepwise discriminant analysis for the four females, and the fact that this amplitude systematically decreased across conditions from largest in Attend to smallest in NVH. A variety of individual patterns were observed in terms of other ERP components which allowed discrimination (successful classification) among the three conditions. The results suggest that both Ignoring and NVH of a stimulus result in a decrease in the subjective certainty of perception of the stimulus. Individual differences in patterns of ERP changes are interpreted in terms of differing strategies for execution of the experimental instructions. The results support the view that NVH instructions produce distinctive ERP effects and that NVH generally can be viewed as an extreme level of ignoring" (p. 716).

1981

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.

#### NOTES

Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.

Experiment 1. Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.

The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15,

16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.

The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.

Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments.

In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

Experiment 2. The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the

previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

**Results.** "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a consistency of responses over experimental sessions that were widely separated in time, making conscious or unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

**N.B.** None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late

component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

1977

Ryan, M. L.; Sheehan, Peter W. (1977). Reality testing in hypnosis - subjective versus objective effects. International Journal of Clinical and Experimental Hypnosis, 25, 27-51.

90 unselected Ss were assigned to a 2 x 3 (Request for Honesty x Suggestibility Instruction) factorial design to test the hypothesis that hypnotic Ss would show pronounced impairment of reality testing by expressing a degree of conviction substantially out of phase with their objective performance. Barber's operational model of hypnosis was adopted to test the prediction on an unusually distinctive auditory comprehension task. The 2 interdependent measures, confidence and accuracy, were highly positively related indicating that, generally speaking, hypnotic Ss performed adaptively, as did task motivated and control Ss. Results for the difficult aspects of the task were most distinctive. Here, degree of confidence about behavior as expressed by Ss who performed well on the suggestibility tests was relatively greater than the confidence expressed by those who performed poorly; further, hypnotic Ss were distinctively willing to respond on the least intelligible parts of the task. The inconsistent nature of certain features of hypnotic behavior was discussed in some detail.

Schneck, Jerome M. (1977). Sleep paralysis and microsomatognosia with special reference to hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 25, 72-77.

Sleep paralysis is described in connection with a patient whose episodes incorporated the experience of her entire body feeling extremely small. The psychological implications of the paralysis and her microsomatognosia are discussed. Comparisons are made with other perceptual distortions involving the sense of change in body size. The characteristics of sleep paralysis and associated personality patterns are delineated. This material is discussed with special reference to experiences of patients in hypnosis, especially hypnotherapy and hypnoanalysis.

1970

Sarbin, Theodore R.; Juhasz, Joseph B. (1970). Toward a theory of imagination. Journal of Personality, 38 (1), 52-76.

NOTES

1:

Imagination refers to (1) forming mental pictures (imaging) and creative innovating. The authors focus on "the more literal meaning of imagining, that is, 'having mental

pictures,' for [they] believe that a clarification of that concept is basic to any further discussion of the psychology of the imagination.

"Before continuing, let us establish some reference cases for what a psychologist would call instances of imaging or imagining.

1. In a psychophysical experiment, a subject declares that he hears an auditory signal when no signal is presented. The experimenter scores the response as a 'false alarm.'
2. A patient in a mental hospital reports seeing the Mother of God. The psychiatrist classifies the report as a hallucination.
3. A novelist describes his work habits as involving conversations with imaginary characters. The critic calls this creative work.
4. A three-year-old child engages in play with a fictitious invisible rabbit. She is said to have an imaginary playmate" (p. 54).

1969

Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73.

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3 in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.

The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Furneau, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Skemp, Richard R. (1961). Note on an hypnotic induction device. International Journal of Clinical and Experimental Hypnosis, 9 (4), 303-304.

Author describes a technique for increasing suggestibility by causing the person to experience effects that he believes are caused by the hypnotist. "If one fixates the edge of a coloured strip on a white background, a narrow line of deeper colour will be seen close to the edge. This is because small movements of the fixation point bring this strip, for part of the time, on to an area of the retina which has been fatigued by the white. (The effect is best obtained if the colour is unsaturated). At the same time a narrow strip of brighter white will appear along the other side of the edge. If fixation is continued, this band of brighter white gradually takes on the colour complementary to that of the coloured band. These effects are unexpected to a naive subject, and therefore satisfy the requirements for a feed-back process" (p. 303). Thus, if the color is red, then the hypnotist suggests that a green line will appear, that the green band will continue to become greener, the red part redder; then suggests that the eyes will blink faster and faster, eventually closing, etc. After the eyes are closed, the suggestion that one will continue to see the green line is given.

## IMAGERY

Gibbons, Don E.; Sanchez, George P. (undated). Hyperempiria, a new 'altered state of consciousness'. [Unpublished manuscript]

## NOTES

The authors suggest that any induction procedure legitimizes acceptance of primary-type suggestions that are at variance with everyday experience. Such primary (i.e. "waking") suggestions are actually accepted at a higher rate than most people think (Barber & Calverley, 1962), and passing those suggestions convinces the subject he must be "hypnotized." However, inductions with the word "sleep" tend to retard subject's response to suggestions. An induction that is more oriented to alert states would be very useful for many people and situations. "Hyperempiria"

in Greek means hyper-experience or enhanced quality of experience. The hyperempiric induction contains suggestions of increased alertness, mind expansion, enhanced awareness, and enhanced sensitivity.

**1995**

**Comey, Gail; Kirsch, Irving (1995, November). Intentional and spontaneous imagery in hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

**Students were given one of two versions of the Carleton University Responsiveness to Suggestion Scale (CURSS): a) the original version, which contains instructions to intentionally imagine goal-directed fantasies, and b) a modified version, in which instructions for suggestion-related imagery was deleted. Participants were asked to report their goal-directed fantasies and to indicate whether these occurred spontaneously or were generated intentionally. They were also asked whether they had tried intentionally to generate the suggested experience and to indicate whether they had believed that the suggested states of affairs were real (e.g., whether they thought a hallucinated cat really existed). The deletion of instructions for goal-related imagery significantly increased responsiveness to CURSS suggestions. Spontaneous goal-directed imagery was significantly correlated with behavioral response, but intentional imagery was not. Most successful responders tried to generate suggested experiences intentionally, indicated that they could have resisted challenge suggestions if they really wanted to, and reported believing in the reality of suggested ideomotor and challenge experiences, but not of cognitive suggestions. Voluntary attempts to generate suggested experiences were correlated with subjective responding.**

**Jasiukaitis, Paul; Spiegel, David (1995, November). Relateralizing hypnosis, or have we been barking up the wrong hemisphere?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

#### **NOTES**

**The association between the right hemisphere and hypnotizability dates to the Gurs and Bakan; and to Hilgard and Morgan who developed a measure based on EEG power spectrum. Results from the body of research using alpha are conflicting. De Pascalis, 1988, also couldn't show a large alpha difference between hemispheres.**

**Research on hypnotic hallucination with Pribram found Highs in a visual obstruction condition reduced P200 and P300; there was a slightly greater response at O2 than O1 EEG leads, leading us to think it was maybe a Right hemisphere task. But it was a foveal stimulus.**

**We tested with hemifield stimuli, blocking perception of 1/2 of the visual monitor; had them do the obstruction hallucination. P200 had the greatest reduction, with stimuli presented on the left. With obstruction of left visual field, we got little response. So ERP results were greater in right visual field (left hemisphere). This suggests the earlier observation was predominantly due to left, not right, hemisphere influence.**

Martha Farah's work on imagery is instructive. Also Steve Kosslyn. The Right hemisphere answers "Where" do you see something. The Left answers "What is it you see?" The left hemisphere generates image patterns that match what you see. When you ask people to generate an image, the activity is in O1 area. Also, patients with left hemisphere damage can't generate images; callosotomy patient also gave evidence. Many inductions use generation of images (left occipital and temporal regions). So when asking subjects to generate a hallucinated image blocking the screen, they are using that area.

The cortex can serve as an amplifier or a suppressor of response. In earlier study of somatosensory potential we observed bigger response when asking person to be more aware of pain. The cortex has an arousal system. There are two relevant systems in the brain (see Posner)--posterior and anterior. Hypnotizability is correlated with a metabolite of dopamine, which is associated with the anterior system which is dopaminergic.

Tucker & Williamson, in article in Psychological Review, 1984, write that activation is "the determination of information control by previous, stored internal representations" as opposed to arousal which is the "determination by novel [missed words....]"

Kinsbourne, in Consciousness and Contemporary Science, 1988. wrote that if at any time a hemisphere works like an automaton, it is the left hemisphere. With R. Davidson, he has shown the left hemisphere elevates affect, the right depresses it. Many people report that hypnosis is a pleasurable thing to do, maybe because it elevates mood.

One obstacle to this formulation is the idea that the left hemisphere governs logical thought.

We may disturb the relationship between words and images in hypnosis; you start to manipulate images and passively receive words, so that language is now a passive, receptive experience and images are active (instead of the usual pattern of actively using words and passively using images).

1994

Krippner, Stanley (1994, August). Improvement of academic skills for children and adolescents with hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Literature and research in this area are sparse, though there is clinical evidence that hypnosis is useful. My definition of hypnosis is a procedure facilitating a variety of structured goals or procedures in which a suggestion or motivation is enhanced by a mechanical device, another person, or oneself.

There are 3 areas of application in academics:

study habits

test taking

strengthening academic motivation

The hypnotist should know the specifics of academic achievement, because specific suggestions (e.g. "Imagine you are at desk focusing well for 20 minutes,") are better.

Emphasis on the positive is better than negative. Use the words "imagination," "concentration," or "imagining pictures," rather than "hypnosis." I try to determine what they expect, based in part on what words they use.

In elementary school I focus on attitude and self esteem. I have them imagine reading a story, then how well they feel; that when they notice mistakes they won't be bothered because everyone makes mistakes.

For high school, I help them develop good habits for time motivation (e.g. suggestions to "make an outline to follow while you study"). At college level, I introduce self hypnosis. I make frequent use of mental imagery, at all levels--especially imagery rehearsal, in which the person is engaged in a particular activity.

In the NSF report on accelerated learning techniques (a project sponsored by the Army), Lozonov's "suggestopedia" techniques were studied. This review indicated it might enhance training effectiveness and reduce training time.

I have observed the suggestopedia classes in Bulgaria and Hungary. Classes had a relaxed comfortable learning environment. Rather than individual learning, it was group learning. It included preliminary exercises, new material, and a review of what was learned. The first stage used 2/3 of the time. Then suggestions were given by the teacher to promote learning. The presentation phase took one third of the time. The method encourages students to make mental images of the material. In foreign language classes, people take on new roles.

**Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

## NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

## RESULTS

Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

1993

Elter-Nodvin, Sabette; Lynch, Gregory; Nash, Michael R. (1993, October). Is primary process mentation a feature of hypnotic responding?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

It is difficult to measure primary process; usually measures from Rorschach are used. Recently Steven Lynn and Ken Bowers have done interesting work.

From literary criticism, we took the newer method of lexical pattern analysis--like a fingerprint (e.g. of Shakespeare's language). Wanted to determine whether there are differences between High and Low hypnotizables; or a difference in waking and hypnotic state. Martindale has a measure based on a lexical dictionary.

In Martindale's method, you take a long verbal sample, transcribe it into computer text file (response to TAT cards, and 3 tasks like--"Imagine you are ascending a spiral staircase and see someone at the top; describe what you see"); then do word count.

Gruzelier, John; Warren, Kristen (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. Psychological Medicine, 23, 93-101.

Individuals with high and low susceptibility to hypnosis were compared in a baseline condition and after instructions of hypnosis on tests of anterior left and right hemispheric functions of word fluency to letter categories, word fluency to semantic categories, design fluency and bilateral finger tapping dexterity. With hypnosis high susceptibles showed a reduction in word generation to letter categories, no significant change in word generation to semantic categories, an improvement in design fluency, and bilateral reductions in finger tapping dexterity. Low susceptibles showed the opposite changes except for the improvement in design fluency. These results, together with correlational results, were interpreted as evidence of central inhibitory processes, particularly of the left hemisphere, in response to instructions of hypnosis in high susceptibles. NOTES 1:

#### NOTES

The authors discussion of their study includes the following statements. "The main result of the study was the differential influence of instructions of hypnosis on high and low susceptibles for word fluency to letter designated categories, as distinct from semantic categories, and design fluency" (p. 98).

"The absence of effects of hypnosis on word generation to semantic categories (left fronto-temporoparietal) versus letter categories (left frontal) has a bearing on evoked potential evidence (Gruzelier et al. 1987). Bilateral comparisons at temporal lobe and central locations showed that high susceptibles were characterized by asymmetric changes in evoked potential amplitude (N116 component) with hypnosis. Activity at the central electrodes was compatible with a left-to-right hemispheric shift of function, but this was not the case at the temporal electrodes. Instead of an inhibition of left temporal activity with hypnosis activation was maintained. Maintenance of activity in the left temporal lobe follows consideration of the fact that hypnosis requires sustained attention to the voice of the hypnotist, which is predominantly a left temporal function" (p. 99).

"The absence of differences in the pre-hypnotic condition between high and low susceptibles indicates that hemisphericity per se may not be a factor that characterizes susceptibility. The fact that lateral differences were found in some experiments (e.g. Gruzelier et al. 1984; Gruzelier & Brow, 1985) but not others (e.g. Cikurel & Gruzelier, 1990; McCormack & Gruzelier, 1993) may indicate that such

effects, when apparent, were secondary to another factor such as cognitive flexibility as conceptualized by Crawford (1989)" (p. 99).

Hall, Howard R.; Papas, Angela; Tosi, Michael; Olness, Karen (1993, October). Bi-directional changes in neutrophil adherence following hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

At the last time that I presented a paper, I talked about the neutrophil. The neutrophil is a model of convenience because it responds quickly to psychological interventions, it is important in upper respiratory infections, and it can be measured reliably in vitro.

We had found that Ss with two weeks of relaxation/imagery training showed an increase in stickiness of neutrophils. We wanted to replicate and extend that study. We wanted one group to increase, another group to decrease, stickiness in neutrophils. There were a total of three groups, including a resting control group. The model of investigation involves two weeks of training in self hypnosis or simply resting.

### Session 1

1 week of practice

### Session 2

Results. The Control group increased adherence in neutrophils. The imagery-increase group and imagery-decrease group both decreased adherence. (In the first study the controls had no previous experience in relaxation. Also, the experimental group that was tested showed a decrease in first week and increased in the second week.)

Imagery is work, and that may result in less adherence. Pulse rate increased for the group trying to increase stickiness, in Session 1--implying less relaxation for them. Hypnotizability (measured with the Pennsylvania State University Scale) was not correlated with increase in neutrophil adherence.

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary HypnHypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

## 1992

Appel, Philip R. (1992). Performance enhancement in physical medicine and rehabilitation. American Journal of Clinical Hypnosis, 35, 11-19.

Performance enhancement or mental practice is the "symbolic rehearsal of a physical activity without any gross muscular movements" to facilitate skill acquisition and to increase performance in the production of that physical activity. Performance- enhancement interventions have been well known in the area of sports psychology and medicine. However, clinical applications in physical medicine and rehabilitation have not flourished to the same extent, though the demand for improved physical performance and the acquisition of various motor skills are as important. In this paper I will describe how hypnosis can potentiate mental practice, present a model of mental practice to enhance performance, and describe how to help patients access an ideal performance state of consciousness.

Hall, Howard R.; Mumma, Gregory H.; Longo, Santo; Dixon, Richard (1992). Voluntary immunomodulation: A preliminary study. International Journal of Neuroscience, 63 (3-4), 275-285.

This study explored the effects of relaxation and imagery procedures on the voluntary self-regulation of immune responses. Immune studies of 19 adults were made before and after a 45 minute intervention consisting of relaxation with imagery aimed at enhancing immune activity. A self-report measure of psychological distress was completed before each blood sample. Results indicate that the seven blood measures of immune functioning were measured with adequate reliability and consisted of two sets of immune parameters. A statistically significant increase in one of the mitogen measures and a marginally significant increase in one of the blood count measures was found following the relaxation/imagery procedure. Age, hypnotizability, and their interaction significantly predicted change on the set of blood count measures but not on the set of mitogen measures. As expected, level of subjective psychological distress generally decreased following the intervention. The methodological limitations of this study included limited sample size and absence of a control group.

Hargadon, Robin M.; Bowers, Kenneth S. (1992, October). High hypnotizables and hypnotic analgesia: An examination of underlying mechanisms. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Bowers' dissociated control adaptation of Hilgard's neodissociation theory of hypnosis posits that higher control systems are not used if lower systems are activated.

Imagery may be less important for achieving hypnotic effects. It also may contribute differently than previously thought, an uncorrelated factor. If imaginal involvement and imagery is integral to the production of analgesia using hypnosis, one would get results different than if not integral.

Research: 65 Ss rated as high on two hypnotizability tests participated.

Session 1:

Procedure entailed finger pressure pain: baseline, followed by 2 hypnosis treatment trials. Ss were not informed of the second trial before they did the first.

Standard suggestions: imagery congruent with the suggestion (hand like block of wood, protected by a glove)

Imageless condition: your hand will remain comfortably nonresponsive to the pressure; you will not allow other things to come into your mind.

Outcome Measures

Analogue scale for pain 0-10

Nonvoluntary experience rated 0-4

Session 2:

Administered Tellegen Scale, Woody & Oakman Scale, Marks Vividness of Imagery, Bowers' Effortless Experiencing, and Duality of Experience during age regression.

## RESULTS

No difference was found between the standard and imageless conditions in amount of pain reduced. So in high hypnotizables, use of imagery or not doesn't matter for controlling pain. Some Ss had a clear preference however, for one or the other method (even counter to their own expectations).

Feelings of nonvolition did not differ as a function of imagery use.

Multiple regression showed effects of hypnotizability and effortless experiencing. Ss who have an effortless experiencing of imagery benefit from using it to reduce pain; those who find it more effortful do better without imagery when attempting to reduce pain.

Contrary to last year's results reported by Bowers, high imagery was related to duality of experiencing in age regression.

Dissociated control theory is consistent with the results but not necessarily demonstrated. It is important to discriminate between imagery as a mediator rather than as a co-occurrence. This research suggests, as did Zamansky's work on counter suggestions, that imagery is not as critical for hypnotic response as we previously thought.

Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.

## NOTES

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new

information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social-cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

**Kraft, Tom (1992). Counteracting pain in malignant disease by hypnotic techniques: Five case studies. Contemporary Hypnosis, 9, 123-129.**

Five cases of patients suffering from cancer are described in which hypnotic visualization techniques were successfully employed to relieve pain and anxiety. This study supports the view that hypnosis can be an effective tool for pain relief in malignant disease, particularly when traditional methods have been exhausted.

**1991**

**Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. Behaviour Research and Therapy, 29, 17-31.**

#### **NOTES**

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in Lancet have important implications for health care.

**Hinshaw, Karin E. (1991). The effects of mental practice on motor skill performance: Critical evaluation and meta-analysis. Imagination, Cognition and Personality, 11, 3-35.**

21 studies that met the criteria of having both an adequate control and a mental practice alone group were included. The 44 separate effect sizes resulted in an overall average effect size of .68 (SD = .11) indicating that there is a significant benefit to performance of using mental practice over no practice. A series of General Linear Models revealed that the use of "internal" imagery produced a

larger average effect size than the use of "external" imagery, and that mental practice sessions of less than one minute or between ten and fifteen minutes in length produced a larger average effect size than sessions of three to five minutes in length. These findings suggest the complexity of the relationship between variables that influence mental practice.

1990

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

#### NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

**Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.])**

**"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).**

**"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.**

**"The finding that blunters experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunters are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunters experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been**

more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

Heyneman, Nicholas E. (1990). The role of imagery in hypnosis: An information processing approach. International Journal of Clinical and Experimental Hypnosis, 38 (1), 39-59.

Imagery is widely agreed to be an important component of hypnosis. The theoretical framework from which to conceptualize the role of imagery in hypnosis, however, has remained controversial. A model is presented which attempts to reconceptualize hypnotic imaginal processing in terms of current theory and research in cognitive psychology and psychophysiology. This model draws from a propositional approach to imagery (e.g. Pylyshyn, 1973), particularly as adapted by Lang's (1979) bioinformational theory. It is argued that the hypnotic image is fundamentally more complex than simple iconic mental representation, containing instead both stimulus and response components. It is proposed that the critical properties of the hypnotic image are not the stimulus components or propositions which give rise to the experience of the image but instead are response propositions which are associated with overt behavior. Processing of these response propositions is conceptualized as a negative feedback system between the brain and effector site. Some preliminary sources of support as well as implications and research suggested by this model are discussed.

#### NOTES

The author notes that the brain does not store a kind of "photograph," but rather stores "meanings" (Anderson, 1978); and that images actually represent response processes, as observable in physiological concomitants (Lang, 1977).

The hypnotic suggestion that a Subject's arm is being pulled up into the air by a large helium balloon is represented by two separate propositions: "There is a helium balloon tied to your arm" (a stimulus proposition) and "Your arm is moving up into the air" (a response proposition). According to Peter Lang (1979), an image is not a mental stimulus to which a response is made, but is in itself an active response process, accompanied by physiological activity. Verbal instructions to a Subject determine whether they will access stimulus propositions or response propositions. "Lang et al. (1980) found that only those Ss given response training coupled with response proposition scripts showed significant physiological arousal. These Ss were presumably better able to access and process that portion of the propositional network which controls visceral and motoric responding" (p. 46).

This author proposes that cognitive processing of a hypnotic image involves (internal) responding, and that 'responsive propositions' provide the basis for understanding the function of imagery in hypnosis, and are more important to hypnotic imagery than stimulus propositions. "In other words, the experience of a visual image and thus the vividness or controllability of that image is not critical for hypnosis. What is important to note is that the hypnotic behavior is not a response

to a visual image but is instead a function of the processing of the image itself (cf. Lang, 1979)" (pp. 47-48).

In explaining how an image might facilitate amplification of a subtle response (such as in arm levitation), the author suggests that physiological and external feedback systems are involved--principally a neural feedback loop between brain and target organ (in this case, arm muscles). "Efferent signals, which are activated by processing response propositions, initiate the overt behavior while afferent signals feed back to the brain and modulate further input to the effector system. The process progressively reduces the mismatch between the image instructions and behavior until the hypnotic task is completed" (p. 48). The feedback loop "provides information on the discrepancy between desired behavior and actual behavior:  $e = B_d - B_a$ , where  $e$  = error,  $B_d$  = desired behavior, and  $B_a$  = actual behavior (Arbib, 1972). The error signal generated by this discrepancy modifies the efferent output so as to eventually approximate  $e = 0$ " (p. 49). The author notes that this complex process of physiological feedback may be "augmented by external feedback such as modified verbal instructions or vocal intonations of the hypnotist and self-observation by S" (p. 49).

The author's model is summarized as: "1. The context, setting, and expectations implied by being hypnotized as well as the wording of the hypnotic suggestions provides S with: (a) explicit or implicit instructions to use imagery, (b) repetitious wording which may increase the probability of fully accessing the relevant propositions, and (c) instructions that task completion is expected. This may function to increase the probability that the deep structure of the response propositions will be processed. 2. The hypnotic suggestion proper is composed of stimulus and response propositions embedded within a propositional network. 3. Stimulus propositions give rise to the phenomenological characteristics or the percept-like experience of the image but may be unimportant in determining hypnotic behavior. 4. Processing of the response propositions includes an active response. This response process is facilitated by S's expectation to become actively involved in the imagined scene. Response propositions are the critical features of hypnotic imagery. 5. During hypnosis, the propositional network may be systematically modified by physiological or external feedback regarding the relative progress of the behavior toward task completion. This processing of response propositions is conceptualized as a negative feedback system. Efferent signals are delivered to the appropriate effector site while afferent signals feed back to the brain in order to modify further neural input, functioning to reduce the error between image and behavior. While the initial feedback is probably physiological, additional feedback may be obtained from the hypnotist's instructions and S's self-observations. 6. If stimulus propositions are simultaneously accessed, S experiences an image" (p. 51).

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.

NOTES

This chapter is a reprint of an article published in the American Journal of Clinical Hypnosis in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Lombard, Lisa S.; Kahn, Stephen P.; Fromm, Erika (1990). The role of imagery in self-hypnosis: Its relationship to personality characteristics and gender. International Journal of Clinical and Experimental Hypnosis, 38 (1), 25-38.

30 volunteer Ss practiced self-hypnosis for approximately 4 weeks and wrote a record of their experiences in a diary following each session. Imagery produced during self-hypnosis was coded in 2 ways: the imagery was either reality oriented or it was fantastic and had primary process qualities. Levels of imagery production remained virtually the same over a 4-week period. Self-hypnotic imagery was significantly greater for the female Ss than for the male Ss, particularly primary process imagery. Verbal expressivity (measured as the average number of words per page of each S diary) was calculated to control for the effects of verbal production on Ss' imagery scores. When imagery scores were standardized based on verbal expressivity, female Ss still produced significantly more primary process imagery than male Ss. Personality characteristics (assessed by standardized personality inventories) were examined in relation to self-hypnotic imagery. "Impulse Expression" was positively related to primary process imagery for the female Ss. "Outgoingness" was positively related to primary process imagery for the entire sample, but especially for the female Ss.

McAleney, Patrick J.; Barabasz, Arreed; Barabasz, Marianne (1990). Effects of flotation restricted environmental stimulation on intercollegiate tennis performance. Perceptual and Motor Skills, 72, 1023-1028.

The study investigated the effects of flotation Restricted Environmental Stimulation (REST) with an imagery message on the competitive performance of intercollegiate tennis players (10 men, 10 women). Pre- and posttreatment athletic performance was measured during intercollegiate competition. Posttreatment results indicated that subjects exposed to flotation REST with an imagery message performed significantly better than subjects exposed to imagery only on a measure of first service accuracy. Findings suggest that flotation REST can be used to enhance the performance of a well learned skill by athletes of high ability.

Newshan, Gayle; Balamuth, Ron (1990-91). Use of imagery in a chronic pain outpatient group. Imagination, Cognition and Personality, 10, 25-38.

Reports treatment of chronic pain, integrating relaxation, cognitive therapy, and imagery techniques for 3 groups of chronic pain patients. Imagery and visualization were the most important components of the treatment. NOTES 1:

## NOTES

Chronic nonmalignant pain is defined as pain that exists beyond the normal and expected healing time, usually six months or more after the initial injury or trauma. Patients used daily journal to monitor level of pain using a color scale 4 times/day (blue - little or no pain, green mild pain, yellow moderate, orange severe, and red pain so intense it could kill or render the patient unconscious.

Used two types of imagery: mental rehearsal of actually doing and reaching a goal, or symbolic representation of the pain as a creature, alive, within their bodies. They dialog with the creature, asking Why are you here? What do you need from me? What can I do to live with you? What is the message you have for me? patients are asked to listen very closely for the response.

Cognitive restructuring is introduced later to identify dysfunctional thought patterns and correct them. They are taught, 1) thoughts influence behavior and emotions, 2) thoughts can be changed, and therefore 3) behavior can be changed. However, not all patients benefit from cognitive restructuring (because resistant to self monitoring or frightened or critical of own negative thoughts.

Relaxation is especially beneficial in breaking the pain/anxiety cycle, reducing fear associated with pain, improving sleep patterns, promoting a general feeling of well-being and facilitating mental imagery. Mental imagery, on the other hand, provides a means of self-discovery. It is defined by Achterberg and Lawlis (1980) as the internal experience of a perceptual event in the absence of the actual external stimuli; although usually thought of as visual, it may well involve any other sensory modality associated with the image.

Imagery is a proverbial process, eliciting the rich symbolism of knowledge of a person's unconscious and providing powerful insights indirectly. It provides an opportunity for one to reorganize a problem or experience, such as pain, towards a more positive resolution. Imagery can increase the patient's self-esteem and self-control and seems to facilitate well behavior. It is also a vivid method of communication from the patient to the therapist and the rest of the group. The group members had a healthy respect for these images and were able to appreciate the impact they had in their recovery, even if the process is not completely understood.

In each of their cases, "it is important to emphasize that the pain was never 'cured,' the pain persisted throughout treatment. Again, the program does not take away the patients' pain but changes the pain experience and enables patients to participate more fully in their lives despite the pain. As suggested by the 'big person, small person' concept, the pain would probably always be part of their lives, but through the program it could be a smaller, more manageable part. Imagery proved to be a valuable tool in helping clients achieve this goal.

Nilsson, Kayla Mae (1990). The effect of subject expectations of 'hypnosis' upon vividness of visual imagery. International Journal of Clinical and Experimental Hypnosis, 38, 17-24.

This study explored how the expectation of hypnosis and the expectation of relaxation affected the vividness of visual imagery. 63 Ss who volunteered for a visual imagination study were randomly assigned to 4 groups. Ss were administered the vividness subscale (VS) of the Vividness and Control of Imagery Scale twice. In the 3 experimental groups, expectations were varied during the 2 VS administrations. All 3 groups were presented with a relaxation exercise between VS administrations. In 2 groups, it was labeled "hypnosis," and in the third group it was correctly labeled "relaxation." A control group listened to a neutral tape between their VSs. All groups were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) after the 2 imagery tests. The results indicated that the vividness of visual imagery was significantly enhanced (equally) in the experimental groups but not in the control group.

1989

Cooper, Nancy A.; Clum, George A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. Behavior Therapy, 20 (3), 381-391.

14 Vietnam veterans suffering from posttraumatic stress disorder (PTSD) were assigned either to standard treatment (control group), or standard treatment plus imaginal flooding (experimental group). The 2 groups were closely matched on medications and combat roles and tours of duty were comparable. Experimental Ss received up to 14 sessions of flooding for a maximum of one and one-half hours per session. Self-report measures were administered at pre-treatment, post-treatment, and at 3-mo follow-up. These measures included the Behavioral Avoidance Test, the Beck Depression Inventory, and a Modified Vietnam Experiences Questionnaire. Results indicate that flooding increased the effectiveness of usual treatment, particularly in such areas as re-experiencing symptoms and sleep disturbances. However, flooding had no effect on level of depression, trait anxiety, and violence-proneness.

Grant, Guy (1989, June). An investigation of hypnotic susceptibility in self-hypnosis and imagery (Dissertation, University of Utah). Dissertation Abstracts International, 49 (12), 5517-5518-B.

## NOTES

"There were two phases in the study. In Phase One hypnotic susceptibility scores were assessed for 43 graduate student subjects by the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A). In addition, the Self-Hypnosis Research Questionnaire (an experimental scale) provided performance scores for subjects under three hypnosis conditions: heterohypnosis, self-directed self-hypnosis, and tape-assisted self-hypnosis. The first purpose in Phase One was to

calculate correlations between hypnotic susceptibility and each of the hypnosis conditions. The second purpose was to determine if there were significant differences across the three types of hypnosis. The third purpose was to discover if any existing differences were dependent on level (e.g., low, medium, or high) of hypnotic susceptibility. Analysis of the data yielded significant correlations between hypnotic susceptibility and (a) heterohypnosis, (b) self-directed self-hypnosis, and (c) tape-assisted self-hypnosis. There were significant performance differences across the three hypnosis conditions with heterohypnosis being somewhat superior to tape-assisted self-hypnosis, and tape-assisted self-hypnosis being slightly superior to self-directed self-hypnosis. This relationship held true regardless of level of hypnotic susceptibility (e.g., low, medium, and high).

"In Phase Two, 49 graduate student subjects were administered the shortened form of the Betts' Questionnaire Upon Mental Imagery (QMI) as well as the HGSHS:A, and to determine if mental imagery is an important component of hypnotic susceptibility. Analysis yielded a significant correlation between the two measures.

"Based on the current data, it was concluded that the HGSHS:A had some utility for predicting performance in hypnosis. It was noted that, as compared with self-hypnosis, heterohypnosis provided the greatest chance of eliciting a positive hypnotic response from subjects not trained or experienced in hypnosis. It was also concluded that the QMI was correlated with and had some utility for predicting performance on the HGSHS:A. It had difficulty, however, differentiating between low and medium hypnotizability" (pp. 5517- 5518).

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

Jirout, J. (1989). Reaction of the cerebral vertebrae in imagined changes in the shape of the cervical spine. Ceskoslovenska Neurologie a Neurochirurgie, 52, 75-77.

Postural reaction of the cervical vertebrae on imagined, but actually not performed, changes in the shape of the cervical spine in the sagittal plane are described. The percentage of reacting vertebrae is relatively high. The findings seem to indicate that, (1) the described phenomena belong to the constant features of the spinal dynamics, (2) that there probably exist residual traces of preceding activities, and

(3) that these changes are due to the activation of the polymetameric system of the intrasegmental muscles. Abstracted in *American Journal of Clinical Hypnosis*, 1990, v. 32, p. 213.

Kahn, Stephen P.; Fromm, Erika; Lombard, Lisa S.; Sossi, Michael (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. *International Journal of Clinical and Experimental Hypnosis*, 37, 290-304.

Studied multidimensional nature of self-hypnotic depth in 22 high hypnotizables who volunteered for self hypnosis research. On personality scales, they were distinguished from the population at large by: strong theoretical orientation, high level of curiosity, disregard for opinions of others, and high Mf scale on the MMPI. Used the Stanford Profile Scale, SHSS:C and HGSHS:A, which measure the entire range of phenomena ordinarily used in experimental studies of hypnosis, including ideomotor phenomena, hypnotic fantasy and dreams, hypermnesias and age regressions, analgesias, negative and positive hallucinations, amnesias, posthypnotic phenomena, and cognitive and affective distortions. They asked Subjects to experience self hypnosis for 60 minutes/day for 4 weeks. Journals were coded for imagery production by scoring for both reality-oriented and primary process imagery. Subject had been taught to monitor their hypnotic depth using a slightly revised version of the Extended North Carolina Scale (ENCS) of Tart (1979). Previously, ENCS has been used only with hetero-hypnotic Subjects. The self-reports of depth using ENCS correlated highly with hypnotizability as measured by the Revised Stanford Profile Scale of Hypnotic Susceptibility... and with imagery production. Results demonstrate that ENCS scores are also a valid indicator of self-hypnotic depth among highly hypnotizable Subjects. Furthermore, they indicate that both hetero- hypnotizability and imagery production are related to self-hypnotic depth, but that the association between imagery and hypnotizability is due to their individual relationships to self-hypnotic depth.

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. *International Journal of Clinical and Experimental Hypnosis*, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic- like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a

common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.

Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self-consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.

#### NOTES

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGSHS:A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47- item scale designed to demonstrate the existence of five factors of the hypnotic

experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General Depth, was also derived to provide a summary measure of the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo

#### NOTES

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

#### 1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

Brink, Nicholas E. (1988-89). Using imagery as a planning and treatment guide in therapy. Imagination, Cognition and Personality, 8, 187-200.

Procedures and case studies of how imagery can provide a means to redefine the problem, an agenda for therapy, information for determining the appropriate interventions, a criteria for evaluating progress, and the appropriate time for termination are presented. Images are evoked using one of several imagery situations. These images may converge on the common dynamic pattern clarifying

the problem, represent different aspects of the problem, or represent different problems, depending upon the hypnotic suggestion used in evoking the images. The emerging pattern(s) provide the agenda for therapy. Emotional energy in imagery work is used to determine the appropriate timing and content for the therapeutic interventions. Emotional release provides a means of evaluating progress. When each of the items on the agenda are resolved with an emotional release the time for termination is near at hand. Therapy begins by evoking a minimum of three images using one of several situations, including time regression, seeing behind doors on a hallway, or going down in an elevator. These images may represent different aspects of the problem, different problems, or, by using the affect bridge, may converge on a common dynamic pattern clarifying the nature of a single problem.

Cross, W. P.; Spanos, Nicholas P. (1988-89). The effects of imagery vividness and receptivity on skill training induced enhancements in hypnotic susceptibility. Imagination, Cognition and Personality, 8, 89-103.

#### NOTES

This article is cited by Spanos & Flynn (1989) as indicating that high hypnotizability requires imaginative skills that some people do not possess in sufficient degrees.

1988

Dougherty, John E.; Payne, Paul A. (1988). The use of breathing rhythm to enhance the vividness of mental imagery. Imagination, Cognition and Personality, 8 (2), 175-179.

The study assessed Jencks' claim that responses to certain suggestions are enhanced by being paced with different phases of the breathing cycle. Following hypnotic induction, twenty-four subjects were given four treatments in counterbalanced order: 1) exhalation-enhanced suggestions paced to exhalation, 2) inhalation-enhanced suggestions paced to inhalation, 3) inhalation-enhanced suggestions counterpaced to exhalation, and 4) exhalation-enhanced suggestions counterpaced to inhalation. Subjects' reports of imagery vividness provided marginal support ( $p < .06$ ) for Jencks' hypothesis. Post-experimental inquiry indicated subjects were unaware of the breathing contingency. Results suggest that appropriate pacing may make a greater difference for the energy-confidence group of suggestions (inhalation-paced) than for the calm-relaxation group (exhalation-paced).

Dywan, Jane (1988). The imagery factor in hypnotic hypermnesia. International Journal of Clinical and Experimental Hypnosis, 36, 312-326.

Week-long repeated recall attempts were used as baseline against which to assess the effects of hypnosis on the recall of pictures. Hypnosis increased errors for all Ss but especially for high hypnotizables. In Experiment 1, dividing Ss on the basis of imagery ability had the same effect on recall as dividing them on the basis of hypnotic ability. In Experiment 2, imagery ability was found to interact with hypnosis in mediating the level of error during waking trials. Results do not support

the claim that hypnosis enhances recall, but they do suggest that further study is needed to clarify the role that imagery ability plays in recall patterns over time.

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Author reviews research indicating that introduction of confident errors is a reliable finding in hypnosis-memory research, and notes that the role of imagery ability has not as yet been examined even though imagery is viewed as important to memory functioning. She also reviews the imagery- hypnotizability correlation literature.

### EXPERIMENT 1

Involved 54 Ss screened by Harvard Scale and SHSS:C, divided into highs (7-12) and lows (1-6) by SHSS:C. Stimuli were 60 black and white line drawings. There were 3 baseline trials in the lab; Ss were then given 6 envelopes, each containing a 60 blank item recall sheet, and asked to complete one each day and return it via campus mail. (When unable to recall more items, they were asked to draw a line under the last item recalled and then use "educated guesses." ) After a week of repeated recalls, Ss in the hypnosis condition were told they would be able to 'see' the slides appear before them; in the task motivating condition Ss were informed about such things as context dependent recall, the importance of focused attention, and the importance of good recall for forensic investigations.

Results were analyzed for increase in recall over the cumulative number of correct items recalled. Neither hypnotizability nor visual imagery ability influenced the cumulative baseline measures. High hypnotizable Ss produced a small but significantly greater increase in new, correct information during hypnosis than other Ss, but also made 3 times as many errors.

Dividing Ss by imagery score produced similar results. That is, people with very good imaging ability reacted in the same manner as the highly hypnotizable Ss: in hypnosis they increased the number of items they were willing to call a memory but also increased the number of errors.

### EXPERIMENT 2

Differed from Experiment 1 in that Ss were selected for hypnotic ability and imagery ability so that both would be adequately represented. (The high hypnotizable - low visual imagery group is a group that hasn't been represented much in earlier research, and the author notes that those Ss are rather difficult to locate. ) The task motivation condition was not used, based on results of Experiment 1. Ss who were low on hypnotizability and imagery ability served as the controls.

Ss were told that they could be either in a hypnosis condition or a control condition but actually all Ss received a hypnotic induction. (This is like the London- Fuhrer, 1961, research design, which goes on the assumption that low hypnotizables do not enter into hypnosis even though they are exposed to an induction. Thus, hypnotic effects are not assumed for lows in the hypnotic condition and they become "controls.")

Results of correct and error recall over the baseline week were analyzed. There was no difference in correct recall as a function of hypnotic ability or visual imagery

ability. However, there was a main effect for visual imagery ability and for hypnotizability, and a significant interaction between trials, for cumulative errors over the baseline week.

Effects of hypnosis were weaker than in Experiment 1 but followed same pattern. Those Ss most likely to have been hypnotized (highs) produced slightly more correct information than lows, and showed a greater increase in errors than lows. However high and low visualizers did not differ in response to hypnosis for correct information or for errors.

Since there was an interaction between hypnotic ability and visual imagery ability for error rate during waking trials, the author tested for the interaction during hypnosis. Using a 2 x 2 ANOVA with new errors as the dependent measure; no interaction was found. Hypnotic ability was therefore responsible for determining Ss' responses in the hypnosis condition. Author attributes the effect to being hypnotized rather than to individual differences in hypnotizability or to context effects.

## DISCUSSION

Includes the author's delineation of differences between the two experiments that might explain differences in results. The increase in errors that was observed may be due to increased fluency in producing items under hypnosis (Sheehan & Tilden, 1984, 1986) or to a shift in reporting criterion (e.g., M. T. Orne, Soskis, Dinges, & E. C. Orne, 1984).

"Both high and low hypnotizable Ss produced more memories in the task-motivating condition, and low hypnotizables are not totally immune from the effect in the hypnotic context. What the report-criterion hypothesis does not explain is the reason why the memory reports of high hypnotizable Ss are differentially affected by task demands (e.g., task-motivating instructions versus hypnosis in Experiment 1) nor why hypnotized Ss so often seem surprised by the ease with which information seems to be 'recalled' during hypnosis. An alternative hypothesis is that being hypnotized results in a shift to a more imagistic style of information processing. The enhanced vividness of items generated during the retrieval process may convince Ss that these items must have been part of the original stimulus presentation (Dywan, 1985).

"Whatever the mechanisms might be, it is clear that the hypnotic effect is the result of an interaction between contextual factors and pre-existing characteristics of the individual. Moreover, these same mechanisms would likely be at work when hypnosis is actually used in the forensic situation, where the pressure to retrieve information could be more acute than what can be mustered in the experimental context. This should cause some concern because the differential increase in errors did not occur only for the relatively small proportion of Ss who were very high in hypnotic ability. The 'high' hypnotizable group in these experiments consisted of Ss of moderate to high levels of hypnotic ability and so the results can be generalized to at least one-half the population" (p. 323).

"In summary, it would seem that any pressure for Ss to increase their recall--whether it be repeated trials, task-motivating instructions, or hypnotic suggestion--results in higher levels of output and lower levels of accuracy. Repeated recall

attempts lead to increases in recall and in errors. Some Ss (viz., those with high levels of hypnotic ability and low levels of imagery ability) are particularly prone to producing false-positive responses over the course of repeated recall attempts. When Ss are pressed to recall more information, they all try to do so by increasing their output and this increased output is usually accompanied by an increase in error. When hypnosis is introduced, however, those Ss who are hypnotizable show a differential increase in output. The amount of new correct information retrieved by hypnotized Ss is small and not a highly reliable phenomenon. The increase in errors that occurs in the recall of hypnotized individuals, however, is a substantial and highly reliable effect. Irrespective of how many errors were made as a function of repeated recall attempts, hypnosis can be counted on to increase errors over and above the increases in errors that occur when Ss are not hypnotized. Further work is needed to identify the mechanisms involved in the hypnotic distortion of recall. The role that imagery ability might have in the context of waking and hypnotic recall has not been resolved and this also presents an interesting problem for future study" (pp. 323-324).

Gabel, Stewart (1988). The right hemisphere in imagery, hypnosis, rapid eye movement sleep, and dreaming: Empirical studies and tentative conclusions. Journal of Nervous and Mental Disease, 176, 323-331.

Reviews studies that have addressed the issue of whether there is an increased activation or efficiency of right-hemispheric processes during imagery, hypnosis, REM sleep, and dreaming. Evidence strongly supports the notion of increased right-hemispheric activation in simple imaginal or visual states during usual consciousness. There are also studies supporting this view of REM sleep, dreaming, and hypnotic phenomena. It is concluded, however, that the lack of adequate studies, contradictory or negative findings, and moderating variables (e.g., task difficulty, cognitive style) make it difficult to draw definitive conclusions concerning right-hemispheric processes.

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications

of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

**Katsanis, Joanna; Barnard, Joanna; Spanos, Nicholas P. (1988). Self-predictions, interpretational set and imagery vividness as determinants of hypnotic responding. Imagination, Cognition and Personality, 8 (1), 63-77.**

Two studies assessed the effects of self-predictions and interpretations of suggested demands on hypnotizability. Subjects overestimated their responsiveness to suggestions. Those who believed that they would fail all or almost all suggestions invariably attained low hypnotizability scores. However, those who believed that they would be highly responsive exhibited wide variability in their actual hypnotizability. Among subjects who self-predicted high responsiveness, those who adopted a passive "wait and see" interpretation toward suggestions scored significantly lower in hypnotizability than those who believed that they should actively bring about suggested effects. Study 2 also found that the relationship between adopting an active interpretation and hypnotizability was moderated by subjects' level of imagery vividness. Theoretical implications are discussed.

**Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.**

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

#### **NOTES**

Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures

the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience

(perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

1988

Lorig, Tyler S.; Schwartz, Gary E. (1988-89). EEG activity during relaxation and focal imagery. Imagination, Cognition and Personality, 8, 201-208.

EEG activity was recorded in nine volunteer subjects while they engaged in eight cognitive tasks. The tasks involved mental arithmetic, relaxation imagery, food imagery and imagery related to "neutral" stimuli (bicycle and automobile). Period analysis of the EEG indicated significant differences in EEG factor activity related to tension and anxiety for the subtraction, relaxation and food imagery trials. Imagery of heaviness and the subject's favorite dessert produced EEG factor activity most characteristic of relaxation. Results of this study are discussed in terms of the relation of odor to food imagery and the ecological validity of the use of food

**NOTES**

Lorig, in a comparison of spectral and period analysis techniques, found that period analysis had greater sensitivity to task-related EEG effects. More recently, Lorig and Schwartz applied factor analysis to EEG period data and found that the factors identified tended to show greater homogeneity and correspondence to self-report than the traditional EEG bands of alpha, theta and beta. Period analysis reduces data to a histogram of the number of waves of various frequencies which occur during each 10 second data collection epoch for each task.

As is evident from Finding 1, the 8 tasks tend to stratify into two groups which either increase or decrease in Factor 1/theta activity over time. Those tasks which decrease over time seem to be performance or practice-related and include Serial subtraction of threes, of sevens, relaxation imagery of heaviness (HVY) and instructions to concentrate on the word "one" as they inhaled and exhaled (BCON). These tasks may change little in their cognitive demands on the subjects over time. The other tasks (imagery of their first bicycle, imagery of their earliest ride in a car, imagery of their favorite main course, imagery of their favorite dessert) may be more evocative to the Ss since they were asked to recall events from their personal experience. The recall of some of these experiences may kindle the subsequent recall of other events and account for the increases in theta and Factor 1. It is also possible that theta and Factor 1 are attention- related. Thus, as the S participates in a task which changes little over time, attention is diminished. If, however, the task continues to evoke other personally relevant events, attention will be maintained and may even increase over time. If this later hypothesis is correct, the Favorite Dessert task may be of use clinically since it produces EEG patterns associated with less tension and anxiety and also less boredom. This task also produced self-reports of greater happiness ( $p = .0001$ ) and was not different from relaxation imagery of heaviness and instructions to concentrate on the word 'one' as they inhaled and exhaled in self reports of relaxation, tension or calm.

The results of this study indicate that imagery of food, especially one's favorite dessert, has relaxation effects apparent in EEG and self-report. These effects may indicate that food-related odorants exert their relaxation effects by producing imagery of food. Such effects should not be surprising given the early history of systematic desensitization training in which food was often used as a competing stimulus for anxiety-provoking stimuli.

Nash, Michael R. (1988). Hypnosis as a window on regression. Bulletin of the Menninger Clinic, 52, 383-403.

Examines the empirical evidence for temporal and topographic regression during hypnosis--which Freud explicitly defined as regressive. A review of more than 100 studies spanning 60 years of research found no convincing evidence that developmentally previous psychological structures are reinstated during hypnosis (temporal regression). In contrast, there is evidence that hypnosis enables subjects to elicit more imagistic, primary process, and affect-laden material (topographic

regression). The author recommends a careful reexamination of two core assumptions underlying the concept of temporal regression: (1) that early structures in human development are imperishable, and (2) that regression necessarily involves reinstatement of infantile psychological structures.

1987

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. Journal of Personality and Social Psychology, 53, 563-571.

#### NOTES

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception.

Boswell, Louis K. (1987). Abstract imaging: Abstract imaging as a mode of personality analysis and adjustment. Medical Hypnoanalysis Journal, 2, 175-179.

Describes the use of abstract imaging during hypnosis to circumvent defense mechanisms and arrive at the initial sensitizing event behind a patient's emotional problems. Case examples illustrate how abstract imaging is also used to explore how the patient relates to the world on a conscious level and forms an idealized self-image to work toward.

Crist, Dwayne Anderson (1987). The effect of suggestibility on the efficacy of relaxation training instruction: A multisession evaluation (Dissertation, University of Alabama). Dissertation Abstracts International, 47 (n9-B), 3950.

Progressive relaxation is a well established procedure used in the treatment of anxiety related disorders. Research has suggested that the muscle tension-release component of progressive relaxation is the critical variable in producing relaxation effects. However, other techniques which do not employ muscle-tension release have proven effective. It has been suggested that treatment type may interact with personality characteristics to produce greater effects. Suggestibility was selected as a personality characteristic that may facilitate or inhibit relaxation effects. Fifty high and 50 low suggestible individuals were selected to participate based on scores from the Creative Imagination Scale. Half of each group as randomly assigned to either a progressive relaxation or imagery relaxation treatment. Subjects received four weekly sessions of relaxation training. The Relaxation Scale was administered before and after each session to assess effects of training. The results indicated that high suggestible individuals had significantly greater increases in relaxation within

session on each of the three scales of the Relaxation Scale, but this appeared to be a result of lower pre-test scores. Only the Physical Assessment scale also demonstrated higher post-test scores for the high suggestible participants. A ceiling effect appeared to be operating for both the Physiological Tension and Cognitive Tension scales. There were no significant differences between the progressive relaxation and imagery relaxation treatments. It appears that muscle tension release may not be a critical variable in relaxation effects" (p. ).

De Sano, Christine F.; Persinger, M. A. (1987). Geophysical variables and behavior: XXXIX. Alterations in imaginings and suggestibility during brief magnetic field exposures. Perceptual and Motor Skills, 64, 968-970.

12 male and 12 female volunteers were evaluated for their suggestibility before and after an approximately 15-min. exposure to either sham, 1-Hz or 4-Hz magnetic fields that were applied across their mid-superior temporal lobes. During the field application subjects were instructed to view a green light that was pulsating at the same frequency as the field and to imagine countering an alien situation. Results were commensurate with the hypothesis that weak brain-frequency fields may influence certain aspects of imaginings and alter suggestibility. NOTES 1: NOTES: "Subjects who had been exposed to the 4-Hz fields showed a significant decrease ... in heart rate compared to those who had been exposed to either the 1 Hz or sham-field conditions. A significant ... interaction of sex by field ... was noted for the change in HIP [Hypnotic Induction Profile] scales. Whereas both men and women in the sham-field condition tended to show less induction (~ 1 unit) on the second occasion ... women showed much greater (8.4 + 1.1) induction (= 3 units) if they had been exposed to the 1-Hz field while men showed much greater (8.0 + 1.5) induction (= 3 units) if they had been exposed to the 4-Hz fields. On the protocols, women reported significantly more fear responses than men. In addition, subjects who were exposed during the imaginings to the 4-Hz field showed more imaginings ... and more references to vestibular experiences (e.g., self or entity rising or floating) ... than those exposed to the other conditions" (p. 969).

"Dissociation scores on the HIP were correlated significantly ... with vestibular (0.44), imagery (0.43), and fear (-0.45) scores from the transcripts. Floating responses on the HIP were correlated with the amount of imagery. (0.46). There was a significant positive Pearson correlation between the compliance measure and the amount of arm levitation during the second induction only. These results suggest that hypnotic susceptibility may be increased following magnetic-field exposure but that the effective frequency is not the same for each sex. In addition, the amount of the imagery (particular vestibular experiences) increased if the person observed a light that was flashing at the same frequency as a 4-Hz applied magnetic field" (p. 969).

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Monty, Richard A. (1987). Visual information processing speed in hypnotized and nonhypnotized subjects. Journal of General Psychology, 114 (4), 363-372.

Using a backward-masking paradigm with a bias-free and ceiling-free psychophysical task, we tested hypnotized and control subjects for speed of visual information processing. Approximately half of each group received visual imagery suggestions in an attempt to influence attention. Imagery produced no significant differential effect. Although an absence of a hypnotizability-performance relationship was in keeping with findings of a previous study, those subjects in the present study who performed under hypnosis were, as a group, significantly superior to the other subjects in speed of information processing.

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rappport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Locke, Steven E.; Ransil, Bernard J.; Covino, Nicholas A.; Toczydlowski, Janice; Lohse, Christopher M.; Dvorak, Harold F.; Arndt, Kenneth A.; Frankel, Fred H. (1987). Failure of hypnotic suggestion to alter immune response to delayed-type hypersensitivity antigens. Annals of the New York Academy of Sciences, 496, 745-749.

The ability to alter delayed-type hypersensitivity via hypnotic suggestion was tested in 12 highly hypnotizable, untrained subjects and 30 non-hypnotized controls. Subjects were skin tested bilaterally with a standardized panel of delayed hypersensitivity antigens and instructed either to enhance or suppress the skin test response (STR) unilaterally. Compared to controls, STR's showed no effect of hypnotic suggestion with regard to either the area of induration or the degree of inflammation assessed histologically.

Lynn, Steven Jay; Rhue, Judith W. (1987). Hypnosis, imagination, and fantasy. Journal of Mental Imagery, 11, 101-112.

Considers three questions pertaining to the relationship between hypnotic responsiveness and imaginative processes: Are subjects' nonhypnotic imaginative involvements related to hypnotic susceptibility? Do some fantasy prone subjects share a unique constellation of personality attributes and experiences, including an ability to respond to hypnotic suggestions? What are the childhood developmental antecedents of persons who score at the extremes of hypnotic ability and measures of fantasy and imagination? Reviews literature.

Nadon, Robert; Laurence, Jean-Roch; Perry, Campbell (1987). Multiple predictors of hypnotic susceptibility. Journal of Personality and Social Psychology, 53, 948-960.

Report two experiments in which various measures thought to be related to hypnotizability were analyzed by stepwise discriminant analysis. Absorption and preference for an imagic style of thinking predicted hypnotizability. Addition of 2 other variables in Experiment 2--a Sleep-Dream score derived from Evans's Cognitive Control of Sleep Mentation subscale and Gibson's Dream Questionnaire, and the Belief in the Supernatural subscale of the Taft Experience Questionnaire--increased the correct classification of the medium-hypnotizable subjects from chance levels to 74%. Argue for a confirmatory and hierarchical approach in future studies to explore correlates of hypnotizability more fully. NOTES 1:

#### NOTES

The following notes were made at an SCEH presentation: [Robert Nadon, Hypnotizability: A Correlational Study Involving Experiential, Imagery, and Selective Attention Variables.]

Author used a number of variables that have related to hypnotizability in single measure studies to predict with a multiple r. 30 male and 30 female Ss, given Harvard (?) then screened on Form A, and finally on Form C. Classed as Low (0-2), Medium (5-10 without amnesia), and High (11-12 with amnesia).

Independent Variable Triserial r % Correctly Classified Sheehan (1967) short Betts  
-.69\*\* 57 Preference for Imagery Mode of Thought

(Isaacs 1982) .64\*\* 57 Tellegen's Absorption .58\*\* Personal Experience  
Questionnaire .51\*\* 80

(Evans 1982) Concordia Fantasy Questionnaire Pavio Stroop Random Number  
Generation Task Modified Van Nuys Meditation Task 8 Auditory attention tasks

#### 1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

#### NOTES

620, Belicki & Bowers, 1982 ABSTRACT: Investigated the role of demand

characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A), which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

Brink, Nicholas E. (1986-87). Three stages of hypno-family therapy for psychosomatic problems. Imagination, Cognition and Personality, 6, 263-270.

In dealing with psychosomatic complaints it has been found useful and necessary to bring together three stages or techniques of psychotherapy. First, along with teaching relaxation, the therapist directs the client to define the symptom in a symbolic or figurative way describing size, shape, color, consistency, smell, and sound. These descriptors assess intensity and, over time, change in intensity of the symptom. Second, several hypnotic techniques are used to determine the dynamic pattern that has created the symptom. Such uncovered patterns have been found to invariably involve family dynamics. Third, hypnotic and family therapy techniques assist the client in changing the pattern. Examples are presented.

Cole, Ronald William (1986, February). Posthypnotic suggestion and the production of creative imagination imagery (Dissertation, Mississippi State University). Dissertation Abstracts International, 47 (8), 2953-A.

This investigation assessed the effect of posthypnotic suggestions in facilitating creativity in persons highly susceptible to hypnosis. Fifty college-age subjects from educational psychology and psychology classes at Mississippi State University who scored 9 or above on the Harvard Group Scale of Hypnotic Susceptibility were used. Groups of 10 subjects were randomly assigned to one of five conditions: a) hypnosis/creative learning set instructions b) relaxation/creativity learning set instructions c) hypnosis only d) relaxation only e) posttest only "Subjects in the hypnosis/creative learning set instructions group received 25 min. of hypnosis and creativity instruction. The relaxation/creative learning set instructions group received 25 min. of relaxation and creativity instructions. The hypnosis-only group received 25 min. of hypnosis and then completed mazes. The relaxation-only group received 25 min. of relaxation and then completed mazes. And lastly, the control group received the posttest only. All groups were given the Torrance Test of Creative Thinking (TTCT), Verbal and Figural Forms A, 1 week after receiving their treatment conditions. The results indicated that the combination of hypnosis and creativity instructions produced significantly higher mean scores on the Verbal

Form A -- fluency, flexibility, and originality subtests, and Figural Form A elaboration subtest, and lend support to the contention that posthypnotic suggestions can increase creativity (as measured by the TTCT) in high susceptible subjects. The components of both hypnosis and creativity instruction had to be present to increase creative performance. There was a tendency for relaxation combined with creativity instructions to show decreases in creativity scores. "The hypnotic state was seen as necessary for the unconscious acceptance of creativity instructions (low volitional control), while the relaxed state produced conscious contamination of suggestions for creativity (high volitional control). It was postulated that it was the difference in volitional control which produced the positive responses to posthypnotic suggestions to be more creative in the group receiving hypnosis and creativity instructions" (p. 2953).

Crawford, Jeffrey Cleon (1986, February). The effects of hypnosis and imagery on immunity (Dissertation, University of Texas Health Science Center at Dallas). Dissertation Abstracts International, 46, 2800-B.

The present study explored the effects of hypnosis and imagery on Total T-Lymphocytes, T-Helper, T-Suppressor, Natural Killer Lymphocytes and level of Salivary IgA. Twenty-four volunteers (15 females and 9 males) between the ages of 23 and 41, with a mean age of 30, were assigned to an experimental or no-treatment control group in a modified random sequence. Participation was limited to individuals who were clinically free of disease, not using medication known to influence immunity, and scored above the mean on self-report pencil and paper measures of life stress (Life Experiences Survey and Stress Coping Rating Scale). Blood and saliva samples were obtained one day before, immediately before, one hour after, and eight days after a one hour hypnotic session. A relaxation induction, a variation of [H. R.] Hall's method, was utilized to induce hypnosis, and its effect measured by the Long Stanford Scale. The subjects were encouraged to imagine the cells of their immune systems multiplying and destroying pathogens. An adaptation of the IMAGE-CA was used to assess the effectiveness of the imagery. Finally, the experimental subjects were instructed in and asked to practice self-hypnosis and imagery twice daily for a week. The data were analyzed in six two-factor repeated measure analyses of variance, and Newman-Keuls tests were utilized to make multiple comparisons between the levels of Group and Time. The analyses produced no evidence for the confirmation of the overall hypothesis that the experimental group would increase in percent of T-Lymphocytes, percent of T-Helper cells, percent of Natural Killer cells and level of Salivary IgA, and decrease in percent of T-Suppressor lymphocytes. Post-hoc analyses revealed correlations that served as a basis for interesting speculation, but there was no revision in the overall conclusion that there was not evidence that hypnosis and imagery, as employed in this study, influenced in the selected measures of immunity. These results extend, but are not analogous, to the results of previously published studies using "fractional" measures of immunity" (pp. 3055-3056).

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Holroyd, Jean (1986). Hypnosis applications in psychological research. Imagination, Cognition and Personality, 5, 103-115.

It is proposed that hypnosis leads to altered cognition, affect, or motivation as reflected by changes in 1) reality orientation, 2) attention and awareness, 3) imagery, 4) dissociation, 5) suggestibility, and 6) mind-body interaction. Hypnosis may be used as an experimental method to effect such cognitive, affective and motivational changes in order to pursue research in learning, personality, physiological, and social psychology. Examples of possible applications of hypnosis are provided. The influence of individual differences in hypnotic responsivity on research also is discussed. NOTES 1: NOTES: The author concludes, "Contributions of hypnosis to research in psychology may have been diminished by the confusion inherent in searching for main effects while giving insufficient attention to interaction effects between personality variables and experimental manipulations. As psychology becomes more cognitive in orientation, the phenomena of hypnosis may seem less bizarre and more amenable to inclusion in psychological research. However great care must be taken not to confuse the contributions of hypnosis with the contributions of the hypnotically responsive personality" (p. 109).

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components,

relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level. NOTES 1:

#### NOTES

(From the Discussion Section).

As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of

course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

1985

Acosta, Enrique; Crawford, Helen J. (1985). Iconic memory and hypnotizability: Processing speed, skill or strategy differences?. International Journal of Clinical and Experimental Hypnosis, 33, 236-245.

The purported relationship between hypnotizability and speed of information transfer from iconic to short-term memory was studied in a comparison of 12 low and 12 high hypnotizable Ss. As in Ingram, Saccuzzo, McNeill, and McDonald (1979), high hypnotizable Ss showed less interference from a visual mask in the report of a briefly presented item than did low hypnotizable Ss when the mask delays were predictable. When the delay of the mask could not be anticipated, however, differences between high and low hypnotizable Ss disappeared. It is suggested that differences in information processing related to hypnotizability may be due to differences in strategy, skills, or other factors, rather than underlying information processing speed.

## NOTES

Hypnosis may require concentrative or selective attention, which usually is measured by self-report (e.g. Absorption) or by experimental measures. Several investigations indicate that high hypnotizable people are better than low hypnotizables at focusing on a task and ignoring extraneous information (Brown, Crawford, Smith, Leu, & Brock, 1983; Graham & Evans, 1977; Karlin, 1979; Miller, 1975; Wallace, 1979; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976). One way to study attentional processes is through the effect of presenting a mask (e.g. \$\$\$\$) shortly after presenting a stimulus (e.g. ABCDE). Ingram (1979) found that highs had faster information processing, but that might be due to anticipation bias associated with the method of limits employed. This study uses both an ascending method of limits, like Ingram, and a condition in which the mask delays were presented randomly within another block of trials.

## RESULTS

"While the present study replicated Ingram et al.'s (1979) findings when an ascending method of limits was used (the same used by Ingram et al.) differences were not found in processing when ISIs were presented randomly. Thus, these results suggest that high and low hypnotizable Ss do not differ in their information transmission rates, but rather they may differ in other aspects which mediate performance in this task" (pp. 241- 242).

"Several lines of evidence point towards strategy or skill differences between high and low hypnotizable Ss as a possible explanation for the present findings. First, it was found that when Ss could anticipate the mask delay (the ascending condition), high hypnotizable Ss outperformed the low hypnotizables. When this anticipation was controlled, as in the random condition, the two groups did not differ when the data were scored by serial position. When the data were scored by a free recall scheme, there was a nonsignificant trend for high hypnotizable Ss to score higher than did the low hypnotizables. This trend suggests that high hypnotizable Ss may be more willing to guess, and to guess more accurately than low hypnotizables, when they have partial information about a letter, and/or they may have greater skill in perceiving incomplete information. The latter suggestion finds indirect support from Crawford (1981) who reported that high hypnotizable Ss can process fragmented stimuli (Gestalt Closure tests, see Thurstone & Jeffrey, 1966), significantly better than can low hypnotizables. High imagers have been shown also to perform significantly better than low imagers in Gestalt Closure tasks (Ernest, 1980). At a speculative level, given that recent research has suggested that iconic memory may be a right hemisphere phenomenon (e.g. Cohen, 1976, but also see DiLollo, 1981), and high hypnotizable Ss outperform low hypnotizables on certain right hemisphere tasks (e.g. Crawford, 1981), it may be asked if the trends found with the free recall scoring scheme in the present study might be a reflection of differential right hemisphere processing. Such a hypothesis could be investigated in future research by comparing the performance of high and low hypnotizable Ss, as possibly moderated by visuo-spatial ability, for stimuli presented to the left versus the right visual hemifield (Ernest, 1983).

"A second set of evidence in favor of strategy differences was found in Saccuzzo et al. (1982) which was published after the data for the present experiment were collected. In the Saccuzzo et al. (1982) paper, which was an extension and replication of Ingram et al. (1979), the same mask delay was used throughout a 10-trial block. The order of the blocks (i.e., the mask delays) was random. Thus, while S did not know which mask delay was used in the first trial of a block, the remaining 9 trials were the same and could be anticipated. During the first session, high hypnotizable Ss outperformed the low hypnotizables, but these differences disappeared on the second testing session. These results suggest that practice may have affected performance, rather than any underlying information processing speed differences" (pp. 242-243).

Gibson (1985). Dreaming and hypnotic susceptibility: A pilot study. Perceptual and Motor Skills, 60, 387-394.

Previous experimental work has indicated that certain stable personality characteristics are reliably associated with differential susceptibility to hypnosis. It is suggested that people who are more susceptible will be characterized by an awareness of dreaming more frequently, vividly and creatively. This study describes the construction of a Dream Questionnaire and the relations of the scores obtained on it to scores previously obtained on the Harvard Group Scale of Hypnotic Susceptibility. Sex differences were noted in response to the questionnaire. For women, a global score was derived from the questionnaire, and this was positively and significantly associated with hypnotic susceptibility. Men responded rather differently to the questionnaire and as hypnotic susceptibility scores were available for only a more limited number, further analysis was postponed until more data from men may become available. Some suggestions for research are discussed, and the relations between sleep research and hypnosis research are briefly considered.

#### NOTES

This article provides an example of dissociation-hypnosis contribution to sleep research:

"There has hitherto been little link between research on sleep and on hypnosis. Cartwright's (1978) review of dream research makes no mention of hypnosis, but a little common ground is referred to in Ernest Hilgard's (1975) review of hypnosis research. More recently, Belicki and Belicki (1984) and Perreault and Montplaisir (1984) have renewed the effort to link the two areas. Such research may not begin to pay off in terms of delineating more fully the traits of personality which refer to dissociative ability both in sleep and in wakefulness. It is hoped that the pilot questionnaire provided by the present study will serve to further such research."

[Note that in Nadon, Hoyt, & Kihlstrom, 1987, some questions from Evans' sleep questionnaire were predictive of hypnotizability.]

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

Nogrady, Heather; McConkey, Kevin M.; Perry, Campbell (1985). Enhancing visual memory: Trying hypnosis, trying imagination, and trying again. Journal of Abnormal Psychology, 94 (2), 195-204.

Tested visual recall memory of high (n = 24) and low (n = 24) hypnotizable undergraduates (screened under the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale) for black and white line drawings of common objects in either hypnosis, imagination, or control conditions. Memory performance in terms of both correct and incorrect items increased appreciably across the recall tests. Neither hypnosis nor imagination enhanced recall beyond that of normal repeated testing. Hypnotizability was not related to the amount of correct material recalled but was related to the amount of incorrect material reported. High hypnotizable Ss in the hypnosis condition were more likely than other Ss to confidently rate the incorrect material as correct.

Findings are discussed in terms of the impact of hypnosis on and the relevance of hypnotizability to enhancing visual memory.

1984

Achterberg, J. (1984, October). Cancer, immunology, psychological factors, and imagery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Author developed a way of scoring imagery (which will be published in *Imagery and Disease*). In terms of predicting who will die and who will survive, the content of the images doesn't seem to be as important as the quality (strength, vividness, etc.), which supports Bernauer Newton's (1984) findings. "The image seems to be a basic pre-verbal component of our species that has survival value."

D'Eon, Joyce Lillian (1984). Response to pressure pain as moderated by hypnotic susceptibility, type of suggestion strategy, and choice (Dissertation, Concordia University, Canada). Dissertation Abstracts International, 45 (n4-B), 1313-1314.

The present study examined the relationship between hypnotic susceptibility and ability to control pain, by comparing high and low susceptible subjects' response to pressure pain when these subjects employed either an imagery or a distraction pain attenuating strategy. The effect of providing subjects with a choice of which strategy to employ was investigated. In addition, the subjects' imagery ability and the types of cognitive strategies they engaged in were assessed. Subjects who scored either 9 or above or 4 and below on the Harvard Group Scale of Hypnotic Susceptibility: Form A, were asked to participate in a pain study. All 84 subjects first received a baseline trial on a modified version of the Forgione-Barber Strain Gauge Pain Stimulator, within susceptibility levels. Subjects who were able to keep their finger in the apparatus for 60 seconds were randomly assigned to a Choice, a No Choice, or a Control condition. The 36 high and low susceptible subjects in the Choice condition were given the option of using either an imagery suggestion strategy or a low distraction strategy on the second trial. The 32 high and low susceptible subjects in the No Choice condition were told about both strategies but were assigned randomly to either the imagery or the distraction strategy group. The 16 subjects in the Control group did not receive a strategy. Both pain intensity and pain tolerance were measured. Results indicated that an equivalent number of high and low susceptible subjects, given a choice of strategy, chose the imagery and distraction strategies. There were no differences in either pain intensity or pain tolerance between high and low susceptible subjects in the Choice conditions. The Choice condition subjects exhibited significant pain reductions from the first to the second trial. No Choice and Control subjects did not reduce pain significantly. In addition, high and low susceptible subjects who chose the imagery strategy did not have higher imagery scores than those subjects who chose the distraction strategy. Subjects in the No Choice condition used fewer coping strategies than subjects in the

Choice condition, on the second trial. The implication of these results and directions for future research are discussed" (p. ).

Gott, Peggy S.; Hughes, Everett C.; Whipple, Katherine (1984). Voluntary control of two lateralized conscious states: Validation by electrical and behavioral studies. Neuropsychologia, 22 (1), 65-72.

A subject is described who can voluntarily select and hold either of two qualitatively different states of consciousness. Evidence is presented which confirmed differential left or right hemisphere dominance in each state. Asymmetries of EEG alpha and task performance scores indicated a state-dependent shift in functional lateralization. Evoked response studies showed directional changes in rate of interhemispheric transmission correlated with state-related hemisphere dominance. These findings demonstrated the capability for voluntary endogenous control of cerebral dominance under natural conditions.

#### NOTES

A personal communication (letter) from Gott indicates the S switches from one state to the other by visualizing her surroundings and imagining what it would look like in the other state. Immediately she finds herself in that other state. Her drawings demonstrate that her perspective must differ in the two states.

Gould, Sol S.; Tissler, Doreen M. (1984). The use of hypnosis in the treatment of herpes simplex II. American Journal of Clinical Hypnosis, 26, 171-174.

Hypnosis training was used to treat the painful lesions and emotional symptoms associated with Herpes Simplex II in two females, ages 32 and 26. Three weekly sessions of hypnosis and daily practice sessions were initiated in the first case. During this time, the patient experienced a decline in the subjective level of pain and severity of the lesions, as well as an elevation in mood level. On three-month followup, she reported no pain or skin eruptions and significantly less feelings of stress and anxiety. The second case utilized two sessions of hypnosis and daily practice sessions, and similar results were obtained. A traumatic event caused a relapse in the latter patient, but she was again able to use hypnosis to bring the virus back under control and to experience an elevation in mood level as well. A seven-month follow-up indicated no eruptions and an improvement in self-esteem.

#### NOTES

In the first case the tape included ego-strengthening suggestions (Hartland, 1971); another tape used the patient's fantasy of water and snow skiing. The patient felt that hypnosis helped her acquire a more positive attitude toward herself and relief of guilt and blame, as well as an improved ability to cope with the unpleasant sensations.

In treatment session, ego strengthening suggestions were followed by 2 minutes of quiet for integration of suggestions, then visualization used in cancer therapy (Simonton): suggestions of a strong cell structure, perfect skin, hormonal balance, cleanliness, and a cooling refreshed feeling in the area of the vagina and perineum; imagery of internally controlled friendly white sharks was used to "devour" the

virus; of water and snow skiing, imagery of cool breezes, white refreshing snow, clean fresh water; visualized herself forgiving and releasing her previous boyfriend of guilt, thereby allowing her anger to abate.

For second patient it was similar, plus visualization of being bathed in white lights and traveling through concentric circles radiating peace and protection, being purified as she traveled through the circles until she emerged as flawless as a diamond, reflecting only clarity and light. Both patients scored 4 on Spiegel's Hypnotic Induction Profile (HIP).

Hall, Howard R. (1984, October). Hypnosis, imagery, and the immune system. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Studied the relationship of hypnosis to immune functions, using imagery methods like the Simontons did with their cancer patients. Twenty normal volunteers were hypnotized and asked to imagine their white blood cells (WBCs) attacking weak germs like strong sharks would attack something, and they were told that the sharks would continue working after they came out of hypnosis (a post-hypnotic suggestion). They were asked to "feel it and experience it any way you can," to avoid emphasizing visual imagery too much. Then they were taught self hypnosis and sent home to practice twice a day for a week.

Three blood measures increased after hypnosis: --B-cells increased with pokeweed stimuli (an allergen) for younger Ss, not older Ss --WBC's increased for highly hypnotizable Ss who were young, not for poor hypnotizable Ss or for any older Ss (Age range was 22-80.) --Lymphocyte count increased, approaching significance for highly hypnotizable Ss who were young but not for poor hypnotizable Ss or for older Ss. A personality test administered before the hypnosis, the SLC-90, suggested that the higher the distress level, the lower the lymphocyte count before hypnosis training. Two scores that summed up the distress level correlated -.49 and -.53, respectively. The psychological distress measured by the personality test decreased after the week of self-hypnosis practice. Of the two scores that summed up distress, one decreased for everyone (General Severity Index) and the other decreased only for highly hypnotizable Ss (Positive Symptom Total). Thus, a week of self hypnosis with imagining one's WBC's eating up weak germs in the blood led to both an increase in immune response indicators and a decrease in psychological distress. Psychological distress decreased as lymphocytes increased.

Dr. Hall repeated these procedures with a small number of Ss who were told just to "lie down and rest" rather than being hypnotized and given instructions to imagine their WBC's increasing. None of the above changes occurred. However, he cautions that his research doesn't indicate whether the positive effects are due to relaxation, imagery, or hypnosis since all three were involved.

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self- hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than

enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Kearns, John S.; Zamansky, Harold S. (1984). Synthetic versus analytic imaging ability as correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 32, 41-50.

It was hypothesized that synthetic imaging ability, but not analytic imaging ability, is positively related to hypnotizability. The correlation of scores on a paired-associates task, used as a measure of synthetic imaging ability, with scores on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), indicated a statistically nonsignificant trend in the predicted direction. 2 measures of analytic imaging ability, as well as Sheehan's (1967) revision of the Betts (1909) Questionnaire Upon Mental Imagery, a measure of vividness of imagery, did not correlate significantly with SHSS:C. The results are discussed in terms of their relation to studies of creativity and goal-directed fantasy.

#### NOTES

The authors review the literature on imagery and hypnotizability and propose that an important variable in hypnosis is an ability to expand imaginatively upon a given verbal input (synthetic imaging ability), akin to Spanos' (1971) concept of goal-directed fantasy. They cite studies relating creativity ("essentially a synthetic process") to hypnotizability, and predict that skill in solving spatial relations problems (analytic imaging ability) is not correlated with hypnotizability because it involves "accurately scanning visual images and converging on solutions to specific problems," (p. 42) rather than creative fantasy characteristic of hypnotic behavior. Forty Subjects had two sessions each: imagery tests in #1 and SHSS:C in #2. Imagery tests included, in this order: 1. Paired Associates (Paivio, 1972; a test of synthetic imaging), in which paired words are learned and later recalled; Experimental Ss were to learn them by combining them into an image, while Control Ss were to simply try to learn them. The nouns differed in imagery strength (potential for stimulating images). 2. Nonsense Forms (a test of analytic imaging), in which Subjects trace with their fingers an irregularly shaped Masonite form, blindfolded, and then choose one of 5 drawings that best matches the form. 3. Cube Visualization (a test of analytic imaging), in which Ss imagine a 2" wooden cube painted red on all faces, that had been sawed into 1" cubes; they are to say how many of the smaller cubes would be red on 3 faces, 2 faces, one face, and none of the faces. 4. Betts QMI.

The Paired Associates (PA) scores were a ratio of high imagery words recalled to low imagery words recalled, intended to reflect the impact of imagery availability on memory. There was a trend for hypnotizability to correlate with PA ratio scores, regardless of whether intermediate or low imagery nouns were used as baseline ( $\rho = .37$  and  $.34$ ,  $p < .10$ ) in the experimental group ("Use imagery to learn."), a trend

that was not found in the control group (no imagery instructions). Neither measure of analytic imaging ability (Nonsense Forms, Cube test) correlated with hypnotizability.

In their Discussion, the authors write, "The common factor in successful performance of both imagery-mediated paired associates learning tasks and hypnotic suggestions appears to be the ability to expand imaginatively upon a given verbal input" (p. 47). They cite the literature relating hypnotizable and creative performance (p. 47). "The present findings with the Nonsense Forms Test and the Cube Visualization Test, both of which failed to correlate significantly with SHSS:C, support the hypothesis that hypnotizability is not related to analytic, spatial-imagining skills" (p. 47). "The nonsignificant correlation between Betts QMI and SHSS:C adds to the growing body of inconsistent findings observed with Betts QMI" (p. 47).

"Given the complex nature of hypnotic susceptibility and of imagery (Monteiro et al., 1980), it is perhaps not surprising that studies attempting to relate the two variables directly frequently yield only modest relationships. Very likely, the inclusion of appropriate mediating variables would serve to clarify and, in particular instances, augment the relationships observed between hypnotic responsiveness and imaging ability. One such variable may be the capacity to become fully involved in everyday nonhypnotic experiences, commonly called absorption. This variable has been shown in numerous studies to be related to hypnotizability (e.g. Tellegen & Atkinson, 1974), as well as to creativity and vividness of imagery (P. Bowers, 1978, 1979; Monteiro et al., 1980). Even more relevant to the present study is the possible interaction between level of hypnotic susceptibility and the relationship between synthetic imaging ability and SHSS:C scores. It may be, for example, that the contribution of synthetic imaging ability becomes more critical in eliciting hypnotic behavior from Ss who are only moderately susceptible to hypnosis. Such an analysis was not possible in the present experiment, since the number of high, medium, and low susceptible Ss was approximately equal, and, therefore, the number of Ss at each level was insufficient for an adequate subgroup analysis. Clearly, however, future studies of the role of imaginal skills in hypnotic responsivity must move in directions such as these" (p. 48).

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and

Regressions, Post- Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process. NOTES 1:

#### NOTES

This is an abstract of an unpublished Ph.D. dissertation, University of Waterloo, 1984. It won the American Psychological Association Division 30 award for Best Student Paper at the 1984 APA Convention.

Kohen, D.; Olness, K.; Colwell, S.; Heimel, A. (1984). The use of relaxation-mental imagery (self-hypnosis) in the management of 505 pediatric behavioral encounters. Journal of Developmental and Behavioral Pediatrics, 5, 21-25.

This report assessed outcomes of hypnotherapeutic interventions for 505 children and adolescents seen by four pediatricians over a period of one year and followed from four months to two years. Presenting problems included enuresis, acute pain, chronic pain, asthma, habit disorders, obesity, encopresis, and anxiety. Using strict criteria for determination of problem resolution (e.g., all beds dry) and recognizing that some conditions were intrinsically chronic, the authors found that 51% of these children and adolescents achieved complete resolution of the presenting problem; an additional 32% achieved significant improvement, 9% showed initial or some

improvement; and 7% demonstrated no apparent change or improvement. Children as young as three years of age effectively applied self-hypnosis techniques. In general, facility in self-hypnosis increased with age. There was an inverse correlation ( $p$  less than 0.001) between clinical success and number of visits, suggesting that prediction of responsivity is possible after four visits or less. NOTES 1:

#### NOTES

Discusses the treatment of 505 pediatric patients with a variety of problems (enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic examinations).

Krenz, Eric W. (1984). Improving competitive performance with hypnotic suggestions and modified autogenic training: Case reports. American Journal of Clinical Hypnosis, 27, 58-63.

Although traditionally trainers of athletes have emphasized physiological refinements for the optimal performance of complex motor skills, research has revealed that heightened levels of stress and anxiety may adversely affect performance. As a result, many athletic training programs, taking into consideration the complex interrelationship of the mind and the body, include "mental training" in an attempt to reduce the negative effects of excess stress. These programs have incorporated various psychological interventions such as post hypnotic suggestions, sensory conditioning, and mental imagery and rehearsal. Modified Autogenic Training, a teaching model based on Standard Autogenic Training, synthesizes the strengths of hypnotic techniques to achieve optimal athletic performance. Athletes trained in these concepts can manage unexpected incidences during competition. The concepts of Modified Autogenic Training are described and four case studies are reported.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization method, with the additional factor that they were hypnotized for the visualization. In a long term follow-up study, those patients who were treated for at least 6 months and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

1983

Crawford, Helen J.; Allen, Steven N. (1983). Enhanced visual memory during hypnosis as mediated by hypnotic responsiveness and cognitive strategies. Journal of Experimental Psychology: General, 112 (4), 662-685.

To investigate the hypothesis that hypnosis has an enhancing effect on imagery processing, as mediated by hypnotic responsiveness and cognitive strategies, four experiments compared performance of low and high, or low, medium, and high hypnotically responsive subjects in waking and hypnosis conditions on a successive visual memory discrimination task that required detecting differences between successively presented picture pairs in which one member of the pair was slightly altered. Consistently, hypnotically responsive individuals showed enhanced mean number of correct performance during hypnosis, whereas nonresponsive ones did not. Hypnotic responsiveness correlated .52 ( $p < .001$ ) with enhanced performance during hypnosis, but it was uncorrelated with waking performance (Experiment 3). Reaction time was not affected by hypnosis, although high hypnotizables were faster than lows in their responses (Experiments 1 and 2). NOTES 1:

#### NOTES

Subjects reported enhanced imagery vividness on the self-report Vividness of Visual Imagery Questionnaire during hypnosis. The differential effect between lows and highs was in the anticipated direction but not significant (Experiments 1 and 2).

Two cognitive strategies appeared to mediate visual memory performance: (a) detail strategy (memorization and rehearsal of individual details) and (b) holistic strategy (looking at and remembering the whole picture with accompanying imagery). Both lows and highs reported predominantly detail-oriented strategies during waking; however the highs shifted to a more holistic strategy during hypnosis. It appears that high hypnotizables have a greater capacity than lows for cognitive flexibility (Battig, 1979).

Results are discussed in terms of Paivio's (1971) dual coding theory and Craik and Tulving's (1975) depth of processing theory. The authors also discuss whether hypnosis involves a shift in cerebral dominance, as reflected by the cognitive strategy changes and enhanced imagery processing.

Farthing, G. William; Venturino, Michael; Brown, Scott W. (1983). Relationship between two different types of imagery vividness questionnaire items and three hypnotic susceptibility scale factors: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 8-13.

122 Ss were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGS: A) of Shor and E. Orne (1962), the Tellegen Absorption Scale (Tellegen & Atkinson, 1974), and 2 tape-recorded questionnaires on vividness of mental imagery. On 1 imagery questionnaire the items were impersonal, objective visual scenes (MIQ:VS), whereas on the other questionnaire the items involved discrete personal actions which elicited a combination of visual and kinesthetic imagery (MIQ:PA). Imagery vividness scores from both questionnaires correlated significantly with hypnotizability scores. MIQ:VS vividness scores were better than

MIQ:PA vividness scores at predicting cognitive factor item scores of HGSHS:A, but not ideomotor or challenge factor items scores. Multiple correlations involving MIQ:VS vividness and the Tellegen predicted cognitive factor scores better than ideomotor or challenge factor scores.

Harris, Gina M.; Johnson, Suzanne Bennett (1983). Coping imagery and relaxation instructions in a covert modeling treatment for test anxiety. Behavior Therapy, 14, 144-157.

The present study compared the efficacy of instructing test anxious subjects to use personalized coping imagery based on nonacademic experiences of competence with coping imagery based on academic experiences of competence. The effect of relaxation was also examined and the relationship of imagery elaborateness and content to treatment effectiveness was assessed. Sixty-three subjects were randomly assigned to one of four treatments or a waiting list control group. Test anxiety as measured by a self-report instrument significantly decreased in all treatment groups. Improvement in grade point average occurred for all treatment groups except for academic coping imagery without relaxation which was also the least efficient treatment. The waiting list control group significantly deteriorated in academic performance. Relaxation training did not appear to enhance treatment effectiveness or influence the elaborateness or content of the imagery used. Test anxiety scenes elicited highly response-oriented images by all subjects. However, the stimulus/response content of the subjects' images was not influenced by treatment outcome. In contrast, successful treatment was primarily associated with reduction in negative coping imagery descriptions, although an increase in positive coping statements cured as well.

Myles, (1983, April). Cognition, hypnotic susceptibility, and laboratory induced pain (Dissertation, University of Waterloo). Dissertation Abstracts International, 43 (10), 3360-B.

Individuals' experiences of pain, and responses to pain treatments vary greatly. This study attempted to relate two areas of research concerned with this variation: (a) cognitions and pain (thoughts, images, etc.), in particular, catastrophizing versus coping; and (b) hypnotic susceptibility and analgesia. "Subjects were preselected for high or low hypnotic susceptibility. Susceptibility assessment was divorced from the laboratory study to minimize the potential bias of expectancies concerning hypnosis. High hypnotic susceptibility was expected to potentiate therapeutic effects of hypnotic-like treatment that did not involve a hypnotic induction. "Ten high and ten low-susceptible subjects were assigned to each of three groups: (a) a cognitive treatment, encouraging subjects to reduce spontaneous catastrophizing and increase self-generated coping cognitions; (b) a dissociative imagery treatment, encouraging subjects to engage in self-generated engrossing images; (c) an attention- placebo manipulation. "Pre and post-treatment assessments involved tolerance and pain-report measures during the cold-pressor task, and interview and questionnaire information concerning cognitions. "No treatment effects were evident on measures

of pain. Cognitive data indicated less catastrophizing and more coping during the post-treatment stressor across all groups. Subjects in the dissociative imagery group did report more imagery during the post-treatment assessment than subjects in the other groups, but this increased use of imagery was not associated with a decrease in pain. "Interview and questionnaire data supported prior reports that catastrophizing is related to increased pain. Low catastrophizing was associated with a high sense of control, high use of a variety of coping strategies, and lower pain reports. These relationships were altered following treatment, however, leading to a caution in generalizing about such variables. "High susceptibility did not potentiate therapeutic effects for either experimental treatment. Nor was susceptibility related in any other consistent way to pain, although high susceptibility was associated with more extensive use of post-treatment imagery. "Methodological inconsistencies and problems in laboratory pain research were discussed, and suggestions made for future work in the area" (p. 3360).

1982

Blum, Gerald S.; Nash, John K. (1982). EEG correlates of posthypnotically controlled degrees of cognitive arousal. Memory and Cognition, 10, 475-478.

Experimental control over five degrees of cognitive (as opposed to organismic) arousal has been developed by hypnotic programming techniques. Previously these posthypnotic manipulations have been applied to the investigation of diverse topics such as visual discrimination, performance on the Stroop test, selective concentration on color versus form of consonants, and cognitive "reverberation." The present study explored EEG correlates of the five degrees of cognitive arousal in a task requiring participants to visualize objects for one-minute periods while lying on a couch with eyes closed. Analysis of data from the occipital area in left and right hemispheres revealed that the highest degree of arousal was accompanied by larger amplitudes of alpha and beta power and smaller amplitudes of theta. This pattern of results was similar in both hemispheres, although more marked in the left. The findings, which provide an independent source of support for validity of the hypnotic programming, are discussed in relation to EEG literature on cognitive activity.

#### NOTES

Hypnosis doesn't enhance imagery. It provides the conditions under which mental alertness may be manipulated, and very clear imagery is associated with the alert condition whereas blurry imagery is associated with the lowest cognitive arousal condition. The other impression comes from clinical work, i.e. that hypnosis enhances imagery. This article is an example of hypnosis used in other research--see last page.

Bowers, Patricia G. (1982). The classic suggestion effect: Relationships with scales of hypnotizability, effortless experiencing, and imagery vividness. International Journal of Clinical and Experimental Hypnosis, 30 (3), 270-279.

How well the Stanford Hypnotic Susceptibility Scales assess what Weitzenhoffer (1978) terms the "classic suggestion effect" is addressed by developing an index of nonvolitional behavior (N-VB) for a group form of the Stanford Hypnotic Susceptibility Scale, Form C of Weitzenhoffer and Hilgard (1962) given to 43 Ss. The N- VB index, reflecting the classic suggestion effect's dual criteria of both behavioral responsiveness to suggestion and nonvolition ratings, was correlated highly with the traditional scoring of the group SHSS:C and moderately with the Harvard Group Scale of Hypnotic Susceptibility, Form A. Effortless experiencing of imagination and imagery vividness relate similarly to traditional and N-VB scores of hypnotizability. In addition, the relationship between involuntary ratings and passing and failing an item of the group SHSS:C was examined for each of the 10 items. There was a significant relationship for 7 of the items.

Brown, Daniel P.; Forte, Michael; Rich, Philip; Epstein, Gerald (1982-83). Phenomenological differences among self hypnosis, mindfulness meditation, and imaging. Imagination, Cognition and Personality, 2 (4), 291-309.

A survey of 122 subjects was conducted to investigate the differences in the phenomenological quality of the experiences engendered by three types of awareness discipline: self-hypnosis (21 Ss), waking dreaming (49 Ss) and mindfulness meditation (25 Ss from a 2-week retreat, and another group of 27 Ss from a 2-day weekend retreat). A questionnaire, the profile of Trance, Imaging, and Meditation Experience (TIME) was used in the survey. Discriminant analyses were used to construct models of the differences in the phenomenological quality of the experiences among the three groups. A number of phenomenological dimensions, in the major areas of attention, thinking, memory, imagery, body sensations, emotions, time sense, reality sense, and sense of self, were found which could accurately distinguish among the experiences of practitioners of the three types of awareness training. Results show that while self hypnosis involves self-referential thinking, memory changes, and intense emotions, waking dreaming emphasizes the immediate impact of emerging images, which unfold in a thematic manner and have a sense of their own reality. Mindfulness meditators have difficulty managing distractions, but with experience learn greater awareness of bodily processes, and experience changes in the perception of time and self; mental processes seem to slow down, and awareness assumes an impersonal quality. No attributions as to the causes or sources of these phenomenological differences are made, as the survey was not large enough to provide comparison groups, subject matching, or other statistical controls necessary for causal analyses.

(Information taken from a pre-publication manuscript.)

Crawford, Helen J. (1982). Cognitive processing during hypnosis; much unfinished business. Research Communications in Psychology, Psychiatry and Behavior, 7, 169-179.

Studies of cognitive processing during hypnosis per se are reviewed suggesting that hypnotically responsive individuals not only experience subjective changes during

hypnosis that are seen as often being discontinuous from their normal consciousness but also may exhibit measurable cognitive changes. Evidence (ego functioning changes, enhanced creativity, enhanced imagery processing, etc.) is presented to support the hypothesis that hypnosis may involve a shift in cognitive functioning away from a verbal, detail-oriented strategy towards a more imaginal, non-analytic, holistic-oriented strategy. Limitations of present research and potentially valuable research areas are discussed. NOTES 1:

#### NOTES

The author reviews evidence for cognitive changes during hypnosis--evident especially in high hypnotizables but also to some degree in moderate hypnotizables. She concludes that there may be changes in ego functioning, imagery functioning, creativity, and strategy preferences and that high hypnotizables are more flexible in cognitive processing . "The question remains whether or not there are accompanying objectively measurable cognitive changes during hypnosis" (p. 170).

"In normal waking consciousness, the hypnotically responsive individual is typically found to be more involved in nonhypnotic imaginative activities and experiences (Hilgard, 1979; Tellegen & Atkinson, 1974), more able to image things (for review, see Sheehan, 1979) and daydream vividly and positively (Crawford, 1982), more able to perceive gestalt closure figures (Crawford, 1981), more able to divert attentional process (e.g., Karlin, 1979), and more creative on certain tasks (e.g., P. Bowers, 1979). Experiential reports indicate that it is these very cognitive processes, amongst others, which are perceived to be enhanced or changed during the hypnotic state" (p. 170).

"Levin and Harrison (1976) found that hypnosis ego changes occurred most in those individuals who also demonstrated good capacity for adaptive regression in the waking state" (p. 171).

"Dave (1979) compared hypnotically induced dreams with rational-cognitive treatment as to their effects on creative problem solving of the problems or projects. 'Conditional support' was given to the significantly stronger effect form the hypnotically induced dreams" (p. 172).

There are many investigations of the effect of hypnosis on imagery, with a number of methodological problems. "Self-reports can be criticized on the grounds that they are easily subject to demand characteristics, subject expectations, and social desirability influences. Coe et al. (1980) found order of condition influenced their findings, while Crawford (1979) found that imagery rating scales suffered from a low ceiling effect among high imagers" (pp. 172-173).

"Surprisingly, while the field of cognitive psychology has devoted extensive attention to the study of the enhancing effects of imagery upon memory, few of their paradigms have been applied to the study of hypnotic processing of information. Germaine to the field of hypnosis are three operational approaches to the investigation of imagery: (a) the manipulation of the availability of imagery as a coding device, such as varying the degree to which stimuli may evoke imagery, (b) the manipulation of the processing strategy in cognitive performance, such as asking subjects to use imagery in the mediation of stimuli information, and (c) the

comparing of information processing strategies and performance in subjects who are low and high in imagery ability (Paivio, 1971)" (p. 173).

"Several studies (Nomura, Crawford, & Slater, 1981; Walker, Garrett, & Wallace, 1976; Wallace, 1978) found that a very few high hypnotizables can successfully produce eidetic imagery, using nonfakable stereograms, during hypnosis even though they cannot during waking. Spanos, Ansari, & Stam (1979) were unable to replicate these findings. It was only self-reported childhood eidetikers who exhibited eidetic imagery during hypnosis, and then only a few. This research suggests that hypnosis permits certain individuals to access the "lost" ability to image eidetically, possibly through a shift in cognitive strategies" (p. 174).

"An underlying emphasis of this paper is the need for hypnotic investigators to integrate findings from cognitive psychology into their research, as well as apply the many new approaches to understanding brain functioning which are now being developed, in their search for a better understanding of what occurs during hypnosis" (p. 176).

Crawford, Helen J. (1982). Hypnotizability, daydreaming styles, imagery vividness, and absorption: A multidimensional study. Journal of Personality and Social Psychology, 42 (5), 915-926.

In 25 male and 31 female university student and staff volunteers, the interrelationships between the following measures were studied: hypnotic susceptibility (SHSS:A and C), imagery vividness (VVIQ), involvement in everyday activities (TAS), and daydreaming styles (28 scales of Singer & Antrobus's Imaginal Processes Inventory). Factor analysis produced a factor characterized as a positively vivid and absorptive imagination style. Hypnotic susceptibility, VVIQ, TAS, and positive-affect daydreaming styles all loaded on this factor. Two other factors were a dysphoric daydreaming style and a lack-of-attentional-control style. Stepwise multiple regressions suggested that males and females, at least within this sample, exhibit different relationships between hypnotic susceptibility and predictor variables. Similar differences were found for the VVIQ and the TAS and their daydreaming-scale predictor variables.

Farthing, G. William; Brown, Scott W.; Venturino, Michael (1982). Effects of hypnotizability and mental imagery on signal detection sensitivity and response bias. International Journal of Clinical and Experimental Hypnosis, 30, 289-305.

It was hypothesized that the ability to selectively concentrate attention on mental images would be greater among high hypnotizable Ss than among low hypnotizable Ss, as indicated by a greater interference with visual signal detection by concurrent visual mental imagery in response to specified nouns. This hypothesis was not supported in the overall results, though the finding of a significant interference effect among the high hypnotizable female Ss, but not among other subgroups, indicates that further research with a more refined procedure might be worthwhile. On the control trials without images, the high hypnotizable Ss made more false alarms than lows, and had a significantly different bias index indicating that high

hypnotizable Ss were more likely than lows to respond "yes" when uncertain about whether the signal was present; false alarms can be interpreted as a nonhypnotic measure of suggestibility. The high and low hypnotizable Ss did not differ in their times to generate images in response to the specified nouns.

1981

DeForest, F. D.; Johnson, L. S. (1981). Modification of stimulation seeking behavior in psychopaths using hypnotic sensory imagery conditioning. American Journal of Clinical Hypnosis, 23, 184-194.

#### NOTES

This is a controlled clinical outcome study of psychotherapy involving the use of hypnosis

Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.

Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in

the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

Houston, Rodney Earl (1981). The effects of autohypnosis, imagery, or single suggestion on pain threshold and tolerance (Dissertation, University of Cincinnati). Dissertation Abstracts International, 42 (5), 1961-A.

#### NOTES

Pain threshold, pain tolerance, and subject's subjective opinion of the pain were studied in 94 volunteer subjects (75 female, 19 male), who had been randomly assigned to three treatment groups (self hypnosis, in-vivo imagery, single suggestion) and a control group. (The original randomized sample included 124 Ss, but 30 were lost to the study-- 22 because of initial baseline scores being above maximum, 2 after reading the consent form, and 6 not returning for post-testing.) Mean age was 25; age range was 18-59 years.

The pain stimulus was 33 degree F. ice water in which the dominant hand was submerged for as long as the subjects were able. Subjects were told to nod when pain was first felt (threshold), and remove their hand when the pain was more than they could tolerate (tolerance). They were then asked to rate the pain on a 7-point scale, from 'none' to 'extreme.' Thus the three outcome measures were threshold time, tolerance time, and degree of perceived pain.

During the week between pretesting and posttesting, the self hypnosis group was to listen to a tape training them in self hypnosis at least twice; the imagery group was to listen to their imagery training tape at least twice; the simple suggestion group received no training. Posttesting was the same as pretesting, except that the simple suggestion group was given the single waking suggestion, "You will be able to withstand the pain much longer this time."

The experimental predictions were that treatment groups would increase in threshold levels and tolerance levels more than the control group; and that the treatment groups would decrease more than the control group in reported pain level. Multivariate analysis of variance of difference scores (pre- to posttest) demonstrated significant differences on the three dependent measures when comparing the three treatment groups to the control group. " Significant differences were also found when comparing treatment groups, autohypnosis and imagery to those given the single suggestion. No significant differences were found when comparing the autohypnosis to the imagery treatment.

"The results indicate that training in autohypnosis and in-vivo imagery has an effect on threshold, tolerance and pain levels. The results also indicate that the use of a single suggestion may not have an effect on threshold, tolerance, and pain levels" (p. 1961).

Coe, William C.; St. Jean, R. L.; Burger, J. M. (1980). Hypnosis and the enhancement of visual imagery. International Journal of Clinical and Experimental Hypnosis, 28, 225-234.

The enhancing effect of hypnosis on the vividness and the control of imagery was investigated. In 1 experiment, Ss who volunteered to be hypnotized were administered 2 measures of imagery, 1 under hypnotic conditions and 1 under imagination instructions while waking (counter-balanced). In another experiment, the imagery of 2 independent samples of Ss (waking or hypnotized) who volunteered for an imagery experiment was evaluated. Of the samples, hypnosis enhanced the vividness and control of imagery in only 1 -- the sample with Ss who volunteered for hypnosis and were first administered a test of imagination while awake. Between the 2 independent samples, control of imagery was reduced in the hypnotized sample. There were no differences in the findings on vividness and control of imagery across high, medium, and low susceptible Ss. Combining all Ss, the correlation between vividness of visual imagery and hypnotic responsiveness was significant for males ( $r = .52$ ) and the total sample ( $r = .33$ ) but not for females ( $r = .15$ ). Similar correlations for the control of imagery were not significant for males or females alone, but they were for the total sample ( $r = .18$ ). The implications of the results are discussed in light of their relevance to theory, future research, and clinical practice.

1979

Beers, Thomas M.; Karoly, Paul (1979). Cognitive strategies, expectancy, and coping style in the control of pain. Journal of Consulting and Clinical Psychology, 47, 179-180.

Measures of tolerance, self-reported pain threshold, and overall discomfort of cold-pressor pain were obtained from 114 male subjects in a pretest-training-posttest experiment. Training consisted of brief practice in one of four cognitive strategies: rational thinking, compatible imagery, incompatible imagery, and task-irrelevant cognition. Analyses of covariance indicated (a) that cognitive-imaginal strategies facilitated endurance of pain and raised self-reported threshold, (b) that rational thinking and compatible imagery were generally the most effective treatments, (c) that expectancy alone was not a significant pain-attenuating factor, (d) that treatments did not affect discomfort ratings, and (e) that individual differences in imaginal ability and coping style did not correlate with changes in any of the dependent measures.

1978

Bowers, Patricia G. (1978). Hypnotizability, creativity and the role of effortless experiencing. International Journal of Clinical and Experimental Hypnosis, 26, 184-202.

Creative people and highly hypnotizable people describe their experience of finding creative solutions or responding to hypnotic suggestions as "effortless." It is suggested that receptiveness to subconscious work accounts for the experience of

effortlessness in both tasks. An experiment using 32 high and low hypnotizable men and women was designed to explore the hypothesis that the aptitude for such effortless experiencing accounts for the relationship found between creativity and hypnotizability.

Analyses of variance indicate highly significant effects of level of hypnotizability on composite scores reflecting effortless experiencing of several tasks and creativity. Intercorrelations of these indices are about .60. As predicted, effortless experiencing accounts for much of the relationship between high versus low hypnotizability and composite creativity. The role of imagery vividness and of absorption in both hypnotizability and creativity were also explored.

Dyckman, John M.; Cowan, Philip A. (1978). Imaging vividness and the outcome of in vivo and imagined scene desensitization. Journal of Consulting and Clinical Psychology, 46 (5), 1155-1156.

This study reexamined the role of imaging vividness in desensitization success. Scores on the Betts Questionnaire on Mental Imagery were used to divide 48 snake-phobic subjects into high, medium, and low vivid groups, who were assigned to imagined scene or in vivo desensitization treatments. Imaging vividness was assessed at scheduled points during therapy. Significant decreases in behavioral and self-reported fear were observed after both treatments, though in vivo desensitization produced significantly greater fear reduction. In therapy imaging vividness scores were significantly correlated with therapeutic success and were superior to pretherapy ratings as predictors of outcome.

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not influenced by social desirability. Factor analysis indicated that subjective and objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

Buckner, Linda G.; Coe, William C. (1977). Imaginative skill, wording of suggestions and hypnotic-susceptibility. International Journal of Clinical and Experimental Hypnosis, 25, 27-36.

3 groups of 20 s based on preselected imaginative capacity were administered either a hypnotic susceptibility scale containing item wording that suggested a goal-directed fantasy or one that did not. Preselected imaginative ability did not predict

hypnotic susceptibility or the production of goal-directed fantasies during hypnosis. However, Ss who received the hypnotic scale containing item wording that suggested goal-directed fantasies reported more goal-directed fantasies than Ss who received the other scale. Limitations of the study are discussed and the causal role of goal-directed fantasy in hypnotic responsiveness is questioned.

1976

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

Gur, R. C.; Reyher, J. (1976). Enhancement of creativity via free-imagery and hypnosis. American Journal of Clinical Hypnosis, 18, 237-249.

Thirty-six male, highly susceptible subjects, divided into hypnosis, simulation and waking groups, were given the Torrance Test of Creativity with modified instructions requiring them to wait passively for visual images in response to the test stimuli. Twelve waking subjects received the same test under standard instructions. The hypnotized group scored higher than all control groups on over-all creativity and on Figural creativity, but not on Verbal creativity. The results seem to support the application of the ego-analytic concept of 'adaptive regression' to both hypnosis and creativity. They also seem to confirm the association found between hypnosis and the activation of the non-verbal cerebral hemisphere.

1972

Greene, R. J.; Reyher, J. (1972). Pain tolerance on hypnotic analgesic and imagination states. Journal of Abnormal Psychology, 79 (1), 29-38.

Found that a hypnotic-analgesic-plus-pleasant-imagery condition was not as effective as was an analgesia suggestion only, in modifying tolerance.

1970

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

## NOTES

Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other

studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience. Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

#### NOTES

The authors used High hypnotizables (SHSS>9) in this investigation.

1962

Klempner, Edith (1962). Projective phenomena in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 10 (3), 127-133. (Abstracted in Psychological Abstracts 63: 5228)

During hypnoanalysis patients who have been age-regressed may perceive themselves as experiencing childhood experiences and also as simultaneously watching these experiences from a distance. This 2nd projected personality may be in the guise of an adult, adolescent, child, or even an incorporeal being. In some patients it may occur with regularity, in others not at all. Representative case

histories and possible dynamic mechanisms are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Halpern, Seymour (1961). On the similarity between hypnotic and mescaline hallucinations. International Journal of Clinical and Experimental Hypnosis, 9, 139-149.

The hypnotically-induced visual percepts of one subject are presented and discussed. These percepts reputedly bore a close resemblance to mescaline hallucinations. It is argued that no essential qualitative difference exists between psychogenic and toxicogenic hallucinations. It was hypothesized that all perceptions including dreaming, hallucinating, imagining and hypnotic perceiving are explainable in terms of perceptual-conceptual reciprocity understood as a neuropsychological function of consciousness. From Psyc Abstracts 36:01:3II39H. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Klemperer, Edith (1961). Shortest distance therapy in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 9, 63-77. (Abstracted in Psychological Abstracts 62: 2 II 63K)

A desymbolization process is described. The method involves "the simple technic of letting a visualization change to what it actually represents." It is reputed to be more direct and less time-consuming than conventional verbal free association. From Psyc Abstracts 36:02:2II63K. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Moss, C. Scott (1961). Experimental paradigms for the hypnotic investigation of dream symbolism. International Journal of Clinical and Experimental Hypnosis, 9, 105-117. (Abstracted in Psychological Abstracts, 62: 3 II 05M)

Objectified study of dream phenomenon attempted through employment of Osgood's Semantic Differential with hypnotically induced dreams. Several innovations in technique outlined. Results are discussed in terms of the principle of congruity, illuminating some aspects of the psychological laws underlying the acquisition and modification of sign significance involved in dream symbol production. From Psyc Abstracts 36:01:3II05M. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Naruse, Gosaku (1960). The abstract image in the post hypnotic state. International Journal of Clinical and Experimental Hypnosis, 8, 213-229.

(Author's Summary)

In the present paper, the experimental production of abstract image in PHHS was examined by the image conditioning method in a hypnotic trance. The comparison

of conditioning procedure was made between the buzzer sound or verbal sign as CS, and circle, numeral letter, or alphabetical letter as UCS. The main results of the study are as follows:

- (1) To evoke at will the abstract image, it is necessary to establish a corresponding relationship between the context of Cs and that of UCS by a conditioning method.
- (2) To establish the corresponding relationship, it is necessary to use the context conditioning procedure and not the single or differentiated conditioning.
- (3) In establishing the context conditioning, the more meaningful the stimulus used, the easier the relationship, and vice versa. The context conditioning is more easily accomplished by verbal signs than by buzzer sounds in CS and by numeral or alphabetical letters than by circles in USC [sic].
- (4) When the trance is too light, it is difficult for the post hypnotic image to appear. On the other hand, when the trance is too deep, while the image is clear and like the originals, the production of abstract image is difficult. The abstract image is, therefore, most easily produced in a middle or somnambulistic trance state between the lighter and the deeper trance.
- (5) The greater the number, the less certain or the more difficult the subconscious operates, especially in counting, for the hypnotic subject. It is assumed that the accuracy of subconscious, spontaneous counting is generally lower than that in consciousness.
- (6) All of the relative workings in order to produce the abstract image, were made in the subject's subconscious and even though the abstract image was achieved correctly, the subjects in normal consciousness or in the post hypnotic hallucinatory state were not generally aware of how or why it was formed, or what meaning it had.

1955

Klempner, Edith (1955). The spontaneous self-portrait in hypnoanalysis. Journal of Clinical and Experimental Hypnosis, 3 (1), 28-33. (Abstracted in Psychological Abstracts 55: 8621)

#### NOTES

Author presents descriptions patients gave of themselves in hypnoanalysis and compares them with material obtained with Dr. Walter Boernstein's Verbal Self-Portrait Test. On that test, the patient is asked, 'If you were an accomplished artist, how would you paint yourself?' The author concludes, "In summarizing I wanted to show that patients in hypnoanalysis can use the symbolical representation of their body as a means of bringing to the fore psychic traits, conflicts, and unconscious forces motivating them. They can even picture through it the complications of their life histories. In other words, the personality projection as it is revealed in the Spontaneous Self-Portrait here serves as a tool for the recognition and understanding of the neurotic structure" (p. 33).

Naruse, Gosaku; Obonai, Torao (1955). Decomposition and fusion of mental images in the post-hypnotic hallucinatory state. II: Mechanism of image composing activity. Journal of Clinical and Experimental Hypnosis, 3 (1), 2-23.

## NOTES

### Summary

This is a report of the studies continued from the previous work, as regards the mode and law of modification of images, by experiments on the image-fusion which is observed in a post-hypnotic hallucinatory state. The writers investigated the configuration law of the Gestalt school, also whether there was nothing other than the overlapping of images. Various experiments were performed using accorded figures (Fig.1), discorded figures (Fig. 3), the composed image partly changed in size (Fig. 4), the incomplete figures with concrete meaning (Fig. 5,A) and the figures in which the perception and meaning were discorded with each other (Fig. 6). The results were as follows:

(1) There were some subjects whose images were clear, and others whose images were vague. In general, the images were clear in deep hypnotic trance, and vague in the medium trance.

(2) In the case of the clear images, they were prominently overlapping while in the case of the vague images, they overlapped one another and were disjointed or integrated.

(3) After conditioning two kinds of figures with two kinds of sounds, a composed image could be aroused by the two stimuli; in this case, by changing the tempo of one kind, a part of the composed image was changed. This fact would prove that the composed images were combinations of elements.

(4) In the case of the integrated images, the modification of both clear and vague images could be explained satisfactorily not by the Gestalt theory but by the intervention of the meaning. Moreover, the hypothesis of the integration or hierarchy of cerebral functions corresponding to these phenomena was possible.

(5) Modification through meaning was more frequent in the vague images than in the clear ones.

(6) The spontaneous effect of meaning of the image was dependent on the depth of trance. This effect was comparatively weak in deep trance and strong in medium trance. It was assumed that in medium trance which reproduced the integrated images, meaning activity still remained.

(7) Having presented incomplete figures with concrete meanings to examine the effect of meaning, it was clear that the modification of images by meaning took place distinctly under the influence of suggestion.

(8) If perception and meaning of the figure were made to be in discord with each other, the meaning suggested at the time of conditioning produced more effect on the modification of the image than that at the time of recall" (p. 22).

1953

Naruse, Gosaku; Obonai, Torao (1953). Decomposition and fusion of mental images in the drowsy and post-hypnotic hallucinatory state. Journal of Clinical and Experimental Hypnosis, 1 (4), 23-41.

### Summary of Part I

"From the above we can conclude the following main facts.

- 1) When one sensory stimulus is given to a subject in a drowsy state, images of other objects associated with it often appear.
- 2) These images sometimes have forms, and sometimes are devoid of forms, only light and color being present. This phenomenon resembles the experience of color-hearing, and is called a new type of synaesthesia [sic] by Bachen.
- 3) These images are sure to disappear when they are observed attentively, a passive attitude being necessary for the image observation.
- 4) The remarkable character of these images are such that elements of forms and colors of various objects have been disjointed and connected with each other in different relationships which construct new images.
- 5) The longer and stronger persistence of stimulus, the more easily and clearly conditioned images appear. Conversely if the stimulus is momentary, the recalled images appear also momentarily.
- 6) Not only the visual images but also the sensory images can be elicited in a similar way" (p. 25).

### **Summary of Part II**

"The chief results of Naruse's experiments with the various subjects are as follows:

1. When one stimulus (C.S.) is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in deep hypnotic trance, a mental image corresponding to the other stimulus (U.C.S.) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears.
2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images.
3. Such images tend to disappear when subjects try to observe them attentively.
4. Images which are broken into elements of the original figure appear as distinct images.
5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image.
6. When two C.S.'s, which were already conditioned individually to two U.C.S.'s are presented at the same time, the images corresponding to each stimulus appear to overlap. This is the composed image.
7. In image composing, which involves the strong-weak stimulus relationship or the spatial positions of two C.S.'s, the clear-vague or positional relationships of the composed images are changed.
8. In the complex of meaningful images, there are two types, primarily. The one grasps the image as a whole, the other observes it in many mosaic elements. The latter can recall the original figure more correctly in an image form than the former.
9. Some positive and negative reports on sensory conditioning in the normal waking state are reviewed" (p. 36).

### **NOTES**

The investigators do not show that hypnosis enhances imagery, compared with the waking state. They studied sensory-sensory conditioning under hypnosis, with

amnesia suggestions, followed by testing for the conditioning effect. This study is relevant to studies of amnesia, "repression." In some studies they paired sound of a buzzer or metronome (the Conditioned Stimulus) with images (the Unconditioned Stimuli) as in [Oo, X]; other studies compared a color patch (CS) with an image (Oo, X). Some studies presented both CS's together, in different spatial arrangements (in the instance of the color patch CS).

Results (partial) included: "1. When one stimulus (CS.) Is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in a deep hypnotic trance, a mental image corresponding to the other stimulus (UCS) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears. 2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images. 3. Such images tend to disappear when Ss try to observe them attentively. ... 5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image. 6. When two CS's, which are already conditioned individually to two UCS's, are presented at the same time, the images corresponding to each stimulus appear to overlap. ..." (P. 36).

#### **IMAGERY ABILITY.**

**2000**

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**1998**

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

## NOTES

1:

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

Kogon, Manuela M.; Jasiukaitis, Paul; Berardi, Annamaria; Gupta, Malkeet; Kosslyn, Stephen M.; Spiegel, David (1998). Imagery and hypnotizability revisited. International Journal of Clinical and Experimental Hypnosis, 46 (4), 363-370.

The objective of this study was to correlate computer-generated imagery tasks and a self-report measure of imagery ability with hypnotizability, hypothesizing that computer-generated imagery tasks would be better predictors of hypnotizability than will the self-report measure. Hypnotizability of 43 subjects was assessed using the Hypnotic Induction Profile and the Stanford Hypnotic Susceptibility Scale, Form C. Imagery ability was assessed by the Visual Vividness Imagery Questionnaire (VVIQ) and by computer-generated imagery tasks measuring the ability to generate, maintain, and transform images. Although there was no correlation between the VVIQ and hypnotizability, the less hypnotizable subjects

made twice as many mistakes in the spatial imagery tasks than did the more hypnotizables, but this difference was not statistically significant. The relationships among hypnotic performance, hypnotizability, and imagery functions are complex.

**1996**

Crawford, Helen J.; Allen, Steven N. (1996). Paired-associate learning and recall of high and low imagery words: Moderating effects of hypnosis, hypnotic susceptibility level, and visualization abilities. American Journal of Psychology, 109 (3), 353-372.

Relationships between recall of low and high imagery paired-associate (P- A) words and hypnotic susceptibility, and the influence of hypnosis on recall as moderated by hypnotic level were examined. Subjects were assessed on 2 hypnotic susceptibility scales [Harvard Group Scale of Hypnotic Susceptibility; Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C)]. Forty-one low (0-4 SHSS:C) and 41 highly (9-12 SHSS:C) hypnotizable college students were assigned to 1 of 4 experimental groups: waking- hypnosis, hypnosis-waking, waking-waking, or hypnosis-hypnosis. Recall was significantly better for high than low imagery words. In the more sensitive within-subjects design, high hypnotizables recalled more P-A words during hypnosis than waking, and lows did not differ. In the between-subjects design, hypnotic level was not a moderator of performance during hypnosis. Low hypnotizables recalled more words in the within-subjects design. Visualization ability was a poor moderator of imagery-mediated learning. High imagery recall correlated significantly with Marks's (1973) Vividness of Visual Imagery Questionnaire (25) and Paivio and Harshman's (1983) Individual Differences Questionnaire (IDQ) Verbal scale (29), but not with the IDQ Imagery scale, the Mental Rotations Test (Vandenberg & Kuse, 1973), or the revised Minnesota Paper Form Board Test (Likert & Quasha, 1941).

Dixon, Mike; Labelle, Louise; Laurence, Jean-Roch (1996). A multivariate approach to the prediction of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 44 (3), 250-264.

The present study examined the relation between various self-report measures and two measures of hypnotizability within a multivariate framework. A group of 748 participants was tested on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), the Tellegen Absorption Scale (TAS), as well as the Preference for an Imagic Cognitive Style (PICS) questionnaire. One hundred ninety of these participants also completed the Paranormal Experiences Questionnaire (PEQ). Data were analyzed using hierarchical multiple regression equations, and the results of the analyses indicated that both the TAS and PICS accounted for significant amounts of unique variance in each of two 373-member samples of HGSHS:A scores. A further sub-sample of participants (n = 161) was tested on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) to see if these results would generalize to another measure of hypnotizability. Hierarchical multiple regression analyses revealed that although the PEQ predicted significant amounts of unique SHSS:C variance over and above that predicted by the TAS, the PICS failed to do

so. This inconsistency in results may be due in part to the generally low intercorrelation between the different hypnotizability scales and points to the need to develop new predictor variables that are orthogonal to each other. - Journal Abstract

Wallace, Benjamin; Allen, Philip A.; Propper, Ruth E. (1996). Hypnotic susceptibility, imaging ability, and anagram-solving activity. International Journal of Clinical and Experimental Hypnosis, 44 (4), 324-337.

Anagram-solving activity was examined as a function of hypnotic susceptibility level and imaging ability. In Experiment 1, anagrams that were composed of sets of letters that formed actual words (word anagrams), but when unscrambled formed other words, were compared to sets of letters that formed nonwords (nonsense anagrams). Word anagrams required more time to solve than nonsense anagrams. Also, fewer word anagrams were correctly solved compared to nonsense anagrams. Those individuals judged both high in hypnotic susceptibility and vivid in imaging ability demonstrated the best performance. In Experiment 2, anagrams that when unscrambled formed high-imagery words were compared to those that formed low-imagery words. High-imagery-word anagrams were solved more quickly and correctly than low-imagery-word anagrams. Such activity was best demonstrated by individuals who were judged to be both high in hypnotic susceptibility and vivid in imaging ability. These results are discussed in terms of strategies for solving anagrams and the individual differences that appear to be associated with using such strategies.

1995

Dywan, Jane (1995). The illusion of familiarity: An alternative to the report-criterion account of hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 43 (2), 194-211.

Hypnosis increases the likelihood that participants will report incorrect material at higher levels of confidence. One interpretation of such data is that hypnosis induces individuals to lower the criterion they use to make memory reports. A lowered report criterion could account for the increase in items that participants are willing to report as memories but not for the increase in confidence that typically accompanies hypnotic retrieval. Although some participants may indeed lower their report criterion, this alone should not result in the highly confident confabulation so often observed. An alternative perspective is that for some participants, hypnosis alters the experience of retrieval such that items generated during retrieval attempts are more likely to have the qualities (e.g., perceptual fluency, vividness) usually associated with remembering. This illusion of familiarity would account for the higher levels of confidence that are so frequently observed in hypnotic recall, and adopting this perspective should lead to even greater caution in the use of hypnosis as an aid to retrieval.

Glisky, Martha L.; Tataryn, Douglas J.; Kihlstrom, John F. (1995). Hypnotizability and mental imagery. International Journal of Clinical and Experimental Hypnosis, 43 (1), 34-54.

Two studies investigated the relationship between mental imagery and hypnotizability, with the imagery measures administered in a hypnotic context. The correlation of hypnotizability with vividness of imagery was significant in one study, but not in the other; both correlations were significantly lower than that obtained between hypnotizability and absorption, assessed in the same samples. The correlations with control of visual imagery, and with various measures of the vividness of motor imagery, were even lower and rarely significant. Except for an aggregate index of motor imagery, a search for significant nonlinear relationships with hypnotizability yielded nothing that was consistent across studies. Future studies of imagery and hypnotizability should make use of better measures of vividness of mental imagery and consider the relevance of aspects of imagery other than vividness.

1994

Ray, William J.; Moraga, R.; Faith, M. (1994, October). Psychometric and psychophysiological studies of hypnotizability and dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES

1:

In the last 5-6 years we see a beginning of a consistency in this type of research on EEG and hypnosis. Baseline EEG theta for high and low hypnotizable Ss was higher significantly in frontal and temporal areas; less significantly in parietal and occipital areas. It begins to look like a signature of hypnotizability. Our research will be published in the Journal of Abnormal Psychology next year.

In Japan they see theta as sustained attention; some aspects of theta relate to MAO and also to dopamine. Betsy Faith did the same research, replicating almost exactly. There are no differences between Highs and Lows in alpha or beta; but we find differences in theta (especially frontal, and in 40 Hz more posteriorly). It may not be L-R hemisphere difference as previously thought, but more a rostral-caudal dimension.

The signature to hypnotizability is more frontal theta at baseline. This may also relate to a drop in theta after induction, but those results are not so clear. Highs have a larger drop in theta from pre to post induction than is observed in the Lows. We did a "chaos analysis" of EEG. There are three main measures, including dimensionality. Dimensionality is a measure of complexity. People demonstrate high dimensionality when asked to do tasks, low dimensionality in anesthesia.

High hypnotizable Ss start an induction with higher dimensionality than the Low hypnotizable Ss, and as we go through the induction they remain the same. So this measure shows individual differences but does not give evidence of a state (because it doesn't change).

Chaos dimensions for 2 mental math problems show lower dimensions in frontal compared to posterior areas; but for imagery [labeled on slide as positive and negative emotional tasks] the dimension is the same across areas.

For the dimension measures, lows look like they are doing mental math and highs look like they are doing imagery, in baseline.

#### **SECOND PART OF RESEARCH--DISSOCIATION.**

For 100 years dissociation and hypnosis have been viewed as similar. Two dissociation scales were used - Putnam's DES and Reilly's scale. A factor analysis found four factors: 1. absorption or derealization 2. depersonalization 3. segment amnesia 4. in situ amnesia

(Segment amnesia differs from in situ amnesia because you wake up to it at that moment in the in situ vs the segment case.)

We have 20-30 people who score very high on hypnotizability.

Colin Ross finds the same factors as our factors 1 and 2, but he finds only one amnesia factor where we find two.

The correlation between DES and Harvard ranges .05 to .18. Are the high hypnotizables related to high dissociatives, with others not related? A scatter plot did not reveal that.

FFT EEG bands during baseline for high and low dissociation Ss find no differences for high and low dissociative subjects. We conclude that dissociation and hypnosis are two orthogonal processes.

Now we are beginning to look at the pathways that lead one to become highly hypnotizable or dissociative.

#### **COMMENTS FROM THE AUDIENCE:**

**Ian Wickramasekera:** Have you introduced threat to high or low DES people?

**Answer:** High and Low DES people with happy and unhappy imagery tasks do the opposite, with the dimensionality measure. With emotionality you don't see stable baseline differences, you see reactivity differences.

**A. Barabasz:** I think the DES isn't a good measure of dissociation in hypnosis which is voluntary and not pathological.

**D. Spiegel:** Sabourin's study found more theta in left frontal during hypnosis, whereas you found less. **Answer:** That's why I don't know what to do about the state effects.

**J. Crawford:** Sabourin had Ss doing tasks, so they may have been more active than yours.

**Wallace, Benjamin; Allen, Philip A.; Weber, Timothy A. (1994).** Hypnotic susceptibility, imaging ability, and the detection of embedded words within letters. International Journal of Clinical and Experimental Hypnosis, 42 (1), 20-38.

Two experiments were conducted to determine the role of hypnotic susceptibility level (high or low) and imaging ability (vivid or poor) in the performance of a visual search for words embedded within matrices of letters. In Experiment 1, subjects searched for target words from a list; however, distractor words were also

embedded in the matrices. Results indicated that subjects judged both high in hypnotic susceptibility and vivid in imaging ability demonstrated the fastest search speed with a greater percentage of target words found. These subjects also made fewer false alarm errors (locating distractor words not on the target list). The poorest performance was exhibited by subjects judged both low in hypnotic susceptibility and poor in imaging ability. The amount of variance accounted for by hypnotic susceptibility and imaging ability was approximately equal for each dependent measure. In Experiment 2, when subjects searched for target words from a list without distractor words embedded in matrices, similar results to those reported for Experiment 1 were produced, except that the percentage of words found was equivalent across groups. This was attributed to the elimination of potential false alarm errors. The results are explained in terms of the use of either a holistic or a detail strategy in the performance of a visual search.

1993

Wallace, Benjamin; Kokoszka, Andrzej (1993, October). Within-subject variability in hypnotic susceptibility and imaging ability: Same or different?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Subjects were given the Harvard scale of hypnotizability and an imagery questionnaire (VVIQ) repeatedly. They had been asked, "when are you the most alert during the day?" and classified as Day People and Night People. People had higher scores on the Harvard for Day People at 10 a.m. and 2 p.m., for Night People at 1 p.m. and at 6, 7, 8, and 9 .m. This replicates my 1993 study.

VVIQ scores do not show that pattern; they are zig-zag. What is the relationship between peaks on the two scales? They don't peak at the same time. This may be why in the literature we don't find a strong relationship between hypnotizability and imagery ability. VVIQ scores peak before hypnotizability scores on the same people. This might mean an ultradian cycle for imaging ability.

So these abilities are not stable throughout 24 hours, despite the fact that hypnotizability scores are stable over 25 years!

Wallace, Benjamin (1993, October). The importance of considering imagery in hypnosis research. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

We looked at both hypnotizability (Harvard Scale) and imagery (Vividness of Imagery - Marks) ability in an embedded words task (like the letter matrices in newspapers). Ss were grouped on both variables, forming four groups: high-high, high- low, low-high, and low-low.

Search time in the embedded figures task was greatest for low-lows and least for high-Highs, whether the words are easy, average, or difficult. A list of the possible words was also provided.

Strategies the subjects in different groups used are different. High-high's use holistic (Crawford) or efficient (Wallace) strategies--studying the list of possible solutions as if storing the words in long-term memory. Low-low's seem to use the list as a check-off list.

Embedded in the matrix were false alarm words, that weren't on the list. The low-lows were also prone to more of these errors. Getting rid of those false alarm trials, when presented with matrices with no false alarms, we still get a differences in search time with the same relationship as before.

## CONCLUSION

It's insufficient to simply look at hypnotic susceptibility as there's an imaging component, a memory or a storage component that we should examine. The percent of variance associated with the embedded figures task success was the same-- 20%-- for each ability. The correlation between the two (imaging ability and hypnotizability) was significant at .26.

1991

Van Dyck, Richard; Zitman, Frans G.; Linssen, A. Corry G.; Spinhoven, Philip (1991). Autogenic training and future oriented hypnotic imagery in the treatment of tension headache: Outcome and process. International Journal of Clinical and Experimental Hypnosis, 39, 6-23.

The aim of the present study was (a) to investigate the relative efficacy of autogenic training and future oriented hypnotic imagery in the treatment of tension headache and (b) to explore the extent to which therapy factors such as relaxation, imagery skills, and hypnotizability mediate therapy outcome. Patients were randomly assigned to the 2 therapy conditions and therapists. 55 patients (28 in autogenic therapy and 27 in future oriented hypnotic imagery condition) completed the 4 therapy sessions and 2 assessment sessions. Patients were to practice at home. No significant main effect or interaction effects for treatment condition or therapist was revealed. A significant effect for time in analyzing scores for headache pain, pain medication usage, depression, and state anxiety was found. In the self-hypnosis condition, pain reduction proved to be associated with depth of relaxation during home practice (as assessed with diaries) and capacity to involve in imagery (as assessed with the Dutch version of the Creative Imagination Scale). After statistically controlling for relaxation and imagery, hypnotizability scores (assessed by Stanford Hypnotic Clinical Scale) were significantly correlated with ratings of pain reduction. Results are discussed in the context of the neo- dissociation and social-cognitive models of hypnoanalgesia. The clinical relevance and the methodological shortcomings of the present study are also critically assessed.

## NOTES

1:  
Unexpectedly, pain reduction occurring in AT [autogenic training] appears to be brought about by different means than in hypnotic treatment. Not only imagery skills and hypnotizability, but also level of relaxation were unrelated to pain reduction achieved during AT. Since the first two therapy sessions of AT and

hypnosis were identical and in both treatment conditions patients are explicitly instructed to relax, the absence of a relationship between depth of relaxation and pain reduction in AT cannot be easily explained" (p. 19).

**1990**

**Lombard, Lisa S.; Kahn, Stephen P.; Fromm, Erika (1990). The role of imagery in self-hypnosis: Its relationship to personality characteristics and gender. International Journal of Clinical and Experimental Hypnosis, 38 (1), 25-38.**

30 volunteer Ss practiced self-hypnosis for approximately 4 weeks and wrote a record of their experiences in a diary following each session. Imagery produced during self-hypnosis was coded in 2 ways: the imagery was either reality oriented or it was fantastic and had primary process qualities. Levels of imagery production remained virtually the same over a 4-week period. Self-hypnotic imagery was significantly greater for the female Ss than for the male Ss, particularly primary process imagery. Verbal expressivity (measured as the average number of words per page of each S diary) was calculated to control for the effects of verbal production on Ss' imagery scores. When imagery scores were standardized based on verbal expressivity, female Ss still produced significantly more primary process imagery than male Ss. Personality characteristics (assessed by standardized personality inventories) were examined in relation to self-hypnotic imagery. "Impulse Expression" was positively related to primary process imagery for the female Ss. "Outgoingness" was positively related to primary process imagery for the entire sample, but especially for the female Ss.

**Nilsson, Kayla Mae (1990). The effect of subject expectations of 'hypnosis' upon vividness of visual imagery. International Journal of Clinical and Experimental Hypnosis, 38, 17-24.**

This study explored how the expectation of hypnosis and the expectation of relaxation affected the vividness of visual imagery. 63 Ss who volunteered for a visual imagination study were randomly assigned to 4 groups. Ss were administered the vividness subscale (VS) of the Vividness and Control of Imagery Scale twice. In the 3 experimental groups, expectations were varied during the 2 VS administrations. All 3 groups were presented with a relaxation exercise between VS administrations. In 2 groups, it was labeled "hypnosis," and in the third group it was correctly labeled "relaxation." A control group listened to a neutral tape between their VSs. All groups were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) after the 2 imagery tests. The results indicated that the vividness of visual imagery was significantly enhanced (equally) in the experimental groups but not in the control group.

**Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.**

Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls. Theoretical implications are discussed.

#### NOTES

1:

Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's 1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8)

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

Wallace, Benjamin (1990). Imagery vividness, hypnotic susceptibility, and the perception of fragmented stimuli. Journal of Personality and Social Psychology, 58, 354-359.

Two experiments were conducted to determine the role of hypnotic susceptibility level (high or low) and imaging ability (vivid or poor) in the performance of gestalt closure tasks. In Experiment 1, subjects were required to identify fragmented stimuli in the Closure Speed Test and in the Street Test. In Experiment 2, subjects reported on fragmented stimuli that were projected to the right eye and subsequently produced an afterimage. Individuals were asked to identify the composite if possible and to report on the duration of the afterimage. In both experiments, hypnotic susceptibility level and imaging ability affected reports of gestalt closure. The greatest number of correct closures was reported by those who were both high in hypnotic susceptibility and vivid in imaging ability. In addition, in the second experiment, this group also reported the longest enduring afterimage. These results are discussed in terms of the processes required to perform in a gestalt closure task.

1989

Kahn, Stephen P.; Fromm, Erika; Lombard, Lisa S.; Sossi, Michael (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. International Journal of Clinical and Experimental Hypnosis, 37, 290-304.

Studied multidimensional nature of self-hypnotic depth in 22 high hypnotizables who volunteered for self hypnosis research. On personality scales, they were distinguished from the population at large by: strong theoretical orientation, high level of curiosity, disregard for opinions of others, and high Mf scale on the MMPI. Used the Stanford Profile Scale, SHSS:C and HGSHS:A, which measure the entire range of phenomena ordinarily used in experimental studies of hypnosis, including ideomotor phenomena, hypnotic fantasy and dreams, hypermnasias and age regressions, analgesias, negative and positive hallucinations, amnesias, posthypnotic phenomena, and cognitive and affective distortions. They asked Subjects to experience self hypnosis for 60 minutes/day for 4 weeks. Journals were coded for imagery production by scoring for both reality-oriented and primary process imagery. Subject had been taught to monitor their hypnotic depth using a slightly revised version of the Extended North Carolina Scale (ENCS) of Tart (1979). Previously, ENCS has been used only with hetero-hypnotic Subjects. The self-reports of depth using ENCS correlated highly with hypnotizability as measured by the Revised Stanford Profile Scale of Hypnotic Susceptibility... and with imagery production. Results demonstrate that ENCS scores are also a valid indicator of self-hypnotic depth among highly hypnotizable Subjects. Furthermore, they indicate that both hetero- hypnotizability and imagery production are related to self-hypnotic depth, but that the association between imagery and hypnotizability is due to their individual relationships to self-hypnotic depth.

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic-like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

Van den Bergh, Omer; Eelen, Paul; Baeyens, Frank (1989). Brief exposure to fear stimuli: Imagery ability as a condition of fear enhancement and fear decrease. Behavior Therapy, 20, 563-572.

Examined fear enhancement and fear decrease during brief exposure to fear stimuli. 140 good and poor imagery Subjects (aged 14-18 years) with medium fear levels toward spiders were exposed to a live spider, either by looking at it or by thinking of an invisible, but present spider during either 60, 180, or 360 sec. Control Subjects were given a distraction task. Subjective fear and behavioral approach were measured. Brief exposure hindered fear decrease compared to the control condition. Good imagers showed more fear decrease and were less affected by the mode of exposure. Fear enhancement occurred only in poor imagers at the longer exposure duration (360 sec) during thinking. In that condition, good imagers showed their greatest fear decrease.

de Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

1:

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

1988

Cross, W. P.; Spanos, Nicholas P. (1988-89). The effects of imagery vividness and receptivity on skill training induced enhancements in hypnotic susceptibility. Imagination, Cognition and Personality, 8, 89-103.

NOTES

1:

This article is cited by Spanos & Flynn (1989) as indicating that high hypnotizability requires imaginative skills that some people do not possess in sufficient degrees.

Dougherty, John E.; Payne, Paul A. (1988). The use of breathing rhythm to enhance the vividness of mental imagery. Imagination, Cognition and Personality, 8 (2), 175-179.

The study assessed Jencks' claim that responses to certain suggestions are enhanced by being paced with different phases of the breathing cycle. Following hypnotic induction, twenty-four subjects were given four treatments in counterbalanced order: 1) exhalation-enhanced suggestions paced to exhalation, 2) inhalation-enhanced suggestions paced to inhalation, 3) inhalation-enhanced suggestions counterpaced to exhalation, and 4) exhalation-enhanced suggestions counterpaced to inhalation. Subjects' reports of imagery vividness provided marginal support ( $p < .06$ ) for Jencks' hypothesis. Post-experimental inquiry indicated subjects were unaware of the breathing contingency. Results suggest that appropriate pacing may make a greater difference for the energy-confidence group of suggestions (inhalation-paced) than for the calm-relaxation group (exhalation-paced).

Katsanis, Joanna; Barnard, Joanna; Spanos, Nicholas P. (1988). Self-predictions, interpretational set and imagery vividness as determinants of hypnotic responding. Imagination, Cognition and Personality, 8 (1), 63-77.

Two studies assessed the effects of self-predictions and interpretations of suggested demands on hypnotizability. Subjects overestimated their responsiveness to suggestions. Those who believed that they would fail all or almost all suggestions invariably attained low hypnotizability scores. However, those who believed that they would be highly responsive exhibited wide variability in their actual hypnotizability. Among subjects who self-predicted high responsiveness, those who adopted a passive "wait and see" interpretation toward suggestions scored significantly lower in hypnotizability than those who believed that they should actively bring about suggested effects. Study 2 also found that the relationship between adopting an active interpretation and hypnotizability was moderated by subjects' level of imagery vividness. Theoretical implications are discussed.

Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of

#### NOTES

Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount,

vididness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

Spanos, Nicholas P.; Stenstrom, Robert J.; Johnston, Joseph C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. Psychosomatic Medicine, 50, 245-260.

Two experiments assessed the effects of psychological variables on wart regression. In Experiment 1, subjects given hypnotic suggestion exhibited more wart regression than those given either a placebo treatment or no treatment. In Experiment 2, hypnotic and nonhypnotic subjects given the same suggestions were equally likely to exhibit wart regression and more likely to show this effect than no treatment controls. In both experiments, treated subjects who lost warts reported more vivid suggested imagery than treated subjects who did not lose warts. However, hypnotizability and attribute measures of imagery propensity were unrelated to wart loss. Subjects given the suggestion that they would lose warts on only one side of the body did not show evidence of a side-specific treatment effect.

1987

Nadon, Robert; Laurence, Jean-Roch; Perry, Campbell (1987). Multiple predictors of hypnotic susceptibility. Journal of Personality and Social Psychology, 53, 948-960.

Report two experiments in which various measures thought to be related to hypnotizability were analyzed by stepwise discriminant analysis. Absorption and preference for an imagic style of thinking predicted hypnotizability. Addition of 2 other variables in Experiment 2--a Sleep-Dream score derived from Evans's Cognitive Control of Sleep Mentation subscale and Gibson's Dream Questionnaire, and the Belief in the Supernatural subscale of the Taft Experience Questionnaire--increased the correct classification of the medium-hypnotizable subjects from chance levels to 74%. Argue for a confirmatory and hierarchical approach in future studies to explore correlates of hypnotizability more fully. NOTES 1:

NOTES

The following notes were made at an SCEH presentation: [Robert Nadon, Hypnotizability: A Correlational Study Involving Experiential, Imagery, and Selective Attention Variables.]

Author used a number of variables that have related to hypnotizability in single measure studies to predict with a multiple r. 30 male and 30 female Ss, given Harvard (?) then screened on Form A, and finally on Form C. Classed as Low (0-2), Medium (5-10 without amnesia), and High (11-12 with amnesia).

Independent Variable Triserial r % Correctly Classified Sheehan (1967) short Betts  
-.69\*\* 57 Preference for Imagery Mode of Thought  
(Isaacs 1982) .64\*\* 57 Tellegen's Absorption .58\*\* Personal Experience  
Questionnaire .51\*\* 80  
(Evans 1982) Concordia Fantasy Questionnaire Pavio Stroop Random Number  
Generation Task Modified Van Nuys Meditation Task 8 Auditory attention tasks

1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

620, Belicki & Bowers, 1982

Investigated the role of demand characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A), which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

Priebe, Frances A.; Wallace, Benjamin (1986). Hypnotizability, imaging ability, and the detection of embedded objects. International Journal of Clinical and Experimental Hypnosis, 34, 320-329.

40 Ss participated in an experiment designed to determine the influence of hypnotizability and imaging ability on cognitive performance. Individuals were asked to locate objects embedded within a series of pictorial scenes. For each scene, Ss were allocated a total of 6 minutes to find as many objects as possible. The objects were described to Ss prior to their search for them. Although there were no

significant differences in total number of objects found as a function of hypnotizability, high hypnotizable Ss made significantly fewer errors in locating and identifying objects. This difference was attributed to the superior ability of the high hypnotizability Ss in visualizing the hidden objects and in using produced images as a means for correctly identifying them. This did not appear to be the case for the low hypnotizability Ss.

It was this different in search strategy that may ultimately have led to the error difference between high and low hypnotizable Ss. NOTES 1:

#### NOTES

High hypnotizables "have been shown to be better able to resist distractions in a tracking task (Mitchell, 1970); to concentrate on their own breathing or on a candle flame (Van Nuys, 1973); to listen to a target story along with a nontarget story and to report what they could remember about the target story (Karlin, 1979); and to perceive Necker cube and Schroeder staircase illusory reversals (Wallace, Knight, & Garrett, 1976).

"Cognitive performance also has been shown to be influenced by imaging ability. For example, Paivio & Ernst (1971) found that when Ss were asked to identify letters, pictures, and geometric forms flashed to either the left or right visual field, those judged to be high imagers on a self-report test demonstrated better visual recognition. Similar findings were reported by Gur and Hilgard (1975) and Paivio (1978a, b).

"In addition to reports that imaging ability and hypnotizability affect performance on a variety of cognitive tasks, there have also been reports that these two variables are related, at least to some degree (Diamond & Taft, 1975; Palmer & Field, 1968; Sutcliffe, Perry, & Sheehan, 1970). Some, however, have found that ... low imagers tend to be low in hypnotizability but high imagers may not necessarily be high in hypnotizability (Perry, 1973)" (pp. 320-321). A correlation between hypnotizability and imaging ability also was found by T'Hoen (1978) in a paired associates learning task in which imagery and concreteness of the word pairs was varied; and by other investigators using other research designs (Gur & Hilgard, 1975; Paivio, 1978a, b; Paivio & Ernst, 1971).

Cognitive performance of high hypnotizable people was superior to low hypnotizables when the task was locating an imbedded letter ('Z') or completing double-digit arithmetic problems (Wallace and Patterson, 1984), possibly because highs may be using imagery to facilitate their performance. Highs performed better in detecting small differences in picture pairs when hypnotized but not when awake (Crawford and Allen, 1983). It appears that both highs and lows may use memorization of details for task performance, but only highs switch to a 'holistic' cognitive processing style, and mostly during hypnosis. Actually, Wallace and Patterson (1984) found that highs also used a holistic strategy in the waking state, not just in the hypnotized condition.

In the present study, subjects were 40 volunteers (20 highly hypnotizable subjects with scores of 9-12 on the Harvard Group Scale of Hypnotic Susceptibility, and 20 lows with scores of 0-3). The task was to locate hidden objects in pictures, with level of difficulty rated as hard, medium, or easy. The outcome data were analyzed by

analysis of variance for hypnotizability, picture difficulty, and time (six successive 1-min periods).

In Session 1 subjects were administered the Harvard Scale and the Marks Vividness of Visual Imagery Questionnaire; in Session 2 the group Stanford Hypnotic Susceptibility Scale: C was administered.

Before the actual experimental task of circling hidden pictures within larger pictorial scenes, each subject was given a list of words representing things that were embedded in the scenes, and asked to visualize each item. Then they were given six minutes to complete the item-finding task. They received three scores: the total number of objects located in six minutes, the number of objects correctly found, and number of errors. The 2x3x6 ANOVA was performed for each of these three dependent variables.

Hypnotizability was not an important variable determining the number of correct objects located, but was significantly associated with the occurrence of fewer errors. Mean errors were 4.5 for Lows and 2.7 for Highs. Furthermore, hypnotizability was associated with using a 'holistic strategy' rather than a 'detail strategy' for finding items (self report on storing a memory of the list of objects-to-be found, preparatory to making the search, rather than checking back with the list during the search). Hypnotizability correlated with imaging ability  $r = .34, p < .05$ .

In their Discussion, the authors noted that low hypnotizable people did not tend to use imagery for locating hidden objects, but would glance back and forth between the list and the picture--sometimes using a check-off mark next to items. High hypnotizables spent an average of 20 seconds looking at the list and becoming more familiar with it before starting to try to find the hidden objects. "One can assume this was a preparatory step in the formation of images for a subsequent visual search and the deployment of a holistic strategy during the search.

"When asked why they engaged in their respective behaviors, low hypnotizables generally said that they were not too concerned with the list initially because they searched for hidden items by constructing objects out of discrepancies in the picture. Only when they found what they thought had the properties of an embedded object did the list become important. At that point they would refer back to the list to determine if the object was among those to be located. The list thus served as a tool for confirming the existence of an object they had found as well as a means for enabling them to double check which items they still had to find. High hypnotizable Ss generally claimed that they formed mental images in their heads for each item on the list. Once they found an object in the picture, they compared that object to the formed, mental image rather than referring back to the actual list.

"As was previously mentioned, Crawford and Allen (1983) only found a difference in cognitive strategy between high and low hypnotizable Ss in the hypnotic state. In the present study, however, a strategy difference between these groups was noted in the waking state but only in terms of number of errors produced. A significant difference between high and low hypnotizables was not found in terms of the number of objects correctly found in a pictorial scene within a set period of time. It is possible that had cognitive strategies used in the hypnotic state been compared to those used in the waking state, our results might have been different. It is equally plausible, however, that hypnosis is not the critical factor in producing the

difference between the results of the present study and those of Crawford and Allen (1983). It is possible that high hypnotizable Ss may show a holistic strategy when they are encouraged to involve themselves imaginatively and this encouragement is naturally provided in hypnosis, but it could also be present in the waking state if the task being used is appropriately structured. The task used in the present study is one that could be said to especially encourage the use of imagery, and in this sense, it may be relatively distinct from that used by Crawford and Allen. The fact that Ss practiced imagery on the element list beforehand simply reinforces the difference. Thus, the nature of the cognitive task may be what is at issue and not the presence or absence of hypnosis" (p. 327).

Slomoff, Daniel A. (1986, March). Hypnotic susceptibility, vividness of imagery and the ability to self-regulate pain in a cold pressor test (Dissertation, Fielding Institute). Dissertation Abstracts International, 46 (9), 3231-B.

"Previous studies suggested that subjects who used more vivid images and who are good hypnotic subjects are more involved in their imagery and therefore have better pain control. In this study, subjects were given the Harvard Group Scale of Hypnotic Susceptibility and the Sheehan-Betts Questionnaire Upon Mental Imagery and then exposed to a cold pressor test for pain. Previous studies had limitations using an imagery scale which only tested for visual imagery, asking subjects to learn a new cognitive strategy, and limiting the study to female subjects. This study used both an objective and subjective multisensory test of imagery, tested for both genders, and allowed subjects to use their inherent cognitive strategies. "It was hypothesized that hypnotically susceptible subjects would demonstrate greater pain tolerance and pain intensity. This was not supported. It was also hypothesized that subjects who scored high on pain intensity control and this was also not supported. It was discussed that the instruments may not be strong enough to measure differences when pain tolerance and pain control are being looked at. "It was further predicted that there would be an interaction effect between hypnotizability and vividness of imagery for pain tolerance and pain intensity control. The results did not support this hypothesis. the author felt that it might be necessary to compare high and low imagers rather than high and medium imagers in this study. In that case the degree of difference between the groups might be great enough to demonstrate the interaction effects. As was predicted, it was found that highly hypnotizable subjects who were good imagers did use more imagery and rated this imagery as more effective and more vivid. "It is suggested that future research assess the type of imagery associated with a specific kind of pain experience. Pain as the result of temperature, pressure, or electrical stimulation might require different imagery as a cognitive coping strategy. Appropriate assessment tools will then need to be developed in this regard" (p. 3231).

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J. (1986). Component analysis of cognitive skill training for the enhancement of hypnotic susceptibility. Journal of Abnormal Psychology, 95, 350-357.

Four treatments to enhance the hypnotic responsiveness of subjects who pretested as low in hypnotic susceptibility were compared. Complete skill training included information aimed at encouraging (a) positive attitudes, (b) the use of imagery strategies, and (c) an interpretation of hypnotic behavior as active responding. Partial training included only components (a) and (b). Both training packages enhanced attitudes toward hypnosis to an equivalent degree. However, complete training was much more effective than either partial training or no treatment at enhancing behavioral and subjective responding on two different posttest scales of hypnotic susceptibility. More than half of the subjects who received complete training, but none of the partial training or control subjects, scored in the high-susceptibility range on both posttests. Subjects explicitly instructed to fake hypnosis and those in the complete skill-training treatment exhibited significantly different patterns of posttest responding. Findings support social psychological perspectives that emphasize the importance of contextual factors in hypnotic responding.

Strosahl, K. D. (1986). Imagery assessment by self report: A multidimensional analysis of clinical imagery. Cognitive Therapy and Research, 187-199.

Conducted 2 studies to test the theory that emotive-abstract, sensory modality, and control imagery are functionally distinct abilities and that emotive-abstract imagery and image control are directly related to the quality of in-therapy imagery. In Study 1, 199 undergraduates completed self-report measures of sensory modality, molar imagery, and image control and completed an analog clinical visualization task. In Study 2, 53 undergraduate test-anxious covert behavior therapy participants completed the self-report battery and provided ratings of in-therapy image clarity. Results suggest that emotive/abstract imagery, sensory modality imagery, and image control are factorially distinguishable abilities. A cross-sample factor analysis revealed some instability; however, a theoretically consistent pattern of results emerged. Regression analyses demonstrated that emotive-abstract imagery abilities were the best predictors of performance on the analog task, whereas both image control and emotive imagery were related to the clarity of in-therapy imagery. Results illustrate the qualitative difference between low- and high-order image processes and the possible interaction between emotive imagery and image control.

1985

Acosta, Enrique; Crawford, Helen J. (1985). Iconic memory and hypnotizability: Processing speed, skill or strategy differences?. International Journal of Clinical and Experimental Hypnosis, 33, 236-245.

The purported relationship between hypnotizability and speed of information transfer from iconic to short-term memory was studied in a comparison of 12 low and 12 high hypnotizable Ss. As in Ingram, Saccuzzo, McNeill, and McDonald (1979), high hypnotizable Ss showed less interference from a visual mask in the report of a briefly presented item than did low hypnotizable Ss when the mask delays were predictable. When the delay of the mask could not be anticipated, however, differences between high and low hypnotizable Ss disappeared.

It is suggested that differences in information processing related to hypnotizability may be due to differences in strategy, skills, or other factors, rather than underlying information processing speed.

## NOTES

Hypnosis may require concentrative or selective attention, which usually is measured by self-report (e.g. Absorption) or by experimental measures. Several investigations indicate that high hypnotizable people are better than low hypnotizables at focusing on a task and ignoring extraneous information (Brown, Crawford, Smith, Leu, & Brock, 1983; Graham & Evans, 1977; Karlin, 1979; Miller, 1975; Wallace, 1979; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976). One way to study attentional processes is through the effect of presenting a mask (e.g. \$\$\$\$) shortly after presenting a stimulus (e.g. ABCDE). Ingram (1979) found that highs had faster information processing, but that might be due to anticipation bias associated with the method of limits employed. This study uses both an ascending method of limits, like Ingram, and a condition in which the mask delays were presented randomly within another block of trials.

## RESULTS

"While the present study replicated Ingram et al.'s (1979) findings when an ascending method of limits was used (the same used by Ingram et al.) differences were not found in processing when ISIs were presented randomly. Thus, these results suggest that high and low hypnotizable Ss do not differ in their information transmission rates, but rather they may differ in other aspects which mediate performance in this task" (pp. 241- 242).

"Several lines of evidence point towards strategy or skill differences between high and low hypnotizable Ss as a possible explanation for the present findings. First, it was found that when Ss could anticipate the mask delay (the ascending condition), high hypnotizable Ss outperformed the low hypnotizables. When this anticipation was controlled, as in the random condition, the two groups did not differ when the data were scored by serial position. When the data were scored by a free recall scheme, there was a nonsignificant trend for high hypnotizable Ss to score higher than did the low hypnotizables. This trend suggests that high hypnotizable Ss may be more willing to guess, and to guess more accurately than low hypnotizables, when they have partial information about a letter, and/or they may have greater skill in perceiving incomplete information. The latter suggestion finds indirect support from Crawford (1981) who reported that high hypnotizable Ss can process fragmented stimuli (Gestalt Closure tests, see Thurstone & Jeffrey, 1966), significantly better than can low hypnotizables. High imagers have been shown also to perform significantly better than low imagers in Gestalt Closure tasks (Ernest, 1980). At a speculative level, given that recent research has suggested that iconic memory may be a right hemisphere phenomenon (e.g. Cohen, 1976, but also see DiLollo, 1981), and high hypnotizable Ss outperform low hypnotizables on certain right hemisphere tasks (e.g. Crawford, 1981), it may be asked if the trends found with the free recall scoring scheme in the present study might be a reflection of differential right hemisphere processing. Such a hypothesis could be investigated in

future research by comparing the performance of high and low hypnotizable Ss, as possibly moderated by visuo-spatial ability, for stimuli presented to the left versus the right visual hemifield (Ernest, 1983).

"A second set of evidence in favor of strategy differences was found in Saccuzzo et al. (1982) which was published after the data for the present experiment were collected. In the Saccuzzo et al. (1982) paper, which was an extension and replication of Ingram et al. (1979), the same mask delay was used throughout a 10-trial block. The order of the blocks (i.e., the mask delays) was random. Thus, while S did not know which mask delay was used in the first trial of a block, the remaining 9 trials were the same and could be anticipated. During the first session, high hypnotizable Ss outperformed the low hypnotizables, but these differences disappeared on the second testing session. These results suggest that practice may have affected performance, rather than any underlying information processing speed differences" (pp. 242-243).

Nogrady, Heather; McConkey, Kevin M.; Perry, Campbell (1985). Enhancing visual memory: Trying hypnosis, trying imagination, and trying again. Journal of Abnormal Psychology, 94 (2), 195-204.

Tested visual recall memory of high (n = 24) and low (n = 24) hypnotizable undergraduates (screened under the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale) for black and white line drawings of common objects in either hypnosis, imagination, or control conditions. Memory performance in terms of both correct and incorrect items increased appreciably across the recall tests. Neither hypnosis nor imagination enhanced recall beyond that of normal repeated testing. Hypnotizability was not related to the amount of correct material recalled but was related to the amount of incorrect material reported. High hypnotizable Ss in the hypnosis condition were more likely than other Ss to confidently rate the incorrect material as correct. Findings are discussed in terms of the impact of hypnosis on and the relevance of hypnotizability to enhancing visual memory.

Wallinga, Gary Alan (1985, January). Imagery enhancement: The effects of hypnosis and practice (Dissertation, University of South Dakota). Dissertation Abstracts International, 45 (7), 2326-B.

This study examined the imagery enhancement effects of hypnosis and imagery practice. It also compared the effects of these imagery enhancement techniques when administered to individual subjects as compared to groups of subjects. The sample consisted of 120 undergraduate male student volunteers who were randomly assigned to each of the experimental conditions: 1) imagery practice, 2) hypnosis, 3) hypnosis followed by imagery practice, 4) imagery practice followed by hypnosis, 5) inert treatment control. Each experimental condition was administered to an equal number of subjects individually and in groups. Subjects' self-reports of imagery vividness and imagery control were obtained following administration of the experimental procedures. Three standard imagery questionnaires were used: 4)

Betts' (1909) Questionnaire Upon Mental Imagery, as revised by Sheehan, 2) the Guy Emotive Imagery Scale, (Guy and McCarter, 1978), and 3) Gordon's (1949) Test of Visual Imagery Control, as revised by Richardson, (1969). According to the results obtained in the present study, the effectiveness of imagery enhancement was not supported. Imagery enhancement techniques involving hypnosis decreased subjects' imagery vividness and control while techniques using imagery practice had no effect on imaginal functioning. The results further suggested that across all experimental conditions, subjects trained in groups did not differ significantly from those trained individually. Previous research provides both conflicting and supportive evidence for these results. It is suggested that future research will need to examine differences in experimental processes, uncontrolled for subject characteristics, and alternative dependent measures, in order to reconcile these discrepant findings" (p. 2326).

1984

Billotti, Thomas J. (1984, August). The effects of rational emotive imagery and rational emotive imagery plus hypnosis in reduced public speaking anxiety (Dissertation). Dissertation Abstracts International, 46 (2), 633-634-B.

Previous investigations have demonstrated the effectiveness of rational emotive therapy in reducing public speaking anxiety and the increased benefit derived by combining rational emotive procedures with hypnosis. The present study examined the effectiveness of rational emotive imagery and rational emotive imagery plus hypnosis in reducing public speaking anxiety in subjects with high and low levels of imaginative ability. The dependent measures employed included self report, behavioral and physiological measures of anxiety. "47 undergraduate students who reported anxiety while speaking in public served as subjects in the study. The subjects were divided into high and low levels of imaginative ability and randomly assigned to one of three experimental groups as follows: rational emotive imagery, rational emotive imagery plus hypnosis, and an instructional control group. It was hypothesized that subjects in the rational emotive imagery plus hypnosis group would evidence significantly less anxiety than subjects in the rational emotive imagery and instructional control group, and that subjects with high pre-treatment levels of imaginative ability would evidence significantly less anxiety than subjects with low pre-treatment levels of imaginative ability. "The results of this study provided some support for the efficacy of combining rational emotive imagery with hypnosis. Subjects in the rational emotive imagery plus hypnosis group evidenced significantly less anxiety than subjects in the rational emotive imagery and instructional control group on the two self-report measures. There were no significant differences as between subjects in the rational emotive imagery group and instructional control group or between subjects with high and low imaginative ability on post-treatment assessments. Subjects tended to have their highest pulse rates at the start of the speeches, their lowest pulse rate just after the speeches, and moderate pulse rates just before and during the speeches. "Factors contributing to these results and interpretations of the data were discussed. Suggestions regarding the direction of future research were offered" (p. 633- 634).

1984

Kearns, John S.; Zamansky, Harold S. (1984). Synthetic versus analytic imaging ability as correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 32, 41-50.

It was hypothesized that synthetic imaging ability, but not analytic imaging ability, is positively related to hypnotizability. The correlation of scores on a paired-associates task, used as a measure of synthetic imaging ability, with scores on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), indicated a statistically nonsignificant trend in the predicted direction. 2 measures of analytic imaging ability, as well as Sheehan's (1967) revision of the Betts (1909) Questionnaire Upon Mental Imagery, a measure of vividness of imagery, did not correlate significantly with SHSS:C. The results are discussed in terms of their relation to studies of creativity and goal-directed fantasy.

#### NOTES

The authors review the literature on imagery and hypnotizability and propose that an important variable in hypnosis is an ability to expand imaginatively upon a given verbal input (synthetic imaging ability), akin to Spanos' (1971) concept of goal-directed fantasy. They cite studies relating creativity ("essentially a synthetic process") to hypnotizability, and predict that skill in solving spatial relations problems (analytic imaging ability) is not correlated with hypnotizability because it involves "accurately scanning visual images and converging on solutions to specific problems," (p. 42) rather than creative fantasy characteristic of hypnotic behavior. Forty Subjects had two sessions each: imagery tests in #1 and SHSS:C in #2. Imagery tests included, in this order: 1. Paired Associates (Paivio, 1972; a test of synthetic imaging), in which paired words are learned and later recalled; Experimental Ss were to learn them by combining them into an image, while Control Ss were to simply try to learn them. The nouns differed in imagery strength (potential for stimulating images). 2. Nonsense Forms (a test of analytic imaging), in which Subjects trace with their fingers an irregularly shaped Masonite form, blindfolded, and then choose one of 5 drawings that best matches the form. 3. Cube Visualization (a test of analytic imaging), in which Ss imagine a 2" wooden cube painted red on all faces, that had been sawed into 1" cubes; they are to say how many of the smaller cubes would be red on 3 faces, 2 faces, one face, and none of the faces. 4. Betts QMI.

The Paired Associates (PA) scores were a ratio of high imagery words recalled to low imagery words recalled, intended to reflect the impact of imagery availability on memory. There was a trend for hypnotizability to correlate with PA ratio scores, regardless of whether intermediate or low imagery nouns were used as baseline ( $\rho = .37$  and  $.34$ ,  $p < .10$ ) in the experimental group ("Use imagery to learn."), a trend that was not found in the control group (no imagery instructions). Neither measure of analytic imaging ability (Nonsense Forms, Cube test) correlated with hypnotizability.

In their Discussion, the authors write, "The common factor in successful performance of both imagery-mediated paired associates learning tasks and hypnotic suggestions appears to be the ability to expand imaginatively upon a given verbal input" (p. 47). They cite the literature relating hypnotizable and creative performance (p. 47). "The present findings with the Nonsense Forms Test and the Cube Visualization Test, both of which failed to correlate significantly with SHSS:C, support the hypothesis that hypnotizability is not related to analytic, spatial-imagining skills" (p. 47). "The nonsignificant correlation between Betts QMI and SHSS:C adds to the growing body of inconsistent findings observed with Betts QMI" (p. 47).

"Given the complex nature of hypnotic susceptibility and of imagery (Monteiro et al., 1980), it is perhaps not surprising that studies attempting to relate the two variables directly frequently yield only modest relationships. Very likely, the inclusion of appropriate mediating variables would serve to clarify and, in particular instances, augment the relationships observed between hypnotic responsiveness and imaging ability. One such variable may be the capacity to become fully involved in everyday nonhypnotic experiences, commonly called absorption. This variable has been shown in numerous studies to be related to hypnotizability (e.g. Tellegen & Atkinson, 1974), as well as to creativity and vividness of imagery (P. Bowers, 1978, 1979; Monteiro et al., 1980). Even more relevant to the present study is the possible interaction between level of hypnotic susceptibility and the relationship between synthetic imaging ability and SHSS:C scores. It may be, for example, that the contribution of synthetic imaging ability becomes more critical in eliciting hypnotic behavior from Ss who are only moderately susceptible to hypnosis. Such an analysis was not possible in the present experiment, since the number of high, medium, and low susceptible Ss was approximately equal, and, therefore, the number of Ss at each level was insufficient for an adequate subgroup analysis. Clearly, however, future studies of the role of imaginal skills in hypnotic responsivity must move in directions such as these" (p. 48).

1983

Crawford, Helen J.; Allen, Steven N. (1983). Enhanced visual memory during hypnosis as mediated by hypnotic responsiveness and cognitive strategies. Journal of Experimental Psychology: General, 112 (4), 662-685.

To investigate the hypothesis that hypnosis has an enhancing effect on imagery processing, as mediated by hypnotic responsiveness and cognitive strategies, four experiments compared performance of low and high, or low, medium, and high hypnotically responsive subjects in waking and hypnosis conditions on a successive visual memory discrimination task that required detecting differences between successively presented picture pairs in which one member of the pair was slightly altered. Consistently, hypnotically responsive individuals showed enhanced mean number of correct performance during hypnosis, whereas nonresponsive ones did not. Hypnotic responsiveness correlated .52 ( $p < .001$ ) with enhanced performance

during hypnosis, but it was uncorrelated with waking performance (Experiment 3). Reaction time was not affected by hypnosis, although high hypnotizables were faster than lows in their responses (Experiments 1 and 2).

#### NOTES

Subjects reported enhanced imagery vividness on the self-report Vividness of Visual Imagery Questionnaire during hypnosis. The differential effect between lows and highs was in the anticipated direction but not significant (Experiments 1 and 2).

Two cognitive strategies appeared to mediate visual memory performance: (a) detail strategy (memorization and rehearsal of individual details) and (b) holistic strategy (looking at and remembering the whole picture with accompanying imagery). Both lows and highs reported predominantly detail-oriented strategies during waking; however the highs shifted to a more holistic strategy during hypnosis. It appears that high hypnotizables have a greater capacity than lows for cognitive flexibility (Battig, 1979).

Results are discussed in terms of Paivio's (1971) dual coding theory and Craik and Tulving's (1975) depth of processing theory. The authors also discuss whether hypnosis involves a shift in cerebral dominance, as reflected by the cognitive strategy changes and enhanced imagery processing.

Farthing, G. William; Venturino, Michael; Brown, Scott W. (1983). Relationship between two different types of imagery vividness questionnaire items and three hypnotic susceptibility scale factors: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 8-13.

122 Ss were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962), the Tellegen Absorption Scale (Tellegen & Atkinson, 1974), and 2 tape-recorded questionnaires on vividness of mental imagery. On 1 imagery questionnaire the items were impersonal, objective visual scenes (MIQ:VS), whereas on the other questionnaire the items involved discrete personal actions which elicited a combination of visual and kinesthetic imagery (MIQ:PA). Imagery vividness scores from both questionnaires correlated significantly with hypnotizability scores. MIQ:VS vividness scores were better than MIQ:PA vividness scores at predicting cognitive factor item scores of HGSHS:A, but not ideomotor or challenge factor items scores. Multiple correlations involving MIQ:VS vividness and the Tellegen predicted cognitive factor scores better than ideomotor or challenge factor scores.

#### 1982

Crawford, Helen J. (1982). Hypnotizability, daydreaming styles, imagery vividness, and absorption: A multidimensional study. Journal of Personality and Social Psychology, 42 (5), 915-926.

In 25 male and 31 female university student and staff volunteers, the interrelationships between the following measures were studied: hypnotic susceptibility (SHSS:A and C), imagery vividness (VVIQ), involvement in everyday

activities (TAS), and daydreaming styles (28 scales of Singer & Antrobus's Imaginal Processes Inventory). Factor analysis produced a factor characterized as a positively vivid and absorptive imagination style. Hypnotic susceptibility, VVIQ, TAS, and positive-affect daydreaming styles all loaded on this factor. Two other factors were a dysphoric daydreaming style and a lack-of-attentional-control style. Stepwise multiple regressions suggested that males and females, at least within this sample, exhibit different relationships between hypnotic susceptibility and predictor variables. Similar differences were found for the VVIQ and the TAS and their daydreaming-scale predictor variables.

Smigielski, Jeffrey Steven (1982). Imagery enhancement: An investigation of the effects of hypnosis and practice (Dissertation, University of South Dakota). Dissertation Abstracts International, 43 (n6-B), 2004. (Order No. DA 8226277)

A variety of psychotherapeutic techniques utilize imagery procedures. Many of these are considered to be dependent upon the participant's ability to produce clear, vivid, and manipulable imagery. Clinical procedures have been devised to attempt to enhance imagery ability, in order to obtain maximum therapy effectiveness. The present study was designed to assess the effectiveness of three variations of enhancement procedures. Eighty undergraduate student volunteers, paid for their participation, were selected on the basis of screening for level of hypnotic susceptibility. Ten high susceptibility and ten low susceptibility individuals were randomly assigned to each of 4 experimental conditions: (1) imagery practice only (PR), (2) hypnosis only (Hypnotic), (3) hypnosis plus practice (Help), and (4) inert treatment control (Can). Ss' self reports of imagery vividness and imagery control were obtained following administration of the experimental procedures. Three standard imagery questionnaires were used for this purpose: (1) Betts' (1909) Questionnaire Upon Mental Imagery (QMI), as revised by Sheehan (1967), (2) the Guy Emotional Imagery Scale (GEIS, Guy and McCarter, 1978), and (3) Gordon's (1949) Test of Visual Imagery Control (TVIC), as presented in Richardson (1979). Analyses of variance using the QMI and GEIS as dependent variables yielded no significant treatment effects. Significant differences were noted in analysis of TVIC scores. Post hoc analysis of differences indicated that low susceptibility individuals assigned to the Help condition reported significantly lower imaginal control in comparison with low susceptibility individuals in the PR and Hypnotic conditions, and with high susceptibility controls. They did not differ significantly from low susceptibility controls. Results were interpreted as failing to support the effectiveness of imagery enhancement procedures. Results were considered to be generally consistent with previous work. Suggestions for further research were discussed. Comparison of group versus individually administered enhancement procedures was considered likely to be especially important in future research" (p. 2004).

1981

Hilgard, Ernest R.; Sheehan, Peter W.; Monteiro, K. P.; Macdonald, Hugh (1981). Factorial structure of the Creative Imagination Scale as a measure of hypnotic

responsiveness: An international comparative study. International Journal of Clinical and Experimental Hypnosis, 29, 66-76.

The factor structure of the Creative Imagination Scale (CIS) of Wilson and Barber (1978) was investigated in two studies by correlating scores on it with scores on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the Absorption scale of Tellegen and Atkinson (1974), and Sheehan's (1967) revision of Betts' (1909) imagery scale. One of the studies was conducted at the University of Queensland in Australia (N = 237), the other at Stanford University in California (N = 92). The major finding, consistent in both investigations, was that two factors accounted for the major portion of the variance, one factor designated as a Hypnotic Performance factor, the other designated as an Absorption/Imagination factor. The CIS was weighted highly on both factors, the data bearing on earlier claims that CIS represents a single-factor scale.

Singer, Jerome L.; Pope, Kenneth S. (1981). Daydreaming and imagery skills as predisposing capacities for self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 271-281.

A growing body of empirical literature suggests that daydreaming and related forms of waking reverie are natural-occurring, common experiences in normal individuals. Specific experiments relating daydreaming and the stream of ongoing thought as an alternative source of stimulation to external cues are described. It is proposed that everyday waking consciousness has many features of internal absorption in imagery and adaptive but non-sequential processes that resemble fantasy, hypnosis, and night dreaming. Experiments linking daydreaming, imagery vividness, and hypnosis are cited as suggesting that individuals may develop capacities for control over the stream of thought and that such capacities are closely similar to the skills needed for self-hypnosis.

1980

Coe, William C.; St. Jean, R. L.; Burger, J. M. (1980). Hypnosis and the enhancement of visual imagery. International Journal of Clinical and Experimental Hypnosis, 28, 225-234.

The enhancing effect of hypnosis on the vividness and the control of imagery was investigated. In 1 experiment, Ss who volunteered to be hypnotized were administered 2 measures of imagery, 1 under hypnotic conditions and 1 under imagination instructions while waking (counter-balanced). In another experiment, the imagery of 2 independent samples of Ss (waking or hypnotized) who volunteered for an imagery experiment was evaluated. Of the samples, hypnosis enhanced the vividness and control of imagery in only 1 -- the sample with Ss who volunteered for hypnosis and were first administered a test of imagination while awake. Between the 2 independent samples, control of imagery was reduced in the hypnotized sample. There were no differences in the findings on vividness and control of imagery across high, medium, and low susceptible Ss. Combining all Ss, the correlation between

vidness of visual imagery and hypnotic responsiveness was significant for males ( $r = .52$ ) and the total sample ( $r = .33$ ) but not for females ( $r = .15$ ). Similar correlations for the control of imagery were not significant for males or females alone, but they were for the total sample ( $r = .18$ ). The implications of the results are discussed in light of their relevance to theory, future research, and clinical practice.

Straus, R. A. (1980). A naturalistic experiment investigating the effects of hypnotic induction upon Creative Imagination Scale performance in a clinical setting. International Journal of Clinical and Experimental Hypnosis, 28 (3), 218-224.

A novel experimental design compared performances on the Creative Imagination Scale (CIS) of Wilson and Barber (1978) under hypnotic induction and control conditions. The Ss were 42 paying clients who participated in the study as an implicit part of their first clinical session. Results in this clinical context replicated previous laboratory studies which found that a conventional hypnotic induction procedure did not enhance scores on CIS. The present study suggests that the implicit clinical investigation, where appropriate, permits scientifically sound hypnosis research in natural field settings.

1979

Spanos, Nicholas P.; Ansari, Ferhana; Stam, Henderikus J. (1979). Hypnotic age regression and eidetic imagery: A failure to replicate. Journal of Abnormal Psychology, 88 (1), 88-91.

Walker, Garrett, & Wallace (1976) reported the restoration of eidetic imagery in hypnotically age-regressed subjects. In an attempted replication of that study, 60 subjects who previously scored high on hypnotic susceptibility were 'hypnotically regressed' to age 7. Before administration of the hypnotic procedures and again after age regression, subjects were tested for eidetic imagery using the random-dot stereograms employed by Walker et al. None of our subjects including those who were age regressed according to standard criteria and who reported having been eidetikers as children, were successful at the stereogram tasks. Although these results fail to replicate those of Walker et al., they are consistent with the available evidence concerning the performance of children on stereogram tasks. Contrary to the impression conveyed by Walker et al., children tested to date, including those classified as eidetikers by Haber and Haber's criteria, have been unsuccessful at stereogram tasks.

1978

Dyckman, John M.; Cowan, Philip A. (1978). Imaging vividness and the outcome of in vivo and imagined scene desensitization. Journal of Consulting and Clinical Psychology, 46 (5), 1155-1156.

This study reexamined the role of imaging vividness in desensitization success. Scores on the Betts Questionnaire on Mental Imagery were used to divide 48 snake-phobic subjects into high, medium, and low vivid groups, who were assigned to

imagined scene or in vivo desensitization treatments. Imaging vividness was assessed at scheduled points during therapy. Significant decreases in behavioral and self-reported fear were observed after both treatments, though in vivo desensitization produced significantly greater fear reduction. In therapy imaging vividness scores were significantly correlated with therapeutic success and were superior to pretherapy ratings as predictors of outcome.

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not influenced by social desirability. Factor analysis indicated that subjective and objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

t'Hoen, P. (1978). Effects of hypnotizability and visualizing ability on imagery mediated learning. International Journal of Clinical and Experimental Hypnosis, 26, 45-54

The Ss selected for hypnotizability and visualizing ability were tested for their performance on an imagery-mediated, paired-associates task in which the stimulus materials were varied in imagery and concreteness. Imagery and concreteness showed significant main effects and an additive interaction facilitating learning. Neither hypnotizability nor visualizing ability showed main effects, thereby contradicting the conjecture that those 2 factors would facilitate imagery-mediated learning. However, high hypnotizable Ss learned more high imagery words than the low hypnotizables, and visualizing ability was shown to interact with word concreteness. It is concluded that the effects of hypnotizability and visualizing ability on verbal learning are, at least in part, a function of the content of the words to be learned.

1977

Buckner, Linda G.; Coe, William C. (1977). Imaginative skill, wording of suggestions and hypnotic-susceptibility. International Journal of Clinical and Experimental Hypnosis, 25, 27-36.

3 groups of 20 s based on preselected imaginative capacity were administered either a hypnotic susceptibility scale containing item wording that suggested a goal-directed fantasy or one that did not. Preselected imaginative ability did not predict hypnotic susceptibility or the production of goal-directed fantasies during hypnosis.

However, Ss who received the hypnotic scale containing item wording that suggested goal-directed fantasies reported more goal-directed fantasies than Ss who received the other scale. Limitations of the study are discussed and the causal role of goal-directed fantasy in hypnotic responsiveness is questioned.

1976

Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations. 6458, Slade, 1976

1970

Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.

#### NOTES

Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience.

Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking

visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy

## IMAGINATION

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

Sapp, Marty; Hitchcock, Kim (2003). Creative imagination, absorption, and dissociation with African American college students. Sleep and Hypnosis, 5 (2), 95-104.

The purpose of this study was to assess creative imagination, absorption, and dissociation with African American college students. Two hundred thirty-six undergraduate African American students ranging between the ages of 18 to 22 participated in this study. Students were assigned to the following experimental manipulation: (a) Creative Imagination Scale (CIS), a cognitive-behavioral measure of hypnotizability; and (b) Dissociative Experiences Scale (DES), General Dissociation Scale (GDS), and Tellegen Absorption Scale (TAS) embedded within the CIS. Results indicated that dissociation and absorption were affected by the CIS. Finally, this sample was compared with the European American sample obtained by Barber and Wilson (1978) and Wilson and Barber (1978), and clearly the two samples differed on creative imagination,  $t(405)=7.00$ ,  $p<.005$ . The African American sample had a significantly lower mean CIS score than the European American sample.

NOTES 1:

Key words: imagination, hypnosis, absorption, dissociation, adolescents, cultural differences, African American college students, cognition.

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

## NOTES

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

## Theories of Hypnosis

### Chapter:

1. An Introduction to Hypnosis
2. Hypnosis in the Management of Chronic Pain
3. Hypnosis in Conjunction with Chemical Anesthesia
4. Hypnosis in Conjunction with Regional Anesthesia
5. Hypnosis as the Sole Anesthetic
6. Hypnosis in the Intensive Care Unit
7. Hypnosis in the Emergency Unit
8. Hypnosis in Pediatric Surgery
9. Hypnosis in Obstetrics and Gynecology
10. Perspectives from Physician-Patients

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. (([available online:] <http://www.iuniverse.com/bookstore/marketplace>))

### NOTES

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain.

Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

Gibbons, Don (2000). Applied hypnosis and hyperempiria. New York NY: Plenum Press. ([available online:] <http://www.iuniverse.com/bookstore>)

The book features both traditional hypnotic procedures and hyperempiric inductions based on suggestions of increased awareness, mind expansion, and increased alertness and sensitivity. It contains sections on the use of suggestion as an instrument of personal growth in areas such as improving study skills, taking examinations, achievement motivation, artistic expression, emotional enrichment, aesthetic appreciation and enjoyment, interpersonal effectiveness, musical performance, problem solving, public speaking, salesmanship, sports performance, theatrical performance, and writing ability.

1999

Faymonville, M. E.; Meurisse, M.; Fissette, J. (1999). Hypnosedation: A valuable alternative to traditional anaesthetic techniques. Acta Chirurgica Belgica, 99 (4), 141-146.

Hypnosis has become routine practice in our plastic and endocrine surgery services. Revivication of pleasant life experiences has served as the hypnotic substratum in a series of over 1650 patients since 1992. In retrospective studies, followed by randomised prospective studies, we have confirmed the usefulness of hypnosedation (hypnosis in combination with conscious IV sedation) and local anaesthesia as a valuable alternative to traditional anaesthetic techniques. The credibility of hypnotic techniques and their acceptance by the scientific community will depend on independently-confirmed and reproducible criteria of assessing the hypnotic state. Based on the clinical success of this technique, we were interested in confirming this phenomenon in healthy volunteers. The revivication of pleasant life experiences thus served as the cornerstone of a basic research program developed to objectify the neurophysiological attributes of the hypnotic state. We compared hypnosis to normal alertness with similar thought content. In our experience, the activation profile obtained during the hypnotic state was completely different from simple re-memoration of the same subject matter during normal alertness. This represents an objective and independent criteria by which to assess the hypnotic state.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful

and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1995

Bryant, Richard A. (1995). Fantasy proneness, reported childhood abuse, and the relevance of reported abuse onset. International Journal of Clinical and Experimental Hypnosis, 43 (2), 184-193

This study investigated the relationship between fantasy proneness and the age at which reported childhood sexual abuse occurs. Seventeen adult females who reported having been sexually abused before the age of 7 years, 20 females who reported having been abused after the age of 7 years, and 20 females who reported having never been abused were administered two measures of imaginative involvement (Tellegen Absorption Scale [TAS] and Inventory of Childhood Memories and Imaginings [ICMI]). Participants who were reportedly abused early in childhood obtained higher scores on the TAS and ICMI than participants who were reportedly abused later in childhood, who in turn obtained higher scores than the control participants. Findings are discussed in terms of factors that mediate fantasy proneness and reports of childhood abuse.

Zamansky, Harold S.; Ruehle, Beth L. (1995). Making hypnosis happen: The involuntariness of the hypnotic experience. International Journal of Clinical and Experimental Hypnosis, 43 (4), 386-398.

The authors tested the hypothesis that hypnotized individuals do not truly experience their responses to suggestions as occurring involuntarily, but instead absorb themselves in imagery that is congruent with the suggestions while avoiding critical thoughts, or even simply comply with suggestions without genuinely experiencing their responses as nonvolitional. Participants were instructed to engage in thoughts and imagery that conflicted with the suggestions given, were urged to pay attention to their behavior, and were questioned regarding the perceived involuntariness of their responses. Simultaneously, electrodermal skin conductance responses provided a measure of the truthfulness of their reports. It was found that responses to all hypnotic suggestions were reported as being involuntary, in spite of the conflicting imagery and increased saliency, and that these reports were truthful. These findings provide disconfirming evidence for the sociocognitive theories of hypnosis.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

#### RESULTS

Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Smith, Julien T. (1994). Hypnosis and distraction in the relief of medical pains in an ethnically diverse population of young children (Dissertation, Washington State University, Pullman). Bulletin of Division 30, Psychological Hypnosis, APA, 4 (3), 11.

An ethnically diverse sample of children (N = 36) and their parents volunteered for the study and were trained, with the expectation of equal effects, to use both distraction and imaginative involvement to reduce pain and anxiety. Standardized measures of pain, anxiety and hypnotizability were obtained. Skin conductance response confirmed pain stimulation. Half the subjects used imaginative involvement first and the other half used distraction first. All procedures were video taped. Blind raters judged subjects' responses and subjects reported pain on a standardized scale. Data were collected at baseline, during two intervention sessions and at follow-up. Supporting Hilgard's neodissociation theory, hypnotizable subjects significantly reduced both subjective and objective pain and anxiety scores in response to hypnotic imagination involvement in contrast to low hypnotizable Ss.

No significant effects were found for the distraction condition. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

1992

Bowers, Kenneth S. (1992). Imagination and dissociation in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 40 (4), 253-275.

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

Kirmayer, Laurence J. (1992). Social constructions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 40 (4), 276-300.

Both clinical and experimental views of hypnosis are social constructions that reflect the biases and interests of practitioners and scientists. Each perspective offers useful metaphors for hypnosis. Underlying clinical uses of the term hypnosis are states of mind associated with imaginative reverie and automatic behavior based on procedural knowledge. Social discourse and narratives shape hypnotic experience, but they are themselves influenced by mechanisms of attention and automaticity. Study of hypnosis must proceed on both social and psychological fronts to account for the experience and clinical efficacy of hypnosis. NOTES 1: "In accord with Coe, Sarbin, and other social-psychological theorists, I will argue that hypnosis, like all higher mental phenomena, is fundamentally social in nature. To accept this, however, does not obviate the role of distinctive processes of attention, imagery, and imagination. Hypnosis is a socially constructed context and ritual for evoking imaginative enactment and involuntary of "automatic" modes of experience and behavior. Contemporary social-psychological theorists have failed to

sufficiently explore the nature of enactment. A satisfactory account of hypnosis must go much deeper into the cognitive and social construction of experience; only then can involuntary behavior be properly distinguished from self-deception and self-authorship from cultural construction" (p. 277).

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

## NOTES

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction

while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

Spanos, Nicholas P.; Brice, Peter; Gabora, Natalie J. (1992). Suggested imagery and salivation in hypnotic and non-hypnotic subjects. Contemporary Hypnosis, 9, 105-111.

Salivation was measured in 100 subjects on both a baseline and post-test trial. Subjects in hypnotic, relaxation, and suggestion alone treatments were asked to imagine tasting a lemon during the post-test trial. Subjects in the suggestion alone and relaxation treatments exhibited significant baseline to post-test increments in salivation and, on the post-test trial suggestion alone subjects exhibited greater salivation than either hypnotic subjects or no treatment controls. Neither hypnotizability nor imagery vividness correlated significantly with suggestion-induced increments in salivation.

#### NOTES

"Our findings, like those of numerous earlier studies (reviewed by White, 1978) indicate that instruction to imagine food substances enhance salivation. The fact that imagery-alone instructions were more effective in this regard than hypnotic imagery instructions was unexpected, but this finding is certainly consistent with the large body of evidence which indicates that hypnotic procedures are no more effective than non-hypnotic procedures at enhancing responsiveness to suggestions. Moreover, the present findings, along with those concerning wart regression (Spanos et al., 1988), contradict the hypothesis that hypnotic procedures are particularly effective at enhancing responsiveness to suggestion when the target response is not under direct voluntary control.

"The reasons for the superiority of the imagery-alone treatment to the hypnotic treatment at inducing saliva production remain unclear. Subjects in the three treated groups reported equivalent levels of suggested imagery vividness and, therefore, differences on that variable could not have mediated treatment differences in the amount salivated. On the post-test trial the two treatments that received relaxation instructions (hypnosis and relaxation groups) failed to differ significantly from controls in amount salivated, whereas imagery alone subjects did differ from controls in this respect. Perhaps high levels of relaxation produce a slight inhibition of salivation which at least partly offsets the enhancement produced by suggested imagery. This hypothesis is, of course, highly tentative, and the finding of somewhat less salivation in groups administered relaxation instructions requires replication before further speculation is warranted.

"The finding that controls exhibited a significant decrease in salivation was also unexpected, and the reason for this finding remains unclear.

"Neither the Betts QMI nor any of the hypnotizability indexes correlated significantly with the suggestion induced increments in salivation. On the one hand, these findings are consistent with those of previous studies, which reported no relationship between imagery and/or hypnotizability and suggestion-induced

changes in target responses that were not under subjects' direct control (e.g. Surman et al., 1973; Swirsky-Sacchetti & Margolis, 1986; Spanos et al., 1988). On the other hand, our results failed to replicate White's (1978) finding of a significant correlation between suggestion-induced salivation and Betts QMI scores. Our study differed from that of White (1978) in several important respects. White asked subjects to imagine several foods which they preferred to differing degrees. Significant differences in salivation for subjects classified as high, medium or low on the QMI were found only when subjects imagined preferred foods. Furthermore, subjects classified as high and medium on the QMI tended to salivate to similar degrees when imagining preferred foods, but salivated more under these conditions than low QMI scorers. In the present study all subjects imagined the same food stimulus regardless of preference, and subjects were not selected for extreme scores on the QMI. These differences between our study and that of White (1978) may account for our failure to obtain a significant relationship between QMI scores and imagery-induced salivation" (p. 109).

1991

Crowson, J. Jeffrey, Jr.; Conroy Aileen M.; Chester, Traci D. (1991). Hypnotizability as related to visually induced affective reactivity: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39 (3), 140-144.

Numerous studies have explored the relationship between hypnotizability and individual differences in imaginative involvement and creativity. Most have assessed imaginative or affective involvement by involving Ss in a variety of imaging tasks. Unlike these earlier studies, however, the present study made no attempt to actively involve Ss in the film viewing task. Rather, individuals assessed as high, medium, or low in hypnotizability were exposed to either a violent film, a neutral film, or no film. Results provided tentative evidence to indicate that the level of negative affect reported was significantly greater for highly hypnotizable Ss. Results were discussed in terms of the limitations of the present study and implications for future studies.

Glicksohn, Joseph; Mourad, Boaz; Pavell, Eyal (1991-92). Imagination, absorption and subjective time estimation. Imagination, Cognition and Personality, 167-176.

We report an exploratory study that investigated the interaction of trait and task in determining duration judgment. High and low absorption subjects (determined by median split along the Absorption Scale) viewed a series of paired slides, and were required to relate to each pair in one of two tasks: A metaphor-production task, and a story-production one. These tasks were carried out for an objective interval of fifteen minutes, following which the subject was required to verbally estimate this duration, retrospectively. In addition, from the individual protocols we measured the average time till response and the average time of response. A significant interaction between absorption and task was obtained for the latter two variables. In addition, a main effect for task was found for the duration estimation. These and other results are assessed in terms of both a cognitive-timer model for time

estimation and a contextualistic approach to temporal processing.

#### NOTES

The authors used a model for subjective time estimation (STE) that involves a cognitive timer (or internal clock) that encodes temporal information. STE purportedly may be correlated with the amount of attention directed at the passage of time, and negatively correlated with attention paid to other kinds of tasks.

They used tasks that aroused Subjects' imagination--a series of pairs of slides. One group was to produce a metaphor relating the two slides, while the other group was to produce a short story relating the two--theoretically an easier task.

The authors hypothesized that high absorption Ss would be more engrossed in the task than low absorption Ss, and therefore would underestimate the amount of time used for the task irrespective of task difficulty. For the low absorption Ss they predicted that time estimates for the more difficult metaphor task should be longer, because the task itself demanded more attention than the other task. (High absorption Ss would not exhibit such a difference.)

As another measure, Subjects were required to produce four short time intervals (4, 8, 16, and 32 seconds) to assess whether there might be a different rate of the cognitive timer for the two types of Ss, irrespective of nontemporal task involvement.

26 Ss were randomly allocated to one of two conditions (metaphor task or story task). Since this number of Ss is too small for an adequate evaluation of the interaction effect (absorption x task) of particular interest, the authors regard the experiment as exploratory only.

The results suggest that high absorption Ss view the tasks as easy and pleasant relative to the lows, and have larger STE values. Shorter time estimates are associated with the metaphor task than the story task, for both highs and lows--an unexpected finding. While highs take the same amount of time for metaphor production as for story production, lows take longer to produce a metaphor than a story (and of course, the metaphor is shorter in length!)

The high absorption Ss provided larger estimations of time for the task in which they produced a required number of seconds (4, 8, etc.), indicating a slower baseline rate of functioning of the cognitive timer.

The authors in their discussion find the results supportive of the cognitive timer model. They cite the finding that duration estimate was predicted from STE, task, and interaction of absorption with average time to response. (1) remembered duration was positively correlated with baseline functioning of the cognitive timer (STE) (2) remembered duration was negatively correlated with task difficulty (3) remembered duration was an interactive function of absorption and average time to response.

Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginative sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

Ross, Colin A.; Joshi, S.; Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. Hospital and Community Psychiatry, 42, 297-301.

The 28-item Dissociative Experiences Scale was administered to a stratified cluster sample of 1055 respondents in a general population of Winnipeg. Dissociative experiences were common in the sample and were not related to socioeconomic status, sex, education, religion, or place of birth, although they declined with age in both sexes. A principal components analysis identified three factors accounting for 47.1% of the combined variance of scores. The first factor, absorption-imaginative involvement, is composed of common, benign experiences such as missing part of a conversation, being able to ignore pain, staring into space, absorption in a television program or movie, not being sure if you did something or only thought about it, and remembering things so vividly one seems to be reliving it. The other two factors, activities of dissociated states and depersonalization-derealization, composed of less common experiences such as not recognizing friends or family members and not recognizing one's own reflection in a mirror, may be powerful predictors of DSM-III-R dissociative disorders.

Strauss, Billie S. (1991). The use of a multimodal image, the apple technique, to facilitate clinical hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 1-5.

A 1- to 3-minute exercise involving imagination (of an apple) and ideomotor ideation (hand levitation) is a simple, benign technique that is useful for illustrating to patients the nature of imagery and hypnosis. It avoids power struggles and allows a reasonable approximation of the patient's capacity for imagery and hypnotic responsiveness, without emphasizing the use of a hypnotic procedure. When administered to 35 college students, the hand levitation component of this exercise correlated with the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & E. R. Hilgard, 1963) ( $r = .66, p < .001$ ) and with the Stanford Hypnotic Clinical Scale: Adult (Morgan & J. R. Hilgard, 1975, 1978/79) ( $r = .60, p < .001$ ). NOTES 1: NOTES: Hypnosis is explained as involving imagination and concentration. Then the patient is asked to participate as the clinician checks their imagination. The patient is asked to close their eyes and hold out their hand, after which the clinician says "I'm going to put an apple in your hand; describe the apple to me." The patient is prompted to report multiple sensory modalities with questions Like, "Does the apple have weight? Does it have a smell? Would you Like to take a bite out of the

apple? How does it sound as you chew it?" The clinician can obtain useful information about the patient's preferred sensory modalities, the amount of structure required to engage in imaginal activities, etc.

If the patient becomes very involved with the image and would like to continue the experience on into hypnosis, the clinician can ask them to concentrate on the apple's weight, then tell the patient that s/he will take the apple from the patient's hand and the patient will notice that the hand feels light. As this imagery progresses, the clinician can move into suggesting a sense of lightness, and ultimately an arm levitation procedure like that of Chiasson, i.e. that "when the hand reaches the patient's face, the patient will find himself or herself in a comfortable state of hypnosis" (p. 2).

"At any point where the patient does not appear to respond to suggestions or remain involved with the imagery, techniques are shifted. For example, if the patient indicates that the apple does not appear to have weight or the hand does not feel light, I suggest simply that the patient continue to listen to my voice, to breathe deeply, and to continue to enjoy this comfortable state, perhaps using imagery commensurate with the skills shown by the patient when he or she first imagined the apple. Finally, patients are roused, with posthypnotic suggestions for alertness, comfort, and control" (p. 2).

The author administered this Apple Technique to 12 patients, following the administration with an interview to learn about their subjective responses. Of the 12, 6 showed at least some hand levitation and scored 3-5 on SHCS:A; 6 had no levitation and scored 0-1 on SHCS:A. When administered to 35 college students, only 3 did not experience a sensation of weight when imagining an apple in their hand. A three-point rating (1 = no hand movement; 2 = some hand movement, but not to the face; 3 = hand movement to the face) correlated .66 with SHSS:C and .60 with SHCS:A.

The author has found that good Ss can go into hypnosis within 2-3 minutes using the Apple Technique, while poor Ss conversely may reveal limited imaginative involvement or ideomotor skill within the same amount of time.

**Drake, Stephen D.; Nash, Michael R.; Cawood, Glenn N. (1990-91). Imaginative involvement and hypnotic susceptibility: A re-examination of the relationship. *Imagination, Cognition and Personality*, 10, 141-155.**

Several researchers have reported that significant correlations between hypnotic susceptibility and absorption result from the reactive effects of administering scales immediately before measurement of hypnotizability. The present study was conducted to determine whether interview measures of imaginative involvement are similarly reactive. Three groups of 48, 43, and 43 Ss each were first administered 3 scales of absorption/imaginativeness. This was followed by administration of a hypnotizability scale. Ss in Group 1 who were administered the 3 scales immediately prior to hypnosis evidenced the usual significant positive correlation between each of the 3 scales and hypnotizability. Ss in Groups 2 and 3 were administered the 3 scales 24 to 36 hours prior to hypnosis. Group 2 Ss were informed that administration of these scales was part of a hypnosis experiment. Group 3 Ss were

not aware that the scales were part of a hypnosis experiment. No significant correlation between hypnotizability and the 3 measures of imagination/absorption was evidenced for either Group 2 or Group 3. Our findings suggest that any relationship between these two constructs may be quite dependent on how and when the measures are administered.

Fellows, Brian J. (1990). Current theories of hypnosis: A critical overview. British Journal of Experimental and Clinical Hypnosis, 7, 81-92.

The present state of theory in hypnosis is reviewed and observations are made concerning future prospects. The state- non-state issue continues to dominate theoretical debate, although no satisfactory reply has yet been made to T. X. Barber's criticisms of the 'hypnotic trance' concept. The impact of social-psychological theory has been considerable and the results of Spanos's hypnotic training programme could have significant implications for our understanding of hypnosis. Future theorizing should see a move towards a more integrated sociocognitive approach. Neodissociation theory has generally not fulfilled its early promise and is encumbered with the 'hidden observer' concept. The role of imaginative processes continues to be a dominant theme in hypnosis theory, although the relatively small correlation between imaginative and hypnotic abilities remains a problem. The links between hypnosis, sleep and relaxation deserve further research, although, as theories of hypnosis, their scope seems limited. Suggestibility and role enactment theories have shown few signs of development in recent years. Theoretical problems over the interpretation of hypnosis need to be more widely recognized and the use of question-begging terminology curtailed. One advantage of the imagination hypothesis is that it provides a bridge, or a point of convergence, between state and non-state approaches (Spanos & Barber, 1974). It also handles certain hypnotic phenomena very well. For example, the known facts of age regression can be readily interpreted, together with the oddities of age progression and past life regression, as imaginative reconstructions (Barber, 1979). However, other phenomena, such as amnesia and analgesia, are less easily explained.

Stewart, Malcolm W.; Marks, David F. (1990). Actual and expected hypnotizability in hypnotic analgesia. British Journal of Experimental and Clinical Hypnosis, 7, 47-56.

The effects of actual hypnotizability, assessed by the Creative Imagination Scale (CIS), and expected hypnotizability on hypnotic analgesia were assessed in a design in which a high hypnotizability group and a low hypnotizability group were given incorrect information about their true levels of hypnotizability whilst other groups of highs and lows were correctly informed. Both actual and expected hypnotizability significantly affected self-reports of cold-pressor pain. Post hoc testing showed that the high CIS/high expectancy group reported significantly less pain than the other three groups and, in fact, was the only group to show significant analgesia. The research shows expected hypnotic ability to be an important factor in hypnotic

analgesia. Direct verbal suggestion about a subject's hypnotizability prior to the hypnotic induction significantly enhances reported hypnotic analgesia. This finding could have important clinical applications and indicates the special role of favourable expectancies in hypnotic phenomena. N

#### NOTES

The authors provide a good description of analgesia testing that could be used in training patients to control pain.

**Pain rating:** the subject used a 10-point numerical pain rating scale (as used by Spanos et al., 1979) where 0 was described as 'no pain,' 5 as 'moderate pain' and 10 as 'excruciating pain.'

**Apparatus:** plastic tank with crushed ice and water to depth of 11 cm; digital thermometer to record hand temperature when Subject clasped it tightly; digital stop watch; tape recorder to present instructions; cassette tape recorder to record Subjects' pain ratings.

**Procedure for pain tests:** After recording skin temperature, the Subject was told to put right hand in the water and leave it there until either 90 seconds elapsed or they felt pain was no longer tolerable; Subject was asked to call out each level of pain as it was reached. After removing arm from tank and sitting quietly for 5 minutes, Subject read a letter informing them about their level of hypnotizability. Then they were hypnotized with tape recorded induction (approximately 8 1/2 minutes long), followed by an analgesic suggestion. "Just relax and breathe deeply. You become more and more sleepy, more and more drowsy, deeper and deeper asleep. Deeper and deeper asleep. You are feeling very, very relaxed. This time when your hand is in the water ... it will continue to become more and more numb, insensitive and unfeeling. Just relax and breathe deeply, you will become more and more sleepy, more and more drowsy, deeper and deeper asleep, deeper and deeper asleep, you are feeling very, very relaxed. Now open your eyes. This time when your hand is in the water ... it will continue to become more and more numb, insensitive and unfeeling. This time when your hand is in the water ... it will become more and more numb, insensitive and unfeeling." Then the Subject was instructed to do the cold water immersion (using the other hand this time). Finally, Subjects completed a post-experiment questionnaire.

#### 1989

Snodgrass, M.; Lynn, Steven Jay (1989). Music absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 41-54.

The present study investigated differences between high (N = 15), medium (N = 20), and low (N = 16) hypnotizable Ss' involvement in imaginative versus nonimaginative music. Ss were first screened for hypnotizability with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). In a second session presented as a study of music appreciation, Ss listened to classical music of high- and low-rated music imaginativeness. Ss' involvement was indexed by absorption, imagery elaboration reported in open-ended essays, and reaction time to a pure tone. High hypnotizable Ss reported more absorption than low hypnotizable Ss,

regardless of the imaginativeness level of the music. Ss reported more imagery elaboration in the imaginative than in the low-imaginative passages. High hypnotizable Ss tended to differ in their imagery elaboration in response to the imaginative passages but not in response to the nonimaginative passages. Reaction time results were nonsignificant. No sex differences were found. Medium hypnotizable Ss were indistinguishable from both high- and low-hypnotizable Ss. The findings are generally compatible with J. R. Hilgard's (1970, 1974) construct of imaginative involvement.

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Compliance, imaginal correlates and skill training. [Comment/Discussion] .

#### NOTES

The authors defend the Carlton skill training program against accusation that the trained Ss are simply complying in the context of social pressure. They also discuss characteristics of high hypnotizables (absorption and imagery), noting that the majority of lows do not have low absorption/imagery scores (citing de Groh, 1988, and noting the research on context dependency for absorption).

"Despite all of this, it is worth noting that the results of our modification studies are not inconsistent with the hypothesis that high hypnotizability requires imaginative skills that some subjects do not possess in sufficient degrees. For example, two recent studies (Spanos et al., 1987; Cross and Spanos, 1988) found that the extent to which low hypnotizables showed gains following administration of the CSTP was predicted by their pre-tested levels of imagery vividness. Lows with good imagery benefitted substantially more from the CSTP than did lows with poor imagery ability. When it is kept in mind that most low hypnotizables do not score low on measures of imagery/absorption (de Groh, 1988), then the findings that substantial numbers of low hypnotizables can be taught to attain high hypnotizability is not at all inconsistent with the notion that high hypnotizability requires at least moderate levels of imagery/absorption ability" (p. 14).

de Groh, Margaret (1989). Correlates of hypnotic susceptibility. In Spanos, Nicholas P.; Chaves, John F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 32-63). Buffalo, NY: Prometheus Books.

#### NOTES

The author describes a non-linear relationship between imagery and hypnotizability and between absorption and hypnotizability. People good at imagery may be high or low on hypnotizability scales; the same is true for people high on absorption trait. However, people low on those traits generally are low on measured hypnotizability.

Council, James R.; Greyson, Bruce; Huff, Kenneth D. (1988, November). Reports of paranormal experiences as a function of imaginative and hypnotic ability.

[Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Wilson and Barber (1983) have suggested that some excellent hypnotic subjects ("fantasy prone" persons) may be more likely to report paranormal experiences than the rest of the population. Council and Greyson (1985), studying a sample of subjects who had reported near-death experiences (NDEs), found a significant relationship between fantasy-proneness and NDEs, and a much stronger relationship between fantasy-proneness and reports of paranormal experiences in general. This paper presents new data from the study of NDE reporters and a replication and extension of those findings with a sample not selected for NDEs. These data indicate a strong association between fantasy-proneness and reports of paranormal experiences. Hypnotic susceptibility bears a weaker relationship with such reports that appears dependent upon variance shared with measures of fantasy-proneness. Other data from these studies suggests that both imaginative ability and reports of paranormal experiences may be related to a history of stressful or traumatic childhood experiences.

Cross, W. P.; Spanos, Nicholas P. (1988-89). The effects of imagery vividness and receptivity on skill training induced enhancements in hypnotic susceptibility. Imagination, Cognition and Personality, 8, 89-103.

#### NOTES

This article is cited by Spanos & Flynn (1989) as indicating that high hypnotizability requires imaginative skills that some people do not possess in sufficient degrees.

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

1988

LeBaron, Samuel; Zeltzer, Lonnie K. (1988). Imaginative involvement and hypnotizability in childhood. International Journal of Clinical and Experimental Hypnosis, 36, 284-295.

2 pilot studies assessed the relationship between hypnotizability in children and extent of involvement in fantasy-related activities during early childhood. The

Stanford Hypnotic Clinical Scale for Children and a structured interview questionnaire regarding fantasy activities based on previous work by Singer (1973) were given to 30 medical patients aged 6-18 years in the first study and to 37 healthy children aged 6-12 years from a school population in the second study. In both studies, hypnotizability correlated moderately (.42 and .39, respectively) with extent of involvement in fantasy-related activities. Results support Hilgard's (1979) findings that hypnotizability is related in part to the development of imaginative involvement in childhood.

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

2 pilot studies assessed the relationship between hypnotizability in children and extent of involvement in fantasy-related activities during early childhood. The Stanford Hypnotic Clinical Scale for Children and a structured interview questionnaire regarding fantasy activities based on previous work by Singer (1973) were given to 30 medical patients aged 6-18 years in the first study and to 37 healthy children aged 6-12 years from a school population in the second study. In both studies, hypnotizability correlated moderately (.42 and .39, respectively) with extent of involvement in fantasy-related activities. Results support Hilgard's (1979) findings that hypnotizability is related in part to the development of imaginative involvement in childhood.

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other

subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

Ross, Colin A.; Norton, G. R.; Anderson, Geri (1988). The dissociative experiences scale: A replication study. Dissociation, 1 (3), 21-22.

The authors administered the Dissociative Experiences Scale to medical student controls and patients with multiple, personality disorder, schizophrenia panic disorder, and chemical dependency. Patients with multiple personality disorder scored significantly better than the other clinical groups and the medical student controls.

Spanos, Nicholas P.; Stenstrom, Robert J.; Johnston, Joseph C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. Psychosomatic Medicine, 50, 245-260.

Two experiments assessed the effects of psychological variables on wart regression. In Experiment 1, subjects given hypnotic suggestion exhibited more wart regression than those given either a placebo treatment or no treatment. In Experiment 2, hypnotic and nonhypnotic subjects given the same suggestions were equally likely to exhibit wart regression and more likely to show this effect than no treatment controls. In both experiments, treated subjects who lost warts reported more vivid suggested imagery than treated subjects who did not lose warts. However, hypnotizability and attribute measures of imagery propensity were unrelated to wart loss. Subjects given the suggestion that they would lose warts on only one side of the body did not show evidence of a side-specific treatment effect.

Van Der Hart, O. (1988). An imaginary leave-taking ritual in mourning therapy. International Journal of Clinical and Experimental Hypnosis, 36 (2), 63-69.

One form of mourning therapy is the therapeutic leave-taking ritual, the essence of which is that by parting with symbols connected with the deceased, patients take their leave of the deceased and can start a new life of their own. In the case described in the present paper, the patient performed such a ritual in her imagination while under hypnosis. Her extreme grief response is explained in terms of Janet's theory of emotions. It is emphasized that successfully performing the ritual necessarily involved a change in attitude towards the deceased, and it is argued that the specific characteristics of hypnosis--involuntariness and effortlessness--add an extra dimension to guided imagery approaches to unresolved mourning.

1987

Crist, Dwayne Anderson (1987). The effect of suggestibility on the efficacy of relaxation training instruction: A multisession evaluation (Dissertation, University of Alabama). Dissertation Abstracts International, 47 (n9-B), 3950.

Progressive relaxation is a well established procedure used in the treatment of anxiety related disorders. Research has suggested that the muscle tension-release component of progressive relaxation is the critical variable in producing relaxation effects. However, other techniques which do not employ muscle-tension release have proven effective. It has been suggested that treatment type may interact with personality characteristics to produce greater effects. Suggestibility was selected as a personality characteristic that may facilitate or inhibit relaxation effects. Fifty high and 50 low suggestible individuals were selected to participate based on scores from the Creative Imagination Scale. Half of each group as randomly assigned to either a progressive relaxation or imagery relaxation treatment. Subjects received four weekly sessions of relaxation training. The Relaxation Scale was administered before and after each session to assess effects of training. The results indicated that high suggestible individuals had significantly greater increases in relaxation within session on each of the three scales of the Relaxation Scale, but this appeared to be a result of lower pre-test scores. Only the Physical Assessment scale also demonstrated higher post-test scores for the high suggestible participants. A ceiling effect appeared to be operating for both the Physiological Tension and Cognitive Tension scales. There were no significant differences between the progressive relaxation and imagery relaxation treatments. It appears that muscle tension release may not be a critical variable in relaxation effects" (p. ).

Lynn, Steven Jay; Rhue, Judith W. (1987). Hypnosis, imagination, and fantasy. Journal of Mental Imagery, 11, 101-112.

Considers three questions pertaining to the relationship between hypnotic responsiveness and imaginative processes: Are subjects' nonhypnotic imaginative involvements related to hypnotic susceptibility? Do some fantasy prone subjects share a unique constellation of personality attributes and experiences, including an ability to respond to hypnotic suggestions? What are the childhood developmental antecedents of persons who score at the extremes of hypnotic ability and measures of fantasy and imagination? Reviews literature.

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered

states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

Siuta, J. (1987). Normative and psychometric characteristics of a Polish version of the Creative Imagination Scale. International Journal of Clinical and Experimental Hypnosis, 35 (1), 51-58.

111 Polish undergraduate students participated in a study designed to provide psychometric characteristics of the Creative Imagination Scale (CIS). These results were compared to those from American (Wilson & Barber, 1978) and Australian (Sheehan, McConkey, & Law, 1978) norm studies which also used CIS. The total scale score means of the three samples differed no more than .20 scale points; these differences were not statistically significant. This finding, together with a high consistency in item difficulty level among the three samples which were compared, indicates that cultural differences do not influence the major pattern of findings obtained with CIS. It was also found that CIS possesses high test-retest reliability ( $r = .79$ ) and moderate split-half reliability ( $r = .50$ ). Factor analysis yielded only one

significant factor; this is congruent with results obtained by Wilson and Barber (1978).

**1986**

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

**1985**

Levitan, Alexander A. (1985). Hypnotic death rehearsal. American Journal of Clinical Hypnosis, 27 (4), 211-215.

Death rehearsal is a technique developed to help terminally ill patients and their families deal with anxieties about death. It has proven useful in demystifying the dying process by answering the question "What is it like to die?" Patients, who are able to hypnotically experience the death process, learn to deal with both grief and anxiety with the help of the hypnotherapist. - Author's abstract

Neufeld, Victor; Lynn, Steven Jay; Jacquith, Leah; Weekes, John (1985, November). Fantasy style, imagination, and hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

## **NOTES**

Authors discuss three fantasy styles: 1. Positive constructive daydreaming 2. Guilt / fear of failure 3. Poor attentional control. Fantasy style has been related to many personality variables, usually based on questionnaires.

They examined subjects in hypnosis and waking states using hypnotic dreams, Short Imaginal Processes Inventory, Tellegen Absorption, Betts QMI Imagery Vividness, Hypnosis (HGSHS and suggested dream) involvement, Wilson and Barber ICI, Nonvoluntary experience, Fantasy Proneness, Content of fantasies.

137 student volunteers participated in the study. 82 had HGSHS-A and hypnotic dream, and gave involuntariness ratings. Ss self-rated pleasant and unpleasant for hypnotic dreams. Experimenter rated dream for 1) positive emotion, 2) negative

emotion, and 3) anxiety. Correlations were significant for female Ss, but not for male Ss.

**RESULTS.** Fantasy-style, at least of negative affect, was consistent for waking and hypnotic states. Positive constructive fantasy correlated to HGSHS but the other two fantasy styles did not. [Other results reported are not included in this brief summary.]

**Nogrady, Heather; McConkey, Kevin M.; Perry, Campbell (1985).** Enhancing visual memory: Trying hypnosis, trying imagination, and trying again. Journal of Abnormal Psychology, 94 (2), 195-204.

Tested visual recall memory of high (n = 24) and low (n = 24) hypnotizable undergraduates (screened under the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale) for black and white line drawings of common objects in either hypnosis, imagination, or control conditions. Memory performance in terms of both correct and incorrect items increased appreciably across the recall tests. Neither hypnosis nor imagination enhanced recall beyond that of normal repeated testing. Hypnotizability was not related to the amount of correct material recalled but was related to the amount of incorrect material reported. High hypnotizable Ss in the hypnosis condition were more likely than other Ss to confidently rate the incorrect material as correct. Findings are discussed in terms of the impact of hypnosis on and the relevance of hypnotizability to enhancing visual memory.

**Spanos, Nicholas P.; de Groot, Hans P.; Tiller, Dale K.; Weekes, John R.; Bertrand, Lorne D. (1985).** 'Trance logic,' duality, and hidden observer responding in hypnotic, imagination control, and simulating subjects: A social psychological analysis. Journal of Abnormal Psychology, 94 (4), 611-623.

Tested the hypothesis that a tolerance for logical incongruity characterizes hypnotic responding and is related to reports of duality experiences during age regression and hidden-observer responding during suggested analgesia. 30 undergraduates (the "reals") with high scores on a responsiveness-to-suggestion scale were randomly assigned to hypnotic or imagination control treatments, while 15 undergraduates with low scores were assigned to a simulation treatment in which they were instructed to fake hypnosis. Ss were assessed on 6 indicators of logical incongruity, given age-regression suggestions and perception tasks, administered a suggestion for analgesia and hidden observer instructions, and interviewed. Results do not support the hypothesis. The differences in responding that did emerge between reals and simulators were accounted for by the different task demands to which Ss were exposed. These behavioral differences, which have been previously interpreted in terms of intrinsic characteristics of hypnosis, may instead reflect a combination of between-treatments differences in demands and between- Ss differences in the interpretation of those demands and in the ability to fulfill them.

Barabasz, Arreed F. (1984). Antarctic isolation and imaginative involvement - preliminary findings: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (3), 296-300.

Group 1 Ss (N = 9) were interviewed in Antarctica prior to and following 1 year of Antarctic isolation. Group 2 Ss (N = 7) were exposed to 3 weeks of Antarctic field-site isolation and were interviewed upon return to the United States. A control group of 10 Ss was also interviewed on 2 occasions, paralleling Group 1. Group 1 showed a significant increase in imaginative involvement from pre- to post-Antarctic isolation. Group 2 showed a significantly greater level of imaginative involvement than the control Ss. The possibility that Antarctic living may have revived the mental processes available to these Ss as children is considered within both regression and learning explanations.

Billotti, Thomas J. (1984, August). The effects of rational emotive imagery and rational emotive imagery plus hypnosis in reduced public speaking anxiety (Dissertation). Dissertation Abstracts International, 46 (2), 633-634-B.

Previous investigations have demonstrated the effectiveness of rational emotive therapy in reducing public speaking anxiety and the increased benefit derived by combining rational emotive procedures with hypnosis. The present study examined the effectiveness of rational emotive imagery and rational emotive imagery plus hypnosis in reducing public speaking anxiety in subjects with high and low levels of imaginative ability. The dependent measures employed included self report, behavioral and physiological measures of anxiety. "47 undergraduate students who reported anxiety while speaking in public served as subjects in the study. The subjects were divided into high and low levels of imaginative ability and randomly assigned to one of three experimental groups as follows: rational emotive imagery, rational emotive imagery plus hypnosis, and an instructional control group. It was hypothesized that subjects in the rational emotive imagery plus hypnosis group would evidence significantly less anxiety than subjects in the rational emotive imagery and instructional control group, and that subjects with high pre-treatment levels of imaginative ability would evidence significantly less anxiety than subjects with low pre- treatment levels of imaginative ability. "The results of this study provided some support for the efficacy of combining rational emotive imagery with hypnosis. Subjects in the rational emotive imagery plus hypnosis group evidenced significantly less anxiety than subjects in the rational emotive imagery and instructional control group on the two self-report measures. There were no significant differences as between subjects in the rational emotive imagery group and instructional control group or between subjects with high and low imaginative ability on post-treatment assessments. Subjects tended to have their highest pulse rates at the start of the speeches, their lowest pulse rate just after the speeches, and moderate pulse rates just before and during the speeches. "Factors contributing to these results and interpretations of the data were discussed. Suggestions regarding the direction of future research were offered" (p. 633- 634).

Kearns, John S.; Zamansky, Harold S. (1984). Synthetic versus analytic imaging ability as correlates of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 32, 41-50.

It was hypothesized that synthetic imaging ability, but not analytic imaging ability, is positively related to hypnotizability. The correlation of scores on a paired-associates task, used as a measure of synthetic imaging ability, with scores on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), indicated a statistically nonsignificant trend in the predicted direction. 2 measures of analytic imaging ability, as well as Sheehan's (1967) revision of the Betts (1909) Questionnaire Upon Mental Imagery, a measure of vividness of imagery, did not correlate significantly with SHSS:C. The results are discussed in terms of their relation to studies of creativity and goal-directed fantasy.

#### NOTES

The authors review the literature on imagery and hypnotizability and propose that an important variable in hypnosis is an ability to expand imaginatively upon a given verbal input (synthetic imaging ability), akin to Spanos' (1971) concept of goal-directed fantasy. They cite studies relating creativity ("essentially a synthetic process") to hypnotizability, and predict that skill in solving spatial relations problems (analytic imaging ability) is not correlated with hypnotizability because it involves "accurately scanning visual images and converging on solutions to specific problems," (p. 42) rather than creative fantasy characteristic of hypnotic behavior.

Forty Subjects had two sessions each: imagery tests in #1 and SHSS:C in #2. Imagery tests included, in this order: 1. Paired Associates (Paivio, 1972; a test of synthetic imaging), in which paired words are learned and later recalled; Experimental Ss were to learn them by combining them into an image, while Control Ss were to simply try to learn them. The nouns differed in imagery strength (potential for stimulating images). 2. Nonsense Forms (a test of analytic imaging), in which Subjects trace with their fingers an irregularly shaped Masonite form, blindfolded, and then choose one of 5 drawings that best matches the form. 3. Cube Visualization (a test of analytic imaging), in which Ss imagine a 2" wooden cube painted red on all faces, that had been sawed into 1" cubes; they are to say how many of the smaller cubes would be red on 3 faces, 2 faces, one face, and none of the faces. 4. Betts QMI.

The Paired Associates (PA) scores were a ratio of high imagery words recalled to low imagery words recalled, intended to reflect the impact of imagery availability on memory. There was a trend for hypnotizability to correlate with PA ratio scores, regardless of whether intermediate or low imagery nouns were used as baseline ( $\rho = .37$  and  $.34$ ,  $p < .10$ ) in the experimental group ("Use imagery to learn."), a trend that was not found in the control group (no imagery instructions). Neither measure of analytic imaging ability (Nonsense Forms, Cube test) correlated with hypnotizability.

In their Discussion, the authors write, "The common factor in successful performance of both imagery-mediated paired associates learning tasks and hypnotic suggestions appears to be the ability to expand imaginatively upon a given

verbal input" (p. 47). They cite the literature relating hypnotizable and creative performance (p. 47). "The present findings with the Nonsense Forms Test and the Cube Visualization Test, both of which failed to correlate significantly with SHSS:C, support the hypothesis that hypnotizability is not related to analytic, spatial-imagining skills" (p. 47). "The nonsignificant correlation between Betts QMI and SHSS:C adds to the growing body of inconsistent findings observed with Betts QMI" (p. 47).

"Given the complex nature of hypnotic susceptibility and of imagery (Monteiro et al., 1980), it is perhaps not surprising that studies attempting to relate the two variables directly frequently yield only modest relationships. Very likely, the inclusion of appropriate mediating variables would serve to clarify and, in particular instances, augment the relationships observed between hypnotic responsiveness and imaging ability. One such variable may be the capacity to become fully involved in everyday nonhypnotic experiences, commonly called absorption. This variable has been shown in numerous studies to be related to hypnotizability (e.g. Tellegen & Atkinson, 1974), as well as to creativity and vividness of imagery (P. Bowers, 1978, 1979; Monteiro et al., 1980). Even more relevant to the present study is the possible interaction between level of hypnotic susceptibility and the relationship between synthetic imaging ability and SHSS:C scores. It may be, for example, that the contribution of synthetic imaging ability becomes more critical in eliciting hypnotic behavior from Ss who are only moderately susceptible to hypnosis. Such an analysis was not possible in the present experiment, since the number of high, medium, and low susceptible Ss was approximately equal, and, therefore, the number of Ss at each level was insufficient for an adequate subgroup analysis. Clearly, however, future studies of the role of imaginal skills in hypnotic responsivity must move in directions such as these" (p. 48).

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad

expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

Tilton, P. (1984). The hypnotic hero: A technique for hypnosis with children. International Journal of Clinical and Experimental Hypnosis, 32 (4), 366-375.

A technique for the use of hypnosis with children is described in detail. The method of using this technique to create a new source of ego strength and a secure reality for rapid symptom reduction is discussed. Cases are presented to give the reader examples of the various ways of utilizing this technique.

1983

Eisen, Marlene R.; Fromm, Erika (1983). The clinical use of self-hypnosis in hypnotherapy: Tapping the functions of imagery and adaptive regression. International Journal of Clinical and Experimental Hypnosis, 31 (4), 243-255.

The authors present a new method of interweaving hetero-hypnotic psychotherapy and self-hypnosis. In the hetero-hypnotic sessions, the hypnotherapist acts as a dependable parent figure who is supporting and available when that is desirable, but who also encourages and fosters the patient's efforts to develop his/her inner resources and ability to function autonomously. Self-hypnosis is utilized for its rich idiosyncratic imagery. The hypnotherapist uses and elaborates on this rich, affect-loaded imagery. At other times the therapist takes a guiding role in producing therapeutic metaphors of positive valence. The patient uses and enlarges on these during self-hypnosis between the weekly therapeutic hours. In addition, the hypnotist may counteract any negative strong self-hypnotic images during hetero-hypnosis. Self-directed self-hypnosis allows patients to experience openness and receptivity to internal and unconscious processes against which they may defend themselves in the dyadic relationship with the therapist. For patients struggling with issues of control and for patients fighting their own regressive pull towards dependency, this mode of therapy appears to be particularly effective. The emphasis in this paper is on imagery and on the inter-twining of the two modalities, hetero-hypnosis and self-hypnosis.

Myers, S. A. (1983). The Creative Imagination Scale: Group norms for children and adolescents. International Journal of Clinical and Experimental Hypnosis, 31 (1), 28-36.

This study presented the responsiveness of 1302 children and adolescents (ages 8-17) to the Creative Imagination Scale (CIS) of Wilson and Barber (1978) and Barber and Wilson (1978/79). The normative features of CIS were highlighted in the data analysis. Since items on CIS have been found to be related, a MANOVA was used for the analysis. There were significant differences in both sex and age. Females at each age level, 8 through 17, scored higher on CIS than males of the same age. Ss of

ages 9, 10, and 11 obtained the highest scores, but only differed significantly from the scores for 15-year-old Ss. The other age groups did not differ significantly from each other. In addition, the stability of CIS was confirmed. The author would recommend CIS for Ss 9 years old through adult years, however, CIS should be administered individually to Ss 12 and 15 years old, due to peer pressure.

Sheehan, Peter W. (1982). Imagery and hypnosis--forging a link, at least in part. Research Communications in Psychology, Psychiatry and Behavior, 7 (2), 257-272.

The role of imagery as one aspect of the processes of imagination at work is viewed in relation to ease of responsiveness in hypnosis. Focus is placed on the issue of imagery enhancement in hypnosis and on the relevance of imagery as a correlate of hypnotic susceptibility. Evidence suggests that imagery is positively related to hypnotizability but no clear support has been provided for the enhancement hypothesis. The nature of the association being examined needs to be clarified by closer scrutiny both of the measures used for assessing imagery and hypnosis, and of the test conditions under which the association is studied. Experience-based modes of assessment may help considerably in that pursuit.

Spanos, Nicholas P.; Bridgeman, M.; Stam, H. J.; Gwynn, M. I.; Saad, C. I. (1982-83). When seeing is not believing: The effects of contextual variables on the reports of hypnotic hallucinations. Imagination, Cognition and Personality, 2, 195-209.

When administered a hallucination suggestion most high susceptible hypnotic and task-motivated subjects reported that they "saw" the suggested object. When asked what they meant by "saw," however, almost all indicated that they had imagined the object but did not believe that it had actually been present. On the other hand, simulating subjects maintained that the suggested object had been "really there." Simulators were also more likely than non-simulators to provide "life-like" descriptions of the suggested object (e.g., solid rather than transparent, colored, highly vivid). These findings are consistent with the view that hypnotic hallucinations are context-generated imaginings. They also indicate that unique or unusual psychological processes like "trance logic" need not be posited to account for the descriptions of "hallucinatory" experiences proffered by hypnotic subjects.

#### NOTES

It was observed that hypnotized Ss reported more vivid (and longer sustained) imagery than task motivated Subjects. Hypnotized Ss did not differ from high susceptible simulators on vividness of imagery or how long they experienced the imagery, but did report shorter and less vivid imagery than simulators who were low hypnotizables.

1981

Hilgard, Ernest R.; Sheehan, Peter W.; Monteiro, K. P.; Macdonald, Hugh (1981). Factorial structure of the Creative Imagination Scale as a measure of hypnotic

responsiveness: An international comparative study. International Journal of Clinical and Experimental Hypnosis, 29, 66-76.

The factor structure of the Creative Imagination Scale (CIS) of Wilson and Barber (1978) was investigated in two studies by correlating scores on it with scores on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the Absorption scale of Tellegen and Atkinson (1974), and Sheehan's (1967) revision of Betts' (1909) imagery scale. One of the studies was conducted at the University of Queensland in Australia (N = 237), the other at Stanford University in California (N = 92). The major finding, consistent in both investigations, was that two factors accounted for the major portion of the variance, one factor designated as a Hypnotic Performance factor, the other designated as an Absorption/Imagination factor. The CIS was weighted highly on both factors, the data bearing on earlier claims that CIS represents a single-factor scale.

Singer, Jerome L.; Pope, Kenneth S. (1981). Daydreaming and imagery skills as predisposing capacities for self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 271-281.

A growing body of empirical literature suggests that daydreaming and related forms of waking reverie are natural-occurring, common experiences in normal individuals. Specific experiments relating daydreaming and the stream of ongoing thought as an alternative source of stimulation to external cues are described. It is proposed that everyday waking consciousness has many features of internal absorption in imagery and adaptive but non-sequential processes that resemble fantasy, hypnosis, and night dreaming. Experiments linking daydreaming, imagery vividness, and hypnosis are cited as suggesting that individuals may develop capacities for control over the stream of thought and that such capacities are closely similar to the skills needed for self-hypnosis.

Spanos, Nicholas P.; Brown, Jude M.; Jones, Bill; Horner, Donna (1981). Cognitive activity and suggestions for analgesia in the reduction of reported pain. Journal of Abnormal Psychology, 90, 554-556.

Assessed 38 undergraduates' pain magnitude and pain tolerance for arm immersion in ice water during a baseline and posttest session. Before the posttest, half the Ss received an analgesia suggestion. On the basis of their written testimony, Ss were classified as having either predominately coped (e.g., imagined event inconsistent with pain or made positive self-statements) or predominantly exaggerated (e.g., worried about and exaggerated the noxious aspects of the situation) during each immersion. On both immersions, copers reported less pain and exhibited higher pain tolerance than exaggerators. Moreover, the suggestion was associated with reductions in reported pain only when it transformed baseline exaggerators into posttest copers.

1980

Pereira, M. J.; Austrin, H. R. (1980). Locus of control and status of the experimenter as predictors of suggestibility. International Journal of Clinical and Experimental Hypnosis, 28 (4), 367-374.

The present study investigated locus of control and manipulated status of the experimenter as predictors of suggestibility. Rotter's (1966) Internal-External Locus of Control Scale was used as the paper-pencil measure of locus of control, and the Barber (1965) Suggestibility Scale was used as the measure of suggestibility. We predicted two main effects on suggestibility; one for high externality, and one for high status. In addition, we predicted an interaction between locus of control and status of experimenter. A main effect for locus of control was not found, but one for status was significant, with externals significantly more suggestible than internals in the high status experimenter condition and significantly less suggestible in the low status condition. This interaction effect was viewed as the most significant finding, and implications for prediction were discussed.

Spanos, Nicholas P.; Pawlak, Anne E.; Mah, Christopher D.; D'Eon, Joyce L. (1980). Lateral eye movements, hypnotic susceptibility and imaginal ability in right-handers. Perceptual and Motor Skills, 50, 287-294.

A total of 46 male and 36 female right-handers were assessed on three measures of left-moving, as well as on hypnotic susceptibility, and several measures of imaginal ability. The three left-moving indices intercorrelated significantly. However, none of these indices correlated significantly with hypnotic susceptibility or imaginal ability variables in either sex.

Straus, R. A. (1980). A naturalistic experiment investigating the effects of hypnotic induction upon Creative Imagination Scale performance in a clinical setting. International Journal of Clinical and Experimental Hypnosis, 28 (3), 218-224.

A novel experimental design compared performances on the Creative Imagination Scale (CIS) of Wilson and Barber (1978) under hypnotic induction and control conditions. The Ss were 42 paying clients who participated in the study as an implicit part of their first clinical session. Results in this clinical context replicated previous laboratory studies which found that a conventional hypnotic induction procedure did not enhance scores on CIS. The present study suggests that the implicit clinical investigation, where appropriate, permits scientifically sound hypnosis research in natural field settings

Wallace, Benjamin (1980). Autokinetic movement of an imagined and an hypnotically hallucinated stimulus. International Journal of Clinical and Experimental Hypnosis, 28 (4), 386-393.

Autokinetic movement (AKM) of an imagined or an hallucinated stimulus was assessed as a function of hypnotic susceptibility level. 3 groups of Ss were asked to produce an image of a small, pinpoint spot of light and to monitor any activity of the stimulus. The stimulus was produced by imagination for a group of Ss judged high

in hypnotic susceptibility and for a second group of Ss judged low in hypnotic susceptibility. A third group of Ss, highly susceptible to hypnosis, was asked to hallucinate the pinpoint spot stimulus with the aid of instructions administered by E. Instructions by which movement reports were elicited were kept equal and open-ended for all 3 groups of Ss. Results indicated that form of the stimulus (imagined or hallucinated) did not affect reports of AKM. Hypnotic susceptibility level, however, was a major factor in influencing resultant reports. The Ss judged high in hypnotic susceptibility reported a significantly greater number of direction changes of AKM than Ss low in hypnotic susceptibility. The data are interpreted in terms of the possible differences in stimulus monitoring ability as a function of hypnotic susceptibility level

1979

McConkey, Kevin M.; Sheehan, Peter W.; White, K. D. (1979). Comparison of the Creative Imagination Scale and the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 27 (3), 265-277.

237 Ss were administered both the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962), and the Creative Imagination Scale (CIS) of Barber and Wilson (1977) and Wilson and Barber (1978) in separate testing sessions. Results were analyzed to assess the extent of relationships between the 2 scales and particular attention was paid to the question of whether, or not, CIS can be said to be an index of hypnotizability as traditionally measured by HGSHS:A. Data indicated that performance on CIS relates positively ( $r = .28$ ) to success on HGSHS:A, but the 2 tests are independent in their underlying dimensions. The CIS appears to tap primarily the processes of imagery and imagination which are only partly related to performance on the more complex scales which measure hypnosis as generally conceptualized.

Connors, J. R.; Sheehan, P. W. (1978). The influence of control comparison tasks and between-versus within-subjects effects in hypnotic responsivity. International Journal of Clinical and Experimental Hypnosis, 26, 104-122.

Type of experimental design (between- versus within-subjects) and type of control task were examined for their differential effects on the magnitude of objective and state report test scores associated with response to items on the Stanford Hypnotic Scale of Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). In an integrated program of work exploring design effects in hypnotic research, Ss in each of 7 comparison conditions that involved hypnosis and 4 separate comparison conditions that did not involve hypnosis were tested twice on successive occasions. Three of the control tasks used (waking, imagination, and imagination [alert] instruction) were counterbalanced with hypnosis to analyze possible order effects associated with hypnotic test conditions. Data indexed the patterns of between- versus within-subjects effects associated with standard control tasks and also highlighted the

order effects that accompanied them. Imagination instructions, in particular, pose specific difficulties that require attention when Ss are tested as their own controls.

1978

Sanders, Shirley (1978). Creative problem-solving and psychotherapy. International Journal of Clinical and Experimental Hypnosis, 26, 15-21.

The techniques described comprise a creative problem-solving approach to short-term individual psychotherapy which appears effective in conjunction with hypnosis. The techniques include describing and visualizing the client's problem, imagining alternative reactions, dreaming about new solutions, and trying the solutions in real life. The method is illustrated by 2 clinical examples. The discussion focuses on a comparison of the techniques used with individuals versus with small groups, the fostering of regression in the service of the ego, and the redirection of attention from the physically out of control to the recognition of the possibility of obtaining control. This shift of attention fosters active coping on the part of the client.

1977

Buckner, Linda G.; Coe, William C. (1977). Imaginative skill, wording of suggestions and hypnotic-susceptibility. International Journal of Clinical and Experimental Hypnosis, 25, 27-36.

3 groups of 20 s based on preselected imaginative capacity were administered either a hypnotic susceptibility scale containing item wording that suggested a goal-directed fantasy or one that did not. Preselected imaginative ability did not predict hypnotic susceptibility or the production of goal-directed fantasies during hypnosis. However, Ss who received the hypnotic scale containing item wording that suggested goal-directed fantasies reported more goal-directed fantasies than Ss who received the other scale. Limitations of the study are discussed and the causal role of goal-directed fantasy in hypnotic responsiveness is questioned.

1976

Gur, R. C.; Reyher, J. (1976). Enhancement of creativity via free-imagery and hypnosis. American Journal of Clinical Hypnosis, 18, 237-249.

Thirty-six male, highly susceptible subjects, divided into hypnosis, simulation and waking groups, were given the Torrance Test of Creativity with modified instructions requiring them to wait passively for visual images in response to the test stimuli. Twelve waking subjects received the same test under standard instructions. The hypnotized group scored higher than all control groups on over-all creativity and on Figural creativity, but not on Verbal creativity. The results seem to support the application of the ego-analytic concept of 'adaptive regression' to both hypnosis and creativity. They also seem to confirm the association found between hypnosis and the activation of the non-verbal cerebral hemisphere.

**Raikov, V. L. (1976). The possibility of creativity in the active stage of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 258-268.**

Creative capacity was studied by means of suggestions given to Ss under the condition of active hypnosis. In deep hypnosis it was suggested to S that he was a famous person with a specific talent. In a series of experiments Ss performed under active hypnosis such tasks as drawing, playing musical instruments, and playing chess. The results illustrated that creative processes can be facilitated in Ss capable of deep hypnosis and there is a carry-over of the creative achievements from hypnosis to the waking state. Low hypnotic Ss and control groups did not show improvements in the tasks. A particular significant increase in creativity was observed when Ss capable of deep hypnosis performed several successive creative tasks while hypnotized. The theoretical and experimental definitions of several new approaches to active hypnosis are also discussed.

**Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.**

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations. 6458, Slade, 1976

1975

**Barber, Theodore Xenophon (1975). Responding to 'hypnotic' suggestions: An introspective report. American Journal of Clinical Hypnosis, 18 (1), 6-22.**

The author first presents an introspective report which describes some of his attitudes, motivations, and expectancies and ongoing thought processes while he is responding to 'hypnotic' suggestions. The introspective report indicates that (a) suggested effects are experienced when a person thinks with and imaginatively focuses on those things that are suggested and (b) a person imaginatively focuses on the suggestions when he sees the test situation as useful and worthwhile and when he wants to and expects to experience those things that are suggested. It is then argued that the responsive subject in a hypnotic situation differs in every important respect from the sleepwalker and closely resembles the person who is involved in reading an interesting novel or in observing an interesting motion picture. Finally, the author

outlines a course, now being developed, that aims to teach individuals how to respond to suggestions.

**1970**

**Sarbin, Theodore R.; Juhasz, Joseph B. (1970). Toward a theory of imagination. Journal of Personality, 38 (1), 52-76.**

#### **NOTES**

**Imagination refers to (1) forming mental pictures (imaging) and creative innovating. The authors focus on "the more literal meaning of imagining, that is, 'having mental pictures,' for [they] believe that a clarification of that concept is basic to any further discussion of the psychology of the imagination.**

**"Before continuing, let us establish some reference cases for what a psychologist would call instances of imaging or imagining.**

**1. In a psychophysical experiment, a subject declares that he hears an auditory signal when no signal is presented. The experimenter scores the response as a 'false alarm.'**

**2. A patient in a mental hospital reports seeing the Mother of God. The psychiatrist classifies the report as a hallucination.**

**3. A novelist describes his work habits as involving conversations with imaginary characters. The critic calls this creative work.**

**4. A three-year-old child engages in play with a fictitious invisible rabbit. She is said to have an imaginary playmate" (p. 54).**

**Sutcliffe, J. P.; Perry, Campbell; Sheehan, Peter W. (1970). The relation of some aspects of imagery and fantasy to hypnotizability. Journal of Abnormal Psychology, 76, 279-287.**

**Studied relations between hypnotic susceptibility and some aspects of imagery and fantasy in a normal population of 95 undergraduates. Vividness of imagery was assessed by a reliable questionnaire adapted from procedures 1st devised by G. H. Betts; dreams were collected by a diary method which studied the incidence of distortion in dream content; and hypnotizability was assessed by the Stanford Hypnotic Susceptibility scale (Form C), a standardized scale devised by the authors, and a rating procedure based on both scales. Results show a positive, curvilinear relationship between vividness of imagery and hypnotic susceptibility, but no significant relationship for fantasy. Evidence suggests that both imagery and fantasy, considered conjointly, lead to a more accurate prediction of deep susceptibility than the imagery variable alone. (34 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1969**

**Nowlis, D. P. (1969). The child-rearing antecedents of hypnotic susceptibility and of naturally occurring hypnotic-like experience. International Journal of Clinical and Experimental Hypnosis, 17, 109-120.**

Data pertaining to early and mid-childhood socialization experiences available from a sample of children and their mothers as studied earlier by R. R. Sears, E. E. Maccoby, H. Levin, and others were related to hypnotizability scores and scores of susceptibility to naturally occurring hypnotic-like experiences for a part of the same sample when the children reached late adolescence. As hypothesized by J. R. Hilgard and E. R. Hilgard (see 37:3) after retrospective interviewing with college-age hypnotic Ss, the present study, using a longitudinal method of investigation, indicated some relationship between firm parental discipline in childhood and subsequent susceptibility to hypnosis and hypnotic-like experiences in adolescence. Correlations, however, were low and the overall yield of significant data was judged to be meager. This was particularly true of hypnotizability scores in relation to the other variables available for analysis. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Barber, Theodore Xenophon; Calverley, David S. (1968). Toward a theory of 'hypnotic' behavior: Replication and extension of experiments by Barber and co-workers (1962-65) and Hilgard and Tart (1966). International Journal of Clinical and Experimental Hypnosis, 16, 179-195.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS' CAPABILITIES AND DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Webster, Raymond B. (1962). The effects of hypnosis on performance on the H-T-P and MPS. International Journal of Clinical and Experimental Hypnosis, 10 (3), 151-153.

**Impressionistic analysis supported the view that hypnosis Ss provide richer protocols in the House-Tree-Person projective technique than in the waking state. A quantitative analysis of subtest and total scores on the Minnesota Personality Scale in the 2 states was insignificant. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.**

**Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).**

**1955**

**Schneck, Jerome M. (1955). Hypnotic interviews with the therapist in fantasy. Journal of Clinical and Experimental Hypnosis, 3 (2), 109-116. (Abstracted in Psychological Abstracts, 56: 1126)**

#### **NOTES**

**" Summary. This report furnishes illustrations from two patients of the technique consisting of hypnosis interviews conducted by the patients with the therapist in fantasy. This method emerged from previous work with visual imagery in the form of scene visualization and some of its derivatives. The writer believes that further work with the technique presented now may prove to be beneficial in psychotherapy. At the same time it offers an opportunity for further study of personality functioning in general and certain aspects of psychodynamics. The patients manipulate the session in a way which furthers a duality in their functioning as a result of which they attempt to probe and contend with contradictory tensions in their unconscious. The image of the therapist undergoes certain distortions demonstrating dynamisms such as projection and identification as utilized by the patient. The therapist is in a position to view all of this and to discern elements in his relationship with the patient which may otherwise have escaped him. Countertransference issues may be clarified in this way. The technique may assist at points where the therapist seems to be functioning too blindly and where the patient may more pointedly show the way by guiding the therapist while relating to a mental image of him. There is a possibility that some aspects of this approach in treatment may prove of value in psychotherapy which does not**

incorporate hypnosis. This may be of assistance to workers who have not been trained in hypnotherapy" (pp. 115-116).

1953

Israeli, Nathan (1953). Experimental study of projection in time: I. Outlook upon the remote future--extending through the quintillionth year. Journal of Clinical and Experimental Hypnosis, 1 (2), 49-60.

#### Author's Summary

This report on research now under progress is concerned with time projection and with hypnotic imagination and dreams of projection into varying remote future periods extending to the very distant quintillionth year. The work proceeded in stages including (a) orientation to the general procedure, (b) hypnotic future autobiographic material (age progression), (c) going successively from one future period to another from the end of the 21st century through the quintillionth year -- devoting usually one experimental session to any future period. This paper reports on the self-ratings for hypnosis depth reached by the subjects, their description of life, things, and events, in connection with each projection into a future period, and their visual or nonvisual imagery.

1. Self-ratings for hypnosis depth show with one insignificant exceptional instance that all subjects were always at least at the trance-level or in a deeper hypnotic stage. Individual differences in level reached were indicated with a general trend towards more profound trance in later sessions. The deeper levels on the scale used were not described by the experimenter. Each subject gave those levels his own interpretation in setting up his own scale.

2. The time projections are to be explained in terms of changing space-time framework, social topographic reorientation, recentering, and non-conventional time centering.

3. Hypnotic suggestion to imagine and dream about being suddenly transported and projected into a specified future period is followed by rapid recentering as the subjects follow out the suggestions.

4. Although no specific instructions or sets of suggestions were included about the nature of their anticipations, the description of life, things, and events of any future period was on a predominant impersonal level, with the personal aspects in the background. Nonetheless, the suggestion of transportation and projection into a future period leads to various changes in one's present-situation perceptions, imagery, space-time framework, and system of concepts and beliefs. With a change in time reference, the description of life, things, and events is adjusted to the era or epoch specified. This involves description of technological, biological, psychological, and anthropological changes. The extinction of mankind is anticipated in the very remote future by some subjects. The earth and the moon are expected to disappear by collision or otherwise.

5. Individual analysis shows that the descriptions of the different future periods approximately fit into patterns and are not discontinuous. An individual subject's descriptions beginning with the first future period and taking in all the other periods show constructive or catastrophic trends or cyclical variation between both

extremes. Descriptions of life, things, and events of each future period in the main change in a constructive or in a catastrophic direction. They are continuous but with certain discontinuities and incoherence.

6. A geocentric orientation and a heliocentric preoccupation are invariant and predominant. The subjects are unable to abandon their basic planetary orientation or schemata.

7. Colored imagery includes mainly the primary colors. They comprise both expanse colors and surface colors. Auditory imagery is quite frequent. There are also references to olfactory, tactile, and kinesthetic imagery. Thermic imagery becomes increasingly prominent in the more remote future periods when the sun's heat is described as more intense. Imagery changes with the outlook patterns and appears to have personal, structural, and social determinants. One subject's imagery was macropic.

## IMMUNOLOGY

2003

Wood, Gary J.; Bughi, Stefan; Morrison, John; Tanavoli, Sara; Tanavoli, Sohrab; Zadeh, Homayoun H. (2003). Hypnosis, differential expression of cytokines by T-cell subsets, and the hypothalamo-pituitary-adrenal axis. *American Journal of Clinical Hypnosis*, 45 (3), 179-196.

Tested the hypothesis that hypnosis can differentially modulate T-cell subsets, and that this effect is mediated by changes in hypothalamo-pituitary-adrenal (HPA) mediators. Seven healthy, highly hypnotizable volunteers (aged 24-42 yrs) participated in 3 1-day sessions, a baseline and 2 intervention sessions. Hypnosis intervention entailed a standardized induction, suggestions for ego strengthening and optimally balanced functioning of the immune and neuroendocrine systems, and post-hypnotic suggestions for stress management and continued optimal balance of bodily systems. Blood samples were analyzed for T-cell activation and intracellular cytokine expression (Interferon [IFN]-gamma, Interleukin-2 [IL-2], Interleukin-4,) and HPA axis mediators (ACTH, cortisol, and beta-endorphin). The proportion of T-cells expressing IFN-gamma and IL-2 were lower after hypnosis. T-cell activation response to polyclonal stimulation was positively correlated with ACTH and beta-endorphin, while IFN-gamma expression was correlated with levels of cortisol. Further controlled studies utilizing hypnosis with patients in treatment are warranted in order to examine whether an altered T-cell response can be replicated in the presence of disease. (PscINFO Database Record (c) 2003 APA, all rights reserved)

2002

Hammond, D. C. (2002). Treatment of chronic fatigue with neurofeedback and self-hypnosis.. *NeuroRehabilitation*, 16, 1-6..

A 21 year old patient reported a relatively rapid onset of serious chronic fatigue syndrome (CFS), with her worst symptoms being cognitive impairments. Congruent

with research on rapid onset CFS, she had no psychiatric history and specialized testing did not suggest that somatization was likely. Neuroimaging and EEG research has documented brain dysfunction in cases of CFS. Therefore, a quantitative EEG was done, comparing her to a normative data base. This revealed excessive left frontal theta brainwave activity in an area previously implicated in SPECT research. Therefore, a novel treatment approach was utilized consisting of a combination of EEG neurofeedback and self-hypnosis training, both of which seemed very beneficial. She experienced considerable improvement in fatigue, vigor, and confusion as measured pre-post with the Profile of Mood States and through collaborative interviews with both parents. Most of the changes were maintained at 5, 7, and 9 month follow-up testing.

2001

Kiecolt-Glaser, Janice K.; Marucha, Phillip T.; Atkinson, Cathie; Glaser, Ronald (2001). Hypnosis as a modulator of cellular immune dysregulation during acute stress. Journal of Consulting and Clinical Psychology, 69 (4), 674-682.

To assess the influence of a hypnotic intervention on cellular immune function during a commonplace stressful event, the authors selected 33 medical and dental students on the basis of hypnotic susceptibility. Initial blood samples were obtained during a lower stress period, and a second sample was drawn 3 days before the first major exam of the term. Half of the participants were randomly assigned to hypnotic-relaxation training in the interval between samples. Participants in the hypnotic group were, on average, protected from the stress-related decrements that were observed in control participants' proliferative responses to 2 mitogens, percentages of CD3-super(+) and CD4-super(+) T-lymphocytes, and interleukin 1 production by peripheral blood leukocytes. More frequent hypnotic-relaxation practice was associated with higher percentages of CD3-super(+) and CD4-super(+) T-lymphocytes. These data provide encouraging evidence that interventions may reduce the immunological dysregulation associated with acute stressors. (PsycINFO Database Record (c) 2002 APA, all rights reserved) (journal abstract)

2000

Rossi, Ernest L. (2000). In search of a deep psychobiology of hypnosis: Visionary hypotheses for a new millennium. American Journal of Clinical Hypnosis, 42 (3/4), 178-207.

This search for the deep psychobiological foundations of hypnosis begins with a review of some of the paradoxes of historical hypnosis and the impasse of current theory. It is proposed that further progress requires a deeper investigation of how psychosocial cues can modulate the mechanisms of healing at the CNS, autonomic, neuroendocrine and cellular-genetic levels. The dynamics of hypnotic communication and healing from the cognitive-behavior level to the cellular-genetic are outlined in 4 stages: (1) information transduction between the experiences of consciousness and the limbic-hypothalamic-pituitary system; (2) the psychosomatic network of messenger molecules and their receptors; (3) the immediate early gene

protein cascade; and (4) state dependent memory, learning and behavior. Neuroscience research is outlined for its contributions to a mathematical model of how a psychobiological approach to the therapeutic applications of hypnosis and the placebo response could facilitate neurogenesis in the human hippocampus and healing at the cellular-genetic-protein level throughout the body. A series of 10 hypotheses is proposed as a guide for theory and research in therapeutic hypnosis. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1997

Schafer D. W. (1997). Hypnosis and the treatment of ulcerative colitis and Crohn's disease. American Journal of Clinical Hypnosis, 40 (2), 111-117.

Ulcerative colitis and Crohn's Disease can be cured if they are treated as autoimmune diseases with a special understanding of the personality conflicts in the patient. The author hypothesizes that all autoimmune diseases are characterized by a high normal amount of the aggressive instinctual drives and ambivalence about their realization. Each patient's personality causes the ambivalence to be somaticized into specific autoimmune bodies that aggressively are overproduced and then attack specific tissues. Hypnosis helps in gaining insight, reinforcing interpretations, handling stress, visualizing normal intestinal areas, and controlling of the autoimmune antibodies to the normal level. This paper deals specifically with these 2 diseases.

Hall, Howard; Papas, Angela; Tosi, Michael; Olness, Karen N. (1996). Directional changes in neutrophil adherence following passive resting versus active imagery. International Journal of Neuroscience, 85, 185-194.

This study was designed to determine whether increases or decreases in neutrophil adherence could be achieved following a self-regulation (relaxation/imagery) intervention. Fifteen subjects were randomly assigned to one of three conditions. Two experimental groups employed imagery focused on either increasing or decreasing neutrophil adherence. Subjects had two weeks of self-regulation practice (4 total training sessions) prior to blood drawings. A third group of control subjects had the same number of resting sessions without imagery training. All subjects had blood samples collected before and after either 30 minutes of self-regulation or resting practice for two sessions. Pulse and peripheral finger temperature measures were taken before and after the blood samples. Both experimental groups demonstrated decreases in neutrophil adherence, and the control group showed a tendency toward increases in this measure. The psychophysiologic data for the control group was suggestive of a relaxation response. The experimental group that attempted to increase neutrophil adherence demonstrated psychophysiologic responses that were contrary to relaxation. We concluded that an active cognitive exercise or process is associated with decreases in neutrophil adherence irrespective of the intent of the exercise. In contrast, relaxation without an active imagery exercise was associated with increases in neutrophil adherence. The results of this

study are discussed in terms of behavioral engineering of directional immune changes.

**1995**

Ruzyla-Smith, Patricia; Barabasz, Arreed; Barabasz, Marianne; Warner, Dennis (1995). Effects of hypnosis on the immune response: B-cells, T-cells, helper and suppressor cells. American Journal of Clinical Hypnosis, 38, 71-79.

This study tested the effects of hypnosis on the immune response. High and low hypnotizable Ss were exposed to hypnosis, relaxation or control conditions. Blood samples obtained before treatment and twice thereafter were subjected to flow cytometry analysis. Significant alteration of the immune response as measured by B-cells and helper T-cells was shown only for highly hypnotizable Ss exposed to hypnosis.

**1994**

Holroyd, Jean (1994, January 27). Hypnosis and the mind-body relationship. [Lecture]

**NOTES**

**1:**

Historically, hypnosis has been associated with mental healing (e.g. Mesmer's salon), and clinical literature has been well reviewed by T. X. Barber (1984); Di Piano & Salzberg (1979); E. Hilgard & J. Hilgard (1975); Mott (1979); Paul (1963); and Perry, Gelfand, & Marcovitch (1979). Recently psychoneuroimmunology research has provided some support for the clinical evidence of healing. Research in this area should provide for determining whether the results are due to relaxation, to suggestion (waking or hypnotic), to personality (high hypnotizability), and should lead to an understanding of the basic physiological processes.

Clinical studies are sometimes given more credence by basic laboratory studies in a closely related area. For example, irritable bowel syndrome responded better to hypnosis with direct suggestions than to a combination of psychotherapy and a placebo pill (Whorwell, Prior, and Faragher, 1984). In the laboratory, Klein and Spiegel (1989) showed that secretion of stomach acid could be controlled by hypnosis and suggestion. Chapman, Goodell, & Wolff (1959) demonstrated that hypnotic suggestions could not only decrease but could increase the inflammatory response to burns, and that the response probably was mediated by a histamine-type substance.

Warts have been removed not only by hypnotic suggestion but by waking suggestion (Spanos, Stenstrom, & Johnston, 1988; Spanos, Williams, & Gwynn, 1990), and the hypnosis was more effective than potent placebo comparison treatment conditions. The elimination of warts may be related to control of blood flow or to a change in the immunological response. Chaves, Whilden, & Roller, 1979 (and Chaves, 1980) showed that dental patients could reduce the blood loss associated with dental surgery, using hypnosis and imagery suggestions. Bennett, Benson, & Kuiken (1986) helped back surgery patients to reduce blood loss using waking suggestions. The

immune response also can be modified using hypnotic suggestion (Zachariae, Bjerring, & Arendt-Nielsen, 1989).

In the research on mind-body healing, the following considerations also apply: 1. People's psychosomatic reactivity may affect the results obtained with hypnosis. Research on the immune response has sometimes used patients with psychosomatic disorders as the research subjects, to assure reactive physiological systems. 2. Severity of the disease may affect outcome (e.g. in the Spanos studies, those with the most warts responded best to the hypnosis intervention). 3. Hypnotizability sometimes relates to outcome and sometimes does not, in these investigations. In general, among very highly hypnotizable people, some can perform one hypnotic task such as develop amnesia while others can perform other, different hypnotic tasks.

In summary, there is an extensive clinical literature on hypnosis and healing, and experimental laboratory studies can offer support and some understanding of hypnosis effects on blood flow, histamine release, acid release, immune cell function, etc. In order to establish the effect of hypnosis one needs to start with the best chances for finding an effect: use high hypnotizable subjects. But later you either need to see if results correlate with general hypnotizability or with some other ability or experience, and often waking suggestion is sufficient.

Zachariae, Robert; Locke, Steven E. (1994, October). Effects of hypnotic suggestions on immune and inflammatory processes--experimental studies 1962-1994. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

1:

We reviewed studies of the effects of hypnotic suggestion to enhance or suppress immediate type hypersensitivity (ITH) or delayed type hypersensitivity (DTH) skin responses (investigations between 1960-1994). In the early 60's most of the studies occurred in England with Black and colleagues. In Black's studies there weren't many subjects.

In most studies the stimulus was an allergen to the patient, or histamine injections that mimic immediate type hypersensitivity response. In one study we have used ultraviolet stimulation. Most studies involve decreasing the response, but a few studies used both increasing and decreasing the response.

Measures include the wheal response (local) and erythema (mediated by the nervous system). Most studies find a reduction in both types of response, but in some of our later studies and also the study by Beahrs, Harris, & Hilgard (1970) they didn't find a wheal response but did find erythema reduction. In the ultraviolet response we didn't get a reduction in erythema but did in blood flow.

Studies in delayed type hypersensitivity usually measure induration and erythema; 3 used tuberculin, 3 used varicella zoster, 1 used multiple antigens, 1 used mumps. Antigen in mumps is latent in the body so the immune response will be different. Most studies tried to increase and decrease the response; two tried just to increase, one just to depress it. Some tried to increase the response in one arm and suppress it in the other arm. In ours we separated the two conditions by a week.

## **RESULTS.**

**ITH in general can be suppressed, both the wheal and flare response. Erythema was altered in six studies, unchanged in three; wheal response was altered in [missed number] and unchanged in four. Some studies used allergic patients or those with a psychosomatic history; others screened them out.**

**DTH results are inconclusive for erythema and induration. All studies using PPD as the antigen were positive; one study using DCP and DNCB was positive. Negative results are found in three studies using Varicella Zoster; 1 study using the Multitest, and 1 study using mumps as antigen.**

**One could think the reasons for positive vs. negative results relate to the antigens used, and also the dosages given. Some studies use very small doses; one of ours uses such a large dose it is actually felt and sensed. Health status of Ss also could make a difference: a healthy immune response would resist modification if it's not needed. Timing between stimulus and measurement also varies. Suggestions and rapport may affect results, and also the presentation of suggestions. (Some studies taped the suggestions, some use scripts, but using tapes or scripts may lessen rapport with the Subjects.) Measurements differ, e.g. from area tested, diameter of measurement, type of measurement (ultrasound to measure skin thickness, caliper measurement of skin thickness). In measuring hypnotizability and selecting only high hypnotizables, you may eliminate people who can modify their physiological processes. Ss differ with degree of prior training (those with training are more able to effect responses than on the first time). Operator differences between hypnotists may have some effect.**

**Mechanisms of the process being studied are at issue: Are we dealing with immune or non-immune processes. Changes in skin temperature and blood flow suggest the latter (vaso dilation and vaso constriction), because of lack of changes seen in lymphocytes etc, although two studies found some kind of changes.**

**Damage to cutaneous sensory nerves has produced clearing of psoriasis.**

### **COMMENTS FROM THE AUDIENCE:**

**H. Bennett: How about hypnotizability of the Subjects? Also, T. X. Barber indicated in a long review article that local vascular response accounts for all of this.**

**Response: Just testing for hypnotizability isn't enough. Local response may be important; immunologists say this isn't immunology because you are affecting nonimmune responses.**

**1993**

**Covino, Nicholas A.; Frankel, F. M. (1993). Hypnosis and relaxation in the medically ill. Psychotherapy and Psychosomatics, 60, 75-90.**

**Interest in the application of hypnotic techniques for patients with medical disorders seems to rise and fall over the years. Enthusiasm for this work comes both from patients and from clinicians. Often, however, these techniques are offered without regard to the psychological theories that should inform their operation and the limits that clinical and experimental research suggest. This article offers a brief description of the elements of hypnosis and a review of the history of the use of**

hypnotic techniques with a variety of medical problems, including asthma, habits, pain, cardiology, surgical preparation, irritable bowel syndrome, persistent nausea and vomiting, trichotillomania, and infection and immunity. Special attention is placed on the psychological and physiological principles that help to establish the valid use of hypnotherapy.

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES**

**1:**

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

Hall, Howard; Minnes, Luke; Olness, Karen (1993). The psychophysiology of voluntary immunomodulation. International Journal of Neuroscience, 69, 221-234.

In twenty-two studies of intentional efforts of humans to change immune measures, only four monitored psychophysiologic parameters. One study reported physiologic alterations associated with immune changes. In this current study we examined changes in pulse rate and peripheral temperature associated with intentional changes in neutrophil adherence. Subjects had blood, pulse and temperature recordings collected before and after either a rest condition (Group A), or a self-regulation exercise (Groups B and C) for two sessions. Group C had four prior training sessions before participating in the experimental sessions. This study found no association between psychophysiologic alterations and neutrophil changes. the control group (A) demonstrated no significant neutrophil changes but showed physiologic alterations, whereas, the experimental group (C) that showed increases in neutrophil adherence demonstrated no significant physiologic changes. It was speculated that intentional changes on neutrophil adherence and the pattern of the psychophysiologic measures were associated with and reflective of cognitive activity.

Hall, Howard R.; Papas, Angela; Tosi, Michael; Olness, Karen (1993, October). Bi-directional changes in neutrophil adherence following hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

**NOTES**

**1:**

At the last time that I presented a paper, I talked about the neutrophil. The neutrophil is a model of convenience because it responds quickly to psychological interventions, it is important in upper respiratory infections, and it can be measured reliably in vitro.

We had found that Ss with two weeks of relaxation/imagery training showed an increase in stickiness of neutrophils. We wanted to replicate and extend that study.

We wanted one group to increase, another group to decrease, stickiness in neutrophils. There were a total of three groups, including a resting control group. The model of investigation involves two weeks of training in self hypnosis or simply resting.

Session 1

1 week of practice

Session 2

**Results.** The Control group increased adherence in neutrophils. The imagery-increase group and imagery-decrease group both decreased adherence. (In the first study the controls had no previous experience in relaxation. Also, the experimental group that was tested showed a decrease in first week and increased in the second week.)

Imagery is work, and that may result in less adherence. Pulse rate increased for the group trying to increase stickiness, in Session 1--implying less relaxation for them.

Hypnotizability (measured with the Pennsylvania State University Scale) was not correlated with increase in neutrophil adherence.

**Olness, Karen N. (1993, October). Hypnosis, research, and public affairs. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

#### NOTES

Bill Moyers' TV show on public television, Healing and the Mind, was seen by 15 million when first shown, and the book became a Book of the Month selection. Consumer Reports published Mind-Body Medicine. A TV program, Heart of Healing, sponsored by Noetic Sciences, will be shown; their teaching guides refer to the Society for Clinical and Experimental Hypnosis (SCEH).

The federal government's NIH Office of Alternative Medicine (OAM) now has grants providing up to \$30,000; in first year they received 800 letters of intent, ultimately 500 applications. In Nursing Research they also have sponsored research with OAM. OAM and the Cancer Institute are evaluating studies on using visual imagery with cancer patients. July of this year there was a 3-day working conference, with 80 scientists--1/2 of them from NIH--; David Spiegel and Karen Olness were there. Forty draft RIA's will be coming out. She will give us a draft of the RIA's.

Fetzer Institute of Michigan has been involved, with Robert Lehman--new director--who vows to make it the leading institute for research on the mind. They funded the NIH Conference, but don't give direct research support to investigators.

Marketing information on science and clinical medicine is not an interest for me, but Fetzer's marketing effort has resulted in research support that previously we would not have had. We do not have enough research on the value (cost vs benefits) of hypnotherapy.

Jacknow & Associates looked at nausea in children; hypnotized patients had less nausea than the control group. Syrjala's study (Pain, 1992) and this one did not have a cost benefit component.

A medical student and I learned that even HMOs don't know the average costs for various treatments for migraine headaches. There are only 3 controlled studies on child migraine that compare drugs to placebos! 5-7% of children in U.S. have migraines; 18% of men and 22% of women also have migraines.

We need more studies of how hypnotic ability can be modified, to increase beneficial outcomes.

We are forming a pediatric multi-site group to study Tourette's Syndrome and warts. A Wart Sensor is being developed to measure what is going away and in what order; by Case Western Reserve.

There should be increased funds available in the next 5-7 years. The magazine Scientific American, Sept 24 1993, predicts more support for the behavioral sciences.

It's time to explain the mechanisms of what happens in hypnosis.

Olness, Karen N. (1993, October). Intentional immunomodulation - does it exist?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

1:

Robert Ader coined the term psychoneuroimmunology. The immune system is modulated by feedback mechanisms mediated via neural and endocrine processes, and by feedforward mechanisms, as well (see the second edition of Ader's book).

Ader, Grotta, and Cohen have shown that the immune system of animals also can influence behavior (e.g. genetic influences on preference for chocolate). She thinks this should be considered in designing controlled studies.

In her review of studies, some investigators request Ss to focus on changing an immune parameter; others to "relax." There is evidence for intentional influence on the immune response. Black in England and Good in the U.S. presented studies (Manteaux, histamine sensitivity, etc.) and all were laboratory studies.

Olness (1986) worked with children: they were given self hypnosis practice with instructions to "increase the immune stuff in your spit." This suggestion or request resulted in an increase in saliva IgA. [N.B. In giving suggestions to children, don't use the words "I want you to ..." because that phrasing may arouse resistance.]

The area of hypnosis and suggestion curing warts has a lot of research papers. We are doing a consortium study on treatment of warts with hypnosis and found that basic agreement on methods, such as "how you define a wart," don't exist.

Schoen, Marc (1993). Resistance to health: When the mind interferes with the desire to become well. American Journal of Clinical Hypnosis, 36, 47-54.

Secondary gain has long been viewed as a variable that can significantly affect a patient's recovery from such conditions as chronic pain disorders, factitious and somataform disorders, and other psychological disorders. Secondary gain has not been evaluated in terms of its impact on major illnesses such as cancer or autoimmune disorders. In this paper I discuss how secondary gain can be present in such illnesses and how it results in a resistance to health. This resistance to health can lead not only to medical noncompliance, but can also ultimately affect the progression and recovery from the illness. I describe how hypnosis can be used to

ferret out this resistance to health and how patients in a hypnotic state will indicate or express their resistance to becoming healthy. The advantage of this approach is that it enables the clinician to deal directly with the patient's unconscious resistance to health.

Walker, Leslie G.; Johnson, Vanessa C.; Eremin, Oleg (1993). Modulation of the immune response to stress by hypnosis and relaxation training in healthy volunteers: A critical review. Contemporary Hypnosis, 10, 19-27.

#### NOTES

1:

They review literature on modulation of the immune response to stress with relaxation and/or hypnosis, and raise the following questions and conclusions: 1. It is not clear which dependent variables should be studied. 2. There is a need to clarify which independent variables are responsible for particular effects. 3. There is the question of moderator variables. 4. There is room for many more case studies, including single case research (given the uncertainties discussed and the costs of controlled studies). 5. There is evidence that pathways exist whereby the brain could alter or modulate aspects of immune reactivity. [They describe assigning 20 healthy volunteers randomly to experimental or control group. The experimental group received 3 weeks progressive relaxation and cue-controlled relaxation training, with hypnosis before exposure to an experimental stressor--video recording and playback of a doctor-patient role play. They evaluated not only the biochemical and immunological effects of relaxation training but also the effect in modulating the biological responses to stress.] 6. They concentrated on studies with healthy volunteers because there are already known immunological changes in patients who have tumors. However people with a healthy immune system may have a natural limit in how much they can improve their immune response with interventions like hypnosis.

Zachariae, Robert; Bjerring, P. (1993). Increase and decrease of delayed cutaneous reactions obtained by hypnotic suggestions during sensitization. Studies on dinitrochlorobenzene and diphenylcyclopropanone. Allergy, 48, 6-11.

Cutaneous reactivity to challenge with dinitrochlorobenzene (DNCB) and diphenylcyclopropanone (DCP) was studied in 16 subjects following hypnotic suggestions to increase and to decrease response during sensitization. The immunoreactivity to DNCB and DCP was modulated by direct suggestions and guided imagery under hypnosis. Subjects were high in hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility. Measurement of skin reactions to the challenge one month after sensitization was performed double blindly. Results showed a significant (.01) difference in visually scored reactions to DCP and DNCB between the group instructed to increase reaction to DCP and decrease reaction to DNCB and the group given the opposite instructions. A nonsignificant difference (.055) in skin thickness measured by ultrasound was found between the two groups. The study supports previous reports of experimental modulation of immunoreactivity and indicates that the specific immunological

processes involved in the development of all allergic reactions may be susceptible to psychological factors.

1992

Ewin, Dabney M. (1992). Hypnotherapy for warts (*verruca vulgaris*): 41 consecutive cases with 33 cures. American Journal of Clinical Hypnosis, 35, 1-10.

Published, controlled studies of the use of hypnosis to cure warts are confined to using direct suggestion in hypnosis (DSIH), with cure rates of 27% to 55%. Prepubertal children respond to DSIH almost without exception, but adults often do not. Clinically, many adults who fail to respond to DSIH will heal with individual hypnoanalytic techniques that cannot be tested against controls. By using hypnoanalysis on those who failed to respond to DSIH, 33 of 41 (80%) consecutive patients were cured, two were lost to follow-up, and six did not respond to treatment. Self-hypnosis was not used. Several illustrative cases are presented.

#### NOTES

I do not consider self-hypnosis necessary, and I believe it may be contraindicated. Once the change in sensation has been acknowledged by an ideomotor signal, I suggest that the subconscious will take care of healing the warts and that the patient should ignore them and get interested in other things. Self-hypnosis would require regularly giving attention to the warts, and a high rate of cure is obtained without it. In their controlled study using DSIH with adults, Johnson and Barber (1978) included daily self-hypnosis and got cures in only 3 of 11 (27%) of the hypnotic group. This is the poorest result in the published literature. Their control group of 11 patients was given waking suggestions to 'practice imagining that the specified wart(s) were tingling for a few minutes each day until they were gone' and got no change in 3 months. Hellier (1951) got remission in 27 of 74 (36%) patients just using sham x-ray, (waking suggestion without any self-hypnosis). Spanos et al. (1988) instructed their hypnotic group to 'count their warts every day, and after each counting to close their eyes and spend 3 to 4 minutes imagining the warts on their target hand disappearing.' Only 2 of 8 patients (25%) with a single wart cleared, while 9 of 14 (69%) with multiple warts lost one or more warts at 6- weeks' follow-up. My impression is that conscious daily attention to the lesion is contrary to normal body healing of injuries such as cuts, burns, sprains, in which healing progresses best when ignored while undue attention increases suffering" (pp. 3-4). All Ss were private patients referred for hypnotherapy; most were diagnosed clinically.

"...I found that there were sexual implications in 7 of the 16 miscellaneous warts in patients over 13, so I separated the cases into pre- and postpuberty to evaluate the results" (p. 4).

"An early success was with a medical student (Case 28) with whom I used suggestions of warmth, with the blood vessels dilating and bringing in antibodies, leukocytes, opsonins, etc. Changes were visible in 3 days. This biased me toward using 'warm,' but two of the children (Cases 6 and 9) got no result until I gave them a choice. Using ideomotor signals they chose cold. Only two healed with 'warm,'

while five did with 'cold.' All of them had either had the warts cauterized or frozen previously and had a personal feeling about heat and cold. I've learned to give the patient a choice on the first visit" (p. 5).

"Three... were first treated using DSIH without result and later responded to hypnoanalysis. After obtaining an ideomotor signal that there was no more subconscious value to the warts, the suggestion was given that the body's healing processes would take over without any more conscious attention by the patient. No self-hypnosis was prescribed" (pp 7-8).

Gildston, Phyllis; Gildston, Harold (1992). Hypnotherapeutic intervention for voice disorders related to recurring juvenile laryngeal papillomatosis. International Journal of Clinical and Experimental Hypnosis, 40 (2), 74-87.

Recurring juvenile laryngeal papillomatosis is resistant to cure, and thus usually requires multiple operations which may lead to the extensive proliferation of vocal fold scar tissue. Severe hoarseness, sharply lower pitch, and weak loudness levels are common sequelae. Adjunctive hypnotherapy can increase motivation for change, speed up the acquisition of vocal skills, and possibly even facilitate or sustain remission of growths in selected patients. An 8-year-old girl with severe active eruptions went into remission after 16 sessions, and a 12-year-old boy, already in remission at the beginning of the intervention period, remained free of neoplasms throughout the regimen. Whether or not hypnosis contributed significantly to the sanguine results, it is probable that, at the least, the hypnotic intervention facilitated the achievement of certain technical objectives in voice therapy.

NOTES

1:

Includes a review of relevant studies of physiologic changes induced by hypnosis.

Hall, Howard R. (1992, October). Voluntary immunomodulation in adolescents: A cyberphysiologic approach. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

He is working with a normal population studying neutrophils.

Gave Ss 30 minutes of an imagery exercise to increase neutrophil adherence when compared with controls; e.g., imagery could be ping pong balls in the blood stream, clumping together with honey.

Phase 1: blood sample; strategy or rest; blood sample  
practice for 1 week at home

blood sample; strategy; blood sample Hypothesis 2 Healthy adolescents who practice cyberphysiologic (imagery) strategies for 2 weeks will increase neutrophil adherence compared with controls.

Phase 2:

2 week training in cyberphysiologic technique

Session 1 and Session 2 same as in first study. (Thus, these Ss had practiced the technique already.)

Results were analyzed with ANOVA. Only one factor was significant: neutrophil adherence, the one they were studying.

The experimental group with no prior training showed less adherence than controls, as did the trained group in session 1; but the trained group in session 2 showed a large increase over session 1.

Does this reflect relaxation or an active cognitive process? The group that showed the most change did not show relaxation effect of lowered pulse and finger temperature, though the other two groups lowered pulse rate some. Therefore, it is not relaxation.

There was no association of hypnotizability to the increase in neutrophils, using the Penn State Group Hypnotizability Scale, which correlates with the Stanford Scale.

In future the author will look at whether Ss can increase and decrease neutrophil adherence.

Hall, Howard; Minnes, Luke; Tosi, Michael; Olness, Karen (1992). Voluntary modulation of neutrophil adhesiveness using a cyberphysiologic strategy. International Journal of Neuroscience, 63, 287-297.

In a study of voluntary immunomodulation, 45 subjects were assigned either to a control group or one of two experimental groups. All groups had blood and saliva samples collected before and after either a 30 minute rest condition (Control group) or a 30 minute cyberphysiologic strategy (Experimental groups) to increase neutrophil adherence. These samples were analyzed on a range of immunologic measurements including neutrophil adherence. The second experimental group practiced a cyberphysiologic strategy two weeks prior to the experimental session. Subjects in each group returned to repeat their exercise in a second session the following week. Analysis of all immune measurements revealed statistical significance for changes in neutrophil adherence. These studies suggest that such strategies may be used to effect changes in immune cell functions. Analysis further revealed that those subjects with prior cyberphysiologic training were able, by the second session, to induce a significant increase in neutrophil adherence.

Hall, Howard R.; Mumma, Gregory H.; Longo, Santo; Dixon, Richard (1992). Voluntary immunomodulation: A preliminary study. International Journal of Neuroscience, 63 (3-4), 275-285.

This study explored the effects of relaxation and imagery procedures on the voluntary self-regulation of immune responses. Immune studies of 19 adults were made before and after a 45 minute intervention consisting of relaxation with imagery aimed at enhancing immune activity. A self-report measure of psychological distress was completed before each blood sample. Results indicate that the seven blood measures of immune functioning were measured with adequate reliability and consisted of two sets of immune parameters. A statistically significant increase in one of the mitogen measures and a marginally significant increase in one of the blood count measures was found following the relaxation/imagery procedure. Age, hypnotizability, and their interaction significantly predicted change on the set

of blood count measures but not on the set of mitogen measures. As expected, level of subjective psychological distress generally decreased following the intervention. The methodological limitations of this study included limited sample size and absence of a control group.

Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.

## NOTES

1:

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social-cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these

responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

Isenberg, S. A.; Lehrer, P. M.; Hochron, S. (1992). The effects of suggestion on airways of asthmatic subjects breathing room air as a suggested bronchoconstrictor and bronchodilator. Journal of Psychosomatic Research, 36, 769-776.

Thirty-three asthmatic subjects were told they were receiving, alternately, an inhaled bronchoconstrictor and inhaled bronchodilator, although they actually were only breathing room air. No subjects showed suggestion-produced effects on FEV1, although two (of the 19 on whom FEF50 was measured) showed effects of greater than 20% on measures of maximal midexpiratory flow. The incidence of the effect is smaller than reported previously, possibly because some subjects in previous studies inhaled saline, a mild bronchoconstrictor, and reversal of effect was not required for classification as a reactor. Higher percentages of subjects in this study showed decreased MMEF in response to the "bronchoconstrictor", but this appeared to reflect fatigue rather than suggestion effects. However, the fact that the effect occurred in a relatively non-effort-dependent measure suggests that real changes occurred in bronchial caliber, not just in test effort. Suggestion had a significant effect on perception of bronchial changes, but the correlation between actual and perceived changes was minimal. There was an increase in FVC prior to administration of the "bronchoconstrictor", possibly reflecting a preparatory response to the expected drug. Correlations among self-report variables suggested the existence of three personality dimensions among our population related to suggestion and asthma: cognitive susceptibility to suggestion of bronchial change; feeling of physical vulnerability; and anxiety. However, there was no significant relationship between airway response to suggested changes and hypnotic susceptibility, as measured by the Harvard Group Scale of Hypnotic Susceptibility

Ruzyla-Smith, Patricia; Barabasz, Arreed; Barabasz, Marianne (1992, October). Effects of hypnosis and restricted environmental stimulation therapy on the immune response: B- and T-cells, helper and suppresser cells. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

1:

This research extends Robert Hall's work with B-cells and T-cells, adding helper cells and suppressor cells to the dependent measures also.

Random assignment of high hypnotizable people and low hypnotizable people to 3 groups resulted in 6 groups: Hypnosis High Hypnotizables (10) Hypnosis Low

Hypnotizables (11) REST High Hypnotizables (13) REST Low Hypnotizables (11)  
Control High Hypnotizables (10) Control Low Hypnotizables (10)

The Research Procedure entailed: Orientation to hypnosis, plateauing hypnosis response through repeated inductions Assigned participants randomly by hypnotizability to above groups Orientation to immune response measurement Administration of the Symptom Check List - 90, Revised Skin conductance response (taken during blood draws to measure anxiety) Pretreatment blood draw Audiotaped hypnotic induction Self hypnosis instructions Posttreatment 1 blood draw One week Treatment 2 Induction Posttreatment 2 Blood draw Post Experimental inquiry

Prior to first session Ss in Group 1 received orientation to flotation tank Pretreatment blood draw One hour REST session [with no suggestions to alter the immune response] Posttreatment 1 blood draw One week Treatment 2 REST session Posttreatment 2 Blood draw Post experimental inquiry

Waiting list controls experienced: First blood draw Second blood draw after 1 hour One week follow up Third Blood draw Post experimental inquiry  
(N.B. SCL-90 apparently was being taken on each experimental visit.)

## RESULTS

The analysis used covariate of pretreatment measurements. Immune response measured was a standard procedure, e.g. % B-Cells by FACS (the dot measure of immune response). Post Treatment 1 showed high and low hypnotizables increasing their B-cells in the hypnosis condition; also H-cells increased. Highs in hypnosis had higher T-cells when compared with highs in REST but not in other treatment and control groups.

No significant changes were observed in T suppressor cells, though high hypnotizables in the hypnotized condition seemed to have increase in suppressor cells. Maybe it was the way the suggestion was given; perhaps we should say they would not only increase their helper cells but would decrease their suppressor cells. The author viewed the results as supporting Hilgard's neodissociation theory.

Spiegel, David (1992, October). Hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

Dr. Spiegel announced that this was a last minute substitution for Fred Frankel's presentation on Hypnotizability.

We have ongoing a major replication of the study that we published on group therapy with terminally ill breast cancer patients. The matched control patients get educational materials but not psychotherapy. We are looking at NKC cytotoxicity and delayed hypersensitivity.

Tasks: spend 15 minutes discussing list of problems; 15 minutes discussing things like, "What is your spouse doing that doesn't help; what can we do to help it?" We get drop in NKC cytotoxicity immediately afterward, returning after 24 hrs to usual levels. Controls don't drop in NKC cytotoxicity. This measure of stress may be a predictor of survival time.

In Fawzy's study of group therapy with melanoma patients, they noted a significant difference at 6 months in interferon augmented activity of NK, which didn't hold up at a year. But at 6 years there were 10 of 40 deaths in control group vs 3 of 40 deaths in treated group. This is a vigorous effect.

Cohen's study of colds in New England J. of Med is another good clinical study.

There are two broad areas of relevance of hypnotizability to healing: 1. Hypnotizability as a trait: do highs differ in way they regulate body or mind? 2. Is there something you do when in hypnotized state that is different? Studies of treatment of warts with hypnosis are important 3. Transition between states, e.g. circadian rhythms; is there a shift in wakefulness between trance and nontrance states that affects health?

Psychiatric Diagnosis and self regulation. High hypnotizability is associated with certain psychiatric disorders (dissociative reaction, PTSD, MPD, etc.). Schizophrenics score much lower than normals (av. = 4 vs 7; replicated with the Hypnotic Induction Profile (HIP). Stanford Hypnotizability Scales show no difference in means, but do show a difference in range). I don't know what this means. But schizophrenics can falsely pass some Stanford Scale items, e.g. amnesia which they don't however reverse; so schizophrenics' hypnotizability scores may be inflated on Stanford scales. We don't see extremely high scores in schizophrenics.

Psychoactive medication doesn't affect scores of schizophrenics, but improves scores of anxiety neurotics (by reducing anxiety). Frischholz has an article coming out in a psychiatry journal that confirms this.

There is a lot of evidence that patients with dissociative disorders are more hypnotizable than other groups. Frischholz et al couldn't replicate Frankel's finding of higher scores in phobics. Pettinati et al found higher scores in bulimia and I haven't seen anything to counter that. Another idea is that high hypnotizables are very good at internal regulation

Spiegel & Ken Kline selected Ss who could regulate gastric activity. They got an 80% increase in gastric acid output while imagining eating; got 40% decrease in output when imagining something pleasant that wasn't imagining eating. Injected with pentagastrin, which induces gastric output, they still got a decrease in gastric acid output in the relaxation condition.

This suggests that hypnotizability should be a selection criterion for some research. See also Katz et al. 1974 (?) with acupuncture; and McGlashan, Evans & Orne on the placebo response.

Herbert Spiegel found that 2/3 of highs but 1/3 of lows were cured of phobia. Eye roll sign on the HIP, living with spouse/lover, rating self as hypnotizable, and giving a postcard follow-up response at one week post treatment were associated with 89% rate abstinence at 2 years follow-up, when only 23% overall of 223 were abstinent. Absence of those positive predictors was associated with only a 4% rate of abstinence.

Walker, Leslie G. (1992). Hypnosis with cancer patients. American Journal of Preventative Psychiatry & Neurology, 3, 42-49.

Overviews the uses of hypnosis with cancer, for example to ameliorate side effects of treatment, help patients adjust to having cancer and its symptoms, reduce the distress caused by painful procedures, and to attempt to alter mechanisms of immunity with a view to improving prognosis. Studies in these areas are reviewed.

Zachariae, Robert; Petersen, Kirstan S.; Simonsen, Carsten; Thestrup-Pederson, Kristian (1992, October). Effects of guided imagery and relaxation on natural killer cell activity in high and low hypnotizable subjects. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

Author describes work done in Denmark with immediate and delayed hypersensitivity; hypnotically induced emotions and effect on [missed words] chemocytotoxicity (?). Now we are studying cancer patients, because it is popular to believe you can cure yourself with guided imagery and hypnosis.

First study used healthy subjects and was directed at several questions: 1. Do results in previous studies result from immune specific suggestions or from a general effect on homeostasis (like one gets with relaxation)? 2. Few studies consider hypnotizability or use highly hypnotizable Ss. Is hypnotizability a factor? 3. What changes can we expect? 4. To what extent can we determine what a healthy immune response is?

There were 120 undergraduate psychology students (81 female, 39 male), measured with Harvard Scale of hypnotizability. We selected 30 for 3 groups with 5 highs (9-12) and 5 lows (0-6) in each group. The Ss were randomized into 3 groups:

Guided imagery group: Ss were instructed in how guided imagery might affect the immune system. They experienced live, direct intervention with music, and with instruction to imagine the cells of the immune system becoming increasingly effective. Ss were given an audiotape to use 3 times/wk for 2 weeks.

Relaxation group: Ss were not given instructions re the immune system. Control group: Ss were sitting, reading newspaper, magazines. All groups came in on days 1, 8, 15 and 36 (the last time after a 3 week separation). Ss provided 3 blood samples each session.

Music was composed to go along with the imagery (when the suggestions said that cells were active, the music was active). Relaxation imagery was of their own choosing, with instructions to go to some place in nature and relax.

The fourth session was changed so that the relaxation group was given "an intelligence test," which was a stressor. (They were told that anyone could do it, which wasn't true.) The Control group listened to what the investigators felt was neutral music.

Results showed no difference in percentage of K cells between the three groups. There are differences within each day. The only difference was in the Relaxation group on the fourth day; with the stress test there was a slight increase.

We also looked at the percentage of increase or decrease. There was tendency for highly hypnotizables to show larger increases and decreases. In the Control group, highs and lows were opposite in this reaction: lows showed large decreases, but highs showed no decreases and no or small increases.

After the stress test the lows had an increase in NKCA; they are the ones responsible for the change seen in the stress condition.

We did another similar study, with 30 Ss but only 2 blood samples each day. We studied the response to PHA, measuring cpm 10 - 3. Controls don't change, but the two other groups do. So we observed different lymphocyte proliferative response with different agents. Also, the control group that knows it is a control doesn't show changes at the beginning.

**CONCLUSIONS.** 1. Effects may vary with the immune parameter measured. 2. The effects of immune specific imagery and relaxation are similar. 3. Changes may be due to a non-specific effect on general homeostasis.

Though costly and time consuming, further studies with a larger number of Ss are needed.

**COMMENTS FROM THE AUDIENCE:**

Karen Olness: We found a difference between hypnosis and nonspecific relaxation with children. Research in this area is very expensive, however.

1991

Hajek, P. R.; Radil, T.; Jakoubek, B. (1991). Hypnotic skin analgesia in healthy individuals and patients with atopic eczema. Homeostasis in Health and Disease, 33, 156-157.

**NOTES**

The cutaneous pain threshold was measured before, during, and after 10 sessions of hypnosis in 14 healthy and 13 atopic eczema patients. A control group of 10 healthy subjects who were not hypnotized was also evaluated. Cutaneous pain threshold increase was correlated with improvement of eczema and was correlated with hypnotizability.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

**NOTES 1:** NOTES: They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the

patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually

beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Schumaker, John F. (1991). Human suggestibility: Advances in theory, research and application. New York: Routledge, Chapman, and Hall.

#### NOTES

1:

This book discusses suggestibility in relation to mental illness (e.g., MPD, anorexia nervosa), advertising, education, self-deception, forensics, political persuasion, and the biological aspects of the suggestion process (e.g., the effects of suggestion on the immune system).

Van Der Kolk, Bessel; Van Der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. American Imago, 48, 425-454.

Describes the work of Janet concerning narrative versus traumatic memory, dissociation, and subconscious fixed ideas. Janet (1904) believed PTSD patients suffer from a phobia for the traumatic memory. Repression and dissociation are distinguished. Contemporary concepts of memory processing and the concept of schemas are then reviewed. Finally, a model is presented about how the mind freezes some memories. Evidence for the involvement of autonomic hyperarousal, triggering, and state dependent learning in PTSD is reviewed. They conclude that helplessness and the inability of the PTSD victim to take action (psychological and physical immobilization) facilitates dissociation. Includes practical ideas for the working through of trauma.

#### NOTES

p. 443 "Traumatic memories are triggered by autonomic arousal ... and are thought to be mediated via hyper-potentiated noradrenergic pathways originating in the locus coeruleus of the brain... The locus coeruleus is the 'alarm bell' of the central nervous system, which properly goes off only under situations of threat, but which, in traumatized people, is liable to respond to any number of triggering conditions akin to the saliva in Pavlov's dogs. When the locus coeruleus alarm gets activated, it secretes noradrenaline, and, if rung repeatedly, endogenous opioids. These, in turn, dampen perception of pain, physical as well as psychological (van der Kolk et al. 1989). These neurotransmitters which are activated by alarm affect the hippocampus, the amygdala and the frontal lobes, where stress-induced neurochemical alterations affect the interpretation of incoming stimuli further in the direction of 'emergency' and fight/flight responses" (p. 443).

1990

Ader, Robert; Felton, David; Cohen, Nicholas (1990). Interactions between the brain and the immune system. In Cho, Arthur K.; George, Robert; Blaschke, Terrence (Ed.), null (30, pp. 561-602). Palo Alto, CA: Annual Reviews Inc..

#### NOTES

(From the SUMMARY)

**"Without attempting to cover all the literature, we have used stress effects and conditioning phenomena as illustrations to point out that behavior can influence immune function. We have also described data indicating that the immune system can receive and respond to neural and endocrine signals. Conversely, behavioral, neural, and endocrine responses seem to be influenced by an activated immune system. Thus, a traditional view of immune function that is confined to cellular interactions occurring within lymphoid tissues is insufficient to account for changes in immunity observed in subhuman animals and man under real world conditions.**

**"These data question seriously the notion of an autonomous immune system. ... The immune system is, indeed, capable of considerable self-regulation, and immune responses can be made to take place in vitro. The functions of that component of adaptive processes known as the immune system that are of ultimate concern, however, are those that take place in vivo. There are now compelling reasons to believe that in vivo immunoregulatory processes influence and are influenced by the neuroendocrine environment in which such processes actually take place ... . The immune system appears to be modulated, not only by feedback mechanisms mediated through neural and endocrine processes, but by feedforward mechanisms as well. The immunologic effects of learning, an essential feedforward mechanism, suggest that, like direct neural and endocrine processes, behavior can, under appropriate circumstances, serve an immunoregulatory function in vivo. Conceptually, the capacity to suppress or enhance immune responses by conditioning has raised innumerable questions about the normal operation and modifiability of the immune system via neural and endocrine processes.**

**"We do not yet know the nature of all the channels of communication between the brain and the immune system or the functional significance of the neural and endocrine interrelationships that have been established....**

**"This integrated circuitry has extensive ascending and descending connections among the regions cited. These regions also share many similarities. They are sites intimately involved in visceral, autonomic, and neuroendocrine regulation. The cortical and limbic forebrain regions mediate both affective and cognitive processes and may be involved in the response to stressors, in affective states and disorders such as depression, in aversive conditioning, and in the emotional context of sensory inputs from the outside as well as the inside world. From an immunologic perspective, these regions are the sites in which lesions result in altered responses of cells of the immune system; they are the regions that respond to immunization or cytokines by altered neuronal activity or altered monoamine metabolism; and they are the regions that possess the highest concentration of glucocorticoid receptors and link some endocrine systems with neuronal outflow to the autonomic and neuroendocrine systems. Thus, this circuitry is the major system of the CNS suspected to play a key role in responding to immune signals and regulating CNS outflow to the immune system" (pp. 587-589).**

**Andrews, Vivian H.; Hall, Howard R. (1990). The effects of relaxation/imagery training on recurrent aphthous stomatitis: A preliminary study. Psychosomatic Medicine, 52, 526-535.**

Recurrent aphthous stomatitis (RAS) is one of the most common diseases of the oral mucosa. Although etiology remains unknown, immunological and emotional disturbances have been implicated in the pathogenesis of RAS. No consistently effective therapeutic regimen has been found. The present study investigates the voluntary modulation of RAS employing hypnosis-like relaxation/imagery training procedures. A multiple baseline design was used to evaluate change in frequency of ulcer recurrence. The role of psychological distress, ratings of perceived pain, and hypnotizability in the treatment of RAS were also examined. Results suggest that the relaxation/imagery treatment program was associated with a significant decrease in the frequency of ulcer recurrence for all subjects. Psychological distress was examined for relationship to ulcer recurrence and symptomatic changes with treatment, but no pattern was found. Finally, little support was found for the role of high hypnotic ability in the treatment of RAS.

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

#### NOTES

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced

to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespectively whether they are of opioid or nonopioid nature)" (p.550)

Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.

Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls. Theoretical implications are discussed.

#### NOTES

Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's 1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8)

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart

regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

1989

Abelson, James L.; Curtis, George C. (1989). Cardiac and neuroendocrine responses to exposure therapy in height phobics: Desynchrony within the 'physiological response system'. Behaviour Research and Therapy, 27 (5), 561-567.

Monitored subjective, behavioral, cardiovascular and neuroendocrine responses in 2 men (aged 19 and 34 yrs) with height phobias over a full course of exposure therapy and at 6 and 8 month follow-up. Both Ss showed rising cortisol responses and stable, nonextinguishing norepinephrine responses to height exposure over the course of treatment, while improvement occurred in subjective and behavioral response systems. They had differing heart rate responses. Despite desynchrony among anxiety response systems and within the physiological system at treatment conclusion, Ss had successful outcomes with general measures of change (phobia rating scales, the Fear Survey Schedule, and the SCL-90) showing substantial improvement for both Ss. These outcomes were preserved at follow-up.

Hall, Howard R. (1989). Research in the area of voluntary immunomodulation: Complexities, consistencies, and future research considerations. International Journal of Neuroscience, 47, 81-89.

NOTES

It is speculated that the successful voluntary alteration of one's immune functioning is a complex phenomenon associated with a number of possible factors. Evidence suggests the importance of prior experience in self-regulation and the role of practice, the ability of subjects to become relaxed and reduce sympathetic arousal, the importance of the nature and content of images, the complex role of hypnosis and hypnotizability, the importance of individual differences, and the choice of immune measures. Conclusions are drawn about the need for more experimental attention to these variables and future research with both experienced and inexperienced subjects.

Reid, S. (1989). Recalcitrant warts: Case report. British Journal of Experimental and Clinical Hypnosis, 6, 187-189.

NOTES

Recalcitrant warts which persisted for 5 years despite treatment cleared in 51 days with hypnotherapy. A cause/effect relationship between hypnotherapy and resolution was shown by at first excluding and then including the left hand from the suggestions given.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Zachariae, Robert; Bjerring, P.; Arendt-Nielsen, L. (1989). Modulation of type I mediated and type IV delayed immunoreactivity using direct suggestion and guided imagery during hypnosis. Allergy, 44 (8), 537-542.

Cutaneous reactivity against histamine skin prick test (Type I) and purified tuberculin protein derivative (Mantoux reaction, Type IV) was studied in eight volunteers under hypnosis. Types I and IV immunoreactivity were modulated by direct suggestion (Type I) and guided imagery (Type IV). When the highly susceptible volunteers underwent hypnotic suggestion to decrease the cutaneous reaction to histamine prick test, a significant ( $P$  less than 0.02) reduction of the flare reaction (area of erythema) was observed compared with control histamine skin tests. The wheal reaction did not respond to hypnotic suggestion. Neither wheal nor flare reaction could be increased in size by hypnotic suggestion compared with control histamine skin-prick tests. A hypnotic suggestion of increasing the Type IV reaction on one arm and decreasing the reaction on the other revealed a significant difference in both erythema size ( $P$  less than 0.02) and palpable induration ( $P$  less than 0.01). In two cases the reactions were monitored by laser doppler blood flowmetry and skin thickness measurement by ultrasound. The difference between the suggested increased and decreased reaction was 19% for the laser doppler bloodflow (in favor of the augmented side), and 44% for the dermal infiltrate thickness. This study objectively supports the numerous uncontrolled case reports of modulation of immunoreactivity in allergic diseases involving both Type I and Type IV skin reactions following hypnotic suggestions.

1988

Colgan, S. M.; Faragher, E. B.; Whorwell, P. J. (1988, June 11). Controlled trial of hypnotherapy in relapse prevention of duodenal ulceration. Lancet, 1299-1300.

**30 patients with rapidly relapsing duodenal ulceration were studied to assess the possible benefit of hypnotherapy in relapse prevention. After the ulcer had healed on treatment with ranitidine, the drug was continued for a further 10 weeks during which time patients received either hypnotherapy or no hypnotherapy. The two randomly selected groups were comparable in terms of age, sex, smoking habits, and alcohol consumption. Follow-up of both groups of patients was continued for 12 months after the cessation of ranitidine. After 1 year, 8 (53%) of the hypnotherapy patients and 15 (100%) of the control subjects had relapsed. The results of this study suggest that hypnotherapy may be a useful therapeutic adjunct for some patients with chronic recurrent duodenal ulceration.**

#### **NOTES**

**The aetiology of duodenal ulceration is poorly understood but it is probably multifactorial. ... Stress, both psychological and physical, has since been shown to affect gastric emptying and the secretion of acid and pepsin, but attempts to causally link stress and peptic ulcer disease have produced conflicting results.**

**"Hypnotherapy can modify the response to betazole-stimulated gastric acid secretion, although the mechanism by which this is mediated remains unclear" (p. 1299).**

**"The active [treatment] group received 7 sessions of hypnotherapy and were given an audio tape for daily autohypnosis; the other group were seen as often, but did not receive any hypnotherapy. The ranitidine was then stopped and both groups were reviewed every 3 months for a further year, with the active group receiving hypnotherapy at their follow-up visits. All subjects had an endoscopy at the end of the study, or sooner if a symptomatic relapse occurred.**

**"Hypnosis was induced as previously described, with attention focused on the abdomen by the use of the patient's hand. They were asked to imagine warmth beneath the hand and to relate this to the control of gastric secretion. Reinforcement by visualization was used if the patient had this ability" (p. 1299).**

**At the end of a year, on follow up, the patient relapse rate was 53% and controls relapse was 100%, a difference significant at  $p = 0.01$ .**

**In their Discussion, the authors state, "This study shows that hypnotherapy is helpful in maintaining remission in those patients with duodenal ulceration who are particularly prone to relapse. ... In this model, hypnotherapy might operate at a variety of levels in the disease process: it could act in a nonspecific psychotherapeutic sense increasing 'coping' capacities and decreasing perceived stress. Alternatively, hypnotically induced relaxation may affect gastric acid secretion, and there is some experimental evidence for this.**

**"The early relapse rate in the hypnotherapy subjects was similar to that of controls, but subsequently the curves showed a much greater separation. This finding could indicate that there is a subgroup of subjects who are particularly response to therapy. However, a detailed review of psychological and clinical parameters did not reveal any specific feature that could be used to predict a response to this form of treatment" (pp. 1299-1300).**

## NOTES

2:

Current etiology of duodenal ulcers includes the presence of bacteria *Helicobacter pylori* which is important in relapse. In order to compare treatments we must know what is the status of each group regarding the presence of this bacteria. Current treatment of duodenal ulcer includes metronidazole, amoxicillin and tetracycline to kill it. [Editor's Note: This appears to be a critique of the research methodology rather than notes on the article itself.]

1987

Bongartz, Walter (1987, October). Influence of hypnosis on white blood cell count and urinary level of vanillyl mandelic acid. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

## NOTES

They hypothesized that hypnosis benefits to immunology are due to alterations in white blood cell counts (WBC). Found that (1) blood samples before and after hypnosis with relaxation scenes led to significant decrease in WBCs compared to watching film of Mesmer or doing mental arithmetic, and (2) Vanillyl Mandelic Acid also was reduced.

After physical exercise, video game, or reading, within 20', the WBCs return to pre-relaxation levels, i.e. they hadn't left the bloodstream. Key to understanding this result: only 50% of WBCs are in circulation, and others adhere to vessel walls; the experience of hypnotic relaxation leads to less sympathetic nervous activation and less epinephrine or hormonal response. WBCs also increased over a day period with mental arithmetic, but remained the same with hypnosis.

This research is only preliminary and exploratory.

Locke, Steven E.; Ransil, Bernard J.; Covino, Nicholas A.; Toczydlowski, Janice; Lohse, Christopher M.; Dvorak, Harold F.; Arndt, Kenneth A.; Frankel, Fred H. (1987). Failure of hypnotic suggestion to alter immune response to delayed-type hypersensitivity antigens. Annals of the New York Academy of Sciences, 496, 745-749.

The ability to alter delayed-type hypersensitivity via hypnotic suggestion was tested in 12 highly hypnotizable, untrained subjects and 30 non-hypnotized controls. Subjects were skin tested bilaterally with a standardized panel of delayed hypersensitivity antigens and instructed either to enhance or suppress the skin test response (STR) unilaterally. Compared to controls, STR's showed no effect of hypnotic suggestion with regard to either the area of induration or the degree of inflammation assessed histologically.

1986

Crawford, Jeffrey Cleon (1986, February). The effects of hypnosis and imagery on immunity (Dissertation, University of Texas Health Science Center at Dallas). Dissertation Abstracts International, 46, 2800-B.

"The present study explored the effects of hypnosis and imagery on Total T-Lymphocytes, T-Helper, T-Suppressor, Natural Killer Lymphocytes and level of Salivary IgA. Twenty-four volunteers (15 females and 9 males) between the ages of 23 and 41, with a mean age of 30, were assigned to an experimental or no-treatment control group in a modified random sequence. Participation was limited to individuals who were clinically free of disease, not using medication known to influence immunity, and scored above the mean on self-report pencil and paper measures of life stress (Life Experiences Survey and Stress Coping Rating Scale). Blood and saliva samples were obtained one day before, immediately before, one hour after, and eight days after a one hour hypnotic session. A relaxation induction, a variation of [H. R.] Hall's method, was utilized to induce hypnosis, and its effect measured by the Long Stanford Scale. The subjects were encouraged to imagine the cells of their immune systems multiplying and destroying pathogens. An adaptation of the IMAGE-CA was used to assess the effectiveness of the imagery. Finally, the experimental subjects were instructed in and asked to practice self-hypnosis and imagery twice daily for a week. The data were analyzed in six two-factor repeated measure analyses of variance, and Newman-Keuls tests were utilized to make multiple comparisons between the levels of Group and Time. The analyses produced no evidence for the confirmation of the overall hypothesis that the experimental group would increase in percent of T-Lymphocytes, percent of T-Helper cells, percent of Natural Killer cells and level of Salivary IgA, and decrease in percent of T-Suppressor lymphocytes. Post-hoc analyses revealed correlations that served as a basis for interesting speculation, but there was no revision in the overall conclusion that there was not evidence that hypnosis and imagery, as employed in this study, influenced in the selected measures of immunity. These results extend, but are not analogous, to the results of previously published studies using "fractional" measures of immunity" (pp. 3055-3056).

Olness, Karen N. (1986, March). Hypnotherapy in children: New approach to solving common pediatric problems. Postgraduate Medicine, 79 (4), 95-105.

Hypnotherapy, once thought of as magical and mysterious, is rapidly becoming accepted as an appropriate form of treatment for a wide range of disorders. Some primary care physicians are beginning to discover the value of hypnotherapy in controlling chronic disease and pain, in changing negative behavior, and in facilitating self-regulation of autonomic responses. Dr. Olness explores such use of hypnotherapy in children, the age-group that most readily acquires self-hypnosis skills and in which this technique has had dramatic results.

Rogers, Malcolm; Reich, Peter (1986). Psychological intervention with surgical patients: Evaluation outcome. Advances in Psychosomatic Medicine, 15, 23-50.

## NOTES

The Notes are a direct quotation of the authors' Conclusions. "There is well documented evidence that psychological and behavioral preparation prior to surgery can effect post-operative recovery. In almost all instances, except when patients are characterized by avoidance or denial defenses predominantly, the outcome results have been positive. The effect of interventions have been most consistently positive in reducing length of hospitalization and post-operative pain,

but a variety of other improvements in affect and physiologic stability have been shown. As others such as Auerbach have pointed out [76], in all but a handful of studies different intervention approaches have been combined, making it impossible to sort out the specific effects of information, psychotherapeutic relationship, relaxation training, or suggestion given either with or without hypnosis. Indeed it is not only likely that each has had an effect, but there may also be synergistic effects.

"More recent investigations have begun to include measurements of personality differences between patients so that the nature of the intervention can be more specific and appropriate to the individual's coping style.

"The reduction in length of hospitalization alone (clearly shown to result from pre-operative psychological preparation) argues forcefully on a cost benefit basis for the inclusions of careful pre-operative preparation. The reduction in pain is also of major importance, and may well reduce future avoidance behavior or post-traumatic disorders, although these latter potential outcomes have not been investigated. It should be kept in mind that there are also a number of studies which have failed to demonstrate the efficacy of psychological intervention on these outcome measures. Moreover, it is extremely difficult in studies of this nature to control adequately for the subtle effects on behavior of experimenter and subject expectation.

"A few points can be made about future strategies in this field. The evidence accumulated to date suggests that all patients undergoing surgery or certain difficult procedures be given the option of pre-operative psychological preparation. The preparation should emphasize what the patient will experience and when, and how to cope with it, i.e., how to move, or breathe, or relax. Rapidly evolving audiovisual capabilities and hospital televisions connected by cable to health education channels will routinely offer such preparation in the future. Patients could choose or not choose to watch (thereby protecting mechanisms of denial).

"Finally, future studies should focus on outcome measures uniquely important to a particular operation and also on longer term rehabilitation outcome measures. An example of the former might be post-operative sexual functioning after prostatectomy. A study by Zokar et al. [77] has shown that the likelihood of this post-operative function is correlated with not only the level of pre-operative anxiety and general 'life satisfaction', but also whether the patient received a pre-operative explanation of what to expect from the surgery" (pp. 45-46).

1985

Domangue, Barbara B.; Margolis, Clorinda; Lieberman, D.; Kaji, H. (1985). Biochemical correlates of hypnoanalgesia in arthritic pain patients. Journal of Clinical Psychiatry, 46, 235-238.

Self-reported levels of pain, anxiety, and depression, and plasma levels of beta-endorphin, epinephrine, nor-epinephrine, dopamine, and serotonin were measured in 19 arthritic pain patients before and after hypnosis designed to produce pain reduction. Correlations were found between levels of pain, anxiety, and depression. Anxiety and depression were negatively related to plasma norepinephrine levels. Dopamine levels were positively correlated with both depression and epinephrine

levels and negatively correlated with levels of serotonin. Serotonin levels were positively correlated with levels of beta-endorphin and negatively correlated to epinephrine. Following hypnotherapy, there were clinically and statistically significant decreases in pain, anxiety, and depression and increases in beta-endorphin-like immunoreactive material.

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

1984

Achterberg, J. (1984, October). Cancer, immunology, psychological factors, and imagery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

Author developed a way of scoring imagery (which will be published in *Imagery and Disease*). In terms of predicting who will die and who will survive, the content of the images doesn't seem to be as important as the quality (strength, vividness, etc.), which supports Bernauer Newton's (1984) findings. "The image seems to be a basic pre-verbal component of our species that has survival value."

Hall, Howard R. (1984, October). Hypnosis, imagery, and the immune system. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

NOTES

Studied the relationship of hypnosis to immune functions, using imagery methods like the Simontons did with their cancer patients. Twenty normal volunteers were hypnotized and asked to imagine their white blood cells (WBCs) attacking weak germs like strong sharks would attack something, and they were told that the sharks would continue working after they came out of hypnosis (a post-hypnotic suggestion). They were asked to "feel it and experience it any way you can," to avoid emphasizing visual imagery too much. Then they were taught self hypnosis and sent home to practice twice a day for a week.

Three blood measures increased after hypnosis: --B-cells increased with pokeweed stimuli (an allergen) for younger Ss, not older Ss --WBC's increased for highly hypnotizable Ss who were young, not for poor hypnotizable Ss or for any older Ss (Age range was 22-80.) --Lymphocyte count increased, approaching significance for highly hypnotizable Ss who were young but not for poor hypnotizable Ss or for older Ss. A personality test administered before the hypnosis, the SLC-90, suggested that the higher the distress level, the lower the lymphocyte count before hypnosis

training. Two scores that summed up the distress level correlated  $-.49$  and  $-.53$ , respectively. The psychological distress measured by the personality test decreased after the week of self-hypnosis practice. Of the two scores that summed up distress, one decreased for everyone (General Severity Index) and the other decreased only for highly hypnotizable Ss (Positive Symptom Total). Thus, a week of self hypnosis with imagining one's WBC's eating up weak germs in the blood led to both an increase in immune response indicators and a decrease in psychological distress. Psychological distress decreased as lymphocytes increased.

Dr. Hall repeated these procedures with a small number of Ss who were told just to "lie down and rest" rather than being hypnotized and given instructions to imagine their WBC's increasing. None of the above changes occurred. However, he cautions that his research doesn't indicate whether the positive effects are due to relaxation, imagery, or hypnosis since all three were involved.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization method, with the additional factor that they were hypnotized for the visualization. In a long term follow-up study, those patients who were treated for at least 6 months and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

Schneider, John; Smith, C. Wayne; Whitcher, Sarah (1984, October). The relationship of mental imagery to white blood cell (neutrophil) function in normal subjects. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Reports three studies in which normal healthy volunteers visualized various things happening with their white blood cells.

He used imagery rather than hypnosis with college student volunteers who knew the goal of the study was to have people increase their white blood cell (WBC) count, and who thought they might be able to do it. Actually, the physiological model is that neutrophils increase, become sticky so that they stick to the blood vessel wall, and then insinuate themselves through the wall. So he did three studies to check out each aspect of the model.

Study I: Author asked Ss to increase WBC's though his three goals actually were to decrease WBC count, increase stickiness, and [missed words]. The neutrophil count dropped significantly, and he interpreted that result as due to the fact that the increased number of cells had already moved through the vessel walls. Also, stickiness decreased (counter to prediction), and there was a negative relationship

between imagery vividness and stickiness. The more people visualized "sticky" the less sticky the neutrophils became. He concluded they may have been too successful, as there had been a 60% drop in number of neutrophils (so perhaps the more successful neutrophils had left!) So he designed a second study, not to let the neutrophils leave the bloodstream.

**Study 2:** Author asked the Ss not to decrease the WBC but to increase the stickiness of the cells. As a result, the neutrophil count did not change. In fact, adherence did increase. Imagery ratings correlated positively with adherence.

**Study 3:** Author asked Ss to have their WBC's become less sticky, to leave the wall of the blood vessel and go into the blood. He found that stickiness decreased, but there was no increase in the number of WBC's though it was predicted. Imagery ratings correlated positively with adherence. Schneider concluded that neutrophil functioning (becoming sticky) can be affected by training and specific imagery, but that the relationship between imagining and the increase or decrease in WBC's is more complex. Relaxation decreases WBC's, imagery increases them, hyperventilating increases them. We don't know what biofeedback or hypnosis would do.

(A discussant pointed out that WBC count depends on blood volume, which wasn't measured in either this group of studies or in Hall's study of hypnosis and imagery effects on WBCs.)

**1983**

**Smith, Shirley J.; Balaban, Alvin B. (1983). A multidimensional approach to pain relief: Case report of a patient with systemic lupus erythematosus. International Journal of Clinical and Experimental Hypnosis, 31 (2), 72-81.**

A multidimensional approach to the relief of intense pain associated with a chronic, debilitating disease (Systemic Lupus Erythematosus) is illustrated in this case report. Techniques associated with behavioral therapy (deep muscle relaxation, systematic desensitization); hypnosis (trance states, guided imagery, age regression, anesthetic induction and transfer and auto-hypnosis); and psychodynamic psychotherapy (dyadic interchange, suggestion, encouragement, interpretation of resistance and the transference/countertransference relationship) were utilized in obtaining virtual freedom from disabling pain and the necessity for analgesic and tranquilizing medications. Follow-up over a 3-year period demonstrated the utility of the approach.

**Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.**

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented

as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal.

1982

Finkelstein, Selig; Greenleaf Howard, Marcia (1982-83). Cancer prevention: A three year pilot study. American Journal of Clinical Hypnosis, 25 (2-3), 177-183.

A review of the literature in the use of hypnosis for physiological alteration and ego strengthening indicates that the incidence of cancer may be alterable. A pilot study of three years duration for a subject population considered to be at risk for cancer (N = 43) has been completed. The results of this study, as well as the hypnotic model on which the intervention was based, are discussed. Suggestions for further research are noted.

Gardner, G. Gail; Lubner, Alison (1982-83). Hypnotherapy for children with cancer: Some current issues. American Journal of Clinical Hypnosis, 25 (2-3), 135-142.

The authors review some of the problems that now face clinicians and researchers working in the field of hypnotherapy for pediatric cancer patients. These include (1) understanding and dealing with resistance and refusal, (2) developing preventive hypnotherapeutic strategies for children who will survive cancer, and (3) carrying out research that clarifies the value of hypnotherapy with childhood cancer patients and elucidates when and how specific approaches can best be utilized.

Hall, Howard R. (1982-83). Hypnosis and the immune system: A review with implications for cancer and the psychology of healing. American Journal of Clinical Hypnosis, 25 (2-3), 92-103.

#### NOTES

Presents a review of the body's immune system as an introduction to a discussion of the implications of those processes for cancer and the healing mechanisms.

Hall, Marian D. (1982-83). Using relaxation imagery with children with malignancies: A developmental perspective. American Journal of Clinical Hypnosis, 25 (2-3), 143-149.

Developmental theory has been the foundation for this program of relaxation-imagery therapy with its goal of increasing the efficacy of immune mechanisms, thus increasing the survival rate of children with malignancies and/or improving the comfort and quality of their lives. Three basis constructs--the impact of social stress, the positive development of attachment and the negative effects of separation and loss, and the stages of concept formation relating to the functioning of the human

body, the processes of disease and death--are basic approaches to the use of imagery-relaxation as an integral part of a comprehensive care plan.

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

Margolis, Clorinda G. (1982-83). Hypnotic imagery with cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 128-134.

This is a clinical report on the use of hypnotic imagery to reduce pain and discomfort in cancer patients. Deep relaxation, ego strengthening, imagery, and suggestions for changes in perception and awareness are the principal techniques used to reduce suffering and to produce a sense of well-being among cancer patients treated at different stages of disease. Hypnotic intervention involving six patients is described, with emphasis on the ease with which positive transference is established and the effectiveness with which it may be used to enhance therapeutic effects.

Meares, Ainslie (1982-83). A form of intensive meditation associated with the regression of cancer. American Journal of Clinical Hypnosis, 25 (2-3), 114-121.

Elsewhere I have reported a number of cases of regression of cancer following intensive meditation. This type of meditation is characterized by extreme simplicity and stillness of the mind, and so differs from other forms using a mantra, awareness of breathing or visualization of the healing process. Any logical verbal communication by the therapist stimulates intellectual activity in the patient. So communication is by unverbilized phonation, reassuring words and phrases, and most important, by touch. There follows a profound reduction in the patient's level of anxiety which flows on into his daily life. The non-verbal nature of the meditative experience initiates a non-verbal philosophical understanding of other areas of life.

Newton, Bernauer W. (1982-83). The use of hypnosis in the treatment of cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 104-113.

For nearly eight years, cancer patients have been treated at this outpatient facility using hypnosis and psychotherapy. Basic concepts, assumptions and procedures are

presented and the issues and problems encountered are discussed. Results are given as they relate to the three goals of treatment.

**Oliver, George W. (1982-83). A cancer patient and her family: A case study. American Journal of Clinical Hypnosis, 25 (2-3), 156-160.**

In recent years, increasing numbers of mental health workers have been attempting to use techniques of psychotherapy to influence the course of malignant disease. This paper reviews in detail the course of treatment of one female patient with an inoperable malignancy and conveys a sense of the clinical experience of working intensively with a cancer patient and her family. It shows the complex levels of interaction within the patient herself, between the patient and her family, and between the therapist and her family and within the therapist himself during different phases of the therapeutic journey.

**Rosenberg, Simon W. (1982-83). Hypnosis in cancer care: Imagery to enhance the control of the physiological and psychological 'side-effects' of cancer therapy. American Journal of Clinical Hypnosis, 25 (2-3), 122-127.**

The use of surgery, radiation, and chemotherapy has resulted in increased control of malignancy and prolonged survival for cancer patients. These modalities also carry significant morbidity. Normal physiological homeostasis is often altered by both the neoplasm and its treatment. The diagnosis, treatment, and social stigma of cancer exact profound psychological impact. Hypnosis effectively can control the range of both physiological and psychological 'side-effects' of cancer and its therapy. This paper will delineate those effects of hypnosis of proven value to the cancer patient. Incorporation of images into each phase of a hypnosis session will be demonstrated with an actual case history and annotated transcript. Imagery as a therapeutic modality will be discussed in general, and specific suggestions and images will be given.

**Shapiro, Arnold (1982-83). Psychotherapy as adjunct treatment for cancer patients. American Journal of Clinical Hypnosis, 25 (2-3), 150-155.**

During the past ten years psychotherapy as adjunct treatment for cancer patients has become increasingly common. The use of hypnosis as an integral part of that treatment has also burgeoned. This report will follow the progress of two cancer patients in psychotherapy. While each is highly individual, the commonalities which allow treatment to be systematic will be quite apparent. The ability to minimize pain and discomfort, the ability to keep the white cell count high despite ongoing chemotherapy, and augmenting the ability of the body's immune system to fight the disease are utilized by both of the patients. All of the above are accomplished through the use of visual imagery in the trance state. Visual imagery is also used to reach feelings which patients are often unable to verbalize, and of which they often claim to be unaware. Other aspects of therapy such as the gradual shift from

despair to hope and even confidence, and the development of more assertive behavior are discussed.

1964

Black, Stephen (1964). Mind and body. London: Kimber.

#### NOTES

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental

conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

## INDIRECT SUGGESTION

1998

Groth-Marnat, Gary; Mitchell, Kaye (1998). Responsiveness to direct versus indirect hypnotic procedures: The role of resistance as a predictor variable. International Journal of Clinical and Experimental Hypnosis, 46 (4), 324-333.

Empirical research attempting to demonstrate that indirectly phrased hypnotic suggestions result in greater responsiveness than do direct approaches generally has not shown any differences on formal hypnotizability scales. However, empirical research in related areas along with clinical observation suggests that client resistance might be a crucial moderating variable. specifically, participants with greater resistance would be expected to be more responsive to indirect approaches, whereas those with low levels of resistance would be more responsive to direct hypnotic procedures. To test this hypothesis, participants were given either a standardized test of hypnotic responsiveness that used direct suggestions (Harvard Group Scale of Hypnotizability) or a comparable indirect scale (Alman Wexler Indirect Hypnotic Susceptibility Scale) followed by administration of a measure of resistance (Therapeutic Reactance Scale). The hypothesis was not confirmed, in that those with higher (or lower) reactance/resistance did not score differently than those on either the indirect or direct hypnotizability measures.

1997

Fourie, D. P. (1997). 'Indirect' suggestion in hypnosis: Theoretical and experimental issues. Psychological Reports, 80 (3, Pt 2), 1255-1266.

"Indirect" suggestion is conceptualized in two distinct ways in the literature. From an Ericksonian perspective "indirect" suggestions are theoretically approached as suggestions which can circumvent the censorship of consciousness to reach the "unconscious" where they can activate dormant potentials. In contrast, from a research perspective "indirect" suggestion is operationally defined as a technique. Based on Ericksonian theory, it was claimed that "indirect" suggestion was more effective than traditional, "direct" suggestion. However, this claim could not be empirically substantiated. In this paper it is shown that the theoretical claim is

based on questionable assumptions about the existence of the "unconscious" as a reified entity and about the direct and lineal influence of certain suggestions on this entity. Also, it is argued that traditional research strategies which emphasize strict controls are unable to verify or unambiguously refute the Ericksonian claim because these strategies are biased toward "direct" suggestion. Finally, the paper provides a different, contextual perspective on "indirect" suggestion, thereby placing the theoretical and experimental issues in a different context of meaning. [PubMed Abstract]

1993

Lynn, Steven Jay; Neufeld, Victor; Mare, Cornelia (1993). Direct versus indirect suggestions: A conceptual and methodological review. International Journal of Clinical and Experimental Hypnosis, 31, 124-152.

The article reviews the literature on the effects of direct versus indirect hypnotic suggestions. A conceptual and methodological analysis of direct versus indirect suggestions is also provided. Three conclusions follow from the review: (a) Contrary to views of Ericksonian hypnotists, suggestion style has little effect on objective responding to hypnotic test items; (b) studies of clinical- and laboratory-induced pain and other measures of subjective experience have yielded contradictory results- -however, the best controlled studies have not indicated that indirect suggestions are superior to direct suggestions; and (c) there is insufficient evidence to conclude that hypnotizability level and suggestion wording interact, such that low hypnotizable subjects are particularly responsive to indirect suggestions. Methodological and conceptual problems in defining and studying hypnotic communications, the lack of rigorous experimental controls, and research issues and directions are highlighted.

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NOTES: Although this article is primarily concerned with the nature of suggestion, the review also mentions several studies comparing hypnosis with other interventions for pain, in passing:

Crowley (1980)

Snow (1979)

Omer, Darnel, Silberman, Shuval, & Palti (1988)

Stern (1982)

Bassman (1983)

"Like the clinical studies using the RIA [Rapid Induction Analgesia], pain studies that did not use the RIA lack appropriate control groups: Neither Bassman's (1983) nor Stern's (1982) research explicitly compared direct and indirect suggestions. What our review does suggest is that studies (e.g., Crowley, 1980; Snow, 1979; Van Gorp et al., 1985) that imposed the greatest degree of methodological control yielded the outcomes least favorable to the hypothesis that indirect suggestions are effective and account for the pain relief achieved, above and beyond factors common to placebo treatments" (p. 132).

"Lynn and his colleagues' studies indicate that whereas indirect suggestions enhance archaic representations of the hypnotist, direct suggestions facilitate

involvement in the events of hypnosis, as measured by subjective involvement and involuntariness" (p. 136).

**Maurer, Candida; Santangelo, Michael; Claiborn, Charles D. (1993). The effects of direct versus indirect hypnotic suggestion on pain in a cold pressor task. International Journal of Clinical and Experimental Hypnosis, 41, 305-316.**

Past studies have investigated the usefulness of hypnosis in pain reduction. Although hypnotic analgesia has been found to be effective, it is generally only those subjects who are highly susceptible to hypnosis who benefit. Some experimenters have found that even low-susceptible subjects can use hypnotic analgesia, if the hypnotic induction uses indirect rather than direct hypnotic suggestions. In the present study, high- and low-susceptible subjects were tested for analgesia using either direct or indirect hypnotic suggestion on pain in a cold pressor task. Findings suggest that high susceptibles experience greater pain reduction than do low susceptibles. However, no significant differences were found between the pain reduction in the direct versus the indirect hypnotic suggestion groups. Possible explanations for this lack of differences are discussed. **NOTES 1:** **NOTES:** They noted that this study differed from Joseph Barber's (1979) in that the latter used continuous suggestion whereas in the current study only posthypnotic suggestion was employed. Also, they used the Harvard Scale to classify Ss, and Register and Kihlstrom (1986) found that only one third of their HGSHS:A tested high-susceptible subjects were able to be so classified on a subsequent administration of the Stanford Hypnotic Susceptibility Scale, Form C, perhaps due to social demands inherent in group hypnosis. Also, perhaps 1 minute was not sufficient time to challenge the effectiveness of alternative coping strategies that some "low" Ss could have used to endure the procedure.

**Szabo, Csaba (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. International Journal of Clinical and Experimental Hypnosis, 41, 225-233.**

The effect of two hypnotic induction styles on subjective experience was measured in an experiment in which 44 subjects participated in both traditional direct hypnosis, induced by the Stanford Hypnotic susceptibility Scale, Form A, and indirect hypnosis (presented in counterbalanced order), followed by 4 minutes of rest before dehypnosis. The depth of hypnosis was measured retrospectively by a subjective scale, and the structure of experiences was measured by the Phenomenology of Consciousness Inventory. Subjects were subsequently administered the Stanford Hypnotic Susceptibility Scale, Form B, so that awareness of their hypnotizability would not affect their subjective depth reports. No differences were found in a comparison of subjects' structure of experiences in direct and indirect hypnosis. In addition, low and medium hypnotizable subjects reported indirect hypnosis as deeper. This may reflect the possibility that while hypnotized different mechanisms come into play for subjects high in hypnotizability compared to those who are less hypnotizable.

**1990**

**Zeig, Jeffrey K.; Geary, Brent B. (1990). Seeds of strategic and interactional psychotherapies: Seminal contributions of Milton H. Erickson. American Journal of Clinical Hypnosis, 33 (2), 105-112.**

**NOTES**

**Describes history of Erickson's relationship to the Palo Alto group and family therapy practice (both strategic and interactional), and identifies seven philosophical and methodological realms which represent the incorporation of Ericksonian principles into strategic and interactional family therapy models.**

**1988**

**Edgette, John H. (1988). 'Dangerous to self and others': The management of acute psychosis using Ericksonian techniques of hypnosis and hypnotherapy. In Lankton, Stephen R.; Zeig, Jeffrey K. (Ed.), Ericksonian Monographs: No. 3. Treatment of special populations with Ericksonian approaches (pp. 96-103). New York: Brunner/Mazel.**

**NOTES**

**Edgette shows how several agitated psychotics were hypnotized using an Ericksonian approach. His inductions were bold attempts to introduce hypnosis in a setting where drugs and restraints are often the only available tools. He offers some ideas concerning the myth that hypnosis will not work with such a population.**

**Lynn, Steven Jay; Weekes, John R.; Matyi, Cindy L.; Neufeld, Victor (1988). Direct versus indirect suggestions, archaic involvement, and hypnotic experience. Journal of Abnormal Psychology, 97 (3), 296-301.**

**This study examined the effects of direct (Harvard Group Scale of Hypnotic Susceptibility; Shore & Orne, 1962) versus indirect (Alman-Wexler Indirect Hypnotic Susceptibility Scales; Pratt, Wood, & Alman, 1984) suggestions on archaic involvement (Nash & Spinler, in press) with the hypnotists, objective responding, and subjective involvement and involuntariness ratings, when the scales were administered in all possible combinations (direct/indirect, N = 61; indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect suggestions reported a greater emotional bond with the hypnotist and increased fear of negative appraisal than subjects who received direct suggestions. Repeated testing resulted in response decrements on measures of objective responding, subjective involvement, and involuntariness that were paralleled by diminished involvement with the hypnotist. The most stable relation between scales was evident when scales were defined as direct hypnosis across both sessions. Although direct and indirect suggestions produced comparable effects in the first session, in the second session, direct suggestions fostered greater subjective involvement and feelings of involuntariness.**

1987

Lynn, Steven Jay; Neufeld, Victor; Matyi, Cindy L. (1987). Inductions versus suggestions: Effects of direct and indirect wording on hypnotic responding and experience. Journal of Abnormal Psychology, 96 (1), 76-79.

This study examined the effects of direct wording (authoritative language, specific responses) versus indirect wording (permissive language, choice of responses) of hypnotic inductions and suggestions in measures of behavioral and subjective responding. Subjects experienced suggestion-related involuntariness and suggested effects to a greater degree in response to direct-word suggestions (Harvard Group Scale of Hypnotic Susceptibility; Form A; Shor & Orne, 1962) than in response to indirect-worded suggestions (Alman-Wexler Indirect Hypnotic Susceptibility Scale; Pratt, Wood, & Alman, 1984). No difference in behavioral responding was observed. Furthermore, induction wording did not have an effect on these measures, nor did the wording of the induction and the wording of the suggestion types interact with each other. Female subjects attributed less of their responsiveness to their own efforts when they received direct suggestions, and male subjects were less likely to attribute their responsivity to the hypnotist's ability when they received indirect suggestions. Rapport with the hypnotist did not vary as a function of induction or suggestion wording.

Price, Donald D.; Barber, Joseph (1987). An analysis of factors that contribute to the efficacy of hypnotic analgesia. Journal of Abnormal Psychology, 96, 46-51.

An analysis was made of factors that contribute to the magnitude of hypnotic analgesia produced by indirect hypnotic suggestions. Two groups of human volunteers made \_sensory\_ and \_affective\_ visual analogue scale (VAS) responses to nociceptive temperatures (44.5-51.5C) before and after hypnotic suggestions were given for analgesia. Group 1 was given suggestions for developing a hypnotic state only once just before analgesic testing and did not have significantly reduced VAS responses to experimental pain after hypnosis. Group 2 was continuously given cues for maintaining a hypnotic state during their analgesia testing session and had large reductions in both VAS- sensory and, especially, VAS-affective responses to pain. A small but statistically reliable correlation was found between hypnotic susceptibility and overall magnitude of reduction in VAS-sensory responses ( $R = .4$ ). The correlations were much larger for intense stimuli compared to those near threshold. Reductions in VAS-affective pain responses were not correlated with hypnotic susceptibility.

1986

Woolson, Donald A. (1986). An experimental comparison of direct and Ericksonian hypnotic induction procedures and the relationship to secondary suggestibility. American Journal of Clinical Hypnosis, 29 (1), 23-28.

Recent studies reporting the disparate effects of direct and indirect suggestion upon hypnotized subjects have indicated that standardized, direct hypnotic susceptibility

tests may not accurately predict the suggestibility of subjects exposed to an indirectly worded, albeit similar, test. Historically, primary suggestibility correlates highly with hypnotizability, while secondary suggestibility does not and has been reported to be a subject's response to indirect suggestion. In this study 56 volunteers for self-hypnosis training were first tested for secondary/indirect suggestibility, then each singly received either a direct standardized [sic] induction or an Ericksonian (indirect) version. While susceptibility scores between groups were close, a greater number of the Ericksonian group subjects were rated as medium or highly susceptible. This occurred regardless of their type of suggestibility. Also, the Ericksonian group subjects appeared to be less aware of their depth of trance, as judged by a comparison of their susceptibility scores and their self-report depth scores. - Journal Abstract

1985

Coe, William C.; Scharcoff, J. A. (1985). An empirical evaluation of the neurolinguistic programming model. International Journal of Clinical and Experimental Hypnosis, 33 (4), 310-318.

The neurolinguistic programming hypothesis that most people have a preferred way of dealing with the world -- a primary representational system -- was tested. 50 Ss were evaluated for sensory modality preference in 3 ways: (a) they chose among written descriptions using either visual, auditory, or kinesthetic wording (preference); (b) their eye movements were recorded during an interview; and (c) their verbal responses were scored for sensory predicates. The results did not support neurolinguistic programming theory in that preference of 1 modality on 1 measure did not relate to the same modality on the other measures as would be expected if primary representational systems were characteristic of the sample. Other studies have shown mixed results. The conclusion seems warranted that a good deal more empirical support is needed before the positive therapeutic claims of neurolinguistic programming proponents can be taken seriously.

Matthews, W. J.; Bennett, H.; Bean, W.; Gallagher, M. (1985). Indirect versus direct hypnotic suggestions - an initial investigation: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33 (3), 219-223.

Keywords: indirect suggestion, suggestion

The clinical use of indirect hypnotic suggestion is purported to be an effective method of trance induction because it allows S a wider latitude of responsiveness than does a traditional hypnotic induction. In the present study, 15 male and 15 female Ss each received a traditional hypnotic induction followed by the Stanford Hypnotic Clinical Scale (SHCS) of Morgan and Hilgard (1978) and an Ericksonian hand levitation induction (Erickson, E. L. Rossi, & S. Rossi, 1976) followed by a rewritten SHCS, utilizing indirect suggestions for each scale item (Indirect Suggestion Scale -- ISS). The results revealed no significant main effect differences between hypnotic methods on the behavioral response measure. Ss did report feeling more deeply hypnotized during the indirect hypnotic procedure. High hypnotizable

male Ss felt more aware of the hypnotic suggestions and more in charge of their experience when they experienced ISS than they did on SHCS. This difference in self-reported experience may possibly be due to the time differential between SHCS and ISS, with the latter taking approximately one-third longer. Implication and limitations of the study are discussed.

Stone, Jennifer A.; Lundy, Richard M. (1985). Behavioral compliance with direct and indirect body movement suggestions. Journal of Abnormal Psychology, 94 (3), 256-263.

Investigated the effectiveness of 2 types of suggestions in eliciting body movement by presenting 96 high-, medium-, and low-susceptible undergraduates, in hypnotic or nonhypnotic conditions, with either of 2 series of body movement suggestions. The indirect suggestions were designed to represent the approach of M. H. Erickson (see PA, vol 60:11116 and 12262) and resulted in greater compliance in the hypnotic condition. Direct suggestions resulted in greater compliance in the nonhypnotic condition. Susceptibility to hypnosis was related to compliance in the hypnosis condition, but no interactions were found between susceptibility and type of suggestion. Sense of volition in responding was unrelated to the major findings. Discussion of the results includes a call for the accurate reporting of the wording of hypnotic suggestions in future research.

Van Gorp, Wilfred G.; Meyer, Robert G.; Dunbar, Karen D. (1985). The efficacy of direct versus indirect hypnotic induction techniques on reduction of experimental pain. International Journal of Clinical and Experimental Hypnosis, 33, 319-328.

The cold pressor test was used to investigate the efficacy of Rapid Induction Analgesia, a new, indirect hypnotic technique introduced by J. Barber (1977). Rapid Induction Analgesia was compared with traditional hypnosis, relaxation, suggestion without an induction, and a no-treatment control in Subject of high and low hypnotizability. Only traditional hypnosis was found to significantly reduce Subject's reported pain when compared to the control group Subject, and Rapid Induction Analgesia was not found to be an effective treatment in this study, in contrast to J. Barber's earlier findings

#### NOTES

105 subjects were randomly assigned to conditions, based on high (8-12) or low (0-4) scores on the Harvard Group Scale of Hypnotic Susceptibility. There were 9-13 Subjects per cell in the treatment conditions.

McConkey, Kevin M. (1984). The impact of an indirect suggestion. International Journal of Clinical and Experimental Hypnosis, 32 (3), 307-314.

The impact of an indirect suggestion was investigated in 2 different test contexts; real and simulating Ss were tested. The Experiential Analysis Technique was employed with real Ss in order to explore their perceptions and processing of the

indirect suggestion. Real Ss were seen to be more heterogeneous in their response to the indirect suggestion than were simulating Ss, and the pattern of response was similar in the 2 test contexts. Some real Ss perceived the indirect suggestion as an illegitimate basis for a change in their phenomenal awareness. Findings point to the ways in which real Ss differ in the detail of their hypnotic response, and comment is made on the relevance of cognitive style for understanding the response patterns of hypnotic Ss.

**1983**

Bassman, S. (1983). The effects of indirect hypnosis, relaxation and homework on the primary and secondary psychological symptoms of women with muscle contraction headache (Dissertation). Dissertation Abstracts International, 44, 1950-B.

**NOTES**

Compared the effects of indirect hypnosis (e.g., metaphors, stories, vague suggestions, and implied directives) on muscle contraction headaches with a relaxation and a no-treatment control condition. Both hypnosis and relaxation conditions reduced symptoms more than did the no-treatment condition. Unlike relaxation, indirect hypnosis did not reduce the intensity and duration of headaches, although it did reduce the amount of medication and also benefitted sleep.

**1982**

Stern, T. E. (1982). The effects of Ericksonian hypnosis and biofeedback on self-reported measures of pain (Dissertation). Dissertation Abstracts International, 43, 3744-B.

**NOTES**

Conducted a 6-subject case study comparing the effectiveness of so-called Ericksonian hypnosis and biofeedback on chronic pain. Two subjects improved more on subjective and behavioral pain measures using biofeedback, three improved more using hypnosis, and one did not improve in either condition.

**1980**

Crowley, R. (1980). Effects of indirect hypnosis (Rapid Induction Analgesia) for relief of acute pain associated with minor podiatric surgery (Dissertation). Dissertation Abstracts International, 40, 45-49.

**NOTES**

Lynn et al. (1993) cited this dissertation. They noted that all 30 volunteer subjects responded painfully when stimulated by a needle administered by a podiatrist and that the Rapid Induction Analgesia of Joseph Barber (RIA) was not as effective as local chemical analgesia. Furthermore, according to Lynn et al., RIA patients did not report a reduction in their anxiety following podiatric surgery comparable to that reported by patients who received chemical analgesia. The author also found that hypnotizability was related to multiple chronic pain indices.

Edwards, William Henry (1980). Direct versus indirect hypnosis for the relief of chronic pain in spinal cord injured patients (Dissertation, United States International University). Dissertation Abstracts International, 40 (10-B), 4996.

#### NOTES

This study compared effectiveness of direct hypnosis and indirect hypnosis (Rapid Induction Analgesia, developed by Joseph Barber) in reducing experimental and clinical pain in spinal cord injured patients. The 30 male paraplegic patients who had chronic benign pain volunteered for the study. They were administered three tests: the Pain Estimate Scale (Sternbach, 1974), Ischemic Muscle Pain Test (IMPT), and the Stanford Profile Hypnotic Susceptibility Scale, Form II -- SPHSS -- (Weitzenhoffer and Hilgard, 1967). Each patient experienced three sessions: (1) Baseline Control, (2) Direct Hypnosis, and (3) Indirect Hypnosis. Patients were randomly assigned to Sessions (2) and (3). The results indicated no significant statistical difference in the effectiveness of direct versus indirect hypnotic analgesia in these chronic pain patients. Direct and indirect hypnosis were equally effective; hypnotizability was not associated with outcome. Furthermore, there was no interaction between treatment effects and pretreatment pain level. The results were similar for both clinical and experimental pain.

McConkey, Kevin M.; Sheehan, Peter W. (1980). Inconsistency in hypnotic age regression and cue structure as supplied by the hypnotist. International Journal of Clinical and Experimental Hypnosis, 28 (4), 394-408.

Inconsistency in hypnotic age regression was elicited by asking Ss to write a complex sentence, in contexts that varied appreciably in the extent to which they cued Ss that illogical response was appropriate. Hypnotically responsive and unresponsive Ss were assigned to a real or simulating group in application of the real-simulating model of hypnosis and tested in 1 of 3 distinct cue conditions. Cue conditions either followed those of previous studies and communicated that no particular response was appropriate, or communicated that an illogical response was appropriate, or inappropriate. It was hypothesized that cue structure would have a significant impact. Data indicated that cues for logical response had a greater influence on the behavior of Ss than did cues for illogical response when compared with the base response condition; at times, real Ss behaved appreciably more illogically than simulating Ss. Also, detailed analysis of the reports of both groups of Ss indicated distinctive properties of experience that point to the importance of recognizing the complexities of consciousness underlying the experiences of highly susceptible Ss.

1975

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

Borderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1974

Behrs, John O. (1974). Dynamics of experiential therapy. American Journal of Clinical Hypnosis, 17, 1-4.

Modern experiential therapies have significant features in common with hypnotherapy. The essence of hypnotically oriented psychotherapy is described by Milton H. Erickson (1971) as 'meet the patient at the patient's level, thereby gaining rapport. As trust is developed, modify the patient's productions by covert suggestions, thereby gaining control. This control is then utilized in order to get the patient to institute therapeutic growth from within.' He further emphasizes the necessity of an indirect approach, of subtle manipulations leading the patient to circumvent his resistances. The modern experiential therapist follow Erickson's maxim and display many features in common with hypnotic therapies. It is our observation that successful experiential work almost always leads to a hypnotic trance, in even very resistant subjects, and that this greatly augments its therapeutic effectiveness. It differs from Erickson's therapy in not requiring the indirect, round-about approach. In essence, it is highly suited to the therapist who admires the ingenuity of Erickson but who is more suited, personality-wise, to a direct approach, of zeroing right in on a problem where the energy is. Instead of circumventing a patient's resistances, the therapist helps the patient fully experience them. The two

styles, however, are seen as both similar and compatible with one another. [Emphasis removed.]

1967

Evans, Frederick J. (1967). An experimental indirect technique for the induction of hypnosis without awareness. International Journal of Clinical and Experimental Hypnosis, 15, 72-85.

A procedure is described which has been used in an experimental setting as a method of indirectly inducing hypnosis without S's awareness. Ss are not told that hypnosis is involved in the procedure, but are told they will be taught how to relax. The aim of the indirect procedure is to create different expectations and preconceptions from those normally occurring in the special hypnotic relationship. Evidence from 3 studies (samples of 63, 63, 120) indicates that the procedure successfully induces hypnosis comparable in depth to other standard hypnotic procedures. About half of the Ss tested apparently do not recognize the procedure involves hypnosis. Approximately 30% of the Ss who receive the procedure, as well as 30% of the Ss in the control group who did not receive the procedure, but were tested with the same test suggestions, recognized that an attempt had been made to induce hypnosis. The perceptions about whether hypnosis was involved were unrelated to scores on typical hypnotic phenomena. It was concluded that the indirect induction technique successfully induces hypnosis and is a useful technique for manipulating S-expectations in an experimental context.

#### NOTES

[The Subject] is told, 'A series of experiments are being conducted investigating the effects of relaxation on behavior. Because of confusing results in the literature, this study is designed to examine the relationship between relaxation and several other psychological phenomena, some of which might remind you of a variety of other phenomena which you may have heard or read about.' The S was told that a technique had been devised that would assist him to relax completely. His main task was to relax as completely as possible. This would be facilitated by lying comfortably on a couch, and by allowing his mind to become completely blank. To prevent himself from falling asleep, he should concentrate his attention on some object or idea. To help exclude other thoughts from his mind, E would continue to talk in a monotonous voice saying little of importance, while the S stared at a spot on the wall. This shaping of the situation was continued with a considerable degree of apparent permissiveness.

"The S's attention was slowly directed to the rhythm of his own breathing as suggestions were given of eye fatigue. If S closed his eyes, he might find it convenient to concentrate on the rhythm of his own breathing. Perhaps this would be easy to think about if he visualized a pendulum swinging in time with his breathing. The E continued to talk and count in rhythm with S's breathing. Special words, such as 'breathing in and out; the pendulum swings back and forward,' were always spoken as S inhaled or exhaled. Counting was also timed to coincide with exhalation.

Deeper relaxation was suggested as E counted slowly from 1 to 21, and later, from 1 to 31.

"Throughout the procedure, phrases and words (such as 'hypnosis,' 'trance,' 'drowsy') traditionally employed with hypnotic induction techniques were avoided. After approximately 30 minutes, a natural transition was made to the testing procedure. Suggestions of continued deep relaxation were intermingled between various tests administered. Termination was effected by suggesting that the relaxation would end as E counted from 'A' to 'H'" (p. 75).

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

1957

Solovey, Galina; Milechnin, Anatol (1957). Concerning the induction of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 5 (2), 82-98.

## NOTES

The hypnotic state has four attributes: "an effect of emotional stabiliztion, a retrogression to an infantile psychological functioning, suggestibility, and transmissibility of the hypnotic relationship" (p. 82). "SUGGESTIBILITY is a special motivation to accept, incorporate within one's self, and execute direct or implicit propositions, which is equivalent to the motivation of a child to accept, assimilate and carry out the propositions of its parents" (p. 84). The authors propose that verbal and non-verbal suggestions are incorporated during the course of education, lasting years and thus becoming in effect post-hypnotic suggestions. "The person will have in the future a \_special responsiveness,\_ that may be more or less pronounced according to the circumstances, \_for those data\_ (coming from books, movies, conversations, etc.) \_which agree with his emotionally-incorporated post-hypnotic suggestions\_" (p. 85). If while in an auto-hypnotic condition he comes in contact with someone "who appears to be the embodiment of the convictions or prejudices that on being stimulated started the process of emotional activation that led to the development of the hypnotic state, \_there may be a transformation of the auto-hypnotic condition into an interpersonal hypnotic relationship\_" (p. 86).

According to the authors, this theory can explain post-hypnotic (negative) sequellae. It also accomodates explantions of both Natural or Direct Orientation inductions

and Indirect Orientation inductons, and explains phenomena such as patients entering hypnosis rather automatically while awaiting the appearance of Mesmer in his waiting room.

"To conclude, we will stress that the psychological mechanism of hypnotic induction is exactly the same in everyday life and in the experimental environment. The apparent differences like [sic] in the behavior of the subject in the hypnotic state, and are due to the motivation that arises from the circumstances and to the convictions, capacities, psychological maturity, and degree of retrogression of the individual" (p. 96).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the nature of hypnotic phenomena. Journal of Clinical and Experimental Hypnosis, 5 (2), 67-76.

#### NOTES

The authors write about the place of the hypnotic state in general psychology: "the study of the psychological mechanisms that make the appearance of the phenomenon possible, which need not be different from the normal and current psychological mechanisms in everyday life\_" (p. 67). They classify hypnotic phenomena into three groups:

"I. Phenomena which are a function of the state of psychological retrogression (hypnotic depth), appearing in spontaneously [sic] or when proposed by the operator.

II. Phenomena which appear without any specific suggestion, as a side issue of other suggestions, capable of originating emotional states in the subject.

III. Phenomena which are independent of all suggestion, being a constituent part of the hypnotic state itself, in its 'positive' or 'negative' forms" (p. 68).

Using this framework, the authors describe several aspects of hypnosis: catalepsy, anesthesia, retrogression, the taking of a role, negativism and resistance, visceral changes, emotional stabilization, psychotherapeutic benefits (indirect). They observe that direct suggestions are often not necessary for therapeutic benefit, and give as an example the tendency for less bleeding when dentists suggest that patients will not feel less pain.

"For the elucidation of this point, the authors carried out an experiment in a dental clinic, taking six easily hypnotizable subjects in whom dental extractions were to be performed. They were given only the suggestions that they would feel the doctor working, but not experience pain ... that they would pay no attention to it ... or even if they felt a little pain, this would not trouble them and they would bear it perfectly ... Nothing was said about the loss of blood. As a result, in all the cases the loss of blood was slight, practically insignificant, though technically difficult extractions of roots were included" (p. 74).

"The explanation of hypnotic phenomena as natural and normal consequences of the hypnotic emotional state, and of the state of psychological retrogression, eliminates the supposed mysterious powers of suggestion. Suggestion is thus relegated to the modest role of a litmus paper which reveals the psychological functioning of the individual in an experimental environment. On the other hand, in everyday-life hypnosis, in the principal hypnotic relationships of parents with

their children, of teachers with their pupils, etc. (11), suggestibility plays an important role in education or re-education" (p. 75).

1955

Fisher, Seymour (1955). An investigation of alleged conditioning phenomena under hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (2), 71-103.

#### NOTES

"Summary and Conclusions.

"The primary objective of the present investigation was to present rational and empirical evidence supporting a reinterpretation of a number of alleged 'conditioning' studies performed under hypnosis. An experiment which contained no explicit verbal posthypnotic suggestion was conducted. The study was designed to expose the presence of characteristic features of an explicit posthypnotic act in hypnotically induced 'conditioned responses'; two responses, an olfactory hallucination and a coughing reaction, were induced under hypnosis by a conditioning procedure, and were examined under various experimental conditions in the subsequent waking state.

"Although the results are based upon a relatively small sample of Ss, the overall data seem to warrant the following principal conclusions:

"(1) Responses induced under hypnosis by means of a conditioning procedure do not conform to some of the expected principles of contemporary conditioning theory.

"(2) These responses do, however, show a marked similarity to behavior induced by explicit posthypnotic suggestion. Inasmuch as no significant discrepancies between these two classes of phenomena (posthypnotic behavior and the responses induced by a conditioning procedure) were observed, the results are interpreted as supporting the dual hypothesis that (a) evocation of the cough and olfactory hallucination by their respective stimuli is a function of hypnotically determined suggestive factors, and (b) aside from the omission of an explicit verbal suggestion, these responses differ in no essential way from a typical posthypnotic act.

"(3) As a corollary to the preceding conclusion, it follows that some deeply hypnotized Ss are capable of performing posthypnotic behavior solely on the basis of implicit hypnotic suggestion. Hence, the frequently accepted assumption that explicit verbal instructions are required to effect posthypnotic behavior seems untenable.

"(4) To the extent that these conclusions are valid, it seems doubtful whether the concept of 'conditioned response' is any more appropriate when applied to these hypnotically determined responses than when applied to typical posthypnotic behavior. It would appear, rather, that the only fundamental difference between these two forms of behavior lies in the degree to which E explicitly communicates his suggestions.

"The major implications of the results are discussed, and several secondary conclusions are suggested:

"(5) The results are interpreted to support the possible existence of 'operator attitude' as a significant variable in research with hypnosis.

"(6) The results seem best understood within a framework of role-taking theory which takes into consideration both S's expectations and the hypnotist's expectations.

"(7) Recognition of the active participation of hypnotic Ss prescribes extreme caution in the interpretation of results whenever hypnosis is utilized as a technique for controlling psychological variables" (p. 101).

1954

Erickson, Milton H. (1954). A clinical note on indirect hypnotic therapy. Journal of Clinical and Experimental Hypnosis, 2, 171-174. (Abstracted in Psychological Abstracts 55: 4292)

#### NOTES

Author describes treatment of a young married couple who presented with the problem of life-long enuresis. The treatment involved a prescription: "Each evening you are to take fluids freely. Two hours before you go to bed, lock the bathroom door after drinking a glass of water. At bedtime, get into your pajamas, and then kneel side by side on the bed, facing your pillows and deliberately, intentionally and jointly wet the bed" (p. 172). (Hypnotic induction was not used.)

The author opines that the procedure was based upon an indirect use of hypnosis. "The instructions were so worded as to compel without demanding the inntent attention of the unconscious" (p. 173).

Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)

#### NOTES

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whome restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate

and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

Kline, Milton V.; Guze, Henry (1954). The alteration of oral temperature through hypnotic techniques: I. Pilot experimentation. Journal of Clinical and Experimental Hypnosis, 2 (3), 233-237.

## NOTES

The authors used a variety of hypnotic techniques to attempt to modify the oral temperature of a normal 30 year old male who was capable of both positive and negative hypnotic hallucinations and of reaching a somnambulistic level with spontaneous, complete, post-hypnotic amnesia. Techniques included direct suggestions (general for temperature rising as when ill, and specific, i.e. his oral area was getting hot), time regression to when he had experienced a fever, age regression to age 10 when he had a high fever, direct suggestion of temperature drop, and positive hallucination of extreme elevation in a plane. A waking simulation control was run for each condition.

Although the subject appeared uncomfortable and showed behavioral changes, the mean oral temperatures did not differ from the baseline mean significantly for either hypnosis or simulation conditions, except for the hallucinated experience of flying in a plane at an altitude of 100,000 feet. That condition lowered the temperature an average of 3 degrees Fahrenheit. In that experimental condition there was no mention of temperature alteration per se, "thus indirect mechanism rather than direct mechanism appears to be more effective in the hypnotic control of temperature" (p. 237).

## INDUCED MOOD

2000

Willmarth, Eric K. (2000, August). Modification of experienced pain with hypnotically induced positive mood. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

This study investigated the relationship between chronic pain and depressed mood within the context of Associative Network Theory and the High Risk Model of Threat Perception. A bi-directional relationship was hypothesized and tested by comparing pain ratings before and after the hypnotic induction of positive mood by suggestion of positive memories. These results were compared to the pain ratings of two control groups: participants who received hypnotic suggestion for relaxation only and participants who received non-hypnotic suggestion for relaxation and enhanced mood. Participants were 96 patients of a hospital-based Pain Management Center. Following assessment of hypnotic ability using the Harvard Group Scale of Hypnotic Susceptibility: Form A, and the Subjective Experiences Scale, participants

recorded levels of depressed mood, sensory pain, affective pain, global pain and self control of pain before and after listening to an audio-taped treatment session. Results show that the induction of a positive mood did influence a decrease in self-reports of pain. In addition, the level of the participants' hypnotic ability was also found to be a significant factor, suggesting that screening for predisposing factors, such as hypnotic ability, and the clinical use of hypnosis for mood enhancement are warranted in a chronic pain population. - Abstract taken from *Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30*, Fall 2000.

1993

Harris, Ruth M.; Porges, Stephen W.; Carpenter, Myrna E. Clemenson; Vincenz, Lilli M. (1993). Hypnotic susceptibility, mood state, and cardiovascular reactivity. *American Journal of Clinical Hypnosis*, 36 (1), 15-25.

In this study we explored the relationship between hypnotic susceptibility measured with the Harvard Group Scale of Hypnotic Susceptibility (HGSHS) and cardiovascular parameters. After assessing their degree of hypnotic susceptibility, we induced 21 female students into happy mood states and into sad mood states. During the mood state induction we monitored blood pressure, heart rate, and cardiac vagal tone continuously. The study demonstrated a strong relationship between hypnotic susceptibility and both cardiac vagal tone and heart rate reactivity. Subjects with lower heart rate and greater vagal tone during baseline and greater heart rate increases during mood induction were more susceptible to hypnosis. Multiple regression analyses indicated that approximately 40% of the individual difference variance of hypnotic susceptibility was accounted for by baseline cardiac vagal tone and heart rate reactivity during mood state. The data demonstrate that autonomic tone, assessed by cardiac vagal tone and heart rate reactivity, are related to hypnotic susceptibility as measured by the HGSHS. - Journal Abstract

Crowson, J. Jeffrey, Jr.; Conroy Aileen M.; Chester, Traci D. (1991). Hypnotizability as related to visually induced affective reactivity: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, 39 (3), 140-144.

Numerous studies have explored the relationship between hypnotizability and individual differences in imaginative involvement and creativity. Most have assessed imaginative or affective involvement by involving Ss in a variety of imaging tasks. Unlike these earlier studies, however, the present study made no attempt to actively involve Ss in the film viewing task. Rather, individuals assessed as high, medium, or low in hypnotizability were exposed to either a violent film, a neutral film, or no film. Results provided tentative evidence to indicate that the level of negative affect reported was significantly greater for highly hypnotizable Ss. Results were discussed in terms of the limitations of the present study and implications for future studies.

1991

Zachariae, Robert; Bjerring, P.; Arendt-Nielsen, L.; Nielsen, T.; Gotliebsen, K. (1991). The effect of hypnotically induced emotional states on brain potentials by painful argon laser stimulation. Clinical Journal of Pain, 7, 130-138.

The relationship between pain perception and emotional states is well known. However, the nature of this relationship and how different emotional states affect sensory and cognitive dimensions of pain remains uncertain. Results from experimental investigations are often contradictory, which may be due to methodological difficulties in inducing pain and monitoring physiological responses. In addition, most studies have focused on a single emotion, and data on the relative effects of different emotional states are lacking. In the present study we attempted to eliminate some of these methodological problems. Laser evoked potentials were used as a quantitative correlate to pain perception and were measured in 12 highly hypnotically susceptible subjects during seven conditions: (a) a prehypnotic baseline condition; (b) a neutral hypnotic control condition; (c-e) hypnotically recalled anger, fear, and depression in randomized order; (f) a hypnotically recalled happy condition, and (g) a posthypnotic awake control condition. The pain evoked potentials were significantly decreased in the angry condition and significantly increased in the depressed condition compared with baseline. No differences could be detected for either the happy or the fear-related condition compared with the baseline or neutral hypnotic condition. A significant positive correlation between the subjective intensity of depression and the increase in evoked potentials was found, but none for the other three emotions. The results support earlier findings that clinical depression is related to increased pain perception, and findings that the expression of anger can inhibit the experience of pain. The lack of changes in pain-related potentials during the neutral and happy condition may indicate that effects of psychological interventions such as hypnotic analgesia may be due to specific cognitive processes rather than a relaxed or pleasant state in itself.

#### NOTES

Hypnosis was used as an experimental condition because the recall of emotion may be more intense and vivid than in nonhypnotized conditions. Pulse was measured as an indicator of arousal. Subjects (9 women, 3 men) scored at least 10 or 11 on the Danish version of the Harvard Group Scale of Hypnotic Susceptibility. Each S was interviewed to determine early life experiences associated with the emotions under study, and the Experimenter noted key words regarding the emotion-arousing situation (time, place, persons involved) to assist in evoking the emotional state.

Pain was evoked with laser stimulus (100 ms) in a 1 x 3 cm. target area, avoiding repeated stimulation at identical points within the area. Pain threshold (prehypnotic) was defined as 'a distinct sharp pin prick without any burning aftersensation.' During the baseline and experimental conditions, evoked potentials were elicited using a stimulus 1.5 times threshold.

Following a standardized 15 minute hypnotic induction, the four emotional states were induced (randomized across Subjects). Each emotion was the focus for 10 minutes, and evoked potentials were recorded during the last five minutes of each. Subjects were instructed to relax and clear their minds of images or emotions in

between each emotion condition. No suggestions were given regarding pain or pain perception.

After the hypnosis conditions, Subjects were asked to rate the intensity of each emotion on an analogue scale, and to rate their experience of pain on an analogue scale. (As it turned out, most of the Subjects were not able to recall the intensity of pain during all four emotional states.)

The size of the evoked potentials to painful stimuli increased during depression 35.8% over prehypnosis baseline, but decreased during anger 46.8% below prehypnosis baseline. The difference between prehypnosis baseline and neutral hypnosis was not significant statistically. Also, the differences between the happy condition, the fearful condition, or the posthypnotic condition, and prehypnosis were not significantly different. Pulse increased 6.5% over baseline during anger, decreased 4.1% under baseline in depression, and evidenced no difference from baseline for the other two emotions.

"A significant ( $p < 0.05$ ) positive correlation ( $r = +.60$ ) was found between the subjective intensity of the depressed emotional state as measured on the visual analogue scale and the increase in power of the evoked potentials in the depressed condition compared to the prehypnotic baseline condition. There was a small ( $r = +0.35$ ) nonsignificant positive correlation between the subjective intensity of fear and the increase in power of the evoked potentials in this emotional state compared with baseline. No correlations between the increase in evoked potentials and the condition of happiness ( $r = +0.05$ ) and the condition of anger ( $r = -0.07$ ) could be detected. ... There was a positive correlation between the subjective intensity of happiness and anger ( $r = +0.70$ ,  $p < 0.02$ ). A positive correlation ( $r = +0.56$ ,  $p < 0.05$ ) between the intensity of happiness and the intensity of depression was found. No other correlations between intensity ratings reached significance level" (p. 134).

In their Discussion, the authors present the possibility that the differences in evoked potentials observed between different emotional states might be due to differences in attention/distraction, or differences in arousal/inhibition. They reject the attention/distraction hypothesis because evoked potentials increase more in the depression state than in the anger state, though anger was more intense than depression.

"There are, however, several findings that point toward support for a hypothesis that specific affects, and not attention in itself, may account for the opposite changes in evoked potentials. ... Subjects rated fear as even more intense (87.5%) than anger, but with no similar effects on evoked potentials. ... We also found a significant positive correlation between increase in evoked potentials and intensity of experienced depression; a finding opposite of what could be expected from an attention/distraction hypothesis.

"A simple attention/distraction hypothesis, therefore, cannot explain the opposite directions of evoked potentials in the two emotional states. ...

"The differences in pain evoked potentials therefore could be hypothesized to be more related to mechanisms of arousal and inhibition than attention in itself. ...

"Modulation of pain evoked potentials is most likely not due to the state of hypnosis in itself, but to the specific suggestions given under hypnosis, which may be the reason that previous studies of hypnotic modulation of event-related potentials have

been inconsistent.... One must be careful not to assume a direct relationship between pain and evoked potentials. ...

"Based on earlier findings (6-10) one could have hypothesized that an increase in pain perception would be found during the condition of hypnotically induced fear. However our results did not show any significant difference in pain evoked potentials when the emotion of fear was induced. This may be due to the fact that the fear or anxiety did not relate to the painful stimulus in itself, but involved an earlier experienced anxiety or a phobic fear (i.e., of snakes or flying). ...

"Although the state of hypnosis itself does not seem to affect sensory pain perception, the hypnotic state might facilitate the effect of specific suggestions given under hypnosis by affecting cognitive processing. Chapman (44) has suggested that hypnotic analgesia is due to the control of the figure-ground transitions associated with the experience of pain. Likewise, different emotional states may affect figure-ground transitions differently. Whereas outwardly directed anger might prevent inner sensations of pain from emerging as figure, the emotion of depression and helplessness might force the surroundings in the background, letting inner sensations emerge as figure" (pp. 136- 137).

**1990**

Martin, Maryanne (1990). On the induction of mood. Clinical Psychology Review, **10**, 669-697.

#### **NOTES**

Increasing interest in the relation between emotion and cognition has led to the development of a range of laboratory methods for inducing temporary mood states. Sixteen such techniques are reviewed and compared on a range of factors including success rate, the possibility of demand effects, the intensity of the induced mood, and the range of different moods that can be induced. Three different cognitive models (self- schema theory, semantic network theory, and fragmentation theory) which have been successfully used to describe long-term mood states, such as clinical depression, are elaborated to describe the process of temporary mood induction. Finally, the use of mood induction is contrasted with alternative methods (such as the study of patients suffering from depression) for investigating emotion.

**1989**

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. Cognition and Emotion, **3** (1), 1-26.

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

Samsom, Deborah; Rachman, S. (1989). The effect of induced mood on fear reduction. British Journal of Clinical Psychology, 28 (3), 227-238.

Investigated the effect on fear reduction in a laboratory study of fearful people. A musical mood-induction technique was utilized to induce either a happy mood or a sad mood in 84 female undergraduates who were fearful of spiders or snakes. Following the mood induction, Ss' fears were reduced by participant modeling. Measures of subjective fear and self-efficacy were taken before and after mood induction, after modeling, and 4 weeks later. Compared to the induced sad-mood condition, induced happiness was followed by a decrease in subjective fear and greater self-efficacy. No difference was found in the length of time taken to reduce fear for happy and sad Ss. Fear reduction during a sad mood was associated with greater return of fear than fear reduction during a happy mood.

1988

Robins, Clive J. (1988). Development of experimental mood induction procedures for testing personality-event interaction models of depression. Journal of Clinical Psychology, 44 (6), 958-963.

Developed 2 mood induction procedures for use in testing personality- event interaction hypotheses with regard to the onset of depressed mood of clinical depression. In these inductions, Ss listened to audiotapes depicting either a series of social rejections or achievement failures and were instructed to imagine themselves as the main character. Both tapes were found to produce a strong increase in reported depressed affect in 119 normal undergraduates. These effects were large in comparison to those elicited by commonly used mood induction procedures. Women reported greater mood shifts than men in response to both tapes. It is concluded that the present procedures have the advantage of content specificity, which permits test of personality-event interaction hypotheses.

1987

Weiss, F.; Blum, G. S.; Gleberman, L. (1987). Anatomically based measurement of facial expressions in simulated versus hypnotically induced affect. Motivation and Emotion, 11, 67-81.

NOTES

Cited by Bryant R. A. & McConkey, K. M. (1989) Hypnotic emotions and physical sensations: A real-simulating analysis, IJCEH, 37, 305-319, who state, 'Finally, future research could usefully focus on aspects of experiencing emotions that are not obvious to simulators. Recent research by Weiss et al. (1987), for instance, that focused on the onset latency and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure, and this points to the potential value of investigating specific aspects of emotional experience. Thus, future investigations of real and simulated emotions and physical sensations could usefully employ more

subtle and unobtrusive measures of the specific emotional responses of subjects" (p. 316).

1986

Madigan, R. J.; Bollenbach, A. K. (1986). The effects of induced mood on irrational thoughts and views of the world. Cognitive Therapy and Research, 10 (5), 547-562.

Sixty college students participated in an experiment concerning the influence of somatic mood induction statements on measurements of irrationality as defined by Ellis. Subjects were randomly assigned to depression, elation, and neutral mood induction groups. There were significant differences between groups on mood and irrationality. Results are discussed in terms of the Ellis and Beck cognitive models of depression, the Isen cognitive loop model, and the relationship between irrationality and depression. This study added irrational thinking as defined by Ellis to the growing list of cognitions that have been manipulated by mood, and it supports a body of findings that demonstrate the reciprocal influence of cognition and mood in depression. The study also has implications for the Beck and Ellis hypothesis that cognitions are the dominant causes of depression.

1985

Lundy, R. M.; Geselowitz, L.; Shertzer, C. L. (1985). Role-played and hypnotically induced simulation of psychopathology on the MMPI: A partial replication. International Journal of Clinical and Experimental Hypnosis, 33 (4), 302-309.

In Wilcox and Dawson (1977) hypnotized Ss who were simulating paranoia while taking the MMPI (Dahlstrom & Welsh, 1960) were not detected as simulators by 2 MMPI validity measures, the F scale and the Gough F minus K index (Gough, 1950). The present study found that hypnotized Ss were detected by the same measures, thus failing to replicate Wilcox and Dawson (1977). Hypnotized Ss in the present study, however, were different from a comparison group in not appearing to overplay psychopathology to the same degree.

1984

Stava, L. (1984). The use of hypnotic uncovering techniques in the treatment of pedophilia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 350-355.

This case study describes the use of the hypnotic uncovering techniques of induced dreams (Sacerdote, 1967) and the affect bridge (Watkins, 1971) in reducing inappropriate sexual arousal in a male pedophile. Treatment effects were examined through the use of both psychophysiological measures of penile tumescence and psychological tests. The hypnotherapeutic treatment regime consisted of 25 sessions over approximately 9 months. At the end of treatment, psychophysiological measures revealed a definite reduction of sexual excitation to slides of prepubescent children. Psychological testing indicated reduced defensiveness as well as reduced sexual anxiety to adult women. Various hypnotherapeutic experiences which may have contributed to the treatment effects are discussed.

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

**NOTES**

**Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.**

**Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.**

**1973**

**Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)**

**NOTES**

**Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2: This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)**

**1966**

Vandenbergh, R. L. (1966). Effects of hypnotically induced emotional stress on carbohydrate and lipid metabolism in patients with diabetes mellitus. Psychosomatic Medicine, 28, 382-390.

Effects of hypnotically induced emotional stress on carbohydrate and lipid metabolism in patients with diabetes mellitus

1962

Das, J. P. (1962). Learning under conditions of hypnotically induced anxiety and nonanxiety. International Journal of Clinical and Experimental Hypnosis, 10 (3), 163-168.

The hypothesis that anxiety may serve as a drive in learning situations was tested. Easy and difficult lists of trisyllabic nonsense syllables were learned by 6 somnambulistic Ss under conditions of hypnotically induced high and low anxiety. Level of hypnotically induced anxiety was not found to affect either recall scores nor number of trials to criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

#### NOTES

Healthy and psychosomatic patients participated in a series of experiments in which reactions were elicited by discussion of emotionally charged issues (discovered through interview and psychological tests) in hypnosis and in waking conditions. The experiments concerned the following:

1. The influence of emotions induced by hypnotic suggestions upon gastric secretion.
2. The influence of emotions induced by hypnotic suggestions upon gastric motility.
3. The influence of emotions induced by hypnotic suggestions upon colonic motility.
4. The influence of hyperventilation induced by emotional stress upon gastrointestinal function.
5. The influence of emotions induced by hypnotic suggestion upon the antibacterial activity of human blood.

In the fifth investigation, Colonies of E. Coli cultured in whole blood before and after a suggestion of fear were reduced in diameter following the suggestion; the same tendency was found in Staphylococcus Aureus. Albumin decreased and globulin increased after the suggestion of fear. The authors interpret this as antibacterial activity of human blood that is part of an "Alarm Reaction" of emotional stress.

1954

Kesner, Lawrence S. (1954). A comparison of the effectiveness of two psychotherapeutic techniques in the resolution of a post-hypnotic conflict. Journal of Clinical and Experimental Hypnosis, 2, 55-75. (Abstracted in Psychological Abstracts, 54: 7601)

#### NOTES

The author developed two experimental psychotherapies, based on Rogerian

(emotion-focused) and psychoanalytic (emotional reaction + factual data) principles, and investigated their effectiveness in resolving hypnosis-induced psychological conflict. The experimental design was:

"1. The subject was given a posthypnotic suggestion of an embarrassing situation of deriding a friend who later proved to have overheard the conversation, putting the subject in conflict. The situation was recalled intellectually and affectively upon awakening.

2. Upon awakening from hypnosis the subject was given a word association test consisting of 30 words related to the posthypnotic conflict and 30 neutral words. The words were presented alternately in groups of five Non-charged words and five Charged words.

3. One of the two therapy techniques was applied for a single session. The length of therapy was determined by the subject's desire. That is, the subject indicated that he had solved the conflict or that he did not wish to discuss it further after an attempt was made to handle the resistance.

It may be noted that in the present experiment both therapy techniques required a similar amount of time. The experimental therapy sessions ranged from nine to 30 minutes. A fairly typical session required about 20 minutes.

4. The word association list was repeated.

5. The subject was rehypnotized. He was told that the conflict was not real and no longer troubled him. Then amnesia was suggested for the conflict situation and the previous therapy session.

6. The word association list was administered again.

7. Steps one through four were repeated except that the alternate therapy technique was used after the second induction of the conflict.

8. To insure the subject's peace of mind, rather than for experimental purposes, after conclusion of the experiment the subject was rehypnotized, the fictional nature of the conflict was explained, and the residuals of the conflict were removed" (pp. 72-73).

Subjects averaged 23.6 years in age (range 17-42) and were screened from approximately 1,000 people. Psychological conflict was inferred from a significant difference in reaction time between Charged and Non-charged words.

"The Emotional therapy technique resolved the experimental conflict for more than three times as many subjects as did the Factual therapy technique" [but] "neither technique resolved the experimental conflict" [although] "both techniques caused some degree of resolution" (p. 74).

## INDUCTION

1994

Barabasz, Arreed F.; Barabasz, Marianne (1994, October). EEG responses to a reading comprehension task during active alert hypnosis and waking states. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

Evoked potentials differ between High & Low hypnotizables during hypnosis but not during waking (Barabasz & Lonsdale, 1983; Spiegel et al, 1985; Spiegel & Barabasz, 1988). Showed critical importance of instructions. We may not be aware of the suggestions that subjects are giving themselves. Or experimental cues may lead to de facto instructions.

Freeman, M. Barabasz & I found differences in high theta during cold pressor pain (reported elsewhere in this conference).

Active alert hypnosis improves attentional processing in military pilots (Barabasz, 1985, *Journal of Aviation, Space & Environmental Medicine*). INAP = Instantaneous Neuronal Activation Procedure. To enhance responsiveness to cockpit cues. Didn't have way of doing in flight measures of hypnosis. INAP was used clinically with airline pilots (Rhue, Lynn, & Kurtz *Handbook on Clinical Hypnosis*)

Active alert focused attention hypnosis increases frontal EEG topographic energy and frequency shifts (increased beta) in highly hypnotizable normal and attention deficit disordered children (Barabasz, Crawford & Barabasz, 1993; in press). No significant changes are found with low hypnotizables (Barabasz & Barabasz, 1993). But sample was small.

Can alert focused attention hypnosis alter EEG topography and attentional processing in subjects of average hypnotizability?

MRI type mapping shows that attention deficit kids don't have normal patterns.

Subjects: all 11 Ss (female) who volunteered for a vitamin B-6 depletion study, with EEG evaluation, also volunteered for hypnosis testing for a \$5.00 payment (SHCS score range 2-3).

Used active alert procedure during reading comprehension task, disguised as normal reading procedure. Counterbalanced waking, attentional instructions and alert focused attention hypnosis conditions were imbedded in standard EEG situation.

Nelson Denny H.S. Reading Comprehension Test. "Focus your attention to read faster than normal, paying attention to what you read."

Used an eye roll induction, and looked for signs of entering hypnosis before they roll their eyes down; were able to cut no. of sessions in neurofeedback training by 50% by using these instructions. To come out next year in Rhue and Lynn.

Reading rate and comprehension increased in alert hypnosis (and words per minute also in attentional instructions). Neurobehavioral feedback for ADD is to decrease theta and increase beta and it ordinarily takes 60 sessions; 40-80 sessions without hypnosis, 15-25 with hypnosis. Eye roll induction cuts that. (See Barabasz & Barabasz, 1996. Chapter in Lynn, Kirsch, & Rhue, "Casebook of Clinical Hypnosis." Washington, DC.: APA Press.)

1993

Bertrand, Lorne D.; Stam, Henderikus J.; Radtke, Lorraine (1993). The Carleton Skills Training Package for modifying hypnotic susceptibility--a replication and extension: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 6-14.

This study employed the Carleton Skills Training Package (CSTP) to attempt to enhance both objective and subjective components of hypnotic susceptibility. In addition, changes in susceptibility were compared for subjects administered a standard hypnotic induction procedure and for subjects given brief "place yourself in hypnosis" instructions. Results indicated that subjects who were administered the CSTP exhibited significant gains in both objective and subjective susceptibility scores that were maintained at two separate posttests with different scales. No differences were observed between the groups administered the standard induction and those administered the self-induction instructions. NOTES 1:

#### NOTES

The authors do not make much of the latter finding, but I find it to be the more interesting outcome.

"Two experiments (Barber & Calverley, 1969; Stam & Fraser, 1986) found that subjects who sat quietly for 5 minutes following an instruction to "place yourself in hypnosis" attained similar scores when responding to test suggestions as did subjects who were administered a 5-minute hypnotic induction procedure. The CSTP informs subjects that hypnotic induction procedures do not achieve their effects by inducing a trance state and that such procedures function to produce relaxation rather than to enhance responsiveness to suggestion. In addition, the CSTP emphasizes to subjects that responses to suggestions do not 'just happen' but must be actively generated. To the extent that subjects attend to these aspects of the CSTP procedure, they should exhibit equivalent increments on behavioral and subjective indexes of susceptibility regardless of whether they are administered a formal hypnotic induction procedure or simply told to 'place themselves into hypnosis.'" (p. 7).

"That naive subjects can produce equivalent objective, subjective, and involuntariness scores following such instructions highlights the degree to which hypnotic responses are not dependent on formal induction procedures. The fact that so-called active-alert induction procedures are also equivalent in producing hypnotic responses supports this notion (Banyai & Hilgard, 1976)" (p. 13).

De Pascalis, Vilfredo (1993). EEG spectral analysis during hypnotic induction, hypnotic dream and age regression. International Journal of Psychophysiology, 15, 153-166.

EEG was recorded monopolarly at frontal (F3, F4), central (C3, C4) and posterior (in the middle of O1-P3-T5 and O2-P4-T6 triangles) derivations during the hypnotic induction of the Stanford Hypnotic Clinical Scale (SHCS) and during performance following suggestions of hypnotic dream and age-regression as expressed in the before-mentioned scale. 10 low-hypnotizable and 9 highly-hypnotizable and right-handed female students participated in one experimental session. Evaluations were Fast-Fourier spectral analyses during the following conditions: waking-rest in eyes-open and eyes-closed condition; early, middle, and late phases of hypnotic induction; rest-hypnosis in eyes closed condition; hypnotic dream and age regression. After spectral analysis of 0 to 44 Hz, the mean spectral amplitude

estimates across seven Hz bands (theta 1, 4-6 Hz, theta 2, 6-8 Hz; alpha 1, 8-10 Hz; alpha 2, 10-13 Hz; beta 1, 13-16 Hz; beta 2, 16-20 Hz; beta 3, 20-36 Hz) and the 40-Hz EEG band (36-44 Hz) for each experimental condition were extracted. In eyes-open and -closed conditions in waking and hypnosis highly-hypnotizable subjects produced a greater 40-Hz EEG amplitude than did low hypnotizable subjects at all frontal, central and posterior locations. In the early and middle hypnotic induction highly-hypnotizables displayed a greater amount of beta 3 than did low hypnotizables and this difference was even more pronounced in the left hemisphere. With posterior scalp recordings, during hypnotic dream and age regression, high hypnotizables displayed, as compared with the rest-hypnosis condition, a decrease in alpha 1 and alpha 2 amplitudes. This effect was absent for low hypnotizables. Beta 1, beta 2 and beta 3 amplitudes increased in the left hemisphere during age regression for high hypnotizable; low hypnotizables, in contrast, displayed hemispheric balance across imaginative tasks. High hypnotizables during the hypnotic dream also displayed in the right hemisphere a greater 40-Hz EEG amplitude as compared with the left hemisphere. This difference was even more evident for posterior recording sites. This hemispheric trend was not evidenced for low hypnotizable subjects. Theta power was never a predictor of hypnotic susceptibility, 40-Hz EEG amplitude displayed a very high main effect ( $p < 0.004$ ) for hypnotizability in hypnotic conditions by displaying a greater 40-Hz EEG amplitude in high hypnotizables with respect to lows. NOTES 1:

#### NOTES

In the Discussion section, the authors indicate that they have no idea why they didn't replicate results of other theta studies, including their own, except maybe due to complex interaction among personality, subject selection, situation-specific factors, and hypnotizability.

They observe that the alpha results conform with previous findings (p. 163). Beta bands were sensitive. Highs showed left-hemisphere prevalence in all beta bands during age regression; they also showed hemispheric balance in the hypnotic dream condition. Beta 3 amplitude was also greater among highs than lows. "among high hypnotizables, beta 3 amplitude in the early hypnotic condition was greater in the left hemisphere as compared to the right and as the hypnotic induction proceeded hemisphere balancing, with reduced beta 3 amplitude, was displayed. This result appears in agreement with the predictions of the neurophysiological model proposed by Gruzelier et al. (1984) and Gruzelier (1988) as well as with other studies in which beta rhythm was found to discriminate performances between high and low hypnotizables (e.g., Meszaros et al., 1986, 1989; Sabourin et al., 1990)" (p. 163-164). 40 Hz amplitude was higher in highs and increased in right hemisphere during the hypnotic dream, especially in posterior areas. "This pattern of hemispheric activation may be interpreted as an expression of the greater right-hemisphere activation and of the release of posterior cortical functions during the hypnotic dream and is compatible with the predictions of the Gruzelier model of hypnosis, however, the results obtained in this study for 40-Hz EEG amplitude failed to reveal an inhibition of the left-hemisphere activity with the progress of the hypnotic induction" (p. 164).

(They note that De Pascalis & Penna, 1990, agreed with the Gruzelier 1988 model: highs in early induction had increase of 40-Hz in both hemispheres, but as induction proceeded they had inhibition of left and increase in right hemisphere activity. In this current experiment, only beta 3 showed the hemispheric trend of Gruzelier's model. They cite other details of current study, p. 164, not consonant with Gruzelier.)

"The 40-Hz EEG rhythm, which according to Sheer (1976) is the physiological representation of focused arousal, appeared to discriminate between differential patterns of high and low hypnotizables. Both during hypnotic induction and during hypnotic dream and age regression highly hypnotizables exhibit greater 40-Hz EEG amplitude with respect to the lows. These findings support the validity of the assumption that hypnosis is characterized by a state of focused attention (Hilgard, 1965) and that 40-Hz EEG activity reflects differential attentional patterns among subjects high and low in hypnotizability. On the basis of these findings it would appear that 40-Hz EEG and beta 3 spectral amplitudes may prove to be useful measures of individual hypnotizability" (p. 164).

Lynn, Steven Jay; Neufeld, Victor; Mare, Cornelia (1993). Direct versus indirect suggestions: A conceptual and methodological review. International Journal of Clinical and Experimental Hypnosis, 31, 124-152.

The article reviews the literature on the effects of direct versus indirect hypnotic suggestions. A conceptual and methodological analysis of direct versus indirect suggestions is also provided. Three conclusions follow from the review: (a) Contrary to views of Ericksonian hypnotists, suggestion style has little effect on objective responding to hypnotic test items; (b) studies of clinical- and laboratory-induced pain and other measures of subjective experience have yielded contradictory results- -however, the best controlled studies have not indicated that indirect suggestions are superior to direct suggestions; and (c) there is insufficient evidence to conclude that hypnotizability level and suggestion wording interact, such that low hypnotizable subjects are particularly responsive to indirect suggestions. Methodological and conceptual problems in defining and studying hypnotic communications, the lack of rigorous experimental controls, and research issues and directions are highlighted.

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Although this article is primarily concerned with the nature of suggestion, the review also mentions several studies comparing hypnosis with other interventions for pain, in passing:

Crowley (1980)

Snow (1979)

Omer, Darnel, Silberman, Shuval, & Palti (1988)

Stern (1982)

Bassman (1983)

"Like the clinical studies using the RIA [Rapid Induction Analgesia], pain studies that did not use the RIA lack appropriate control groups: Neither Bassman's (1983) nor Stern's (1982) research explicitly compared direct and indirect suggestions.

What our review does suggest is that studies (e.g., Crowley, 1980; Snow, 1979; Van Gorp et al., 1985) that imposed the greatest degree of methodological control yielded the outcomes least favorable to the hypothesis that indirect suggestions are effective and account for the pain relief achieved, above and beyond factors common to placebo treatments" (p. 132).

"Lynn and his colleagues' studies indicate that whereas indirect suggestions enhance archaic representations of the hypnotist, direct suggestions facilitate involvement in the events of hypnosis, as measured by subjective involvement and involuntariness" (p. 136).

1992

Kirsch, Irving; Mobayed, C. P.; Council, J. R.; Kenny, D. A. (1992). Expert judgments of hypnosis from subjective state reports. Journal of Abnormal Psychology, 101, 657-662.

Suggestibility was assessed in 60 student subjects after a traditional hypnotic induction, an alert induction, progressive relaxation training, or instruction in goal-directed imagery. Responsiveness to suggestion did not differ between groups. Subjects also generated open-ended reports of their states of awareness and of their experience of three hypnotic suggestions. A sample of these reports from 24 moderately to highly suggestible subjects was evaluated by 18 experts in the field of hypnosis. Expert ratings of subjects' open-ended reports indicated that (a) traditional hypnotic inductions produce a state of consciousness that is indistinguishable from nonhypnotic relaxation training, (b) the subjective experience of hypnotic suggestions after imagination training is indistinguishable from that after hypnotic inductions, and (c) suggestibility is unrelated to state of consciousness as assessed by experts.

Lewis, D. O. (1992). Hypnoanalgesia for chronic pain: The response to multiple inductions at one session and to separate single inductions. Journal of the Royal Society of Medicine, 85, 620-624.

Serial hypnotic inductions conveying the same analgesic message produce a progressively longer response in an increasing number of patients. The resulting analgesia appears to be independent of the spacing of inductions--whether given at a single session or on separate occasions--and to depend upon their number. However, multiple inductions at a single session save time. Elimination of pain can be achieved, by either approach, for a year or more in up to 70% of patients.

1991

Miller, Mary Frances; Barabasz, Arreed F.; Barabasz, Marianne (1991). Effects of active alert and relaxation hypnotic inductions on cold pressor pain. Journal of Abnormal Psychology, 100 (2), 223-226.

Contrasted relaxation and active alert hypnotic inductions with or without a specific suggestion for cold pressor pain analgesia. Groups of high (n = 38) and low (n = 27)

hypnotizability subjects were tested; hypnotizability had been determined from results of the Stanford Hypnotic Susceptibility Scale, Form C. Cold pressor pain data were obtained after counterbalanced exposure to relaxation and active alert inductions. Highly hypnotizable subjects demonstrated lower pain scores than did low hypnotizability ones. Pain reports did not differ between induction conditions. Highly hypnotizable subjects given an analgesic suggestion showed lower pain scores than did those exposed only to hypnosis. The findings, conceptualized within E. R. Hilgard's (1977a) neodissociation theory, show that relaxation is not necessary for hypnotic analgesia. NOTES 1:

NOTES: The relaxation induction was the SHSS, Form B. The active alert induction used the same instructions except suggestions for alertness, invigoration, and freshness were substituted for drowsiness and relaxation. During the active alert induction, the subjects rode a bicycle ergometer at a constant load of 1-3 kg and a constant rate of 1-2 rotations per s (Banyai & Hilgard, 1976).

1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

NOTES

We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each \_cell\_ is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're \_both\_ going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.

In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.

1989

Moss, Barry F.; Magaro, Peter A. (1989). Personality types and hetero- versus auto-hypnosis. Journal of Personality and Social Psychology, 57, 532-538.

The Multivariate Personality Inventory (MPI; Magaro & Smith, 1981), the Harvard Group Scale of Hypnotic Susceptibility, and the Inventory of Self-Hypnosis (ISH; Shor, 1970) were used to investigate the relationship between personality style and hypnotic procedure in the determination of hypnotic susceptibility. On the basis of MPI scores, a normal college population was segregated into 5 personality styles: hysteric, manic, depressive, character disorder, and compulsive. The hysteric personality was found significantly more hypnotizable than the other personality types in the HGSHS induction context, whereas the compulsive personality was found significant more hypnotizability in the ISH induction context. Results are discussed in terms of personality and situational factors in relation to previous hypnotic susceptibility research.

1988

Hammond, D. Corydon; Haskins-Bartsch, Catherine; Grant, Claude W.; McGhee, Melanie (1988). Comparison of self-directed and tape-assisted self-hypnosis. American Journal of Clinical Hypnosis, 31, 129-137.

Previous research on self-hypnosis has concentrated on the relationship between heterohypnosis and either self-directed self-hypnosis or self-initiated self-hypnosis. Despite widespread use of audiotapes to assist the process of self-hypnosis, no previous research has compared tape-assisted and self-directed self-hypnosis. Forty-eight inexperienced volunteers were hypnotized and taught self-hypnosis by posthypnotic suggestion and immediate practice in the office. They were randomly assigned to one of two experimental orders to practice self-directed and tape-assisted self-hypnosis. No differences were found between heterohypnosis or either type of self-hypnosis in response to behavioral suggestions. Experiential ratings, however, consistently favored heterohypnosis over either type of self-hypnosis. Tape-assisted self-hypnosis was consistently evaluated as superior to self-directed practice by newly trained subjects. NOTES 1: NOTES: The tapes were more or less identical with the in-office hypnosis, including voice of the hypnotist, except that those doing self-directed self hypnosis received a posthypnotic suggestion for how to enter hypnosis by themselves. (All Subjects received written instructions to remind them about the procedures for home practice.)

When self hypnosis was evaluated, use of a tape produced greater concentration and absorption, less distraction, greater subjective depth, greater perception of nonvoluntary response to suggestion, and more changes in body perception (e.g. loss of awareness of the body, feelings of heaviness or of floating). Therefore, the tape-assisted experience could be viewed as more convincing to the Subjects. People tended to fall asleep more when they did self-directed self hypnosis than when they used a tape. However, people enjoyed heterohypnosis more than either self hypnosis experience, and reported more nonvoluntary experiences. The more positive response to heterohypnosis replicates research by Johnson et al. (1983)., in which

preceding self-hypnosis by a heterohypnosis induction may results in less positive experiences with the self-directed self hypnosis.

In their Discussion, the authors note that finding no differences between self hypnosis and heterohypnosis in the number of behavioral suggestions successfully passed replicates earlier research (Shor & Easton, 1973; Ruch, 1975; Johnson, 1979; Johnson, Dawson, Clark, & Sikorsky, 1983).

"Thus, our present study has replicated previous findings concerning the relationship of heterohypnosis and self-directed self-hypnosis. In clinical practice, it appears that a heterohypnosis experience virtually always precedes training in self-hypnosis. Our findings and those of the Johnson (1983) study suggest, however, that generally patients will experience self-hypnosis as significantly less powerful than their previous office experience. But, by using a tape to assist the patient in initial practice, the discrepancy between the quality of the experiences appears reduced. It should be noted that Johnson et al. (1983) provide the innovative suggestion that there may be something gained by having self-hypnotic instruction and practice precede a hypnotic experience by a therapist. Initial self-hypnotic experience may create a mental set of being more actively involved" (p. 136).

"However, we know nothing about how tape-assisted vs self-directed experiences are perceived by Ss with more self-hypnotic and heterohypnotic experience, and particularly if they are utilizing the same tape recording(s) over and over again. Other research (Hammond, 1987) recently followed up premenstrual syndrome patients who were trained in self-hypnosis. In this study, patients showed a clear preference for using tapes to assist them in self-hypnosis shortly after initial training. However, on 6-month follow-up, patients were found to be utilizing self-directed self-hypnosis much more frequently than tapes, with which they may have become somewhat bored. The issue of boredom has thus far not been adequately addressed in the self-hypnosis literature" (p. 136).

Immelman, Aubrey (1988, November). The effects of three pain management procedures on the experience of cold pressor. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

This research was motivated by Joseph Barber's (1977) claim of 99% success rates with dental patients. This research had 3 conditions or levels of treatment: direct suggested analgesia; indirect suggested analgesia; and self-generated cognitive strategies. 60 male and female psychology students volunteered for the pain experiment; they were divided into Low Medium High hypnotizable Subjects. The Experimenter was blind to hypnotizability scores and there was random assignment to treatment groups. The Ss were tested three times with cold pressor test, with left hand in ice water, and assessed after each immersion. Order of conditions was: Pretest, 5' Rest, Baseline, Experimental Treatment, Post-test using Hilgard's procedures.

The Direct suggested analgesia condition used a modified Stanford Scale of Hypnotic Susceptibility Form C induction, with suggested analgesia. The Indirect suggested analgesia condition was Barber's Rapid Induction Analgesia script. For

the third condition, Ss listened to a history of the Fast Food Industry and were instructed to 'do whatever you can do to decrease the pain.'

The authors hypothesized that direct suggestion analgesia would be more effective for Highs, and indirect suggestion analgesia would be unaffected by level of hypnotizability.

## RESULTS

ANOVA for repeated measures produced sequential main effects for both pain and distress. 2. By 3 treatment levels: Indirect reduced pain more, though not significantly. (The pretest looks different, with the direct higher, not significantly so however). 3. For High Ss receiving direct suggestion there are similar decreases from baseline to posttest. For Lows receiving indirect suggestion, there were decreased pain ratings, but for those Lows receiving direct suggestion there is no decrease. But these are just trends and not significant.

## SUMMARY

Ratings of pain and distress, irrespective of hypnosis level, decrease from initial to second trial in absence of any intervention. The trends provide limited support for Barber's claims.

Nathanson, Donald L. (1988). Affect, affective resonance and a new theory for hypnosis. Psychopathology, 21, 126-137.

Suggests new theory of hypnosis based on recent experimental and theoretical work on emotion that shows neurological systems (including structural effectors and chemical mediators affecting specific sites of action). Tomkins' nine innate affects are organizers of the other moieties, genetically determined prewritten subcortical programs that convert quantitative stimuli into qualitative experience. Emotion in the adult involves subtle and complex combinations of innate affect with associations to previous experiences of affect provided by neocortical mechanisms. The infant initially expresses affect in an all-or-none fashion, while the caregiver, usually mother, acts as an external modulator of infantile affect display. All the techniques by which the mother learns to achieve affect mutualization and interaffectivity are analogues of what later may be seen as the techniques of hypnotic induction. Hypnosis may be viewed as the intentional alteration of neocortical cognition made possible by the state of primitive interaffectivity achieved when the hypnotic operator enters the central assembly system of the adult by techniques reminiscent of maternal modulation of infantile affect display.

Omer, H.; Darnel, A.; Silberman, N.; Shuval, D.; Palti, T. (1988). The use of hypnotic-relaxation cassettes in a gynecologic-obstetric ward. In Lankton, S. R.; Zeig, J. K. (Ed.), Research, comparisons and medical applications of Ericksonian techniques (pp. 28-36). New York: Brunner-Mazel.

## NOTES

They did three studies in which they gave women having gynecologic procedures tapes with a Rapid Induction Analgesia hypnosis experience.

**STUDY 1.** Women heard tapes before a painful Fallopian tube procedure (salpingography). The patients reported less pain, tension, anxiety, and fear than control patients. (N.B. Physicians' ratings did not show that difference.)

**STUDY 2.** Women practiced with the tapes at home before labor and delivery. One day after delivery, there was no difference in pain report or experience report between treated and control patients.

**STUDY 3.** Women used the tapes during labor. They reported worse pain and labor experiences than the control patients.  
The authors conclude that their research does not support the hypothesis that Rapid Induction Analgesia is useful for acute pain.

**1987**

**Patterson, David R.; Questad, Kent A.; Boltwood, Michael D. (1987).** Hypnotherapy as a treatment for pain in patients with burns: Research and clinical considerations. Journal of Burn Care and Rehabilitation, 8 (3), 263-268.

Hypnotherapy has increasingly been included in the management of burn patients, particularly in the area of acute pain. To better understand such issues as (1) overall efficacy of hypnotherapy to alleviate acute burn pain, (2) instances in which hypnotherapy is contraindicated, (3) interaction of hypnotherapy with medication, (4) standard induction techniques to use with various age groups, (5) role of nursing and other staff in facilitating hypnotic effects, and (6) future methodological directions, they examined the clinical and methodological merits of recent studies of hypnoanalgesia. A literature search found 17 studies in which hypnotherapy was applied to the management of burns. The literature generally supports the efficacy of this approach to reduce burn pain; however, little else can be concluded from these studies. Several recent studies have applied hypnotherapy to aspects of burn care other than pain using excellent experimental designs. It is suggested that future studies of acute pain management follow suit.

**1986**

**Mitchell, George P.; Lundy, Richard M. (1986).** The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of

hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level. NOTES 1:

## NOTES

(From the Discussion Section)

As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

1985

Matthews, William J.; Kirsch, Irving; Mosher, Donald (1985). Double hypnotic induction: An initial empirical test. Journal of Abnormal Psychology, 94 (1), 92-95.

#### NOTES

In separate experimental sessions, 34 undergraduate students experienced audiotapes of a standard hypnotic induction and a double induction similar to that described by Bandler and Grinder (1975). In the double induction, subjects heard a hand-levitation induction through the ear that is contralateral to the dominant cerebral hemisphere and, simultaneously, heard grammatically childlike messages through the other ear. Half of the subjects experienced the double induction first. There were no significant within-subject differences between the two inductions. However, subjects who experienced the double induction prior to the standard induction were significantly less responsive to suggestions following both inductions, which suggests that the double induction as a first experience of hypnosis may have a negative impact on subsequent experiences of hypnosis.

1984

**Kirsch, Irving; Council, James R.; Vickery, Anne R. (1984). The role of expectancy in eliciting hypnotic responses as a function of type of induction. Journal of Consulting and Clinical Psychology, 52 (4), 708-709.**

#### **NOTES**

**Combined data from a study by J. R. Council et al (see PA, vol 7:4975) and from a study by the present 3rd author (1983) on cognitive skill hypnotic induction to test the hypothesis that the relationship between expectancy and suggestibility varies as a function of type of induction. Analysis of data on 100 Ss shows significant Expectancy x Type of Induction interactions on the Stanford Hypnotic Susceptibility Scale, the Creative Imagination Scale, and an inventory of hypnotic depth. Within-cells correlations revealed a significant relationship between expectancy and responses to skill induction. Correlations between expectancy and responses to a traditional trance induction were nonsignificant**

**Malott, James M. (1984). Active-alert hypnosis: Replication and extension of previous research. Journal of Abnormal Psychology, 93 (2), 246-249.**

#### **NOTES**

**Compared levels of hypnotic responsiveness resulting from 4 induction procedures: (a) verbal active-alert induction alone, (b) bicycle pedaling alone, (c) verbal active-alert induction plus bicycle pedaling and (d) traditional relaxation induction. Ss were 48 undergraduates. Stanford Hypnotic Susceptibility Scale scores indicated that the verbal induction plus pedaling procedure was significantly more effective than either the verbal- or pedaling-alone procedures. There were no significant differences in scores produced by the verbal plus pedaling and traditional relaxation inductions. Findings are consistent with A. M. Ludwig's (1966) proposal that there exists a range of stimulation necessary for the maintenance of normal waking consciousness and that levels of stimulation above or below that range are conducive to the production of altered states of consciousness.**

**This study adds experimental controls to the research design used by Banyai for active alert induction.**

#### **1983**

**Bassman, S. (1983). The effects of indirect hypnosis, relaxation and homework on the primary and secondary psychological symptoms of women with muscle contraction headache (Dissertation). Dissertation Abstracts International, 44, 1950-B.**

#### **NOTES**

**Compared the effects of indirect hypnosis (e.g., metaphors, stories, vague suggestions, and implied directives) on muscle contraction headaches with a relaxation and a no-treatment control condition. Both hypnosis and relaxation conditions reduced symptoms more than did the no-treatment condition. Unlike relaxation, indirect hypnosis did not reduce the intensity and duration of headaches, although it did reduce the amount of medication and also benefitted sleep.**

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

#### NOTES

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction

credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsiveness. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsiveness generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

**1980**

**Diamond, Michael Jay (1980). The client-as-hypnotist: Furthering hypnotherapeutic change. International Journal of Clinical and Experimental Hypnosis, 28, 197-207.**

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist. Relevant theoretical processes are discussed as are mutual hypnosis, modeling, and the uncommon techniques of Erickson (1964). 3 case illustrations are presented and implications discussed. It is hypothesized that the 'client-as-hypnotist' may in certain special situations further hypnotherapy by: (a) increasing client motivation; (b) enhancing therapeutic rapport; (c) increasing both client trust and skills in utilizing unconscious processes; (d) overcoming resistance and increasing hypnotizability; (e) providing a useful psychodiagnostic and behavior assessment index; (f) presenting a role 'model' for dealing with feelings, alterations in consciousness, and self-control; (g) providing a client-centered framework for subsequent therapeutic interventions; (h) increasing client self-esteem, mastery, and ego strength; and (i) increasing client self-control skills. Potential risks and contraindications for use of the technique are also discussed.

**Edwards, William Henry (1980). Direct versus indirect hypnosis for the relief of chronic pain in spinal cord injured patients (Dissertation, United States International University). Dissertation Abstracts International, 40 (10-B), 4996.**

## NOTES

This study compared effectiveness of direct hypnosis and indirect hypnosis (Rapid Induction Analgesia, developed by Joseph Barber) in reducing experimental and clinical pain in spinal cord injured patients. The 30 male paraplegic patients who had chronic benign pain volunteered for the study. They were administered three tests: the Pain Estimate Scale (Sternbach, 1974), Ischemic Muscle Pain Test (IMPT), and the Stanford Profile Hypnotic Susceptibility Scale, Form II -- SPHSS -- (Weitzenhoffer and Hilgard, 1967). Each patient experienced three sessions: (1) Baseline Control, (2) Direct Hypnosis, and (3) Indirect Hypnosis. Patients were randomly assigned to Sessions (2) and (3). The results indicated no significant statistical difference in the effectiveness of direct versus indirect hypnotic analgesia in these chronic pain patients. Direct and indirect hypnosis were equally effective; hypnotizability was not associated with outcome. Furthermore, there was no interaction between treatment effects and pretreatment pain level. The results were similar for both clinical and experimental pain.

Hart, R. (1980). The influence of a taped hypnotic induction treatment procedure on the recovery of surgery patients. International Journal of Clinical and Experimental Hypnosis, 28, 324-331.

A study of 40 open heart surgery patients assigned to 1 of 2 equal size treatment groups sought to evaluate the efficacy and utility of a tape-recorded hypnotic induction procedure that preoperatively prepared patients for surgery. The dependent variables included daily blood pressure measurements and postsurgical outcome data pertaining to postoperative units of blood required, state/trait anxiety, and locus of control dimensions. Results of the study tended to provide some support for the tape-recorded hypnotic induction procedure in lessening state anxiety and in promoting a more self- directed attitude toward surgical recovery.

1977

Barber, Joseph (1977). Rapid induction analgesia: A clinical report. American Journal of Clinical Hypnosis, 19, 138-149.

This is a report of clinical dental experience using a newly developed, hypnotic pain control procedure. Characteristics of the procedure are outlined, an explanation for its success is suggested, and the broader implications of this success are discussed. The unusually high incidence of clinical analgesia rapidly obtained with this procedure leads the author to question the meaning and relevance of the concept of 'hypnotic susceptibility' for the practical clinical application of hypnosis.

Buckner, Linda G.; Coe, William C. (1977). Imaginative skill, wording of suggestions and 3 groups of 20 s based on preselected imaginative capacity were administered either a hypnotic susceptibility scale containing item wording that suggested a goal-directed fantasy or one that did not. Preselected imaginative ability did not predict hypnotic susceptibility or the production of goal-directed fantasies during hypnosis. However, Ss who received the hypnotic scale containing item

wording that suggested goal-directed fantasies reported more goal-directed fantasies than Ss who received the other scale. Limitations of the study are discussed and the causal role of goal-directed fantasy in hypnotic responsiveness is questioned.

**1976**

Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, **18**, 153-171.

The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.

Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it! American Psychologist, **29**, 785-795.

Jackson, T. L.; Barkley, R. A.; Pashko, S. M. (1976). The effects of hypnotic induction versus high motivation on oral temperature. International Journal of Clinical and Experimental Hypnosis, **24**, 22-28.

The hypothesis that changes in oral temperature are associated with neutral hypnotic induction was investigated using neutral hypnosis and a high motivation condition as controls. 33 Ss were assigned to 3 experimental conditions: (1) neutral hypnotic induction, (2) high motivation control, and (3) no treatment control. Ss in all 3 conditions received pre- and post-treatment oral temperature measurements after a 20-minute temperature stabilization showed a significantly greater increase in oral temperature as compared to Ss in both the high motivation and no treatment control conditions. Ss in the latter 2 conditions did not differ from each other in this regard. The methodological considerations of future research in this area are also discussed.

**1972**

Barber, Theodore Xenophon; de Moor, Wilfried (1972). A theory of hypnotic induction procedures. American Journal of Clinical Hypnosis, **15** (2), 112-135.

The first part of the paper delineates nine variables in hypnotic induction procedures that give rise to heightened responsiveness to test-suggestions: (a) defining the situation as hypnosis; (b) removing fears and misconceptions; (c) securing cooperation; (d) asking the subject to keep his eyes closed; (e) suggesting relaxation, sleep, and hypnosis; (f) maximizing the phrasing and vocal characteristics of suggestions; (g) coupling suggestions with naturally-occurring

events; (h) stimulating goal-directed imagining; and (i) preventing or reinterpreting the failure of suggestions. Data are presented to support the theory that the nine variables augment responsiveness to test-suggestions by giving rise to positive attitudes, motivations, and expectancies which, in turn, tend to produce a willingness to think with and vividly imagine those things that are suggested. The second part of the paper specifies situational variables and variables involved in induction procedures that produce a trance-like appearance, changes in body feelings, and reports of having been hypnotized.

1971

Beahrs, J. O. (1971). The hypnotic psychotherapy of Milton H. Erickson. American Journal of Clinical Hypnosis, 14, 73-90.

The principles of hypnosis and suggestion permeate most of Milton Erickson's psychotherapy, although formal trance induction is used in less than ten percent. Characteristic of Erickson's style is his indirect manner of phrasing suggestions or interpretations. They come not as outside impositions, but as subtle manipulations leading the patient to institute constructive behavior from within, often without full conscious awareness. Usually Erickson first attempts to meet the patient at the patient's level, thereby gaining rapport. As trust is developed, he modifies the patient's productions by covert suggestions, thereby gaining control. In this manner, he is able to convert a chaotic psychotic hallucination into an orderly hypnotic one, or the desperate cries of a terminal cancer patient into hypnotic anesthesia. As interpreted here, Erickson's therapeutic approaches can be divided into three categories. First are techniques resembling modern behavior therapy, with frequent use of desensitization. Second, uncovering or abreactive techniques are only rarely used for rigidly resistant and severe symptom patterns. With these, extreme care is taken to protect against too rapid a disclosure to conscious awareness. Third and most important, are techniques enabling the patient to shift or displace large amounts of emotional cathexis from his original problem to some new constructive outlets, usually involving the development of trusting interpersonal relationships. These techniques are the cornerstone of Erickson's therapeutic technique.

1970

Donk, Leonard J.; Vingoe, Frank J.; Hall, Roger A.; Doty, Richard (1970). The comparison of three suggestion techniques for increasing reading efficiency utilizing a counter-balanced research paradigm. International Journal of Clinical and Experimental Hypnosis, 18, 126-133.

Reports an experiment in which both Barber-type and alert-trance procedures significantly increased reading speed while maintaining comprehension when compared to a control group; a traditional hypnotic procedure followed by the specific suggestions failed to obtain these results. 32 volunteer undergraduates were randomly assigned to 4 groups in terms of a counterbalanced design. 2 groups were administered trance inductions (traditional and alert) followed by specific suggestions, a 3rd simply the suggestions, while the 4th served as control. Reading

suggestions were to eliminate specific problems, increase speed, and increase or maintain comprehension. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

.

**1969**

Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, 12 (2), 100-130.

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

Baykushev, S. (1969). Hyperventilation as an accelerated hypnotic induction technique. International Journal of Clinical and Experimental Hypnosis, 17, 20-24.

Describes a rationale and procedure for the use of hyperventilation as a facilitator of hypnotic trance induction. Results with 56 neurotic patients are reported. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Bartlett, K. A. (1968). A rationale of the nature of hypnosis. American Journal of Clinical Hypnosis, 11, 112-118.

A rationale of the nature of hypnosis without formal trance induction is presented. Central to this viewpoint is meeting the needs of the patient in accord with his perception of them and in a manner based on patient-oriented treatment. Case material illustrates practical applications.

**1968**

Chambers, Helen (1968). Oral eroticism revealed by hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 151-157.

A CASE STUDY OF THE OUTPATIENT TREATMENT OF A SEVERELY DEPRESSED WOMAN. THE CASE WAS COMPLICATED BY THE S'S REFUSING USUAL ANTIDEPRESSANT TREATMENTS. COMMUNICATION WAS DIFFICULT BUT WAS FINALLY ACHIEVED BY THE USE OF ETHER AT ALTERNATE INTERVIEWS. WITHDRAWAL OF ETHER WAS THEN USED TO CREATE A SITUATION OF DEPRIVATION TO AROUSE IN THE

TRANSFERENCE ATTITUDE THE FEELINGS PRODUCED BY THE EARLY TRAUMA. THE S'S COMPULSION TO EAT RAW POTATOES WAS STUDIED WHILE SHE WAS DEEPLY HYPNOTIZED. PSYCHOANALYTIC THEORIES THAT PLACE THE ORIGIN OF DEPRESSION AT THE TIME WHEN THE ORAL PHASE IS PRIMARY WERE CONFIRMED. THE S REFUSED ANY OTHER ANTIDEPRESSANT TREATMENT. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database)

1967

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J. (1967). An experimental indirect technique for the induction of hypnosis without awareness. International Journal of Clinical and Experimental Hypnosis, 15, 72-85.

A procedure is described which has been used in an experimental setting as a method of indirectly inducing hypnosis without S's awareness. Ss are not told that hypnosis is involved in the procedure, but are told they will be taught how to relax. The aim of the indirect procedure is to create different expectations and preconceptions from those normally occurring in the special hypnotic relationship. Evidence from 3 studies (samples of 63, 63, 120) indicates that the procedure successfully induces hypnosis comparable in depth to other standard hypnotic procedures. About half of the Ss tested apparently do not recognize the procedure involves hypnosis. Approximately 30% of the Ss who receive the procedure, as well as 30% of the Ss in the control group who did not receive the procedure, but were tested with the same test suggestions, recognized that an attempt had been made to induce hypnosis. The perceptions about whether hypnosis was involved were unrelated to scores on typical hypnotic phenomena. It was concluded that the indirect induction technique successfully induces hypnosis and is a useful technique for manipulating S-expectations in an experimental context.

## NOTES

[The Subject] is told, 'A series of experiments are being conducted investigating the effects of relaxation on behavior. Because of confusing results in the literature, this study is designed to examine the relationship between relaxation and several other psychological phenomena, some of which might remind you of a variety of other phenomena which you may have heard or read about.' The S was told that a technique had been devised that would assist him to relax completely. His main task was to relax as completely as possible. This would be facilitated by lying comfortably on a couch, and by allowing his mind to become completely blank. To prevent himself from falling asleep, he should concentrate his attention on some object or idea. To help exclude other thoughts from his mind, E would continue to talk in a monotonous voice saying little of importance, while the S stared at a spot on the wall. This shaping of the situation was continued with a considerable degree of apparent permissiveness.

"The S's attention was slowly directed to the rhythm of his own breathing as suggestions were given of eye fatigue. If S closed his eyes, he might find it convenient to concentrate on the rhythm of his own breathing. Perhaps this would be easy to think about if he visualized a pendulum swinging in time with his breathing. The E continued to talk and count in rhythm with S's breathing. Special words, such as 'breathing in and out; the pendulum swings back and forward,' were always spoken as S inhaled or exhaled. Counting was also timed to coincide with exhalation. Deeper relaxation was suggested as E counted slowly from 1 to 21, and later, from 1 to 31.

"Throughout the procedure, phrases and words (such as 'hypnosis,' 'trance,' 'drowsy') traditionally employed with hypnotic induction techniques were avoided. After approximately 30 minutes, a natural transition was made to the testing procedure. Suggestions of continued deep relaxation were intermingled between various tests administered. Termination was effected by suggesting that the relaxation would end as E counted from 'A' to 'H'" (p. 75).

1966

**Kramer, E. (1966). Group induction of hypnosis with institutionalized patients. International Journal of Clinical and Experimental Hypnosis.**

25 hospitalized mental patients, mainly with schizophrenic diagnoses, were tested in group sessions for hypnotic susceptibility. The hypnotic induction and the susceptibility tests were part of the Harvard Group Scale of Hypnotic Susceptibility, a scale which has been standardized on a nonpsychiatric population. Os scored the patients' behavior; the patients filled out self-report forms. Contrary to some reports in the literature, the average hypnotic susceptibility of these patients was similar to that of normals. Self-reports of their behavior during the hypnosis session were significantly correlated with O ratings, but less highly than has been reported for normals. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Coe, William C. (1965). A method of self-teaching for experimental hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 144-149.

A student's interest in hypnotic research may actually be discouraged because of the difficulty in obtaining a formal course or close supervision in hypnotic techniques. A method tried by 2 students to overcome this problem is presented. The "self-teaching" procedure attempts to fulfill 3 basic criteria: safeguarding the S, requiring minimal supervisory time, and learning to administer a standard hypnotic scale. Some benefits seem to have been realized. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Das, J. P. (1965). Relationship between body-sway, hand-levitation, and a questionnaire measure of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (1), 26-33.

67 randomly selected college students were administered the body-sway test, a questionnaire measure of tranceability, and an induction procedure utilizing hand-levitation to determine hypnotic susceptibility. The 6 Es varied in age, sex; 5 of them had little experience as hypnotists. All reference to "hypnosis" was omitted from the induction procedure. Significant phi-coefficients between body-sway and levitation (.52), levitation and tranceability frequency (.28) and intensity (.25), and body-sway and tranceability intensity (.33) were obtained. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Field, Peter B.; Evans, Frederick J.; Orne, Martin T. (1965). Order of difficulty of suggestions during hypnosis. International Journal of Clinical and Experimental Hypnosis, 13, 183-192.

This study tests the hypothesis that successful response to suggestion during hypnosis predisposes to further successful response, but failure leads to subsequent failure. The Harvard Group Scale of Hypnotic Susceptibility was administered to 2 groups of 51 volunteer students. For 1 group, 8 of the 12 items were administered in the order easy-to-difficult; for the 2nd group, in the order difficult-to-easy. Total and 8-item mean scores, and frequency distributions, did not differ significantly between groups. Except for the item measuring posthypnotic amnesia, item difficulties for the 2 groups did not differ significantly. Although the difficult-to-easy group was more amnesic, the 2 groups recalled a similar number of additional items when amnesia was "lifted." The block of 4 easier items was relatively easier when preceded by a block of 4 harder items and, similarly, the harder items were relatively less difficult if preceded by a block of easier items. The magnitude of this effect was small, and the order effect hypothesis was basically not supported. Future research should consider the S's subjective impression of success and failure. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

McCord, Hallack (1965). Trance induction under unusual circumstances. International Journal of Clinical and Experimental Hypnosis, 13, 96-102.

In order to obtain a test under naturalistic field conditions of the possible facilitatory or inhibitory effects of ongoing tasks on hypnotizability and the interaction of such effects with S's set either to oppose or not oppose entering hypnosis, a series of Ss were hypnotized either singly or in groups while they were performing a variety of tasks typical of those encountered in office or factory situations. Included were such tasks as typewriting, reading a book, engaging in creative writing, performing the Bennett Hand Tool Dexterity and the Minnesota Rate of Manipulation tests, and performing the Pennsylvania Bi-Manual Worksample. In many cases, it was found that hypnosis could be induced under these conditions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Erickson, Milton H. (1964). The confusion technique in hypnosis. American Journal of Clinical Hypnosis, 6, 183-207.

1964

The confusion technique is "a play on words or communications of some sort that introduces progressively an element of confusion into the question of what is meant, thereby leading to an inhibition of responses called for but not allowed to be manifested and hence to an accumulating need to respond. ... [Added to the play on words] are the modification of seemingly contradictory, or irrelevant unrelated concepts, non sequiturs and ideas, variously communicated, and each of which out of context is a simple reasonable assertion, meaningful and complete in itself. In context, such communications given in a meaningfully emphatic manner become a medley of seemingly valid and somehow related ideas that leads the subject to try to combine them into a single totality of significance conducive to a response, literally compelling a response. But the rapidity of the communications inhibits any true understanding, thereby precluding responses and resulting in a state of confusion and frustration. This compels a need for some clear and understandable idea. As this state develops, one offers a clearly definite easily comprehensible idea which is seized upon immediately and serves to arouse certain associations in the subject's mind. The medley is then continued and another comprehensible idea is offered, enhancing the associations of the previous clear understanding. And in the process, one throws in irrelevancies and non sequiturs as if of pertinent value, thereby enhancing the confusion" (p. 256 in the article as reprinted in Jay Haley).

Hammer, A. G.; Arkins, W. J. (1964). The role of photic stimulation in the induction of hypnotic trance. International Journal of Clinical and Experimental Hypnosis, 12, 81-87.

The relative effectiveness of the ordinary verbal method of trance induction is compared with 2 forms of induction utilizing mechanical photic stimulation, and with methods combining the personal and mechanical features. The criterion of trance adopted was the compulsive carrying out of a difficult suggestion. Results show that mechanical procedures alone are ineffective. On the other hand, the addition of a particular sort of photic driving probably improves trance induction, which suggests that induction is a complex matter involving both social interactions

and relatively nonmeaningful impacts on the brain. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, **11**, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1962**

Giles, Eugene (1962). A cross-validation study of the Pascual technique of hypnotic induction. International Journal of Clinical and Experimental Hypnosis, **10** (2), 101-108.

A cross-validation of reported high successes of hypnotic induction and statements that success was independent of the operator when using Pascal's technique showed that: (a) an experienced-operator group clearly excelled a training group, and (b) the experienced group almost exactly replicated percentage-wise the successes claimed by Pascal and Salzberg. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

McCartney, James L. (1961). A half century of personal experience with hypnosis. International Journal of Clinical and Experimental Hypnosis, **9**, 23-33.

## **NOTES**

(Author's Summary and Conclusions). "After fifty years of experience with hypnosis, it is evident that it is not a superficial and careless technic but should be utilized only by capable, trained physicians, as are the other complex and difficult medical technics. ... In order to induce hypnosis, the patient must be perfectly willing to be hypnotized, he must have confidence in the practitioner, and he must concentrate on doing exactly as he is told. In selected cases, drugs or electrical impulses may be used for the initial induction of hypnotic sleep, but if hypnotherapy is to be continued, the physician must keep in contact with the patient by repeated suggestions. The technic used should fit the individual patient, but in most cases, verbal suggestions are all that is necessary to bring about dissociation. Hypnosis may be used to facilitate the beginning of mental catharsis, the establishment of transference, and may be easily instituted following narcosynthesis, electroshock therapy, minimum stimulus, or Sedac. Suggested activity under hypnosis may be carried out at a designated time, place, and manner after awakening. This is a result of autosuggestion and may be mistaken for psychopathic behavior. Such suggestions

may be instituted by television, movies, radio, telephone, or recorded or written instruction. Hypnosis may be used to plant suggestions; if misused, it may create an obsessive-compulsive neurosis, while when properly used, it may overcome many functional symptoms and may be used to supplement other forms of psychotherapy" (p. 32).

1959

Cheek, David B. (1959). Use of rebellion against coercion as mechanism for hypnotic trance deepening. International Journal of Clinical and Experimental Hypnosis, 7 (4), 223-227.

## NOTES

### Summary

Observation that student subjects often go into a deeper level of hypnosis after suggestions have been given for ending the session has led the writer to explore the reactions of subjects to this phenomenon and to set up a simple experiment using ideomotor responses in ten gynecological patients who needed hypnosis for therapy. In each of the ten patients there was a deepening of the trance after the suggestion to awaken had been given. It was the opinion of the subjects that they deepened the trance in rebellion against the direction for terminating a pleasant experience" (p. 227).

Kroger, William S.; Schneider, Sidney A. (1959). An electronic aid for hypnotic induction: A preliminary report. International Journal of Clinical and Experimental Hypnosis, 7, 93-98.

## NOTES

The BWS or brain wave synchronizer is "an instrument specifically designed to induce various levels of hypnosis by subliminal and photic stimulation of the brain waves" (p. 93). It was developed after noticing that radar operators on ships sometimes fell into deep hypnotic states while watching signals on a radar screen. It has been used with 2500 subjects, 200 of whom were receiving pre-natal training for childbirth under hypnosis.

"For the first five minutes there is a gradual increase in the number of subjects who enter deep hypnosis. At this level, a figure of 50% reach the deep state" (p. 95).

The instructions given were, "Concentrate on the center of the instrument. When your eyes become tired and heavy, as they will, just let them close and feel yourself going deeper and deeper into a relaxed state." It is acknowledged that this procedure worked when Ss expected to experience hypnosis; the rate of deep hypnosis increased as the expectancy of hypnosis increased. "Deep hypnosis in individual inductions reached 80% under the following conditions:

A. Synchronizer on 5 minutes

B. Expectation Level of 50 [on a scale in which 100 represented having seen demonstrations of conventional hypnosis and an explanation of what the instrument would do]" (p. 97).

Pascal, G. R.; Salzberg, H. C. (1959). A systematic approach to inducing hypnotic behavior. International Journal of Clinical and Experimental Hypnosis, 7 (3), 161-167

NOTES

1:

"Summary

The paper reports an experiment in inducing hypnotic behavior. Hypnotic behavior is considered as operant behavior subject to the principles of such behavior. Using a procedure based on this systematic position 52 per cent of 56 subjects were brought to the deep trance state in one session, a considerable gain over results reported in the literature. It is felt that the approach presented suggests that hypnosis may be brought into the realm of behavioral science" (p. 166).

A detailed description of the procedure is provided. It begins with providing information, establishing rapport, using demonstrations of hypnotic-like behavior (the Kohnstamm phenomenon and body sway suggestions), followed by relaxation in a stimulus-attenuated room with verbal suggestions and operant (verbal) reinforcement. It proceeds with a series of frankly hypnotic suggestions for arm analgesia and lightness/floating, amnesia, etc.

1956

Christenson, James A., Jr. (1956). An operational approach to hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (2), 89-91.

NOTES

The author helps subjects and patients to achieve somnambulistic trance by informing them it is akin to things like sleepwalking, dreams, amnesic alcoholic episodes, etc., then suggests that most of us have experienced this before, that we are unconsciously aware of "just what hypnosis really is," and finally invites the subject to achieve that state using the subject's own inner criteria. He distinguishes between hypnotic induction and hypnotic state and critiques researchers who do not make that distinction. "Unwitting hypnosis, the developing of trances by contagion, or in moments of extreme emotional stress, suggest that the achieving of hypnosis is actually a very simple and easy process. I believe that eventually all but a very small percentage of people can be easily and deeply hypnotized" (p. 89). He describes the use of motor signals (e.g. elevated arm) for depth reporting by deeply hypnotized subjects.

1953

Dittborn, Julio (1953). Conditioning of hypnosis to different signs of the same significance. Journal of Clinical and Experimental Hypnosis, 1 (3), 1-3.

1. The difference of the periods of latency to condition a deep hypnotic trance between the different signs of the number six, is remarkable. This difference is significant between the pair (6; six,) and the pair (VI; 12:2).
2. The mean periods of latency are peculiar to each subject, but the subjects tend to gather themselves into two groups: a more rapid (subjects C and D) and a slow one (subjects A and B).

3. It is worthy of notice that one of the subjects, B, did not respond to the idea of six when this was not presented explicitly, but had to be deducted from a calculation (12:2=).

..... It is suggestive that with three somnambulists the idea was enough to produce the phenomenon, while the other always required the objectivation of the idea, even though the sign implied it in a very evident and simple way. It might be worth while to ask if this phenomenon might not be another way to measure the depth of a somnambulatory trance.

Ellis, Albert (1953). Reactions of psychotherapy patients who resist hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 12-15.

#### NOTES

When one of my psychotherapy patients has difficulty in remembering or bringing forth salient material, I or the patient sometimes suggests the use of hypnosis. At such times, I usually find one of two major modes of reaction: either the patient comfortably accepts the idea of hypnosis, and we proceed forthwith to establish a hypnotic relationship; or else the patient, even though he has himself first suggested using hypnosis, is visibly uncomfortable about engaging in it, and in one way or another resists being hypnotized.

"In the latter case, particularly where the patient backs down completely and manages to structure the therapeutic relationships so that hypnosis is never actually attempted, I frequently find that the threat of being hypnotized is so intense that, rather than submit to it, the patient begins to surrender some of his neurotic symptoms or makes unusual psychotherapeutic progress without it."

The author presents three case studies.

#### INFLAMMATION

1997

Schafer D. W. (1997). Hypnosis and the treatment of ulcerative colitis and Crohn's disease. American Journal of Clinical Hypnosis, 40 (2), 111-117.

Ulcerative colitis and Crohn's Disease can be cured if they are treated as autoimmune diseases with a special understanding of the personality conflicts in the patient. The author hypothesizes that all autoimmune diseases are characterized by a high normal amount of the aggressive instinctual drives and ambivalence about their realization. Each patient's personality causes the ambivalence to be somaticized into specific autoimmune bodies that aggressively are overproduced and then attack specific tissues. Hypnosis helps in gaining insight, reinforcing interpretations, handling stress, visualizing normal intestinal areas, and controlling of the autoimmune antibodies to the normal level. This paper deals specifically with these 2 diseases.

1994

Zachariae, Robert; Locke, Steven E. (1994, October). Effects of hypnotic suggestions on immune and inflammatory processes--experimental studies 1962-1994. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

1:

We reviewed studies of the effects of hypnotic suggestion to enhance or suppress immediate type hypersensitivity (ITH) or delayed type hypersensitivity (DTH) skin responses (investigations between 1960-1994). In the early 60's most of the studies occurred in England with Black and colleagues. In Black's studies there weren't many subjects.

In most studies the stimulus was an allergen to the patient, or histamine injections that mimic immediate type hypersensitivity response. In one study we have used ultraviolet stimulation. Most studies involve decreasing the response, but a few studies used both increasing and decreasing the response.

Measures include the wheal response (local) and erythema (mediated by the nervous system). Most studies find a reduction in both types of response, but in some of our later studies and also the study by Beahrs, Harris, & Hilgard (1970) they didn't find a wheal response but did find erythema reduction. In the ultraviolet response we didn't get a reduction in erythema but did in blood flow.

Studies in delayed type hypersensitivity usually measure induration and erythema; 3 used tuberculin, 3 used varicella zoster, 1 used multiple antigens, 1 used mumps. Antigen in mumps is latent in the body so the immune response will be different. Most studies tried to increase and decrease the response; two tried just to increase, one just to depress it. Some tried to increase the response in one arm and suppress it in the other arm. In ours we separated the two conditions by a week.

## RESULTS

ITH in general can be suppressed, both the wheal and flare response. Erythema was altered in six studies, unchanged in three; wheal response was altered in [missed number] and unchanged in four. Some studies used allergic patients or those with a psychosomatic history; others screened them out.

DTH results are inconclusive for erythema and induration. All studies using PPD as the antigen were positive; one study using DCP and DNCB was positive. Negative results are found in three studies using Varicella Zoster; 1 study using the Multitest, and 1 study using mumps as antigen.

One could think the reasons for positive vs. negative results relate to the antigens used, and also the dosages given. Some studies use very small doses; one of ours uses such a large dose it is actually felt and sensed. Health status of Ss also could make a difference: a healthy immune response would resist modification if it's not needed. Timing between stimulus and measurement also varies. Suggestions and rapport may affect results, and also the presentation of suggestions. (Some studies taped the suggestions, some use scripts, but using tapes or scripts may lessen rapport with the Subjects.) Measurements differ, e.g. from area tested, diameter of measurement, type of measurement (ultrasound to measure skin thickness, caliper measurement of skin thickness). In measuring hypnotizability and selecting only high hypnotizables, you may eliminate people who can modify their physiological processes. Ss differ

with degree of prior training (those with training are more able to effect responses than on the first time). Operator differences between hypnotists may have some effect.

Mechanisms of the process being studied are at issue: Are we dealing with immune or non-immune processes. Changes in skin temperature and blood flow suggest the latter (vaso dilation and vaso constriction), because of lack of changes seen in lymphocytes etc, although two studies found some kind of changes.

Damage to cutaneous sensory nerves has produced clearing of psoriasis.

**COMMENTS FROM THE AUDIENCE:**

**H. Bennett:** How about hypnotizability of the Subjects? Also, T. X. Barber indicated in a long review article that local vascular response accounts for all of this.

**Response:** Just testing for hypnotizability isn't enough. Local response may be important; immunologists say this isn't immunology because you are affecting nonimmune responses.

**1990**

Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. Behaviour Research and Therapy, 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

**1989**

Zachariae, Robert; Bjerring, P.; Arendt-Nielsen, L. (1989). Modulation of type I mediated and type IV delayed immunoreactivity using direct suggestion and guided imagery during hypnosis. Allergy, 44 (8), 537-542.

Cutaneous reactivity against histamine skin prick test (Type I) and purified tuberculin protein derivative (Mantoux reaction, Type IV) was studied in eight volunteers under hypnosis. Types I and IV immunoreactivity were modulated by direct suggestion (Type I) and guided imagery (Type IV). When the highly susceptible volunteers underwent hypnotic suggestion to decrease the cutaneous reaction to histamine prick test, a significant (P less than 0.02) reduction of the flare reaction (area of erythema) was observed compared with control histamine skin tests. The wheal reaction did not respond to hypnotic suggestion. Neither wheal nor flare reaction could be increased in size by hypnotic suggestion compared with control histamine skin-prick tests. A hypnotic suggestion of increasing the Type IV

reaction on one arm and decreasing the reaction on the other revealed a significant difference in both erythema size (P less than 0.02) and palpable induration (P less than 0.01). In two cases the reactions were monitored by laser doppler blood flowmetry and skin thickness measurement by ultrasound. The difference between the suggested increased and decreased reaction was 19% for the laser doppler bloodflow (in favor of the augmented side), and 44% for the dermal infiltrate thickness. This study objectively supports the numerous uncontrolled case reports of modulation of immunoreactivity in allergic diseases involving both Type I and Type IV skin reactions following hypnotic suggestions.

1983

Smith, Shirley J.; Balaban, Alvin B. (1983). A multidimensional approach to pain relief: Case report of a patient with systemic lupus erythematosus. International Journal of Clinical and Experimental Hypnosis, 31 (2), 72-81.

A multidimensional approach to the relief of intense pain associated with a chronic, debilitating disease (Systemic Lupus Erythematosus) is illustrated in this case report. Techniques associated with behavioral therapy (deep muscle relaxation, systematic desensitization); hypnosis (trance states, guided imagery, age regression, anesthetic induction and transfer and auto-hypnosis); and psychodynamic psychotehrapy (dyadic interchange, suggestion, encouragement, interpretation of resistance and the transference/countertransference relationship) were utilized in obtaining virtual freedom from disabling pain and the necessity for analgesic and tranquilizing medications. Follow-up over a 3-year period demonstrated the utility of the approach.

## INHIBITION

2002

Raz, Amir; Shapiro, Theodore; Fan, Jin; Posner, Michael (2002). Hypnotic suggestion and the modulation of Stroop interference. Archives of General Psychiatry, 59, 1155-1161..

This study was designed to determine whether a hypnotic suggestion to hinder lexical processing could modulate the Stroop effect. Behavioral Stroop data were collected from highly suggestible and 16 less suggestible subjects; both naturally vigilant and under posthypnotic suggestion. Subjects were urged to only attend to the ink color and to impede reading the stimuli under posthypnotic suggestion. Whereas posthypnotic suggestion eliminated Stroop interference for highly suggestible subjects, less suggestible control subjects showed no significant reduction in the interference effect. This outcome challenges the dominant view that word recognition is obligatory for proficient readers, and may provide insight into top-down influences of suggestion on cognition. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

2001

Raz, Amir (2001). Hypnotic suggestion and the modulation of Stroop interference. [Paper] Presented at annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, Texas.

This study was designed to determine whether a hypnotic suggestion to hinder lexical processing could modulate the Stroop effect. Behavioral Stroop data were collected from highly suggestible and 16 less suggestible subjects; both naturally vigilant and under posthypnotic suggestion. Subjects were urged to only attend to the ink color and to impede reading the stimuli under posthypnotic suggestion. Whereas posthypnotic suggestion eliminated Stroop interference for highly suggestible subjects, less suggestible control subjects showed no significant reduction in the interference effect. This outcome challenges the dominant view that word recognition is obligatory for proficient readers, and may provide insight into top-down influences of suggestion on cognition. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

[Abstract taken from the Archives of General Psychiatry 2002 article by Raz, Shapiro, Fan, & Posner.]

1998

Crawford, Helen J.; Knebel, Timothy; Kaplan, Lyla; Vendemia, Jennifer M. C.; Xie, Min; Jamison, Scott; Pribram, Karl H. (1998). Hypnotic analgesia: 1. Somatosensory event-related potential changes to noxious stimuli and 2. Transfer learning to reduce chronic low back pain. International Journal of Clinical and Experimental Hypnosis, 46 (1), 92-132.

Fifteen adults with chronic low back pain ( $M = 4$  years), age 18 to 43 years ( $M = 29$  years), participated. All but one were moderately to highly hypnotizable ( $M = 7.87$ ; modified 11-point Stanford Hypnotic Susceptibility Scale, Form C [Weitzenhoffer & Hilgard, 1962]), and significantly reduced pain perception following hypnotic analgesia instructions during cold-pressor pain training. In Part 1, somatosensory event-related potential correlates of noxious electrical stimulation were evaluated during attend and hypnotic analgesia (HA) conditions at anterior frontal (Fp1, Fp2), midfrontal (Fe, F4), central (C3, C4), and parietal (P3, P4) regions. During HA, hypothesized inhibitory processing was evidenced by enhanced N140 in the anterior frontal region and by a prestimulus positive-ongoing contingent cortical potential at Fp1 only. During HA, decreased spatiotemporal perception was evidenced by reduced amplitudes of P200 (bilateral midfrontal and central, and left parietal) and P300 (right midfrontal and central). HA led to highly significant mean reductions in perceived sensory pain and distress. HA is an active process that requires inhibitory effort, dissociated from conscious awareness, where the anterior frontal cortex participates in a topographically specific inhibitory feedback circuit that cooperates in the allocation of thalamocortical activities. In Part 2, the authors document the development of self-efficacy through the successful transfer by participants of newly learned skills of experimental pain reduction to reduction of their own chronic pain. Over three experimental sessions, participants reported chronic pain reduction, increased psychological well-being, and increased sleep quality. The development of

"neurosignatures of pain" can influence subsequent pain experiences (Coderre, Katz, Vaccarino, & Malzack, 1993; Melzack, 1993) and may be expanded in size and easily reactivated (Flor & Birbaumer, 1994; Melzack, 1991, 1993). Therefore, hypnosis and other psychological interventions need to be introduced early as adjuncts in medical treatments for onset pain before the development of chronic pain.

## NOTES

1:

The authors suggest that "the anterior frontal region deals with the active allocation of attention and disattention, whereas spatiotemporal aspects of the somatosensory perceptions involve the posterior cortical systems" (p. 113) They acknowledge that "other inhibitory pain systems are actively interacting with the frontal attentional system, including the limbic and thalamic systems" and mention evidence that the inhibitory processing "may extend as far as spinal cord antinociceptive mechanisms as evidenced by reductions in brief latency (Hagbarth & Finer, 1963) and R-III amplitude (Kiernan, Dane, Phillips, & Price, 1995) of spinal reflexes" (p. 113). Both pain perception and strategies of pain control may involve the anterior cingulate cortex (Kropotov et al. 1997), which has many connections with anterior frontal cortex "and is thought to be an area that organizes responses to noxious stimuli" (p. 113).

For the chronic low back pain Ss there were reductions in reported low back pain during the experimental sessions, and significant improvements in psychological well-being and sleep quality across the three sessions. "The importance of developing self-efficacy through learning to control experimental pain and the understanding of one's own attentional and disattentional abilities was demonstrated as being a significant intervention in the modulation and control of chronic pain" (p. 123).

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. *Pain*, 75 (1), 85-92.

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the

autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated. Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

## **INSOMINIA & DEPRESSION**

**1976**

**Barabasz AF. Treatment of insomnia in depressed patients by hypnosis and cerebral electrotherapy. American Journal of Clinical Hypnosis 1976;19(2):120-2**

Investigated the influence of suggestion on recovery in the treatment of sleep disturbances by cerebral electrotherapy (CET). 60 adult psychiatric outpatients (diagnostic classification--mild depressive neurosis) were randomly assigned to 4 groups. Group A received CET only; Group B received a CET placebo; Group C received CET with hypnosis; and Group D received a CET placebo with hypnosis. Group A reported a significantly higher recovery than Group B, Group C a significantly higher recovery than Group A, and Group D a significantly higher recovery than Group B. No significant differences were found between Group C and Group D or between Group A and Group D. Findings support suggestion via passive hypnosis with CET as a powerful variable in the treatment of sleep disturbances with depressed patients.

## **K RESEARCH**

### **Kinesthesia**

**1988**

**Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.**

**Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.**

**Jones, Lynette A. (1988). Motor illusions: What do they reveal about proprioception. Psychological Bulletin, 103 (1), 72-86.**

**Five illusions involving distortions in the perception of limb position, movement, and weight are described in the context of their contribution to understanding the sensory processes involved in proprioception. In particular, these illusions demonstrate that the position sense representation of the body and the awareness of limb movement results from the cross-calibration of visual and proprioceptive signals. Studies of the vibration illusion and phantom-limb phenomenon indicate that the perception of limb movement and position are encoded independently and can be dissociated. Postural aftereffects and the illusions of movement induced by vibration highlight the remarkable lability of this sense of limb position, which is a necessary feature for congruence between the spatial senses. Finally, I discuss the role of corollary discharges in the central processing of afferent information with respect to the size-weight and vibration illusions.**

**1981**

**Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.**

**Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they**

raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

1979

Dosamantes-Alperson, Erma (1979). The intrapsychic and the interpersonal in movement psychotherapy. American Journal of Dance Therapy, 3, 20-31.

The adaptive function of two states of consciousness and corollary movement experiences is described. Movement in which a relaxed state of attention is maintained on inner kinesthetic sensations and imagery is contrasted with movement which is characterized by conscious, active interacting with the external world of people and events. Clinical examples from individual and group psychotherapy sessions are cited to demonstrate how meaning and conflict resolution may be achieved by clients while moving in either mode.

## L RESEARCH

### Language

1985

Kerry Buhk; Rhue, Judith; Henry, Stephanie; Lynn, Steven Jay (1985, November). Fantasy proneness: Are their word associations richer?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

## NOTES

Experimenters screened 7000 students to get 6 samples of fantasy prone Ss (top 2.4% on Wilson and Barber's ICMI). They found less association between fantasy proneness and hypnotizability than did Wilson and Barber.

They had fantasizers hallucinate a second cup next to a first styrofoam cup. Results were that 87% of High fantasizers, < 50% Medium fantasizers, < 25% Low fantasizers could do it, but they didn't describe seeing the hallucinated cup "as real as real" as Wilson and Barber said they did.

Experimenters were concerned about context effects (expectancy) because the Creativity and Fantasy Proneness tests were run proximal in time, so they separated in time the administration of Fantasy Prone and Creativity tests and also looked at word associations.

23 High and 20 Low fantasy prone students selected by ICMI, which was administered to Subjects 18 mos before the creativity study. At the time of the creativity study, Ss were informed they were randomly picked. There were two 90' sessions, counterbalanced.

Sessions: 1. Hallucinate image of R.A. and of styrofoam cup. Other tests were administered for intelligence and personality: Shipley-Hartford, MMPI, Crowne-Marlowe, etc. 2. Creativity tests (Revised Art Scale, Hilgard's Alternate Uses; story production which was scored on detail, imagery and fantasy and on imagery nouns.) Results of this study which was independent of context (i.e. the tests being correlated were administered independently of each other, separated by time). 1. Fantasizers were more creative than low fantasizers on both Creativity Scales. 2. Fantasizers show more divergent thinking on Hilgard Alternate Uses test, but relationship between fantasy proneness and creativity were not strong,  $r = .30$ . 3. Fantasizers and non fantasizers did not differ on the story measures! This diverges from Wilson and Barber's results. Fantasizers may have more vivid images, but storytelling does not capture that.

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

#### NOTES

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-words in an association word test" (p. 139). Freud's predictions were only partially supported.

#### Laterality

1990

Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.

In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.

**1989**

**Bick, C. H. (1989). An EEG-mapping study of 'laughing': Coherence and brain dominances. International Journal of Neuroscience, 47, 31-40.**

**Laughter is triggered by pleasurable psychoemotional stimuli and may have healing potential. According to split-brain studies, psychoemotional stimuli are bound up with emotional activity in the right side of the brain. This suggested the idea of studying laughter generated by different sources with regard to electrical brain activity in the right and left hemispheres. This study first used subjects in normal consciousness and with laughter under hypnosis to study the neurophysiological processes connected with laughter.**

**1985**

**Banyai, Eva I.; Meszaros, Istvan; Csokay, Laszlo (1985). Interaction between hypnotist and subject: A social psychophysiological approach (preliminary report). In Waxman, David; Misra, Prem C.; Gibson, Michael; Basker, M. Anthony (Ed.), Modern trends in hypnosis (pp. 97-108). New York: Plenum Press.**

**There is a vast amount of literature demonstrating that hypnotic susceptibility is a stable personality trait. In the course of our practice of teaching beginners to hypnotize, however, it occurred to us that hypnotists without sufficient previous training frequently measured a lower level of hypnotic susceptibility than the true score. It has to be emphasized that hypnosis is a special altered state of consciousness which develops as a result of an interaction between a hypnotist and a subject. The failure of beginners to induce hypnosis could be explained by considering an insufficient participation of the hypnotist in this interaction. The purpose of the present study was to analyze the necessary and sufficient subjective, behavioral and physiological alterations in both participants of the hypnotic interaction. During successful and unsuccessful hypnotic inductions the subjective experiences, behavioral manifestations and physiological indicators including respiration, ECG, EMG, EOG, GSR and bilateral fronto- occipital EEG leads, were recorded simultaneously in the hypnotists and the hypnotized subjects. The results indicate that hypnotic induction is successful if a mutual "tuning" of the other person occurs not only on the subjective and behavioral levels, but first of all on the psychophysiological level.**

**1984**

**Bakker, Dirk J. (1984). The brain as a dependent variable. Journal of Clinical Neuropsychology, 6, 1-16.**

**The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical,**

neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

## NOTES

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right-hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive

to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P- type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12).

1982

Brende, Joel O. (1982). Electrodermal responses in post-traumatic syndromes: A pilot study of cerebral hemisphere functioning in Vietnam veterans. Journal of Nervous and Mental Disease, 170, 352-361.

This paper summarizes the findings of a pilot study which found a relationship between the post-traumatic symptoms of a) psychic numbing, b) intrusive recollections of traumatic events, and c) hypervigilance and lateralization of electrodermal response (EDR) measurements in six victims of psychological trauma. Hypnotically induced imagery of past traumatic events was often associated with left-sided EDR increases, psychic numbing with left-sided EDR decreases or bilateral EDR unresponsiveness, and revivifications of hypervigilant states with right-sided EDR lateralization. In several cases control of the experience of fear was associated with left- sided or bilaterally decreased EDR. These pilot study findings support previously stated hypotheses: a) EDR obtained from an extremity reflects contralateral cerebral hemisphere functioning; b) left hemisphere functioning is associated with hypervigilance; and c) right hemisphere functioning is associated with emotions and imagery. In addition, the pilot study findings suggest additional hypotheses: a) Post- traumatic symptoms are associated with poorly controlled or integrated cerebral hemisphere functioning; b) psychic numbing and intrusive images, flashbacks, and nightmares are associated with abnormal activation, suppression, or integration of right hemisphere functioning in relationship to the left; c) aggressive behavior, hypervigilance, and character pathology are associated with abnormal activation, suppression, or integration of functioning of the left hemisphere function in relationship to the right; and d) "splitting" as a psychological defense in Vietnam veterans with Borderline Personality Disorders is associated with physiologically impaired interhemispheric integration.

#### NOTES

The authors report that previous research suggests that electrodermal asymmetry may be related to emotional factors. They further suggest that electrodermal responsiveness reflects contralateral cerebral hemispheric functioning, with lower GSR associated with higher activation of the opposite cerebral hemisphere (see Lacroix and Comper, 1979). They indicate that the right hemisphere, which is involved in experience of emotion, also is associated with depression (when there is abnormal inhibitory function of right hemisphere) and affective disorders. The left hemisphere is involved in vigilance (Dimond & Beaumont, 1974). "Based on these

findings, the post-traumatic symptoms hypervigilance, anxiety, and behavior disorders appear to be associated with atypical left hemisphere activation, intrusive recollections of traumatic memories and disturbing emotional states with atypical right hemisphere activation, and psychic numbing or emotional unresponsiveness with diminished right hemisphere activation, or overactivation of the left hemisphere" (p. 354).

In this pilot study, the therapist, who used hypnosis in all but one case, interviewed the patient for 30-50 minutes, focusing on helping the S to recall experiences of a traumatic nature. The therapist was supportive when disturbing emotions were evoked, responding flexibly by monitoring S's anxiety and moving back and forth between uncovering and supportive techniques.

### **SUMMARY**

There were observably variable changes and bilateral differences in EDR within each of the six subjects in relationship to varying verbal, emotional, and imagery content, postulated to reflect contralateral hemispheric functioning. These observed changes were considered conclusive evidence of such functioning in post-traumatic states" (p. 358). "1. Lateralization of EDR to the left is associated with unpleasant emotions and traumatic imagery. ... "2. Lateralization of EDR to the right is associated with hypervigilance and aggressive outbursts. ... "3. Psychic numbing is associated with inhibition of bilateral EDRs (for example, lack of bilateral EDR activation occurred in every case at times) or with suppression of the left EDR. ... "4. General physiological arousal, a normal response to fear, is associated with increased EDRs bilaterally. ... "5. Relaxation and the subjective experience of safety and well-being, which have been reported to foster interhemispheric integration in normal subjects ... were observed to be associated with bilaterally decreased EDR in case I, an example of a less severe post- traumatic condition, but not observed during attempts at relaxation in Vietnam veterans with more severe post-traumatic symptoms. "6. Voluntary efforts to cognitively control fear were related to left hemispheric functioning, as observed in case IV when the subject attempted to control intrusive thoughts with cognitive activity and in Case III following the revivification of a frightening event when he made a shift from the hypnotic trance state to waking cognitive activity. In both cases, such cognitive activity was associated with a decreased right-sided EDR" (p. 359).

### **DISCUSSION**

The results of this pilot study, which demonstrated frequent EDR differences between hands during subjects' recollections of or attempts to suppress recollections of prior traumatic experiences, alters the traditional belief that increased skin conductance is always a predictable physiological measurement when the electrode is placed on only one hand, as Lacroix and Comper (46) have pointed out.

"The finding of EDR lateralization is consistent with the findings of deBonis and Baque (10) who reported that the degree of anxiety determines the presence of lateralization of EDR responses, of Gruzelier and Venables (30, 32) and Myslobodsky and Horesh (53) who reported that the presence or absence of

psychopathology determines the direction of the lateralized response, and of Lacroix and Comper (46) that activation of one hemisphere may suppress

Crawford, Helen J. (1982). Cognitive processing during hypnosis; much unfinished business. Research Communications in Psychology, Psychiatry and Behavior, 7, 169-179.

Studies of cognitive processing during hypnosis per se are reviewed suggesting that hypnotically responsive individuals not only experience subjective changes during hypnosis that are seen as often being discontinuous from their normal consciousness but also may exhibit measurable cognitive changes. Evidence (ego functioning changes, enhanced creativity, enhanced imagery processing, etc.) is presented to support the hypothesis that hypnosis may involve a shift in cognitive functioning away from a verbal, detail-oriented strategy towards a more imaginal, non-analytic, holistic- oriented strategy. Limitations of present research and potentially valuable research areas are discussed.

#### NOTES

The author reviews evidence for cognitive changes during hypnosis--evident especially in high hypnotizables but also to some degree in moderate hypnotizables. She concludes that there may be changes in ego functioning, imagery functioning, creativity, and strategy preferences and that high hypnotizables are more flexible in cognitive processing . "The question remains whether or not there are accompanying objectively measurable cognitive changes during hypnosis" (p. 170).

In normal waking consciousness, the hypnotically responsive individual is typically found to be more involved in nonhypnotic imaginative activities and experiences (Hilgard, 1979; Tellegen & Atkinson, 1974), more able to image things (for review, see Sheehan, 1979) and daydream vividly and positively (Crawford, 1982), more able to perceive gestalt closure figures (Crawford, 1981), more able to divert attentional process (e.g., Karlin, 1979), and more creative on certain tasks (e.g., P. Bowers, 1979). Experiential reports indicate that it is these very cognitive processes, amongst others, which are perceived to be enhanced or changed during the hypnotic state" (p. 170).

"Levin and Harrison (1976) found that hypnosis ego changes occurred most in those individuals who also demonstrated good capacity for adaptive regression in the waking state" (p. 171).

"Dave (1979) compared hypnotically induced dreams with rational-cognitive treatment as to their effects on creative problem solving of the problems or projects. 'Conditional support' was given to the significantly stronger effect form the hypnotically induced dreams" (p. 172).

There are many investigations of the effect of hypnosis on imagery, with a number of methodological problems. "Self-reports can be criticized on the grounds that they are easily subject to demand characteristics, subject expectations, and social desirability influences. Coe et al. (1980) found order of condition influenced their

findings, while Crawford (1979) found that imagery rating scales suffered from a low ceiling effect among high imagers" (pp. 172-173).

"Surprisingly, while the field of cognitive psychology has devoted extensive attention to the study of the enhancing effects of imagery upon memory, few of their paradigms have been applied to the study of hypnotic processing of information. Germaine to the field of hypnosis are three operational approaches to the investigation of imagery: (a) the manipulation of the availability of imagery as a coding device, such as varying the degree to which stimuli may evoke imagery, (b) the manipulation of the processing strategy in cognitive performance, such as asking subjects to use imagery in the mediation of stimuli information, and (c) the comparing of information processing strategies and performance in subjects who are low and high in imagery ability (Paivio, 1971)" (p. 173).

"Several studies (Nomura, Crawford, & Slater, 1981; Walker, Garrett, & Wallace, 1976; Wallace, 1978) found that a very few high hypnotizables can successfully produce eidetic imagery, using nonfakable stereograms, during hypnosis even though they cannot during waking. Spanos, Ansari, & Stam (1979) were unable to replicate these findings. It was only self-reported childhood eidetikers who exhibited eidetic imagery during hypnosis, and then only a few. This research suggests that hypnosis permits certain individuals to access the "lost" ability to image eidetically, possibly through a shift in cognitive strategies" (p. 174).

"An underlying emphasis of this paper is the need for hypnotic investigators to integrate findings from cognitive psychology into their research, as well as apply the many new approaches to understanding brain functioning which are now being developed, in their search for a better understanding of what occurs during hypnosis" (p. 176).

1981

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136.

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6 seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off

immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

## NOTES

Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory.

The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum. ...

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not

change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is associated with altered states of consciousness (Tebecis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that hypnosis has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical pain were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

1970

Bakan, Paul (1970). Handedness and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 18, 99-104.

Carried out 2 studies with 251 and 228 undergraduates to determine the relationship between self-reports of handedness and scores on a shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A. It was found that left-handed Ss were more likely than right-handed Ss to score at the extremes of the hypnotizability scale, either low or high, and less likely to score in the middle of the scale. Results of 2 independent studies were in agreement. (Spanish & German summaries) (15 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Learning

1992

Appel, Philip R. (1992). Performance enhancement in physical medicine and rehabilitation. American Journal of Clinical Hypnosis, 35, 11-19.

Performance enhancement or mental practice is the "symbolic rehearsal of a physical activity without any gross muscular movements" to facilitate skill acquisition and to increase performance in the production of that physical activity. Performance- enhancement interventions have been well known in the area of sports psychology and medicine. However, clinical applications in physical medicine and rehabilitation have not flourished to the same extent, though the demand for improved physical performance and the acquisition of various motor skills are as important. In this paper I will describe how hypnosis can potentiate mental practice, present a model of mental practice to enhance performance, and describe how to help patients access an ideal performance state of consciousness.

1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate

replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

## NOTES

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids.

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the

effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

**Discussion:** The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e.,

as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

## Life experience

1994

Sivec, Harry; Lynn, Steven Jay; Segal, David; Malinoski, Peter; Crothers, Marie K.; Wilson, Holly; Roche, C. (1994, October). Autobiographical memories in hypnosis, relaxation, and waking conditions. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

This is an update of what was presented at last year's meeting. It presents data on waking relaxation vs waking hypnosis conditions.

Research Design: 3 groups: relaxation, hypnosis, and control All Ss were highs (scoring at least 9) and also high on Fantasy Proneness. But Ss were informed that they were randomly selected from the subject pool.

Administered the SCL-90R [?], POMS, and PES (a measure of hypnosis related experiences), and the Stanford-Form C. Early memory protocol required that Ss report the earliest specific childhood event that they could recall; they were told to remember that the time is the present [?].

Recalled two early and two recent memories, in counterbalanced order.

Ss completed the PES for a second time. Positive affect, negative affect, affect intensity, and primary process were evaluated.

Hypotheses about more primary process and affect were not supported.

When early memory was probed first, it was about age 3; when recent memory was probed first, the earliest memory was about 4. The second memory recalled was older (among younger memories) for hypnotized Ss than for non-hypnotized Ss.

For negative affect the relationships were different. Relaxation might have diminished the negativity of affect that was remembered.

1991

Smith, William H. (1991). Antecedents of posttraumatic stress disorder: Wasn't being raped enough? A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 129-133.

Many rape victims, like those traumatized by war, accidents, and natural disasters, are able to recover from their ordeal with supportive, crisis-oriented treatment. For others, however, symptoms may persist and require more intensive treatment. Hypnosis allows a modulated re-experiencing and abreaction of the traumatic event

that can help to provide the victim with a relieving sense of mastery, and it fosters a receptive context for reassurance and interpretation regarding the irrational or exaggerated thoughts and feelings involved. 2 case examples are presented in which earlier conflicts appeared to play a role in perpetuating the patients' symptoms. Detecting and addressing these antecedents resulted in complete alleviation of long-standing problems through relatively brief treatment using hypnosis.

**1985**

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. *American Journal of Psychotherapy*, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

**1962**

As, Arvid; Lauer, Lillian W. (1962). A factor analytic study of hypnotizability and related personal experiences. *International Journal of Clinical and Experimental Hypnosis*, 10 (3), 169-181.

To throw further light on the exclusivity of "primary suggestibility" as reported by other investigators, a factor analysis was performed in a sample of 102 female college students on the basis of the intercorrelations of 23 items of personal experiences earlier shown to be related to hypnotizability, and 19 items from 2 hypnosis scales. No simple factor structure emerged. 2 factors were interpreted: the 1st as a hypnotic factor with special emphasis on the capability to sustain the effect of suggestion over time, and the 2nd as a combination of psychological changeableness and social influencibility. A brief discussion was given of the composite picture of hypnotic susceptibility emerging from the fact that many hypnotic items loaded on both factors. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Rose, J. T. (1962). The use of relevant life experiences as the basis for suggestive therapy. *International Journal of Clinical and Experimental Hypnosis*, 10, 221-229. (Abstracted in *Imagery* 63: Mar., S-543)

A brief, directive method of hypnotherapy is described which combines limited insight therapy with hypnotic suggestions based on relevant life experiences of the patient. By integrating suggestions and experiences familiar to the patient, the former are more likely to have greater meaning to the patient and are therefore more effective. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Shor, Ronald E.; Orne, Martin T.; O'Connell, D. N. (1962). Validation and cross-validation of a scale of self-reported personal experiences which predicts hypnotizability. Journal of Psychology, 53, 55-75. (Abstracted in Psychological Abstracts, 62: 4 II 55S)

A paper-and-pencil self-report questionnaire was designed to measure the incidence of "hypnotic-like" experiences which have occurred naturally in the normal course of living. The questionnaire as evolved was found to predict hypnotizability, especially in the deepest region of the hypnotizability, especially in the deepest region of the hypnotizability continuum. Ramifications of the data are presented in terms of theoretical formulations where both ability factors and nonability factors (such as attitudes and motives) are viewed as components of achieved hypnotizability. From Psyc Abstracts 36:04:4II55S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Locus of control

1988

Spinhoven, Philip; Baak, Diana; Van Dyck, Richard; Vermeulen, Peter (1988). The effectiveness of an authoritative versus permissive style of hypnotic communication. International Journal of Clinical and Experimental Hypnosis, 36, 182-191.

The differential effectiveness of an authoritative versus permissive style of hypnotic communication was investigated, with locus of control as a moderator variable. 44 Ss received in counterbalanced order both the more authoritatively worded Harvard Group Scale of Hypnotic Susceptibility, Form A and the Wexler-Alman Indirect Hypnotic Susceptibility Scale (WAIHS), which is a more permissive scale with the same item content as HGSHS:A. Permissively worded suggestions did not enhance the level of hypnotic responsiveness. Locus of control did not predict the response level on one of the scales. Unexpectedly, significantly more female Ss preferred the WAIHS, and more male Ss preferred HGSHS:A. It is concluded that Ss' characteristics (i.e., hypnotizability) are more important for hypnotic responsiveness than variations in style of hypnotic communication or scale preference.

1986

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were

obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

## NOTES

(From the Discussion Section).

As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

1983

Saavedra, Ramon Luis; Miller, R.J. (1983). The influence of experimentally induced expectations on responses to the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 31, 37-46.

A sample of 75 female and 63 male undergraduates were told that their hypnotizability was predictable through the application of a battery of questionnaires and physiological measures. Three levels of hypnotizability expectations were created, with 3 groups of Ss informed that they were highly hypnotizable, moderately hypnotizable, or low in hypnotizability, respectively. A control group received no such expectations. All Ss were then administered the Harvard. Results indicated a significant main effect due to the assigned hypnotizability expectations. Only Ss in the low expectation group, however, scored significantly differently from the other groups on the Harvard. Four other variables were examined as covariates: locus of control, attitude toward hypnosis, absorption, and self-predictions of hypnotizability. All but locus of control correlated significantly with the Harvard. It also was shown that the degree to which assigned expectations influenced Harvard scores was a function of the confidence Ss had in those expectations.

## NOTES

The authors state that research has shown that it is easier to lower hypnotizability scores by providing negative expectancies than to increase hypnotizability scores through provision of positive expectancies. In this study, very little of the variance of hypnotizability scores was accounted for by the expectancy manipulation.

1982

Pickett, Carolyn; Clum, George A. (1982). Comparative treatment strategies and their interaction with locus of control in the reduction of postsurgical pain and anxiety. Journal of Consulting and Clinical Psychology, 50, 439-441.

Relaxation training, relaxation instructions, and an attention-redirection approach were compared with no treatment in terms of their ability to affect postsurgical anxiety and pain in patients undergoing gallbladder surgery. In addition, two hypotheses involving an interaction between treatment and locus of control were investigated. The results indicate that the attention-redirection approach reduced postsurgical anxiety relative to the other interventions. The effectiveness of attention redirection for reducing postoperative pain is more equivocal, whereas neither of the relaxation procedures reduced either anxiety or pain. Support was also found for one of the interaction hypotheses. The results support the effectiveness of brief interventions for reducing state anxiety associated with surgery but indicate that more intensive techniques may be necessary to affect postsurgical pain.

1980

Hurley, John D. (1980). Differential effects of hypnosis, biofeedback training, and trophotropic responses on anxiety, ego strength, and locus of control. Journal of Clinical Psychology, 36 (2), 503-507.

Pretested 60 college students on three scales: the IPAT Anxiety Scale, the Barron Ego-strength scale, and the Rotter I-E scale. The Ss then were assigned randomly to one of four treatment groups designated: hypnotic treatment, biofeedback treatment, trophotropic treatment, and control. Three of these groups met separately for 60 minutes once a week for 8 weeks. The control group did not meet during this time. During the sessions, each group was trained in a different technique for self-regulation. At the end of the 8-week period the scales were readministered to all groups. A series of covariance analyses indicated that hypnosis was a more effective self-regulatory technique for lowering anxiety levels when compared to biofeedback or trophotropic response procedures. With regard to increasing ego strength, both the hypnotic training group and the biofeedback training group proved to be significant. No significant difference was found between the experimental and control groups on the I-E scores.

Pereira, M. J.; Austrin, H. R. (1980). Locus of control and status of the experimenter as predictors of suggestibility. International Journal of Clinical and Experimental Hypnosis, 28 (4), 367-374.

The present study investigated locus of control and manipulated status of the experimenter as predictors of suggestibility. Rotter's (1966) Internal-External Locus of Control Scale was used as the paper-pencil measure of locus of control, and the Barber (1965) Suggestibility Scale was used as the measure of suggestibility. We predicted two main effects on suggestibility; one for high externality, and one for high status. In addition, we predicted an interaction between locus of control and status of experimenter. A main effect for locus of control was not found, but one for status was significant, with externals significantly more suggestible than internals in the high status experimenter condition and significantly less suggestible in the low status condition. This interaction effect was viewed as the most significant finding, and implications for prediction were discussed.

1979

Di Nardo, Peter A.; Raymond, Jayne B. (1979). Locus of control and attention during meditation. Journal of Consulting and Clinical Psychology, 47 (6), 1136-1137.

Undergraduates were assigned to an internal or external group on the basis of their locus of control scores. A meditation task required subjects to focus their attention on an actual stimulus or an imagined stimulus while recording intruding thoughts by pressing a button on a counter. Results showed that an internal locus of control was related to fewer intrusions than was an external locus and that the actual stimulus resulted in fewer intrusions than did the imagined stimulus. These results suggest that performance in meditation, and possibly in other self-control procedures, may be influenced by individual differences in deployment of attention.

1978

Zuroff, David C.; Schwarz, J. Conrad (1978). Effects of transcendental meditation and muscle relaxation on trait anxiety, maladjustment, locus of control, and drug use. Journal of Consulting and Clinical Psychology, 46 (2), 264-271.

Sixty undergraduate volunteers were randomly assigned to receive training in transcendental meditation (Transcendental meditation), training in a muscle relaxation technique, or no treatment. The training in muscle relaxation was designed to be maximally similar in structure and atmosphere to training in Transcendental meditation. Measures of trait anxiety, locus of control, maladjustment, and drug use were collected before and after the 9-week treatment period. On a behavioral measure of trait anxiety, the scores of all three groups decreased equally, but on a self-report measure the Transcendental meditation subjects reported steady decreases in anxiety, whereas the scores of the other two groups remained unchanged. There were no differences in maladjustment, locus of control, or drug use as a function of treatment. Although Transcendental meditation subjects held higher expectancies for benefits, and were slightly more regular in practicing their technique, individual differences in expectancy and frequency of practice were not correlated with degree of reported anxiety reduction. It is

concluded that Transcendental meditation may reduce trait anxiety, but it has not been shown to be of value in inducing general personality change.

**1976**

Miller, Lawrence J. (1976). A comparison of hypnotic susceptibility for internal and external locus of control subjects in hetero- and self-hypnotic treatments (Dissertation). Dissertation Abstracts International, 37, 978-979.

This study investigated the use of self- and hetero-hypnosis with internal and external locus of control subjects. Fifty-eight subjects, matched on hypnotic susceptibility and internal-external locus of control, were randomly assigned to the self- or hetero-hypnotic treatments. Self reports of their hypnotic behavioral scores and hypnotic subjective responses were obtained for each subject. "The statistical analyses showed there were no significant differences between the internal and external locus of control groups or within groups in regard to self- and hetero-hypnosis total behavioral scores, "challenge" or "non-challenge" items, ... their reported subjective experiences. The results supported the similarity of hetero- and self- hypnosis. Various findings from past research in regard to I-E subjects were also challenged in terms of their generalizability to hypnotic settings" (pp. 978-979).

**1975**

Bean, Bruce W.; Duff, James L. (1975). The effects of video tape, and of situational and generalized locus of control, upon hypnotic susceptibility. American Journal of Clinical Hypnosis, 18 (1), 28-33.

This study examined the effects of mode of induction (video tape vs. live), general locus of control, and situational locus of control upon hypnotic susceptibility. A total of 62 student volunteers was hypnotized in eight small groups using the Harvard Group Scale of Hypnotic Susceptibility. Results confirmed that video taped inductions were as effective as live inductions. None of the other variables, singly or in interaction, significantly affected susceptibility scores. An analysis of variance was also performed upon subjects' subjective ratings of having experienced hypnosis. Results revealed that subjects with an external general locus of control (Rotter's I-E scale) rated themselves as having experienced hypnosis more fully. This was interpreted as a greater response to the demand characteristics of the hypnosis situation by externally controlled subjects. Discussion explores the potential flexibility provided by video tape hypnosis.

## **M RESEARCH**

### **Medical**

**1994**

Bloom Peter (1994, October). Training boundaries that enhance responsible therapy: Using hypnosis creatively in one's own discipline. [Paper] Presented at the

annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Presented three cases that he elected not to treat, to illustrate the principle that we should only treat cases we would be professionally trained to treat without hypnosis. (1) a hemorrhoidectomy patient, where he elected not to do hypnosis because he is not trained specifically in anesthesiology and didn't know how to do anesthesia procedures; (2) conversion hysteria in 12 year old girl, because he isn't trained in child psychiatry and doesn't know child development; (3) to confirm the supposed existence of unidentified flying objects, or UFOs (when a woman tried to get him to hypnotize her so the "truth" would emerge). We must free ourselves from treatment of patients who retreat from reality, when we can't find commonality in goals.

1993

Attias, J.; Shemesh, Z.; Sohmer, H.; Gold, S.; Shoham, C.; Faraggi, D. (1993). Comparison between self-hypnosis, masking and attentiveness for alleviation of chronic tinnitus. Audiology, 32, 205-212.

A total of 45 male patients close in age with chronic tinnitus related to acoustic trauma were assigned to three matched subgroups: self-hypnosis (SH), masking (MA), and attentiveness to the patients' complaints (AT). The therapeutic stimuli in the SH and MA sessions, recorded on audio cassettes, were given to the patients for use when needed. SH significantly reduced the severity of tinnitus, AT partially relieved the tinnitus, and MA had no significant effect.

Bejenke, Christel J. (1993, October). A clinician's perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Presents point of view of a private practice anesthesiologist in Santa Barbara, California. Used hypnosis for 20 years.

Use of hypnosis as hypnoanesthesia is rare since Esdaile, with brief resurgence in 50's, because surgery techniques advanced before anesthetics did in areas that were very risky. Now it is a matter of choice, and may be undertaken because of a patient's extreme fear of anesthesia, previous bad experience with anesthesia, fervent belief in holistic method, allergy, or previous experience with hypnosis. Still advised to use hypnosis for MRIs, radiation procedures, former drug addicts (who may have problems with drugs), burn patients, release of neck contractions, and medical procedures--especially with children--like lumbar puncture.

She disagrees with Kroger's estimate of only 10% of patients being able to use hypnoanesthesia; she does not believe it requires a lot of training, or profound muscle relaxation.

There is no indication of how many cases are actually done with hypnosis. Also, published cases are not representative of the quantity or complexity of cases; most published cases have a few extraordinary characteristics. The Irish surgeon Jack Gibson has done more than 4000 cases, some very complicated.

I have used it for D & Cs, and complex cases that were not published. Most of my patients elected to be alert during the hypnosis and conversed with their surgeons. The most common benefit is that recovery from anesthesia is not necessary; but these days with newer anesthetics recovery from anesthesia is rapid anyway. However, if as we suspect anesthesia affects immune function, that would be another reason to use hypnosis.

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Preparation for surgery may be of three types: 1. formal hypnosis techniques 2. "hypnoidal" techniques that aren't formal 3. unprepared patients in whom hypnosis is used at last moment.

Examples. 1. Formal hypnosis: This symposium deals with this type of approach. Three groups derive particular benefit -- those requiring prolonged artificial ventilation postoperatively (because otherwise sedation must be used, which leads to complications), where prepared patients tolerate interventions calmly and comfortably -- cancer patients, for whom this can be first experience of patient to see self as active participant in care rather than a victim of the illness and of complicated technology -- pediatric patients. 2. Hypnoidal (hypnosis like) techniques: This is the most important application. Time doesn't permit much discussion here. Patients are in an altered state when they come for surgery, highly suggestible, and suggestions appear to be as effective as during formal trance state. The doctor can elicit positive responses during "casual conversation" while seemingly giving information to the patient. (The reverse is true also, with inadvertent negative suggestions, to the detriment of the patient.) Scrupulous adherence to medical facts is important during this type of conversation.

Operating room fixtures are useful for focus of attention, and I have published this information in an article.

Recovery room also is place where case specific information and appropriate suggestions can be given. Patient can experience his ability to alter sensations, for the first time, following suggestions.

Remainder of the hospitalization offers opportunity for reinforcing case specific positive suggestions.

1992

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Tapd therapeutic suggestions and tapd music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

Excluded: Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

Music: Herb Ernst, Dreamflight II. Suggestions: Music background, permissive, based on Evans & Richardson's study.

Outcome Measures: Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

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1989

**Bierman, Steven F. (1989). Hypnosis in the emergency department. American Journal of Emergency Medicine, 7, 238-242.**

Five cases are presented wherein hypnosis was used by the emergency physician either as the primary mode of treatment or as an adjuvant to standard medical care. Common hypnotic phenomena (e.g. anesthesia, analgesia), as well as novel effects, are reported. The technique used for trance induction and utilization is briefly outlined, and criteria are set forth for the bedside recognition of hypnotic trance.

**1984**

**Brown, Erick L.; Kinsman, Robert A. (1984). Resolving intractable medical problems through psychological intervention: A clinical report. Psychotherapy, 21, 452-455.**

Treatment of chronic physical illness is often complicated by psychological factors that maintain and exacerbate the illness. Hypnotic techniques, coupled with insight-oriented psychotherapy comprised an effective strategy for favorably influencing medical outcome. A clinical report illustrates how psychological intervention initiated the resolution of severe medical problems in an asthmatic patient.

**1977**

**Albornoz-Ruiz, Jose M. (1977). Suggestibility as a factor in medical treatment. Maryland State Medical Journal, 26, 66-68.**

This paper presents the view that a physician must be aware of the great influence, direct and indirect, s/he has with the patient as a result of their relationship. "Here it should be remembered that the power of a suggestion, without the benefit of formalized hypnosis, is directly related to the intensity and nature of the emotional bond between the patient and the doctor, often colored by a marked transference unconscious component, where the doctor stands 'in loco parentis' vis-a-vis the patient, regardless of the age, education or intellectual sophistication of the latter. Whatever the nature of the perception that is eventually presented by the patient as a symptom or identified by the doctor as a sign of illness, such perception will be elaborated upon by the patient's fancy, in lonely reveries where he defines for himself causes, nature and possible course of his disorder, not always in keeping with those established by the doctor as he exposes the same set of phenomena to his learned medical judgment" (p. 68).

by the patient's fancy, in lonely reveries where he defines for himself causes, nature and possible course of his disorder, not always in keeping with those established by the doctor as he exposes the same set of phenomena to his learned medical judgment" (p. 68).

**Barber, Joseph (1977). Rapid induction analgesia: A clinical report. American Journal of Clinical Hypnosis, 19, 138-149.**

This is a report of clinical dental experience using a newly developed, hypnotic pain control procedure. Characteristics of the procedure are outlined, an explanation for its success is suggested, and the broader implications of this success are discussed. The unusually high incidence of clinical analgesia rapidly obtained with this procedure leads the author to question the meaning and relevance of the concept of 'hypnotic susceptibility' for the practical clinical application of hypnosis.

1975

Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35.

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

1970

Bowers, Kenneth S.; Kelly, P. (1970). Stress, disease, psychotherapy, and hypnosis. Journal of Abnormal Psychology, 490-505.

Presents evidence for the importance of suggestion and hypnotic ability in the healing or amelioration of various somatic disorders. It is argued that even in some treatment interventions that are not explicitly hypnotic, suggestion and hypnotic ability may be hidden factors that help to promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

1968

Bartlett, K. A. (1968). A rationale of the nature of hypnosis. American Journal of Clinical Hypnosis, 11, 112-118.

A rationale of the nature of hypnosis without formal trance induction is presented. Central to this viewpoint is meeting the needs of the patient in accord with his perception of them and in a manner based on patient-oriented treatment. Case material illustrates practical applications.

British Tuberculosis Association (1968). Hypnosis for asthma: A controlled trial: A report to the research committee of the British Tuberculosis Association. British Medical Journal, 71-76.

**Summary:** An investigation of hypnosis in asthma was made among patients aged 10 to 60 years with paroxysmal attacks of wheezing or tight chest capable of relief by bronchodilators. One group of patients was given hypnosis monthly and used autohypnosis daily for one year. Comparisons were made with a control group prescribed a specially devised set of breathing exercises aimed at progressive relaxation. Treatment was randomly allocated and patients were treated by physicians in nine centres. Results were assessed by daily diary recordings of wheezing and the use of bronchodilators, and by monthly recordings of F.E.V. and vital capacity. At the end of the year independent clinical assessments were made by physicians unaware of the patients' treatment.

There were 252 patients (127 hypnosis and 125 controls) accepted for analysis, but a number of them did not continue the prescribed treatment for the whole year: 28 hypnosis and 22 control patients failed to cooperate, left the district, or had family problems; one hypnosis and one control patient died. Seven hypnosis and 17 control patients were withdrawn as treatment failures, the difference between the two groups being statistically significant.

As judged by analyses based on the daily "score" of wheezing recorded in patients' diaries, by the number of times bronchodilators were used, and by independent clinical assessors, both treatment groups showed some improvement. Among men the assessments of wheezing score and use of bronchodilators showed similar improvement in the two treatment groups; among women, however, those treated by hypnosis showed improvement similar to that observed in the men, but those given breathing exercises made much less progress, the difference between the two treatment groups reaching statistical significance. Changes in F E.V. and V.C. between the control and hypnosis groups were closely similar.

Independent clinical assessors considered the asthma to be "much better" in 59% of the hypnosis group and in 43% of the control group, the difference being

significant. There was little difference between the sexes. Physicians with previous experience of hypnosis obtained significantly better results than did those without such experience.

**1965**

Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Attar, A.; Muftic, M. (1964). Narcohypnosis in abdominal surgery. British Journal of Medical Hypnotism, 16 (1), 29-32.

Effectiveness of a relaxation technique to increase the comfort level of patients in their first postoperative attempt at getting out of bed was tested on 42 patients, aged 18 to 65, who were hospitalized for elective surgery. Study group patients were taught the relaxing technique; control group patients were not taught the technique. Each group had an equal distribution of cholecystectomy, herniorrhaphy, and hemorrhoidectomy patients. Blood pressure, pulse, and respiratory rates of subjects in both groups were compared prior to surgery and after the postoperative attempt to get out of bed. Subjects' reports of incisional pain and bodily distress were measured via a pain and distress scale after their attempt at getting out of bed. Amount of analgesics used in the first 24 hrs following surgery was examined. Mean differences in report of incisional pain and body distress, analgesic consumption, and respiratory rate changes were statistically significant, supporting the hypothesis that use of a relaxation technique to reduce muscular tension will lead to an increased comfort level of postoperative patients.

**1961**

Cedercreutz, Claes (1961). Hypnosis in surgery. International Journal of Clinical and Experimental Hypnosis, 9, 93-95.

(Author's Summary) "It is possible to treat painful conditions and spasms in the alimentary canal by hypnosis. In the rehabilitation of patients with limb injuries and fractures, hypnosis has also proved useful. There is seldom reason to resort to this method of inducing anaesthesia in surgery" (p. 95).

**Meditation/Yoga**

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

1999 Wickramasekera, Ian (1999). How does biofeedback reduce clinical symptoms and do memories and beliefs have biological consequences? Toward a model of mind-body healing. Applied Psychophysiology and Biofeedback, 24 (2), 91-105.

Changes in the magnitude and direction of physiological measures (EMG, EEG, temperature, etc.) are not strongly related to the reduction of clinical symptoms in biofeedback therapy. Previously, nonspecified perceptual, cognitive, and emotional factors related to threat perception (Wickramasekera, 1979, 1988, 1998) may account for the bulk of the variance in the reduction of clinical symptoms. The mean magnitude of these previously nonspecified or placebo factors is closer to 70% when both the therapist and patient believe in the efficacy of the therapy. This powerful placebo effect is hypothesized to be an elicited conditioned response (Wickramasekera, 1977a, 1977c, 1980, 1985) based on the memory of prior healing. These memories of healing are more resistant to extinction if originally acquired on a partial rather than continuous reinforcement schedule. High and low hypnotic ability in interaction with threat perception (negative affect) is hypothesized to contribute to both the production and reduction of clinical symptoms. High and low hypnotic ability respectively are hypothesized to be related to dysregulation of the sympathetic and parasympathetic arms of the autonomic nervous system. Biofeedback is hypothesized to be the most effective for reducing clinical symptoms in people of low to moderate hypnotic ability. For people high in trait hypnotic ability, training in self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

1998

Easterlin, Barbara L.; Cardena, Etzel (1998-99). Cognitive and emotional differences between short- and long-term Vipassana meditators. Imagination, Cognition and Personality, 18 (1), 69-81.

This study compared perceived stress and cognitive and emotional differences between two groups of Buddhist mindfulness [Vipassana] meditators. Nineteen beginning and twenty-four advanced meditators carried electronic pagers for five days and responded to daily random signals by completing an Experience Sampling form (ESF) containing items related to the dependent variables. As compared with beginners, advanced practitioners reported greater self-awareness, positive mood, and acceptance. Greater stress lowered mood and self-acceptance in both groups, but the deleterious effect of stress on acceptance was more marked for the beginners. These findings validate in a naturalistic setting some of the effects described in traditional Buddhist texts on mindfulness.

so precise that what was "I" is deconstructed into evanescent flux, into thoughts, images, emotions (like a movie with solitary frames); the yogi dissolves the self sense, but because of fixed concentration the separate self disappears and yogis feel like merging with larger Self.

So now for first time in history we can compare and map both similarities and differences. Now we have new possibilities for understanding and contrasting different practices. We can now differentiate the many states of consciousness that are available. But there are an awful lot of states. Can we find an over-arching framework? For the first time, we can say yes--due to the work of Ken Wilber. This is Developmental Structuralism (looking for common deep structures).

For example, you can identify millions of different faces, and they are surface structures; but they all have a common deep structure. Likewise, if we see that a Hindu creates images of [devas] and a Christian sees saints, they are seeing archetypal images. Likewise, Buddhists experience nirvana in which all phenomena disappear, and so does another group. This [sense of all phenomena disappearing] is common to both, but different from those who see archetypal images. We may be able to come up with a typology of altered states.

Wilber also says that these deep structures and corresponding states may develop in a developmental sequence, with common stages. Three transpersonal stages are subtle, causal, and non-dual. In meditation, first you learn how out of control the mind is, then gradually it quiets and you discover subtle experiences that you usually overlooked. Going further, all thoughts cease to arise, and there is only pure consciousness. Beyond that, images re-arise but are now recognized as projections of consciousness.

Subtle images may be formless (as in pure light, pure sound). The person may pay attention to more and more subtle sounds. Or the images may have form (as in shamanic power animals).

At the casual stage, the person may be aware of consciousness itself, only consciousness, with no objects: pure consciousness, void, the Atman of Vedanta, abyss of gnosticism.

At the non-dual stage, objects arise again: everything is recognized as expressions of consciousness--e.g., Zen's "one mind." Consciousness now has awoken and sees itself in all things, unbounded by space and time and limits because consciousness is what creates space, time, and limits. This is Moksha, Enlightenment, etc.

This is not the final task, because the final task is bringing the awakening to the world (Plato's re-entering the cave, to educate others; Zen oxherder entering the

marketplace with help-bestowing hands; Christianity's "fruitfulness of the soul"). For Joseph Campbell, this was the hero's return. Toynbee observed that each great contributor had withdrawn and then returned to the world to offer what they had found.

[It is a process of] transforming a peak into plateau experience; an altered state into a trait; stabilized into enduring understanding, and then bringing it back into the world.

Is there evidence for enlightenment? There now is analogical and laboratory support for this. Analogical support is lucid dreaming. Until 20 years ago, Western psychology thought lucid dreaming was impossible, but now LaBerge at Stanford University has shown physiological evidence. We know from every night's experience that we can create worlds and bodies on which our lives seem to depend. The claim of spiritual traditions is that there is a state of consciousness that bears a relationship to the ordinary [waking] state as lucid dreaming has to nonlucid dreaming. The Dalai Lama said they train yogis to be aware during dreams, not to lose awareness 24 hours a day; then to be aware of dreaming while in a waking period. A Tibetan dream yoga aim is the "great realization," that everything in existence is like a dream.

Laboratory studies have been done on enlightened people. The EEG data obtained while they are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

The implications for our usual state are that normality is not the peak of human development; normality is arrested development. The link between apes and civilization is us! We experience a consensus trance, a collective psychosis, society's hypnosis. We live in the biggest cult of all: CULTURE. The answer is, "Wake up."

A most important question is, if it is true that our conventional state of development is suboptimal, how do we develop other states? The classic answer is: take up a discipline, a practice (e.g., meditation, service, being in nature). One problem is that spiritual traditions are usually couched in archaic language, and have accumulated nonsense around them over the years. It is desirable to abstract out the essential elements. That is a recent thrust of transpersonal research.

There are six common elements: 1. Ethics: the moment you sit down to meditate, what emerges is all the unethical stuff you've done and what was done to you. Ethical behavior (not conventional morality) is a tool for mind training. 2. Attentional training: ordinarily we cannot sustain attention. (William James said the maximum is 3 seconds.) The aim is to be able to maintain attention on what one wants. It leads to the stabilization of mind, calming. 3. Emotional training: destroying negative emotions (well developed in Western psychology, maybe better than in the Eastern traditions, because we recognize the problem with repression); cultivating positive emotions (where contemplative practices do well, because they offer tools for unwavering, unconditional, and all-encompassing [positive regard]; what is known as *agape* in Christianity). 4. Redirection of motivation: changing what you want, etc. 5. Perceptual refinement: we mistake shadows for realities;

according to St. Paul we "see through a glass darkly." This enhances sensitivity, accuracy, and subtlety of perception. 6. Wisdom: actually the first element, playing a role all through the path. Initial motivation sees suffering of the world; provides motivation for realizing that there must be another way of living, culminates with deep insight into nature of the world, mind, consciousness, reality (prajna; Christian's gnosis). When the mind is trained, stabilized, and clarified, the mind has a heightened capacity for understanding.

So for the first time we can recognize the common elements in religions; we can see that the contemplative core contain practices and road maps. This approach recognizes multi-state psychologies and philosophies.

**APPLICATION.** Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25 years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

For a fuller account of transpersonal psychology, see R. Walsh & F. Vaughan (Eds). (1993) *\_Paths Beyond Ego: The Transpersonal Vision.\_* New York: Tarcher/Putnam.

are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

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A most important question is, if it is true that our conventional state of development is suboptimal, how do we develop other states? The classic answer is: take up a discipline, a practice (e.g., meditation, service, being in nature). One problem is that spiritual traditions are usually couched in archaic language, and have accumulated nonsense around them over the years. It is desirable to abstract out the essential elements. That is a recent thrust of transpersonal research.

There are six common elements: 1. Ethics: the moment you sit down to meditate, what emerges is all the unethical stuff you've done and what was done to you. Ethical behavior (not conventional morality) is a tool for mind training. 2. Attentional training: ordinarily we cannot sustain attention. (William James said the maximum is 3 seconds.) The aim is to be able to maintain attention on what one wants. It leads to the stabilization of mind, calming. 3. Emotional training: destroying negative emotions (well developed in Western psychology, maybe better than in the Eastern traditions, because we recognize the problem with repression); cultivating positive emotions (where contemplative practices do well, because they offer tools for unwavering, unconditional, and all-encompassing [positive regard];

what is known as agape in Christianity). 4. Redirection of motivation: changing what you want, etc. 5. Perceptual refinement: we mistake shadows for realities; according to St. Paul we "see through a glass darkly." This enhances sensitivity, accuracy, and subtlety of perception. 6. Wisdom: actually the first element, playing a role all through the path. Initial motivation sees suffering of the world; provides motivation for realizing that there must be another way of living, culminates with deep insight into nature of the world, mind, consciousness, reality (prajna; Christian's gnosis). When the mind is trained, stabilized, and clarified, the mind has a heightened capacity for understanding.

So for the first time we can recognize the common elements in religions; we can see that the contemplative core contain practices and road maps. This approach recognizes multi-state psychologies and philosophies.

**APPLICATION.** Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25 years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

For a fuller account of transpersonal psychology, see R. Walsh & F. Vaughan (Eds). (1993) Paths Beyond Ego: The Transpersonal Vision. New York: Tarcher/Putnam.

Laselle, K. M.; Russell, T. T. (1993). To what extent are school counselors using meditation and relaxation techniques?. School Counselor, 40, 178-183.

Zika, William (1991, January). Hidden observer in psychotherapy. [Lecture] Seminar in the UCLA Department of Psychiatry and Biobehavioral Sciences.

Author has explored use of a "hidden observer" metaphor in psychotherapy. He distinguishes between two types of dissociation--that resulting from involvement in fantasy and imagery (separation from the Generalized Reality Orientation described by R. Shor) and that between the "I" and the Observer. He calls the latter nonattachment instead of dissociation, aligning it with meditation concepts. The observer, in the hypnotized patient, is objective and even more in touch with reality than the patient in the waking state. He likens the Observer to Erickson's Inner Self, noting that just as patients learn to allow the therapist to care for them, they can come to allow the Observer to care for them. During inductions he speaks of the Hidden Observer (H.O.) that always knows what is going on, giving a suggestion that the H.O. can be helpful. (This concept seemingly relates also to the observer in Multiple Personality Disorder, and to John Kihlstrom's discussion of William James and the self, as well as to amnesia/duality in age regression or duality (HO) in pain control.)

1990

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

**DISCUSSION.** The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

both groups, but the deleterious effect of stress on acceptance was more marked for the beginners. These findings validate in a naturalistic setting some of the effects described in traditional Buddhist texts on mindfulness.

"Meditation can be defined as the deliberate deployment of mental attention to obtain a particular patterning of consciousness. The aim of such control may be the stabilization of the stream of thought, greater relaxation, the attainment of an altered state, or the development of insights into the nature of mind [12]. Mindfulness meditation has sometimes been contrasted with concentration meditation as one of two main forms of meditation practice [13, 14]. The usual distinction is that mindfulness involves opening awareness to all contents and processes of mind, whereas concentrative forms of meditation involve shutting out

all stimuli extraneous to a single object of attention" (p. 70). Long-term meditators averaged 103 months and 85 days of retreat training. They did not differ from short-term meditators on measures of absorption, neuroticism, trait anxiety, or cognitive style; however they evidenced greater self-awareness and acceptance. The short-term meditators actually had more than a year of meditation experience so that differences between groups are not likely to be due to self-selection. The authors conclude that "meditation brings about sustainable changes in people's lives, above and beyond relaxation. ... [and] that greater conscious awareness through mindfulness techniques such as Vipassana meditation, increases acceptance, positive mood, and the ability to dispassionately observe one's mental states. These results have implications for clinical issues such as pain management and psychotherapy, in which acceptance and awareness are necessary ingredients for therapeutic change" (p. 78). JH

1997

Jana, Hrishikesh (1997). The development of hypnosis in India. [Unpublished manuscript]

Yoga (specially Meditative Yoga or Savasana) and Transcendental Meditation are integral parts of the cultural heritage of Indians. These and the state of hypnosis possess some of the characteristics in common and all these have been grouped under the heading 'Altered States of Consciousness' by the modern psychophysiological and biological researchers. Hindu saints used to clothe sparsely even in the midst of extreme environmental conditions and the lying down of some yogis on the nail-bed are examples of their super-human tolerance to cold, pain, etc." (p. 2). Author cites the pioneering work of Dr. James Esdaile using hypnosis for surgical anaesthesia at Hooghly Hospital (1845-1850). Despite India's culture and the record of Dr. Esdaile, hypnosis often was regarded with suspicion in India. In the early and mid-20th century, physicians (e.g. Dr. N.V. Mody, an obstetrician) had difficulty having their work accepted, but since the early 1970s Dr. Jana and others have contributed to a renaissance in the use of medical, dental, and psychological hypnosis. This paper chronicles the history of hypnosis in the late 20th century in India.

1994

Reader, August L. (1994). The internal mystery plays: The role and physiology of the visual system in contemplative practices. ReVision: A Journal of Consciousness and Transformation, 17 (1).

Walsh, Roger (1994, August). Transpersonal psychology--the state of the art. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Twenty-five years ago a group formed that was called transpersonal psychology, following after humanistic psychology (e.g. Maslow). Some of the humanistic psychologists came into transpersonal psychology. Maslow was interested in healthy people, and in peak experiences that were transpersonal in nature--experiences encompassing wider aspects of life, including mystical experiences.

Peak experiences were thought to be positive, but also overwhelming. When psychologists looked Eastward, they found that there were whole families of these types of experiences, and that they could be induced by will and could be stabilized into not only peak but plateau experiences. There was a reservoir of wisdom in the world's religions that could be drawn upon. This wisdom is being integrated with Western science to create the discipline of transpersonal psychology.

There is a broad spectrum of altered states of consciousness. Traditionally, altered states of consciousness were thought to be few in number, and usually pathological. Our society has been resistant toward studying them. For example, Esdaile's use of hypnosis in surgery was not welcomed, even though he was lowering morbidity and mortality because he controlled shock. His paper was turned down for publication. He amputated a leg in front of colleagues in Britain, who commented that he "must have hired a very hard rogue" to have his leg cut off under hypnosis.

Our culture is monophasic, deriving its world view almost exclusively from the waking state; other cultures are polyphasic and also draw their world view from dreams, meditative, or yogic contemplative states, etc. Recently we can apply more sophisticated analyses, to compare states of consciousness and map these out, phenomenologically. There are several key dimensions of experience for mapping the states: 1. Control 2. Awareness of Environment 3. Concentration 4. Mental Energy/Arousal 5. Emotion 6. Identity or Self Sense 7. Out-of-Body Experience 8. Content of Experience

Using these dimensions, we could compare shamanic, yogic, and Buddhist practices. A Nepalese shaman drums himself into a trance state, demonstrating: 1. Ability to enter and leave an altered state of consciousness and partly control experience 2. Decreased awareness of his environment 3. Increased concentration, fluid attention 4. Increased mental energy/arousal 5. Either pleasurable or not [pleasurable] emotion 6. Separate self sense: may be experienced as a non-physical "spirit" or "soul" 7. Controlled ecstasy (Out of Body experience)

Buddhist meditation is training awareness to examine experience as minutely as possible, in effect a heightened awareness (Vipassana).

A yogic practitioner engages in concentration, focusing on a fixed stimulus and holding it unwaveringly, till it dissolves a sense of separation into a unity with the object, ultimately with the Self.

[Author showed a slide comparing the three.] All three approaches have increased control and concentration. (The Yogi's is unshakable.) An awareness of the environment is increased for the Buddhist; the Yogi may lose awareness entirely. Others have ecstatic experience; the yogi has enstatic experience. Identity for the shaman is separate (a soul); for the Buddhist awareness is so precise that what was "I" is deconstructed into evanescent flux, into thoughts, images, emotions (like a movie with solitary frames); the yogi dissolves the self sense, but because of fixed

concentration the separate self disappears and yogis feel like merging with larger Self.

So now for first time in history we can compare and map both similarities and differences. Now we have new possibilities for understanding and contrasting different practices. We can now differentiate the many states of consciousness that are available. But there are an awful lot of states. Can we find an over-arching framework? For the first time, we can say yes--due to the work of Ken Wilber. This is Developmental Structuralism (looking for common deep structures).

For example, you can identify millions of different faces, and they are surface structures; but they all have a common deep structure. Likewise, if we see that a Hindu creates images of [devas] and a Christian sees saints, they are seeing archetypal images. Likewise, Buddhists experience nirvana in which all phenomena disappear, and so does another group. This [sense of all phenomena disappearing] is common to both, but different from those who see archetypal images. We may be able to come up with a typology of altered states.

Wilber also says that these deep structures and corresponding states may develop in a developmental sequence, with common stages. Three transpersonal stages are subtle, causal, and non-dual. In meditation, first you learn how out of control the mind is, then gradually it quiets and you discover subtle experiences that you usually overlooked. Going further, all thoughts cease to arise, and there is only pure consciousness. Beyond that, images re-arise but are now recognized as projections of consciousness.

Subtle images may be formless (as in pure light, pure sound). The person may pay attention to more and more subtle sounds. Or the images may have form (as in shamanic power animals).

At the casual stage, the person may be aware of consciousness itself, only consciousness, with no objects: pure consciousness, void, the Atman of Vedanta, abyss of gnosticism.

At the non-dual stage, objects arise again: everything is recognized as expressions of consciousness--e.g., Zen's "one mind." Consciousness now has awoken and sees itself in all things, unbounded by space and time and limits because consciousness is what creates space, time, and limits. This is Moksha, Enlightenment, etc.

This is not the final task, because the final task is bringing the awakening to the world (Plato's re-entering the cave, to educate others; Zen oxherder entering the marketplace with help-bestowing hands; Christianity's "fruitfulness of the soul"). For Joseph Campbell, this was the hero's return. Toynbee observed that each great contributor had withdrawn and then returned to the world to offer what they had found.

[It is a process of] transforming a peak into plateau experience; an altered state into a trait; stabilized into enduring understanding, and then bringing it back into the world.

Is there evidence for enlightenment? There now is analogical and laboratory support for this. Analogical support is lucid dreaming. Until 20 years ago, Western psychology thought lucid dreaming was impossible, but now LaBerge at Stanford University has shown physiological evidence. We know from every night's experience that we can create worlds and bodies on which our lives seem to depend.

The claim of spiritual traditions is that there is a state of consciousness that bears a relationship to the ordinary [waking] state as lucid dreaming has to nonlucid dreaming. The Dalai Lama said they train yogis to be aware during dreams, not to lose awareness 24 hours a day; then to be aware of dreaming while in a waking period. A Tibetan dream yoga aim is the "great realization," that everything in existence is like a dream.

Laboratory studies have been done on enlightened people. The EEG data obtained while they are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

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APPLICATION. Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25

years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

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percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

1989

Eppley, Kenneth R.; Abrams, Allan I.; Shear, Jonathan (1989). Differential effects of relaxation techniques on trait anxiety: A meta-analysis. Journal of Clinical Psychology, 45, 957-974.

Conducted a meta-analysis of studies on the effects of relaxation techniques on trait anxiety. Effect sizes for the different treatments (e.g., progressive relaxation, biofeedback, meditation) were calculated. Most treatments produced similar effect sizes, although transcendental meditation (TM) produced a significantly larger effect size than other forms of meditation and relaxation. A comparison of the content of the treatments and their differential effects suggests that this may be due to the lesser amount of effort involved in TM. Meditation that involved concentration had a significantly smaller effect than progressive relaxation.

Soskis, D. A.; Orne, E. C.; Orne, M. T.; Dinges, D. F. (1989). Self-hypnosis and meditation for stress management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 285-289.

In a 6-month follow-up study, telephone interviews were conducted with 31 male executives who were taught either a self-hypnosis or meditation exercise as part of a stress-management program. Use of and problems with the 2 exercises were similar, with the percentage of Ss using the techniques falling over 6 months from 90% to 42%. The exercises were used primarily for physical relaxation, refreshing mental interludes, aiding sleep onset, and stress-reduction. Problems with the exercises chiefly involved difficulty in scheduling even brief uninterrupted practice times and discomfort with the techniques. The incorporation of these issues into the clinical teaching of self-hypnosis may be useful.

1985

Delmonte, Michael M. (1985). Meditation and anxiety reduction: A literature review. Clinical Psychology Review, 5 (2), 91-102.

Reviews the literature concerning the effects of meditation on self-reported anxiety levels, with emphasis on forms of meditation (e.g., transcendental and Zen meditation) in which a person's attention is focused. It is noted that meditation is increasingly being practiced as a therapeutic technique and that the effects of practice on psychometrically assessed anxiety levels have been extensively researched. Prospective meditators tend to report above average levels of anxiety. Methodological issues involving the measurement of anxiety levels are examined, and it is noted that reductions in self-reported anxiety are not always accompanied by decrements in behavioral or physiological measures of anxiety. In general, high anxiety levels predict a subsequent low frequency of practice. However, the evidence suggests that those who practice regularly tend to show significant decreases in anxiety. Meditation does not appear to be more effective than comparative interventions in reducing anxiety, but there is evidence to suggest that hypnotizability and expectancy may both play a role in reported anxiety decrements. It is concluded that individuals with a capacity to engage in autonomous, self-absorbed relaxation may benefit most from meditation

Kabat-Zinn, Jon; Lipworth, Leslie; Burney, Robert (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. Journal of Behavioral Medicine, 8 (2), 163-190.

90 chronic pain patients were trained in mindfulness meditation in a 10-wk stress reduction and relaxation program. Self-report indices, including the McGill Pain Questionnaire, the Profile of Mood States, and the Hopkins Symptom Checklist, were administered to the Ss to assess multiple aspects of pain and certain pain-related behaviors. Results show statistically significant reductions in measures of present-moment pain, negative body image, inhibition of activity by pain, symptoms, mood disturbance, and psychological symptomatology, including anxiety and depression. Pain-related drug utilization decreased, and activity levels and feelings of self-esteem increased. Improvement appeared to be independent of gender, source of referral, and type of pain. A comparison group of 21 pain patients did not show significant improvement on these measures after traditional treatment protocols. At follow-up, the improvements observed during the meditation training were maintained up to 15 months postmeditation training for all measures except present-moment pain. The majority of Ss reported continued high compliance with the meditation practice as part of their daily lives.

Norton, G. R.; Rhodes, L.; Hauch, J. (1985). Characteristics of subjects experiencing relaxation and relaxation-induced anxiety. Journal of Behavioral and Experimental Psychiatry, 16, 211-216.

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimediation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

Meares, Ainsley (1984). Eine Form intensiver, mit dem Rueckgang von Krebs verbundener Meditation. Hypnose und Kognition, EH, 27-35.

1983

Heide, F. J.; Borkovec, T. D. (1983). Relaxation-induced anxiety: Paradoxical anxiety enhancement due to relaxation training. Journal of Consulting and Clinical Psychology, 51, 171-182.

The present study was designed to document the occurrence of relaxation-induced anxiety. Fourteen subjects (7 male, 7 female) suffering from general tension and significant levels of anxiety were given one session of training in each of two relaxation methods, progressive relaxation and mantra meditation; order of presentation was counterbalanced. Four of the subjects plus one other who terminated prematurely displayed clinical evidence of an anxiety reaction during a preliminary practice period, while 30.8% of the total group under progressive relaxation and 53.8% under focused relaxation reported increased tension due to the relaxation session. Progressive relaxation produced greater reductions in subjective and physiological outcome measures and less evidence of relaxation-induced anxiety, and the phenomenon was not clearly evident from physiological measures and from subjective ratings even in this clinical population.

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Lehrer, Paul M. et al. (1983). Progressive relaxation and meditation: A study of psychophysiological and therapeutic differences between two techniques. Behaviour Research and Therapy, 21 (6), 651-662.

Collected physiological and self-report data on 50 anxious Ss (as determined by the IPAT Anxiety Scale) who participated in a study comparing progressive relaxation, meditation, and a waiting-list control. Data provide some support for the hypothesis of G. E. Schwartz et al that there are specific effects for different relaxation procedures, superimposed upon a generalized relaxation response. The similarities between techniques, however, were greater than the differences, both on physiological and self-report measures. Both techniques generated positive expectancies and produced decreases in a variety of self-reported symptoms and on EMG, but no skin conductance or frontal EEG effects were observed. Progressive relaxation produced bigger decreases in forearm EMG responsiveness to stressful simulation and a generally more powerful therapeutic effect than meditation. Meditation produced greater cardiac orienting responses to stressful stimuli, greater absorption in the task, and better motivation to practice than progressive relaxation; however, it also produced more reports of increased transient anxiety. No significant differences between conditions in the therapeutic expectancies they generated were found.

1982

Brown, Daniel P.; Forte, Michael; Rich, Philip; Epstein, Gerald (1982-83). Phenomenological differences among self hypnosis, mindfulness meditation, and imaging. Imagination, Cognition and Personality, 2 (4), 291-309.

A survey of 122 subjects was conducted to investigate the differences in the phenomenological quality of the experiences engendered by three types of awareness discipline: self-hypnosis (21 Ss), waking dreaming (49 Ss) and mindfulness meditation (25 Ss from a 2-week retreat, and another group of 27 Ss from a 2-day weekend retreat). A questionnaire, the profile of Trance, Imaging, and Meditation Experience (TIME) was used in the survey. Discriminant analyses were used to construct models of the differences in the phenomenological quality of the experiences among the three groups. A number of phenomenological dimensions, in the major areas of attention, thinking, memory, imagery, body sensations, emotions, time sense, reality sense, and sense of self, were found which could accurately distinguish among the experiences of practitioners of the three types of awareness training. Results show that while self hypnosis involves self-referential thinking, memory changes, and intense emotions, waking dreaming emphasizes the immediate impact of emerging images, which unfold in a thematic manner and have a sense of their own reality. Mindfulness meditators have difficulty managing distractions, but with experience learn greater awareness of bodily processes, and experience changes in the perception of time and self; mental processes seem to slow down, and awareness assumes an impersonal quality. No attributions as to the causes or sources of these phenomenological differences are made, as the survey was

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**Credidio, Steven G. (1982). Comparative effectiveness of patterned biofeedback vs meditation training on EMG and skin temperature changes. Behaviour Research and Therapy, 20, 233-241.**

Examined whether a low arousal, relaxation pattern of frontalis EMG decreases and peripheral skin temperature increases could be attained more effectively through biofeedback or meditation training. 30 21-59 yr old females were randomly assigned to 1 of 3 groups: patterned biofeedback, clinically standardized meditation, or control. Prior to training, Ss were administered the Eysenck Personality Inventory. Each S was seen weekly for 7 sessions. Subjective experiences and time spent practicing at home were also recorded. Results indicate that the meditation group showed significantly lower EMG levels at the end of treatment than did the control group. The biofeedback group had difficulty in patterning the 2 feedback signals simultaneously. Extraverts in the control group had the highest EMG levels. The most positive subjective reports came from Ss in the meditation group. It is suggested that meditation offers a viable alternative as a relaxation procedure, requiring little time to learn and devoid of any performance criteria levels.

**Larbig, W.; Elbert, T.; Lutzenberger W.; Rockstroh, B.; Schnerr, G.; Birbaumer, N. (1982). EEG and slow brain potentials during anticipation and control of painful stimulation. Electroencephalography and Clinical Neurophysiology, 53, 298-309.**

Cerebral responses in anticipation of painful stimulation and while coping with it were investigated in a 'fakir' and 12 male volunteers. Experiment 1 consisted of 3 periods of 40 trials each. During period 1, subjects heard one of two acoustic warning stimuli of 6 sec duration signaling that either an aversive noise or a neutral tone would be presented at S1 offset. During period 2, subjects were asked to use any technique for coping with pain that they had ever found to be successful. During period 3, the neutral S2 was presented simultaneously with a weak electric shock and the aversive noise was presented simultaneously with a strong, painful shock, again under pain coping instructions. EEG activity within the theta band increased in anticipation of aversive events. Theta peak was most prominent in the fakir's EEG. A negative slow potential shift during the S1-S2 interval was generally more pronounced in anticipation of the aversive events than the neutral ones, even though no overt motor response was required. Negativity tended to increase across the

three periods, opposite to the usually observed diminution. In Experiment 2, all subjects self-administered 21 strong shock-noise presentations. The fakir again showed more theta power and more pronounced EEG negativity after stimulus delivery compared with control subjects. Contrary to the controls, self-administration of shocks evoked a larger skin conductance response in the fakir than warned external application.

A published case study by Pelletier (1977) reported EEG theta enhancement during pain control states, which were maintained by EEG feedback of alpha and theta bands. That author concluded that EEG theta was necessary for the control of pain psychologically.

The authors of this article measured slow brain potentials (SBPs) and vertical eye movements (VEMs). Principal components analysis of the EEG wave forms found three components: theta (4-5.6 c/sec), alpha band (9-10 c/sec) and high frequencies (above 14.4 c/sec) plus harmonics loading in frequencies of 3.2-4.5 c/sec, 7.5-9, and above 15 c/sec.

Alpha "decreased over periods in the parietal record and was virtually absent in the fakir's EEG during period 3" (p. 301). The fakir had a lot of non-sinusoidal, especially square wave, activity.

"Very pronounced negativity was recorded preceding the aversive S2, greater than under neutral stimulus conditions .... This difference was most pronounced at the vertex ... The late negativity increased over periods in control subjects ... especially in anticipation of the aversive S2 ... . This contrasts with the usually observed decrease of SBP components over trials. As is shown in Figure 2, the PCA [principal components analysis] yielded two components for the 2.0 sec S2 interval, a positive deflection, which can be assigned to the P300 complex (here not reported), and a negative deflection, labeled post- imperative negative variation. ... This negative component increased over periods, being more pronounced in response to the aversive stimulation ... with increasing differentiation over period ..." (p. 302-303).

The fakir undertook an elaborate self hypnosis or trance induction to achieve analgesia that he had previously demonstrated in the laboratory (thrusting 4 unsterilized metal spikes into his abdomen, tongue, and neck without bleeding). This included "long- continued fixation on a point above the eye-brows. Blank facial expression, staring eyes, and a very low rate of eye-blinks indicated a trance-like state (periods without eye-blinks more than 30 min)" (p. 299). During the experiment itself, the fakir showed few ocular movements during the second and third periods. He also demonstrated large skin conductance responses, recorded from the second phalanges of the index and middle fingers of the left hand, to the aversive S1.

Experiment 2 was designed to emulate the self-administered aversive stimulation that the fakir routinely undertook, by having the volunteer Ss hold a switch that they pressed twice/minute, giving themselves a mild shock and an aversive noise. (These were the same aversive stimuli as were used in Experiment 1.) There were 21 self-paced button presses.

Three additional measures were taken: 1. Bereitschaftspotential (BP) - the mean negative shift during the 0.3 sec interval prior to the motor response of pressing the

switch 2. Postimperative component (PINV) - the mean negative shift 0.9 to 1.9 sec after stimulus onset, i.e. elicited by closing the microswitch 3. Skin conductance response (SCR) - maximum change in skin conductance level during five second interval after the motor response of pressing the switch.

The fakir, but not the control Ss, showed a pronounced precentral PINV on each single trial of Experiment 2. He also showed pronounced SCRs (indicating autonomic arousal), which was even greater than the SCRs of control Ss. His subjective pain rating was 1 in Experiment 1 (compared with 6.4 for controls) but 8 during Experiment 2 (compared with 5.7 for controls), on a scale of 1 to 10 maximum. Thus the fakir's pain increased from Experiment 1 to 2, while for many volunteer Ss it decreased 2 or 3 points. When interviewed, he said that "intention and motor commands prevented the fakir from getting into 'trance' satisfactorily. Consequently, he reported to have experienced the aversive stimuli as more painful than in experiment 1. Thus it might be that the observed PINV indicates the noncontingency between the demand for coping and the failure to cope or the discrepancy between expected control and presently experienced control" (p. 307).

In their Discussion, the authors speculate that control of pain such as can be achieved by the fakir may involve dissociation of higher (possibly thalamic and cortical) and lower (reticular formation) arousal structures. Their observation of slow brain potentials (theta) recorded in anticipation of painful or aversive stimuli is in agreement with earlier published studies. However their observation of increasing negativity in anticipation of aversive stimuli is in contrast to previous research findings, in which diminution of negativity is generally observed.

Both the fakir and subjects showed a post-stimulus negative shift in response to the S2; this has been "observed in normal subjects under conditions of change from controllable to uncontrollable aversive stimuli... and/or from obvious response-consequence contingencies to unpredictable control over the S2... PINVs were associated with an unexpected change in contingency or the inability to resolve ambiguity. Since a relationship was found between PINV amplitude and subjective ratings or experienced aversiveness of the painful stimulation, it may be speculated that obvious failure in coping with pain (i.e. more experienced pain) together with the requirement to cope (induced by instructions and experimental setting, giving rise to increased expectancy for control), produced a PINV (and probably feelings of uncontrollability together with a state of reactance and frustration) in the present experiments. In accordance with this point of view, it is of particular interest that only the fakir showed a more pronounced PINV in experiment 2, in which subjects delivered the painful stimuli to themselves. A postexperimental interview revealed that intention and motor commands prevented the fakir from getting into 'trance' satisfactorily" (p. 307).

Meares, Ainslie (1982-83). A form of intensive meditation associated with the regression of cancer. American Journal of Clinical Hypnosis, 25 (2-3), 114-121.

Elsewhere I have reported a number of cases of regression of cancer following intensive meditation. This type of meditation is characterized by extreme simplicity and stillness of the mind, and so differs from other forms using a mantra, awareness

of breathing or visualization of the healing process. Any logical verbal communication by the therapist stimulates intellectual activity in the patient. So communication is by un verbalized phonation, reassuring words and phrases, and most important, by touch. There follows a profound reduction in the patient's level of anxiety which flows on into his daily life. The non-verbal nature of the meditative experience initiates a non-verbal philosophical understanding of other areas of life.

Shapiro, Deane H. (1982). Overview: Clinical and physiological comparison of meditation with other self-control strategies. American Journal of Psychiatry, 139 (3), 267-274.

In 1977, the American Psychiatric Association called for a critical examination of the clinical effectiveness of meditation. The present author reviews the pertinent literature and defines meditation as a family of techniques that attempt to focus attention in a nonanalytical way and attempt not to dwell on discursive, ruminating thought. Meditation is then compared with such self-regulation strategies as biofeedback, hypnosis, and progressive relaxation. Particular attention is given to the "uniqueness" of meditation as a clinical intervention strategy as well as the adverse effects of meditation. Future research should deal with the context of meditation, a component analysis, refinement of the dependent variable, S variables, and the phenomenology of meditation.

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

**"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...**

**"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).**

**The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self- statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.**

**"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).**

**"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).**

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Throll, D. A. (1982). Transcendental meditation and progressive relaxation: Their physiological effects. Journal of Clinical Psychology, 38 (3), 522-530.

Measured oxygen consumption, tidal volume, respiration rate, heart rate, systolic and diastolic blood pressure before the Ss learned Transcendental Relaxation Meditation (Transcendental meditation: N = 21) or Jacobson's Progressive Relaxation (PR: N = 18). Ss were tested immediately after learning either technique and again 5, 10, and 15 weeks later. While there were no significant differences between groups for any of the physiological variables at pretest, the Transcendental meditation group displayed more significant decreases during meditation and during activity than did the Psychological Review group. Both groups displayed significantly lowered metabolic rates during Transcendental meditation or PR. The generally more significant and comprehensive results for meditators were explained primarily in terms of the greater amount of time the Transcendental meditation

group spent on their technique, plus the differences in the two techniques themselves. Several avenues for future research are discussed.

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Woolfolk, Robert L.; Lehrer, Paul M.; McCann, Barbara S.; Rooney, Anthony J. (1982). Effects of progressive relaxation and meditation on cognitive and somatic manifestations of daily stress. Behaviour Research and Therapy, 20 (5), 461-467.

Compared meditation and progressive relaxation with self-monitoring control as treatments for symptoms of stress. 34 Ss were assigned to either the progressive relaxation, the meditation, or the self-monitoring control group and were given 5 sessions of training. All Ss self-monitored stress symptoms throughout the study and had their behavior rated weekly by a spouse/roommate. Results show that the progressive relaxation and mediation treatments significantly reduced stress symptomatology over time.

1981

Fling, Sheila; Thomas, Anne; Gallaher, Michael (1981). Participant characteristics and the effects of two types of meditation vs. quiet sitting. Journal of Clinical Psychology, 37 (4), 784-790.

Randomly assigned 61 undergraduate volunteers to Clinically Standardized Meditation (CSM), quiet sitting (SIT), or wait list1 and 19 others to Open Focus (OF) or wait list2. Ss were tested before training and again 8 weeks later. All groups but wait list2 decreased significantly on Spielberger's trait anxiety. All groups became nonsignificantly more internal on Rotter's locus of control. On the Myers-Briggs Type Indicator, meditation volunteers were more introverted than extraverted, intuitive than sensing, feeling than thinking, and perceiving than judging. All groups became more intuitive, approaching significance for CSM only. OF became significantly more extraverted than both CSM and SIT, and CSM significantly more so than wait list1. Practice time correlated with anxiety reduction for the combined treatment groups. More evidence was found for correlations of practice time and outcome with growth motivation than with either new experience motivation or expectancy of benefit

Throll, D. A. (1981). Transcendental meditation and progressive relaxation: Their psychological effects. Journal of Clinical Psychology, 37 (4), 776-781.

Administered the Eysenck Personality Inventory, the State-Trait-Anxiety Inventory, and two questionnaires on health and drug usage to 39 Ss before they learned Transcendental Meditation (TM) or Progressive Relaxation (PR). All Ss were tested immediately after they had learned either technique and then retested 5, 10, and 15 weeks later. There were no significant differences between groups for any of the

psychological variables at pretest. However, at posttest the TM group displayed more significant and comprehensive results (decreases in Neuroticism/Stability, Extroversion/Introversion, and drug use) than did the PR group. Both groups demonstrated significant decreases in State and Trait Anxiety. The more pronounced results for meditators were explained primarily in terms of the greater amount of time that they spent on their technique, plus the differences between the two techniques themselves.

1980

Heide, Frederick J.; Wadlington, W. L.; Lundy, Richard M. (1980). Hypnotic responsivity as a predictor of outcome in meditation. International Journal of Clinical and Experimental Hypnosis, 28 (4), 358-385.

Hypnosis, 28 (4), 358-385.

This study tested the hypothesis that measures of hypnotic responsivity would predict outcome from brief meditation training. 58 Ss were matched on hypnotic responsivity and randomly assigned to meditation and control conditions. The Ss in the meditation group displayed significantly greater decreases in trait anxiety than control Ss following a 1-week treatment period. The Ss highest in hypnotic responsivity showed the most substantial decrements in anxiety. It is concluded that hypnotic responsivity is moderately predictive of outcome in meditation. Findings were also consistent with reports that hypnotic responsivity is not increased by practice in meditation.

Lehrer, Paul M.; Schoicket, Sandra; Carrington, Patricia; Woolfolk, Robert L. (1980). Psychophysiological and cognitive responses to stressful stimuli in subjects practicing progressive relaxation and clinically standardized meditation. Behaviour Research and Therapy, 18 (4), 293-303.

32 Ss were assigned to either progressive relaxation (PR), clinically standardized meditation (SM), or a waiting list control group, which was asked to relax daily without specific instruction. Ss were given paper and pencil tests 2 times/separated by 5 wks, during which time the 2 treatment groups received 4 weekly sessions of group training. At the end of the 5-wk period, all Ss were exposed to 5 very loud tones. While relaxing as deeply as possible and anticipating the loud tones, SMs exhibited higher heart rates and higher integrated frontalis EMG activity, but they also showed greater cardiac decelerations following each tone, more frontal alpha, and fewer symptoms of cognitive anxiety than the other 2 groups. PRs reported more sensations of muscular relaxation than the other groups but also some symptoms of hyperventilation. Results suggest that frontal EEG alpha may be a physiological marker for the absence of cognitive anxiety. Physiological findings also support D. J. Goleman and G. E. Schwartz's suggestion that meditation prepares people to cope with stress.

Lundy, Richard M.; Heide, Frederick J.; Wadlington, W. L. (1980). Hypnotic responsivity as a predictor of outcome in meditation. International Journal of Clinical and Experimental Hypnosis, 28 (4), 358-366.

TM reportedly diminishes Trait Anxiety (not State Anxiety). Spielberger's Anxiety Scale was administered. Non-analytical attention is increased in TM. Spanos, et al. found a relationship between sustained attention in a meditation task and hypnotizability. Both load on the same factor.

Used Control and Experimental groups pretested on a scale of hypnotizability (Harvard Scale?): Lows = 1-4; Mediums = 5-7; Highs = 8-12.

Subjects were given instructions for modified TM, including a lecture on physiological benefits. "Let the sound 'OM' repeat itself; let that sound pass through and return to the mantra." Subjects logged practice on their 20 minute meditation twice a day, for 7 days. They were given pre- and posthypnotic tests of State and Trait anxiety.

**RESULTS.** Meditators decreased Trait anxiety but not State anxiety. But anxiety was reduced more for high hypnotizables than for other levels. There was greater change in anxiety for High hypnotizables who practiced meditation . No difference in pre- and posthypnotic test on Harvard, confirming Spanos, et al.

**CONCLUSIONS.**

This provides more evidence that the skill of hypnotizability has more utility than we had thought, in therapy. Spanos, et al. also found that improvement in meditation was correlated with hypnotizability (in terms of number of intrusions) and Benson, Frankel, et al., found Lows benefit less in blood pressure change with either meditation or hypnosis on Harvard, confirming Spanos, et al.

Puente, Antonio E.; Beiman, Irving (1980). The effects of behavior therapy, self-relaxation, and transcendental meditation on cardiovascular stress response. Journal of Clinical Psychology, 26 (1), 291-295.

Compared Behavior Therapy (BT), self-relaxation (SR), transcendental meditation (TM), and a waiting-list control group (WL) on measures of cardiovascular and subjective stress response. Male and female respondents (N = 60) to an ad for therapy were evaluated in assessment sessions before and after treatment. The results indicate that BT and SR were more effective than either TM or WL in reducing cardiovascular stress response. These data were interpreted as resulting from therapeutic suggestion and positively reinforced client progress.

Schuman, Marjorie (1980). The psychophysiological model of meditation and altered states of consciousness: A critical review. In Davidson, J. M.; Davidson, R. J. (Ed.), The psychobiology of consciousness (pp. 333-378). New York: Plenum Press.

Psychophysiological changes have been found to occur as correlates of meditation. Major emphasis has been placed on changes in alpha brainwave activity and on changes in alpha blocking response to sensory stimuli. Taken together, these

changes in baseline EEG and electrocortical responsiveness to sensory stimulation have been interpreted to be evidence of a unique meditative state of consciousness. The literature on the psychophysiology of meditation, including EEG and autonomic changes, is reviewed with careful attention to different types of meditation practice and various physiological measures of arousal and attentional set. The phenomenology of meditative states and their relationship to trance states is also considered. It is concluded that EEG and autonomic data cannot be used to define states of consciousness; the state of consciousness must be known before the significance of physiological changes can be inferred.

Spanos, Nicholas P.; Stam, Henderikus J.; Rivers, Stephen M.; Radtke, H. Lorraine (1980). Meditation, expectation and performance on indices of nonanalytic attending. International Journal of Clinical and Experimental Hypnosis, 28 (3), 244-251.

Following pretests on the Eysenck personality inventory (H. J. Eysenck & S. B. Eysenck, 1963) and hypnotic susceptibility as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), 2 groups of Ss attended nonanalytically for 20, 15-minute sessions and were then posttested. Sessions were defined as meditation for 1 group and as a study in attention style for the other. Meditators and attenders did not differ in their rate of signalling intrusions into their attending, and neither treatment affected hypnotic susceptibility or personality dimension scores. The Ss who were defined as motivated to participate in the study, and those Ss who were unmotivated did not differ initially in rate of intrusions. At the end of the study, however, motivated Ss reported fewer intrusions than unmotivated ones. Intrusion rate correlated significantly with hypnotic susceptibility.

The Harvard Scale (HGSHS:A) scores correlated  $-.41$  with Mean number of intrusions. The meditation training consisted of one hour of training in transcendental meditation (TM) followed by 20 15-minute sessions spread across 4 or 5 weeks. In their Discussion section, the authors state, "The present finding that intrusion rate correlated significantly with hypnotic susceptibility replicated the results of Van Nuys (1972) and Spanos et al. (1978). In both the present study and that of Spanos et al. [Spanos, Gottlieb, & Rivers, The effects of short term meditation practice on hypnotic responsivity. Unpublished manuscript, Carleton University, 1978] meditation practice failed to produce either an overall reduction in rate of intrusions or an increment in hypnotic susceptibility. Thus, in these studies, the failure of meditation to enhance susceptibility can be accounted for in terms of its failure to increase proficiency at nonanalytic attending. Such an explanation cannot account for Spanos et al.'s (1979) results, however. These investigators, it will be recalled, found that experienced meditators who reported very few intrusions and unselected novice meditators with a relatively high intrusion rate, failed to differ from each other in susceptibility. The empirical interrelationships among meditation practice, intrusions into attending, and hypnotic susceptibility will have to be clarified if a theoretical integration of meditation and hypnotic phenomena is to be accomplished" (p. 249).

1979

Barmark, Susanne M.; Gaunitz, Samuel C. B. (1979). Transcendental meditation and heterohypnosis as altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 27 (3), 227-239.

The effects of transcendental meditation and relaxation-heterohypnosis on subjective phenomena and physiological arousal were examined. One group of Ss, who were experienced meditators, participated in meditation, and a second group of Ss, who were highly susceptible to hypnosis but with little hypnotic experience, were exposed to hypnosis. A period of quiet sitting served as control for Ss in each group. Neither heterohypnosis nor transcendental meditation were identified as low-arousal states. They were assumed to be similar phenomenologically altered states of consciousness, mainly characterized by changes in the distribution of attention and in body image.

Di Nardo, Peter A.; Raymond, Jayne B. (1979). Locus of control and attention during meditation. Journal of Consulting and Clinical Psychology, 47 (6), 1136-1137.

Undergraduates were assigned to an internal or external group on the basis of their locus of control scores. A meditation task required subjects to focus their attention on an actual stimulus or an imagined stimulus while recording intruding thoughts by pressing a button on a counter. Results showed that an internal locus of control was related to fewer intrusions than was an external locus and that the actual stimulus resulted in fewer intrusions than did the imagined stimulus. These results suggest that performance in meditation, and possibly in other self-control procedures, may be influenced by individual differences in deployment of attention.

Spanos, Nicholas P.; Steggle, Shawn; Radtke-Bodorik, H. Lorraine; Rivers, Stephen M. (1979). Nonanalytic attending, hypnotic susceptibility, and psychological well-being in trained meditators and nonmeditators. Journal of Abnormal Psychology, 88 (1), 85-87.

Four groups of trained meditators differing in amount of meditation practice and a group of nonmeditators attended nonanalytically to a mantra in two meditation sessions. Subjects signaled intrusions into their attending, and were also assessed on several person variables. The four trained meditator groups differed from one another only in terms of self-esteem. When combined into a single group, meditators signaled fewer intrusions and reported "deeper" levels of meditating than nonmeditators. However, meditators and nonmeditators did not differ on hypnotic susceptibility, absorption, or indices of psychopathology.

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard

(1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. Psychotherapy and Psychosomatics, 30, 229-242.

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating questionnaires. The meditational and self- hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

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Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

Reed, Henry (1978). Improved dream recall associated with meditation. Journal of Clinical Psychology, 34 (1), 150-156.

Analyzed the effect of meditation on the completeness and vividness of intentional dream recall by use of data protocols obtained from an experimental home-study dream research project that involved Ss who recorded dream recall for 28 consecutive days. It was found that when a S had meditated the day before, there was significantly greater completeness of dream recall on the following morning. A significant interaction effect also was found between the regularity of the S's meditation and whether such meditation was associated with improved dream recall. The results were discussed in terms of Cayce's attunement model of meditation, which predicts more observable effects of meditation when it is practiced regularly

Schwartz, G. E.; Davidson, R. J.; Goleman, D. J. (1978). Patterning of cognitive and somatic processes in the self-regulation of anxiety: Effects of meditation versus exercise. Psychosomatic Medicine, 40, 321-328

Spanos, Nicholas P.; Rivers, Stephen M.; Gottlieb, Jack (1978). Hypnotic responsivity, meditation, and laterality of eye movements. Journal of Abnormal Psychology, 87 (5), 566-569.

Right-handed male subjects were pretested on a number of person variables; they then meditated for eight sessions. Measures of hypnotic responsivity, meditating skill, imaginal abilities, and attitudes toward hypnosis loaded on a common factor that was labeled sustained nonanalytic attending. However, laterality of eye

movement (left moving) failed to load on this factor. The implications of these findings for current theorizing concerning hypnosis and meditation are discussed.

Zuroff, David C.; Schwarz, J. Conrad (1978). Effects of transcendental meditation and muscle relaxation on trait anxiety, maladjustment, locus of control, and drug use. Journal of Consulting and Clinical Psychology, 46 (2), 264-271

Sixty undergraduate volunteers were randomly assigned to receive training in transcendental meditation (Transcendental meditation), training in a muscle relaxation technique, or no treatment. The training in muscle relaxation was designed to be maximally similar in structure and atmosphere to training in Transcendental meditation. Measures of trait anxiety, locus of control, maladjustment, and drug use were collected before and after the 9-week treatment period. On a behavioral measure of trait anxiety, the scores of all three groups decreased equally, but on a self-report measure the Transcendental meditation subjects reported steady decreases in anxiety, whereas the scores of the other two groups remained unchanged. There were no differences in maladjustment, locus of control, or drug use as a function of treatment. Although Transcendental meditation subjects held higher expectancies for benefits, and were slightly more regular in practicing their technique, individual differences in expectancy and frequency of practice were not correlated with degree of reported anxiety reduction. It is concluded that Transcendental meditation may reduce trait anxiety, but it has not been shown to be of value in inducing general personality change.

1977

Avila, Donald; Nummela, Renate (1977). Transcendental meditation: A psychological interpretation. Journal of Clinical Psychology, 33 (3), 842-844.

The authors suggest that Transcendental Meditation offers a great deal of promise for use in helping relationships. They also suggest that the technique might receive wider acceptance if it could be explained in other than a purely philosophical or mystical way. For that reason, in their article they offer a psychological interpretation of the TM process.

Brown, Daniel P.; Fromm, Erika (1977). Selected bibliography of readings in altered states of consciousness (ASC) in normal individuals. International Journal of Clinical and Experimental Hypnosis, 25, 388-391.

The bibliography is divided into the following sections:

I. General Works

II. Reference material on personality in relation to altered states

III. Social and cultural determinants of altered states

IV. Cognition, information-processing, and ego-functioning

V. Methodology in the study of altered states

VI. Differentiation of hyperaroused states

VII. Shamanistic states

VIII. Possession-trance

- IX. Psychedelic states**
- X. The meditative states**
- XI. Personality differences and meditation**
- XII. Affective and cognitive change in meditation**
- XIII. Ordinary Buddhist meditation, concentration, and insight meditation**
- XIV. The variety of Buddhist meditation traditions**

**Brown, Daniel P. (1977). A model for the levels of concentrative meditation. International Journal of Clinical and Experimental Hypnosis, 25 (4), 236-273.**

Classical Tibetan meditation texts are used to specify the most important variables in meditation that can be subjected to empirical test. There are 3 kinds of variables: (a) nonspecific variables, common to all meditation systems; (b) specific variables, limited to specific types of meditation practice; and (c) time-dependent variables, changing over the course of meditation practice. The latter, time-dependent variables, comprise the majority of meditation variables. One set of time-dependent variables for classical concentrative meditation is explored. Using the semantic-field method of translating, technical terms most important in each level of the entire phenomenology of concentrative meditation are discussed. These terms are translated into hypotheses, which are worded in terms of traditional constructs from cognitive psychology. Supporting empirical research is presented and suggestions for further research are made. Certain similarities are noted between the Yogic texts and the constructivist theories of perception, information-processing, and affect. The overall direction of change in concentrative meditation follows an invariant sequence of levels of consciousness.

**Cauthen, Nelson R.; Prymak, Carole A. (1977). Meditation versus relaxation: An examination of the physiological effects of relaxation training and of different levels of experience with transcendental meditation. Journal of Consulting and Clinical Psychology, 45 (3), 496-497.**

Three groups of meditators with varying amounts of experience, a group trained in relaxation, and a pseudomeditation group were tested for changes in heart rate, respiration, skin temperature, and skin conductance during meditation or relaxation. The two more experienced groups of meditators showed decreases in heart rate during meditation while the relaxation group showed decreases after relaxing. The group trained in relaxation and the least experienced meditators showed increases in skin temperature. There were no significant changes in skin conductance or respiration before, during, or after the meditation or relaxation periods.

**Davidson, R. J.; Goleman, D. J. (1977). The role of attention in meditation and hypnosis: A psychobiological perspective on transformations of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 291-308.**

A temporally based scheme for investigation of changes in consciousness, applicable to areas such as meditation and hypnosis, is proposed and is divided into 3 basic epochs: before -- predispositional variables that affect response to consciousness altering techniques; during -- the state effects of the particular technique; and after -- the trait effects of the practice. Research is surveyed which indicates the role of attentional processes during each of these 3 basic epochs in both meditation and hypnosis. Attentional flexibility is a predispositional variable affecting response to both meditation and hypnosis. The state effects of concentrative meditation involve alterations in stimulus set while the state effects of hypnosis may reflect primarily response set. The trait effects elicited by meditation depend critically on the psychobiological systems which are called into play. Evidence is discussed which suggests that concentrative meditation shares with relaxation an autonomic quiescence, but in addition enhances some attentional skills. A mindfulness technique involving the adoption of a particular attentional stance toward all objects of awareness appears to enhance cortical specificity, but a concentration technique does not. Some implications of attentional self-regulation are discussed.

Dillbeck, Michael C. (1977). The effect of the transcendental meditation technique on anxiety level. Journal of Clinical Psychology, 33 (4), 1076-1078.

Two weeks of twice-daily practice of the Transcendental Meditation (Transcendental meditation) technique was compared with 2 weeks of twice-daily practice of passive relaxation as a means of reduction of anxiety, as measured by the Trait scale of the State-Trait Anxiety Inventory. Thirty-three graduate and undergraduate students were assigned randomly to a relaxation group and a Transcendental meditation group. After a 2-week experimental interval, the relaxation Ss began Transcendental meditation. As hypothesized, in the comparison between the relaxation and meditation Ss, as well as between conditions of the relaxation-meditation group, Transcendental meditation was significantly more effective in reducing anxiety level. Thus, the anxiety-reducing effect of the practice of Transcendental meditation cannot be attributed merely to sitting quietly twice daily, although additional research must determine the extent to which S expectations for change contributed to this effect.

Fromm, Erika (1977). An ego-psychological theory of altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 372-387.

In this paper a new ego-psychological theory is proposed for the understanding of altered states of consciousness. The dichotomies of primary and secondary process, ego activity and ego receptivity, and automatization and de-automatization of ego functions in daydreaming, in the inspirational phase of creativity, in hypnosis, in psychedelic states, and in meditation are discussed; so are the roles of fantasy, imagery, and various forms of attention.

The author provides a table titled "Typology of Waking State and Several Altered States of Consciousness by Attention Mode." The states listed in the table are: Waking, normally alert, and concentrated; Waking, fascinated, entranced; Free association; Daydreaming; Dreaming; Psychedelic drugs; Hypnosis; Self-hypnosis; Biofeedback; Transcendental meditation; Concentrative meditation; Satipatthana [mindfulness of body, feelings, mind, and mental events]; Classical vipasyana [Clear intuitive insight into physical and mental phenomena as they arise and disappear, seeing them for what they actually are]. She summarizes, "In general, the present author strongly feels that the advantage of hypnotherapy over therapy in the waking state is that hypnosis allows the therapist to help patients work with more primary process thinking, more fantasy, more imagery, more ego receptivity than they would employ in the waking state" (p. 385). "What helps the therapy is not the depth itself; it is that in the hypnotic state there is greater mobility, a greater ability to dip into the unconscious and to bring the unconscious material back into the waking state of consciousness" (p. 385).

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Sacerdote, Paul (1977). Application of hypnotically elicited mystical states to the treatment of physical and emotional pain. International Journal of Clinical and Experimental Hypnosis, 25, 309-324.

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

1976

Goleman, Daniel J.; Schwartz, Gary E. (1976). Meditation as an intervention in stress reactivity. Journal of Consulting and Clinical Psychology, 44 (3), 456-466.

Meditation and relaxation were compared for ability to reduce stress reactions in a laboratory threat situation. Thirty experienced meditators and 30 controls either meditated or relaxed with eyes closed or with eyes open and then watched a stressor film. Stress response was assessed by phasic skin conductance, heart rate, self-report, and personality scales. Meditators and the meditation condition habituated heart rate and phasic skin conductance responses more quickly to the stressor impact and experienced less subjective anxiety. Meditation can produce a psychophysiological configuration in stress situations opposite to that seen in stress-related syndromes. Research is indicated on clinical applications and on the process whereby meditation state effects may become meditator traits.

Smith, Jonathan C. (1976). Psychotherapeutic effects of transcendental meditation with controls for expectation of relief and daily sitting. Journal of Consulting and Clinical Psychology, 44 (4), 630-637.

Two experiments were conducted to isolate the trait-anxiety-reducing effects of transcendental meditation (TM) from expectation of relief and the concomitant ritual of sitting twice daily. Experiment I was a double-blind study in which 49 anxious college student volunteers were assigned to TM and 51 to a control treatment, "periodic somatic inactivity" (PSI). PSI was carefully designed to match the form, complexity, and expectation-fostering aspects of TM but incorporated a daily exercise that involved sitting twice daily rather than sitting and meditating. In Experiment 2 two parallel treatments were compared, both called "cortically mediated stabilization" (CMS). Twenty-seven volunteers were taught CMS1, a treatment that incorporated a TM-like meditation exercise, and 27, CMS2, an exercise designed to be the near antithesis of meditation. Results show 6 months of TM and PSI to be equally effective and 11 weeks of CMS1 and CMS2 to be equally effective. Differences between groups did not approach significance ( $p > .6$ ). The results strongly support the conclusion that the crucial therapeutic component of TM is not the TM exercise.

1972

Meares, Ainslie (1972). Group relaxing hypnosis. Journal of the American Society of Psychosomatic Dentistry and Medicine, 19, 137-141.

The paper is reprinted from Med. J. Aust., 1971, 2, 675-676 with permission of Editor. The author discusses theoretical concepts, techniques and patient selection for this method. "I avoid all logical communication, as this would only keep the patient alert, and so prevent the atavistic regression which is the essential factor in

hypnosis" (p. 139). He moves from patient to patient, saying little except "Good--easy--natural" etc. and he uses touch to reinforce their development of hypnotic state. To ratify the trance and make sure they are hypnotized, not just relaxed, he places a clip on forearm skin for a few moments. "This potentially painful stimulus has the effect of further deepening hypnosis" (p. 139). After about 35-40 minutes he alerts the group. Patients are taught self hypnosis to extend the results into daily life.

**1968**

Meares, Ainslie (1968). Hypnotherapy without the phenomena of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 211-214

A clear distinction must be drawn between the phenomena of hypnosis and the hypnotic state itself. Hypnosis is a state of mind characterized by regression to atavistic mental functioning. The phenomena are produced as a result of this regression. The production of phenomena in either the induction or the therapeutic process is generally undesirable. Hypnosis may be used for reduction of anxiety or as a therapeutic experience without the production of any hypnotic phenomena. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963 Das, J. P. (1963). Yoga and hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 31-38.

The nature of Yoga and Samadhi (concentration) was described. A comparison with hypnosis revealed widely differing objectives, but many points of functional and methodological similarity. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Yoga methods (with introduction by W. Grey Walter). International Journal of Parapsychology, 5, 25-41.

1960 Meares, Ainsley (1960). The Y-state: An hypnotic variant. International Journal of Clinical and Experimental Hypnosis, 8 (4), 237-242.

(Author's Summary) "Two different forms or manifestations of hypnosis are commonly used in clinical practice. These are hypnotic sleep, and hypnotic activity. Hypnotic sleep is used for giving therapeutic suggestions, and for resting the patient. In this form, the patient is utterly passive. Hypnotic activity is used in abreaction, and in all the various techniques of hypnoanalysis. In this form the activity, whether it is verbal, emotional or motor, is uncontrolled. An hypnotic variant can be induced which materially differs from both hypnotic sleep and hypnotic activity. It is a Yoga-like trance, and for convenience is referred to as the Y-state. It is a state of calm abstraction. It is distinguished from hypnotic sleep by the intense cerebration, and from ordinary hypnotic activity by the fact that activity is subjective and is actively controlled. Y-state has been used with encouraging results in certain cases of chronic anxiety" (p. 241).

**"In contrast to hypnotic sleep, there is another variety of the hypnotic state which involves quite a different state of consciousness. For convenience, we will refer to it as the state of hypnotic activity. In it, the patient talks spontaneously and moves spontaneously. He may express himself by graphic or plastic means if he is given suitable materials. In hypnotherapy, this state of hypnotic activity is used in abreaction and in the uncovering techniques of hypno-analysis. In this state, the activity is essentially uncontrolled, and unrelated to present reality" (p. 237).**

**Sukhakarn, Khun Vichit (1960/1962). Extra ocular vision [Letter]. British Journal of Medical Hypnotism, 14 (2), 41-47.**

**The article is in the original form of a letter to Herbert Spiegel, M.D. The author describes experiences training subjects, both blind and with normal vision, to 'see' through the skin of their cheeks. Training involved concentrative meditation (Buddhist) and hypnosis. Simple tests were performed, apparently independently, by two other scientists.**

**"From information available from our subjects, the Extra Ocular Vision gained through the cheek-skin is different from those through the eyes as best explained here below:-- (1) The vision through the cheek-skin first takes a form of a series of spots somewhat like the image of coarse grain prints. Only after further training the spots are transformed into a clear object, so clear that needle threading is possible. (2) Objects seen through the cheek-skin are as clear as through the eyes. Distant objects can be magnified by the subject's wish, just like looking through an opera glass. (3) The vision gained through the cheek-skin is first 'seen' in black and white, and the 'colour picture' is achieved only after further training. But the colour 'seen' through the cheek is more intense than those through the eyes. (4) The field of vision 'seen' through each side of the cheek is more narrow than those seen through each eye. (5) There is a sign indicating that the vision through the cheek is only two-dimensional, the subjects find it difficult at first to stand the finger to another finger test" (p. 42).**

## **MEMORY**

**1995**

**Eisen, Mitchell L.; Henn-Haase, Clare (1995, November). Memory and suggestibility for events occurring in and out of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

**Resistance to misinformation uses two paradigms: 1. Elizabeth Loftus - expose Subject to slides or videotape, give misinformation with leading or misleading questions 2. Martin Orne - pseudomemory, i.e. age regress people in hypnosis and suggest events occurred.**

**Each approach yields mixed results. Misinformation is accepted more readily in context of hypnosis; but there is no relationship to hypnotizability. Spanos found**

that highs were more responsive to social pressure. In general, in the absence of social pressure, when presented subtly and outside the context of hypnosis, the relationship diminishes. Other factors play a more prominent role: source of information, type of information, salience of information, etc.

They examined whether events occurring in context of hypnosis were more prone to distortion when assessed in biased fashion with use of misleading information, than outside hypnosis. Also, form of questions (dichotomous or with 'I don't remember' option).

They gave the Harvard and asked afterwards 3 misleading items (e.g. did you clench your fist, when they didn't do it). Also asked them to circle items if they had no memory of it. Tellegen Absorption Scale and Dissociation scale (DES) were administered a week later. Also a week later asked about events that occurred, including confederate items. Half of Ss had 2 choices, half had also 'I don't remember' as a third option.

In a previous study, resistance to misleading information was related to the strength of the initial memory and not to hypnotizability (article published in AJCH).

**RESULTS.** When given 3 choices, the number of misleading items endorsed dropped from .7 to 0.4 which is the most robust finding in the study and affects the rest of the study. Many Ss who endorsed the items reported minutes later that they had no memory for the event (on the check list). While many Ss given only two choices wrote in the margin that the event had never occurred.

Offering an 'I don't know' third option decreased endorsement of the Harvard items also, from 6.4 to 5.2 which is significant. The relationship between hypnotizability and endorsement of misleading items became much weaker when accounting for this.

Scoring high on DES is significantly related to accepting misinformation. Tellegen Absorption Scale also related to accepting misleading information. Harvard Hypnotizability Scale was not related to accepting misinformation.

Total memory on the Harvard (before cue plus after cue) did not correlate with resistance to misleading information. History of abuse was related to hypnotizability. Have to evaluate whether it was traumatizing, multiple abuse, etc.

Eisen, Mitchell L.; Goodman, Gail S.; Qin, Jianjian (1995, November). Child witnesses: Dissociation and memory and suggestibility in abused children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Memory

1995

Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the

denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.

The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.

Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.

The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.

In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.

Freud presented his theory to his patients and then sought confirmation.

Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.

Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.

Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It

may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years

Our study looked at suggestibility and resistance to suggestion. During 5-day hospitalization for investigation of child abuse. The first day patient gets physical exam; 2nd day a genital exam, heart arousal, stress arousal; a later day had mental status, emotional functioning, cognitive functioning--and gross screen of IQ for age 5 and up and the digit span for 6 and up, plus rating of global functioning and provisional diagnosis. On Day 5 each child was given structured interview that included questions about the anal- genital exam, with some misleading questions included.

35 minutes after the psychological examination they were given questions about the exam, for brief memory. Next exam was forensic examination of memory for abuse. Gave memory for sentences, perceptual alterations scale (PAS), adolescent version of Dissociative Experiences Scale (A-DES); gave questionnaire to parents.

**Hypotheses: suggestibility would be negatively related to age (more errors when younger). Sexually and physically abused children would show more dissociation or psychopathology. Dissociation or psychopathology should be inversely related to memory ability. IQ should be related to memory and resistance to misinformation. Wanted to reconcile two models of post traumatic stress disorder (PTSD): one says they have poorer memory, and the other says they are hypervigilant.**

**Over 100 children in the 200 received the questionnaire on Day 5. 39% were 3-5 years old, 41% 6-10 years old. 76% were African American. 22% had no documented abuse or neglect; 13% had experienced physical abuse; 30% sex abuse; 12% both types of abuse; 15% neglect; 8% parental addiction.**

**Measuring dissociation in kids is problematic. The concept is used to describe a huge range of phenomena. Scores on the DES are more highly correlated with the F Scale on the MMPI than with any other measure (Michael Nash's research). So the DES measures psychopathology. Also, children have healthy kinds of dissociation--daydreaming, etc. Josephine Hilgard noted that young kids are naturally involved in imagination. Early traumas may lead to this dissociative style. How do we sort out the healthy imaginal involvements of children from the psychopathology? There is not sufficient data at this time.**

**Available measures are not validated well. The CDC indicates behavior problems in children. The C-PAS conceptualizes dissociation as relating to eating disorders; the A-DES is a self report measure that related to psychopathology.**

**CDC scores increase, in 3-5 year olds, as the amount of abuse increases. This looks like general psychopathology, and it is a parental rating. The A-DES and C-PAS were not related to abuse or neglect. In the older groups the CDC related to poor performance on memory tests; but only for the 6-10 year olds. (Poorer memories in younger children could have masked the effect in them.)**

**The main finding for the study was clinician's estimate of Global Adaptive Functioning was significantly related to Resistance to Misleading Information. The effect did not show for the 3-5 yr old group, perhaps because their memory functioning is poor anyway. Also age was related to memory and suggestibility.**

**Frischholz, Edward J. (1995, November). A critical evaluation of the 1985 AMA Report on hypnosis and memory. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

**JAMA 1985 concluded that hypnotically refreshed memories are less reliable than nonhypnotic recall. There are two problems with their conclusion: 1. No consensually validated definition of 'hypnosis' is identified. They talk about administration of induction, and differences in hypnotic susceptibility. 2. Empirical criteria for discriminating the unique and/or moderating effects attributable to hypnosis are not specified.**

**For example Loftus showed that memory errors can be created without hypnosis. You should not just add hypnosis to that model.**

**The criticisms have not led to remedial practices. No research has been done to show how to minimize errors or how to facilitate accuracy.**

'What is Hypnosis?' Something that is done vs. something that happens? A procedure or responsivity? Questions like this are relevant to research on whether hypnotically refreshed memories are less reliable than ordinary recall.

Hypnosis is not a 'valid therapeutic modality' (i.e., 'hypnotherapy' is a misnomer). Hypnosis can be used adjunctively with many different types of therapeutic modalities: --psychodynamic therapies --behavior modification treatments --cognitive restructuring strategies --systematic desensitization --flooding --direct suggestion

There is a specious communality: hypnosis is used in a different kind of way with each approach.

If hypnosis is defined in terms of whether an hypnotic induction procedure was administered to the subject, then hypnosis is a universal phenomenon (i.e., everyone can be administered an hypnotic induction procedure). This, in the AMA report, permitted the courts to define it this way, which leads to a number of ridiculous results.

We need to highlight 'What are the variables that are the source of the errors?' The sources are not hypnosis. We can minimize the sources by the way we ask questions, instruct the subjects, etc.

If hypnosis is defined in terms of the nature of the subjects' response to the procedures, then hypnosis is not a universal phenomenon (i.e., there are wide individual differences in hypnotic responsivity). I have shown that it is possible to alter memories, using the Loftus model, in people who are both low and high hypnotizable.

We need to take into account induction procedure, hypnotizability, type of memory, and the retrieval/influence procedure. The demand characteristics re forced responding, expectancies about memory (e.g. video recorder model), expectancies about hypnosis (e.g., everyone remembers) must be accounted for.

Dependent variables in this type of research include memory accuracy, memory errors, and subjective confidence.

Laurence, Jean-Roch; Gendron, Marie-Josée (1995, November). Pay attention, it may happen by itself. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

1994

Aronoff, J.; Green, J. P.; Malinoski, P.; Zelikovsky, N.; Lynn, S. J. (1994, October). Hypnosis and autobiographical memories: The impact of contextual factors. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco

We examined the individual differences in recall for early memories, in a college population, using the Autobiographical Memory Scale (AMS) along with other scales and with a hypnotizability scale (measured in same and different contexts). 75 male and 171 females subjects participated.

Presented as two separate experiments, so Ss would not make an explicit link between autobiographical memories and things measured in the second study.

**Exper 1. Administered AMS which indicates we are interested in their memories of events, and not what they were later told about the events. First 5 birthdays, first day of school, etc. Rate the detail, vividness, and accuracy.**

**Exper 2. Administered Fantasy Proneness (Wilson & Barber), Cognition, Imagery Control Scale, Derogotis, SAC (Brier's symptoms of child abuse), and Dissociative Experiences Scale.**

**Final sample of 247 Ss.**

**Earliest memory was 3.8 years.**

**Ss ratings of details, vividness, and accuracy were highly correlated. These were negatively correlated with age of first memory.**

**Bloom, Peter B. (1994). Clinical guidelines in using hypnosis in uncovering memories of sexual abuse: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 42 (3), 173-178.**

**"Joan," a clinical psychologist, requested a psychiatric consultation to determine whether hypnosis could recover accurate memories of suspected child abuse by her still living father. Are there clinical guidelines in using hypnosis in uncovering such possible memories of sexual abuse? We asked Dr. Peter B. Bloom to share his views with us.**

#### **NOTES**

**Gives case example and clinical guidelines for using hypnosis in uncovering memories of sexual abuse. 1. In medical practice, "Primum non nocere," i.e. "First do no harm." 2. "No therapist should ever, either directly or indirectly, suggest abuse outside of a specific therapeutic context--certainly not to a client who is on the phone making a first appointment!" 3. "A therapist must not jump quickly to the conclusion that abuse occurred simply because it is plausible." 4. "A therapist should never simply assume that a client who cannot remember much from childhood is repressing traumatic memories or is in denial." 5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'" 6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families." 7. "Therapists should reconsider the 'no pain, no gain' philosophy of treatment." 8. "The context of therapy is as important as the content." 9. "Tolerate ambiguity." (Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."**

**COMMENT: The tenet that insight is necessary for change and growth is not true. Change can occur without insight, although insight may be helpful in maintaining change once it has occurred.**

**SUMMARY:** These guidelines are presented to enhance safe practice, however, clinicians should use their own judgement to determine the best path to follow with each patient.

**NOTE:** Guidelines 1, 8, 9, 10, 11, 12, and 13 are those of Peter B. Bloom. Those labeled as Guidelines 2, 3, 4, 5, 6, and 7 were taken with permission from Yapko, M. (1993 September/October). "The seductions of memory. The false memory debate." *Family Therapy Networker*, 17, pp. 30-37. All discussions, however, are those of Peter B. Bloom.

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Bowers, Kenneth S. (1994, October). Bringing balance to controversy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Skeptics argue that concept of "repression" has no scientific merit, though even if a valid concept, it wouldn't validate all memories recovered. Skeptics regard laboratory evidence as essential, while clinicians are impressed by case reports. See Polonyi, Personal Knowledge.

It is not reasonable to say there is no evidence for fugue states, when seeing one, if it has not been demonstrated in the laboratory. But you can investigate some of the phenomena in the laboratory.

Most of the time it is an affectively loaded idea that is repressed; in contrast, trauma usually lead to intrusions into consciousness. So repression of a traumatic event may be a rare way to deal with the event.

Claims for repression and ESP differ in that there are probably observable mechanisms in the former (e.g. thought avoidance). If a person ejects thoughts about a topic frequently enough, the ejections become automatic. Freud's original description of repression used the word "intentional" and it was a footnote that took out that idea. (See Erdelyi's publications).

Recent research we conducted on intuition and on problem solving is relevant to this problem.

[The remainder of Bowers' presentation is not summarized here.]

1994

Farvolden, Peter; Bowers, Kenneth. S.; Woody, Erik Z. (1994, October). Hypnotic amnesia: Avoiding the intentional loop. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Social-cognitive position is that suggestions for amnesia lead to motivated attempts to forget, and the sense of nonvolition is due to attributional error. Neo-dissociation position is that post-hypnotic amnesia is activated by suggestions, and material is not available to consciousness. Ss may mistakenly attribute their amnesia to their own efforts, or to their imaginings. (See their analgesia studies.)

Used a recall organization paradigm. Ss learn 16 item categorized word list, then are given suggestion to forget one category. After suggestion is canceled, Ss are told to report again. In their heart rate study, highs were amnesic and recalled words not targeted for amnesia. Highs weren't trying to forget, even though they were experiencing things happening cognitively during the waiting period.

Study II. One group of highs engaged in a distraction task, which would prevent their participating in task relevant practice. Ss in the distraction condition recalled fewer words, just as in the standard hypnosis condition. However, their subjective report indicated they had even a stronger feeling that something had happened beyond their volition or control than did Ss in the standard hypnotic condition.

It appears that task relevant thoughts and imagery reported by Highs are not necessary. They are co-suggestion effects. See Hargedon, Bowers, & Woody in similar work, on analgesia. However, during the recall period Highs did not work as hard as the Lows in trying to remember according to both their self-reports and the heart rate measure.

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Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question?

Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

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Ganaway, George K. (1994, October). The thin line: Reality and fantasy in hypnotically facilitated memory retrieval during psychotherapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Historical review: Every hundred years there has been a peak in interest in altered states--a fin de siècle zeitgeist. It is the Brigadoon effect, i.e. something materializing for one day every 100 years. The theories developed then suffer from "paradigm grandiosity." In hypnosis, we can refer back to:

1694 Salem witch trials

1790s Gausser's exorcism (see Ellenberger); in a 1775 showdown between him and Mesmer, there occurred the turning point between exorcism and psychotherapy.

1880s Charcot at Salpêtrier 'demonstrated' that hypnosis was an organic, pathological condition. Ultimately this contributed information about the plasticity of hypnotized people. (In the 1880s Bernheim thought it wasn't pathological and thought that suggestion was the important element in hypnosis.)

Recent historical contributions have influenced our views of MPD. Spiegel and Kardiner published book about hypnosis and war neuroses. Cheek & LeCron developed ideomotor questioning, which ignores the contribution of unconscious fantasy. Jacob Arlow's metaphor for MPD is two movie projectors aiming at a screen from two different sides. The subjectively known experiential world thereby combines external reality and the person's internal, motivated perceptions. The author presented a case study of female therapist, who had been previously diagnosed as MPD, who presented with dissociative symptoms that she thought were due to abuse by her grandmother. She fabricated the memories in order to get the holding and physical nurturing from her therapist for being courageous and remembering the abuse.

Maintenance of professional boundaries is very important in treatment.

Krippner, Stanley (1994, August). Improvement of academic skills for children and adolescents with hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Literature and research in this area are sparse, though there is clinical evidence that hypnosis is useful. My definition of hypnosis is a procedure facilitating a variety of structured goals or procedures in which a suggestion or motivation is enhanced by a mechanical device, another person, or oneself.

There are 3 areas of application in academics:

study habits

test taking

strengthening academic motivation

The hypnotist should know the specifics of academic achievement, because specific suggestions (e.g. "Imagine you are at desk focusing well for 20 minutes,") are better. Emphasis on the positive is better than negative. Use the words "imagination," "concentration," or "imagining pictures," rather than "hypnosis." I try to determine what they expect, based in part on what words they use.

In elementary school I focus on attitude and self esteem. I have them imagine reading a story, then how well they feel; that when they notice mistakes they won't be bothered because everyone makes mistakes.

For high school, I help them develop good habits for time motivation (e.g. suggestions to "make an outline to follow while you study"). At college level, I introduce self hypnosis. I make frequent use of mental imagery, at all levels--especially imagery rehearsal, in which the person is engaged in a particular activity. In the NSF report on accelerated learning techniques (a project sponsored by the Army), Lozonov's "suggestopedia" techniques were studied. This review indicated it might enhance training effectiveness and reduce training time.

I have observed the suggestopedia classes in Bulgaria and Hungary. Classes had a relaxed comfortable learning environment. Rather than individual learning, it was group learning. It included preliminary exercises, new material, and a review of what was learned. The first stage used 2/3 of the time. Then suggestions were given by the teacher to promote learning. The presentation phase took one third of the time. The method encourages students to make mental images of the material. In foreign language classes, people take on new roles.

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1993

Bennett, Henry L. (1993, October). Hypnosis and suggestion in anesthesiology and surgery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

He began by saying that he is opposed to using hypnosis for surgery, though he favors a theory of how hypnosis effects physiological change, and cites T. X. Barber's classic "Changing Unchanging Bodily Processes."

Relaxation puts patient in a "psychological strait jacket" because surgery is so highly stressful. He gives information "about how to go through the surgery more comfortably," gets across the idea about coping style, tells them surgery is exertional and that they are tired afterward, that he can help them "using things you already know how to do," and specifies exactly what they can do--using model of himself as a trainer.

In some recent research he used pairs of pictures, some of which lead to pupillary constriction (blood pressure goes down) or dilation (blood pressure goes up). Instructing them to look, patients looked twice as long at the pictures than they did during free gaze. When not instructed to look, heart rate went down; when told to look, heart rate went up. So the researchers went back to free gaze. He uses this as a metaphor for many of the pre- surgery preparation activities that encourage relaxation "inappropriately."

He cites Cohen & Lazarus re vigilant copers, Price et al (1957), and some other studies on epinephrine effects. He uses examples of work patients may have done (e.g. planting a garden) when talking with patients prior to surgery, that gives them a sense of accomplishment later.

You have to give specific instructions or suggestion, not general relaxation suggestions.

Question from the audience: Can preoperative instructions (not hypnosis) diminish blood loss.

In Bennett's answer he seems to be reporting the earlier study: they found 150- 4000 cc blood loss, high variability. Extent of blood loss was determined by extent of surgery, by instructions to patients vs no instructions.

This study was replicated by Enqvist, Bystedt, & von Konow in the Anesthesia conference at Emory University in 1992.

May 1993 Western Journal of Medicine article, Disbrow, Bennett, & Owinos, with 40 lower abdominal surgery patients who got specific instructions or not. The SHCS was used to measure hypnotizability: highs resolved quicker than low hypnotizable patients. They also found that instructed patients did better than those who did not get specific instructions.

There are now 3 replications of McClintock's study: people use less medications after surgery, when tapes about rapid recovery are played \*during\* surgery.

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1992

Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014.

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

**Excluded:** Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

**Music:** Herb Ernst, Dreamflight II. **Suggestions:** Music background, permissive, based on Evans & Richardson's study.

**Outcome Measures:** Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

1992

Christianson, S-A (1992). Emotional stress and eyewitness memory: A critical review. Psychological Bulletin, 112, 284-309.

Although not addressing hypnosis specifically, this is a comprehensive review of literature on memory for negative emotional events relevant to issues of hypnosis and memory. The final conclusion is that emotional events are indeed remembered differently than neutral or ordinary events and are well retained with respect to the event itself and concerning central, critical detail (not peripheral detail). Such memories seem less susceptible to forgetting. There is evidence for dissociation between memory for emotional information and memory for specific event information. There is also evidence of amnesia or memory impairment effects after high-arousal events, with memory increasing as more time passes after the event. The functional amnesia effects are probably due to an interaction between altered encoding operations and the specific retrieval circumstances aiding consciously and unconsciously controlled reconstructive processes. There is little evidence to support Loftus' contentions that emotional stress is bad for memory.

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. Psychotherapy, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's

emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Darken, Rachel (1992). Hypnosis in the treatment of survivors of sexual abuse. Australian Journal of Clinical and Experimental Hypnosis, 20, 105-110.

This paper outlines the problems of child sexual abuse and its long-term sequelae, often reaching down generations. In psychotherapy with survivors of childhood sexual abuse, hypnosis offers a flexible treatment modality and the paper focuses particularly on the use of hypnosis and self-hypnosis for the "reparenting" element of psychotherapy.

Erdelyi, Matthew, Hugh (1992). Psychodynamics and the unconscious. American Psychologist, 47, 784-787.

The original New Look integrated the constructivist-psychodynamic traditions of Bartlett and Freud. The unconscious (Greenwald's "New Look 3") is a logically different idea, although in practice it is often intertwined with constructivist - psychodynamic approaches. The unconscious is a pretheoretic term with a variety of problems: It has multiple and unsettled meanings; null reports need not signify null awareness; the conscious-unconscious dichotomy implied by the limen may not exist; even "absolute subliminality" (chance-level accessibility) is relative to the time interval of testing, as accessibility can increase to above-chance levels over time (hypermnnesia). Yet, the phenomena that the unconscious sloppily subsumes are not simple or dumb. The capacity of subliminal perception should not be confused with the capacity of subliminal (unconscious) memory and cognition.

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

"Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch

only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).

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Gravitz, Melvin A. (1992, October). Historical and legal issues. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

The 1976 Chowchilla kidnaping case in California stimulated interest in using hypnosis for forensic investigation; in the same year, it was used in a case of airline hijacking in the Mediterranean to Uganda. Hypnosis is used for obtaining "leads" and doesn't claim to develop "the truth."

Other uses include: lifting amnesia of witnesses and victims of trauma--including but not limited to crime; obtaining additional information in nonamnesic Ss; evaluation of a subject's mental condition (e.g. multiple personality disorder vs malingering, as in the Bianchi case). In each use, hypnosis is not infallible, is not complete. But no procedure is. Motivation, resistance, transference are all critical.

Historic questions: 1. whether coercion is entailed 2. impact of hypnosis on memory 3. possible harm to subject, physically and mentally

The coercion issue dates to Mesmer, whose procedures led to accusations of immoral suggestions. In the 1880s Charcot said no one could be forced to do anything while the Nancy school (Liebeault) said they could. Since then we have seen laboratory studies using student volunteers, fake "poison," rubber daggers, etc., as well as recent "real life" studies where Ss were induced to violate their morals (see Watkins). Review articles include those by Jacob Conn of Baltimore and the 1985 JAMA article written by a panel headed by Martin Orne.

For impact of hypnosis on memory, see the Orne report which did not fully support using hypnosis for memory enhancement.

Regarding possible harm to a hypnotic subject in the 19th century, a young man's death was attributed to nervousness and exhaustion and diabetes due to repeated hypnosis. Other studies of death (of chickens, of a frog) due to repeated hypnotization were published. Now the consensus is that hypnosis is not dangerous (but incompetence using hypnosis may be dangerous).

#### LEGAL PRECEDENTS.

In 1897 a California court refused to accept testimony of a Subject who had been hypnotized. *People vs Eubanks*.

The 1950's Cornell case established that a person can be hypnotized for their own defense.

In 1963 the California supreme court ruled that a lower court made a mistake in not admitting testimony from someone who had been hypnotized.

In Harding (a Maryland case), the trauma victim, amnesic, was hypnotized one month later. The testimony was accepted. A 1983 Maryland appeals court overturned it, influenced by the California Shirley case.

In 1983 Hurd case, a victim, hypnotized, identified her husband as attacker. Lower court didn't permit the testimony; then a higher court reversed it. The court issued what are known as the Hurd rules, governing testimony that is acceptable: 1. hypnotist is licensed psychologist or psychiatrist with training in hypnosis 2. hypnotist must be independent of both the prosecution and defense 3. all information given to the hypnotist about the case must be written 4. hypnotist must obtain a nonhypnotic account of the memory before hypnosis is used. 5. must have taped record of the hypnosis sessions (preferably videotaped) 6. only hypnotist and subject should be present in the room

Soon after, California had the Shirley case. The California court ruled hypnosis per se is unreliable because it produces confabulation. This decision had a chilling effect throughout the country for several years.

In 1987 we had Rock vs Arkansas, the first and only case involving hypnosis to come before the U. S. Supreme Court. Vicky Rock shot her husband. Under hypnosis, she remembered she did not have her finger on the trigger, and her husband grabbed her and shook her. Lower court wouldn't admit the testimony of the gun expert, who testified the trigger was sensitive to jarring. Supreme Court ruled defendants (not necessarily others) could use hypnosis in their own defense.

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**Greenwald, Anthony G. (1992). *New Look 3: Unconscious cognition reclaimed. American Psychologist, 47, 766-779.***

Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long-term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

**Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). *Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809.***

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as

are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude.

Kihlstrom, John F.; Barnhardt, Terrence M.; Tatarzyn, Douglas J. (1992). The psychological unconscious. American Psychologist, 47, 788-791.

In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.

Lewicki, Pawel; Hill, Thomas; Czyzewska, Maria (1992). Nonconscious acquisition of information. American Psychologist, 47, 796-801.

The authors review and summarize evidence for the process of acquisition of information outside of conscious awareness (covariations, nonconscious indirect and interactive inferences, self-perpetuation of procedural knowledge). Data indicate that as compared with consciously controlled cognition, the nonconscious information - acquisition processes are not only much faster but are also structurally more sophisticated, in that they are capable of efficient mechanisms of non-conscious acquisition of information provide a major channel for the development of procedural knowledge that is indispensable for such important aspects of cognitive functioning as encoding and interpretation of stimuli and the triggering of emotional reactions.

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1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids).

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single

anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

**Discussion:** The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that

they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

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Bodden, Jack L. (1991). Accessing state-bound memories in the treatment of phobias: Two case studies. American Journal of Clinical Hypnosis, 34, 24-28.

Two cases of simple phobia demonstrate the inadequacies of both behavioral and psychodynamic theories. These cases and their treatment outcomes provide support for the state-dependent memory and learning theory. Hypnosis and ideomotor signaling proved to be not only effective treatments but also useful means of illuminating the role and nature of symptom function. Issues of symptom removal and substitution are also discussed in relation to these cases

The authors state that Rossi and Cheek (1988) summarize a number of experimental studies on animal memory that demonstrate that different information substances are involved in different learning situations. For example, ACTH and cortisol are involved in avoidance learning while angiotensin is involved in operant conditioning. In hypnosis, state dependent memory seems to be implicated. "Hilgard (1977) interpreted the state-dependent memory studies by Overton and others as entirely consistent with and supportive of his theory of hypnosis. Milton Erickson (1948) has also strongly suggested that it is the altered levels of arousal and affect that are responsible for the encoding and recall of stress-related problems with hypnosis" (p. 26).

"Affective experiences are apparently stored independently from their intellectual counterparts, or the emotional unit form one set may attach itself to a constellation of cues that make up a totally different cognitive set. Hypnosis may facilitate recall by providing relevant cues during an altered state of consciousness" (p. 27).

"In commenting upon [one of Erickson's cases], Rossi (1986) states that Erickson was effective because he helped the patient access state-bound memories by reviewing the context and sensory-perceptual cues that surrounded their original acquisition" (p. 27).

"When traditional behavior therapy fails it may be because the original fear stimulus is state bound or unconscious. What is conscious to the patient are those stimuli that are similar in some important respect to the original phobic stimulus and are acquired by stimulus generalization. Desensitization may reduce the patient's reactivity to the associated or acquired stimuli but cannot desensitize the original stimulus until it can be accessed consciously" (p. 27).

"The two main psychological explanations of phobic behavior are psychodynamic and behavioral. The psychodynamic approach is built upon the early writings of Freud (1956) on the traumatic basis of neurosis. Freud speculated that the intense anxiety (psychic pain) associated with the emotional trauma lead to dissociation, repression, and amnesia. Symptoms represented a dissociated or symbolic vestige of the repressed ('forgotten') trauma.

**"Behavioral explanations (e.g., Rimm & Masters, 1974) are built upon classical and operant conditioning models of learning. Classical conditioning explains how a neutral stimulus (e.g., a bridge) can acquire reactivity and elicit a fear response. Avoidant behavior, which preserves the phobia, is acquired and maintained by operant conditioning. Treatment apparently involves gradual extinction of the fear response.**

**"These two divergent explanations have spawned quite different therapeutic approaches, with the behavioral approach (systematic desensitization) demonstrating greater empirical support for its effectiveness (Kaplan & Sadock, 1986). The problem is made complex theoretically by the fact that desensitization doesn't always work, even when applied in a competent fashion" (p. 25).**

**"Freud's early work on the traumatic basis of neurosis pointed to but offered an incorrect explanation of phobias whose origins were unconscious or state bound (i.e., not available to recall during the normal conscious state)" (p. 25).**

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Bowers, Kenneth S. (1991). Dissociation in hypnosis and multiple personality disorder. International Journal of Clinical and Experimental Hypnosis, 39, 155-176.

The first part of this paper examines the concept of dissociation in the context of hypnosis. In particular, the neodissociative and social psychological models of hypnosis are compared. It is argued that the social psychological model, in describing hypnotic enactments as purposeful, does not adequately distinguish between behavior that is enacted "on purpose" and behavior that serves or achieves a purpose. 2 recent dissertations (Hughes, 1988; Miller, 1986) from the University of Waterloo are summarized, each of which supports the neodissociative view that hypnotic behavior can be purposeful (in the sense that the suggested state of affairs is achieved) and nonvolitional (in the sense that the suggested state of affairs is not achieved by high level executive initiative and ongoing effort). The second part of the paper employs a neodissociative view of hypnosis to help understand the current epidemic of multiple personality disorder (MPD). In particular, it is argued that many symptoms of MPD are implicitly suggested effects--particularly prone to occur in persons who have a lifelong tendency to use dissociative type defenses. The present author believes that this account is easier to sustain conceptually and empirically than the current view, which states that a secondary (tertiary, etc.) personality accounts for the striking phenomenological discontinuities experienced by MPD patients.

As an example of the fact that behavior that serves a purpose is not always performed on purpose, the author cites not falling out of bed while sleeping, and waking up in response to signals from the bladder to go to the bathroom. Lower levels of control can be dissociated from executive initiative and/or monitoring. "Since the experience of volition is closely tied to executive initiative and effort, suggested behaviors that bypass such initiative and effort are typically experienced as nonvolitional" (p. 157). Dissociated control occurs under waking conditions also, as when one dials a very familiar phone number rather than the one that they intended to dial. In this case, the behavior that is enacted is not what one consciously intended.

Miller's dissertation, also published as Miller & Bowers, 1986, is described on p. 158 ff. Without hypnosis, cold pressor pain (cold water immersion) reduced accuracy of performance on a multiple choice vocabulary test 35%. Both hypnotic analgesia and cognitive pain management strategies were equally effective in reducing pain of cold pressor test (and both interventions were more effective for high than for low hypnotizable Ss). However, the cognitive strategy group showed an additional drop of 30% in vocabulary performance from pre- to posttreatment cold water immersion (despite successfully reducing their pain). In the hypnosis condition, lows showed only a slight additional decrease (8%) while highs showed a slight (10%) increase in their vocabulary performance from pre- to posttreatment immersion.

Thus, the effect of hypnosis in pain control "does not depend on S's utilization of high-level cognitive strategies. Rather, hypnotic analgesia seems to involve the dissociated control of pain--that is, control which is relatively free of the need for high-level, executive initiative and effort. ... Because hypnotic analgesia minimizes the degree of executive initiative and ongoing effort required to reduce pain, however, it seems inappropriate to view such reductions as something achieved on purpose" (p. 161).

Hughes' dissertation is described on p. 162 and ff. Instead of performance decrement on a cognitive task like vocabulary testing, she used increased heart rate as an index of cognitive effort. If heart rate increases when Ss successfully use hypnotic imagery, that would confirm the social psychological view that "suggested effects are achieved by this kind of ongoing allocation of high-level cognitive force or work" (p. 162).

Highs and lows were hypnotized and administered three trials of neutral and three trials of fearful imagery in counterbalanced order. Each imagery trial lasted 1 minute, after which Ss rated vividness of imagery, effort required, and amount of fear experienced.

Average imagery vividness was higher in highs than lows, for both neutral and fear imagery. For lows the correlation between heart rate increases and ratings of cognitive effort were .54 (neutral imagery) and .49 (fear imagery). For highs, the correlations were -.05 (neutral) and -.52 (fear). Thus, "for low but not high hypnotizable Ss, we find the predicted positive relationship between a cardiac indicator of cognitive effort and the ratings of cognitive effort involved in producing neutral imagery" (p. 163).

"First, for low hypnotizables engaged in fear imagery, ratings of effort are correlated .66 with ratings of fear. In other words, the more low hypnotizable Ss work to produce a fearful image, the more frightening the image is. Second, for high hypnotizables engaged in fear imagery, the correlation between ratings of fear and effort is minus .68-- indicating that the less effort highs report in producing fear imagery, the more frightened they become. Finally, for high hypnotizables, the correlation between ratings of fear and heart rate increase is .59, indicating that the more fear high hypnotizable Ss experience when engaged in fear imagery, the more their heart rate increases (the comparable figure for low hypnotizables is .16)" (p. 164).

The authors discuss why the pattern of correlations is different for people high and low in measured hypnotizability, and summarize the implications of both Miller's and Hughes' research. Both investigations indicate that, at least for high hypnotizable people, less initiative and effort are required to effect a response to hypnotic suggestion than one would expect. They show how behavior can be both purposeful and nonvolitional (in the sense of not exhibiting conscious intention and strategic efforts). By noting that the sense of nonvolition that accompanies a response to suggestion is an actual alteration in executive control, they provide a model for dissociative psychopathology such as MPD. For although executive control is dissociated, these experiments do not suggest that there is a second executive system or 'personality' that is responsible for the behavior.

Patients diagnosed with MPD have very high measured hypnotizability (Bliss, 1984). In fact, they seem to engage in self hypnosis, withdrawing into a trance or a dissociated state (Bliss, 1984). The authors quote Wilson & Barber (1983) as indicating that highly hypnotized, fantasy-prone normal individuals may become so absorbed in a character being imagined that they lose awareness of their own identity.

The authors offer a neodissociative account of MPD: "People prone to MPD are very high in hypnotic ability and are, therefore, vulnerable to the suggestive impact of ideas, imaginings, and fantasies; what is more, they are high in hypnotic ability because they have learned to use dissociative defenses as a way of dealing with inescapable threat-- such as physical and sexual abuse (Kluft, 1987). ... Fantasied alternatives to reality (including a fantasied alter ego ... ) can become increasingly complex and differentiated. Gradually, these fantasied alternatives begin to activate subsystems of control more or less directly--that is, with minimal involvement of executive level initiative and control. Such 'dissociated control' of behavior does not necessarily eliminate consciousness of it, though one's actions are apt to be experienced as increasingly ego-alien. If and when the activating fantasies and resulting behaviors become sufficiently threatening, however, they can also be repressed into an unconscious (i.e., amnesic) status, thus further separating high-level executive and monitoring functions from the dissociated, ego-alien aspects of oneself. The fully realized result of this process is an individual who is subject to profound discontinuities in his or her sense of self. ... The experience of behaving in an outwardly uncharacteristic manner requires only that subsystems of control are more or less directly activated by ideas and fantasies in a manner that effectively bypasses executive initiative and control" (pp. 168-169).

923, Bowers, 1992 NOTES: Tart allegedly taught ESP skills based on reinforcement, using a machine that projected display and gave feedback immediately, so the subjects could learn to anticipate the picture better. But the picture presented next was time-linked to the S's response (so S could learn it).

1987 Behavioral and Brain Sciences review, with 2 target articles, makes one doubt strength of findings. ESP research doesn't distinguish between description of an observation and it's proposed cause.

MPD shares with ESP a tendency to predispose toward a certain explanation. Feeling like one has a separate personality leads to finding evidence for one. But an MPD account is wrong-headed because the diagnosis misconstrues a notion of personality, which is a developmental concept (a pattern of thought, feeling, and behavior). Mischel's (1968) account of human functioning competed with trait theory, so "personality" concept became extraneous.

Defining personality in terms of one's experiences or beliefs about oneself has led to further problems, encouraged by the descriptive approach of DSM III (which depends on patient reports). Drew Weston distinguished between the self and self representation. One can't argue that a computer programmed to describe itself is the same as it's descriptions.

Personality can't be reduced to person's beliefs about themselves. A secondary personality cannot be reduced to bizarre experiences a person believes are due to a second personality. Clinicians do not accept as valid the beliefs of a paranoid

schizophrenic; or of an anxious neurotic. With multiple personality disorder (MPD) the patient becomes the expert and the clinician the student.

William Smith's 1986 SCEH paper: case study of patient who was convinced her problems were due to unresolved problems from a previous life. He didn't challenge her system but still worked with her successfully, communicating respect without validating her belief.

Advocates of MPDs think the observation that it is associated with high hypnotizability indicates great dissociation; critics think the association indicates great suggestibility. There is a historical parallel: Mesmer probably didn't suggest seizure-like episodes, but implicit suggestions for seizures were probably partially responsible. Mistaken attribution permitted Mesmer to see this as validation of his theory of animal magnetism.

Clinicians are not the only ones to "suggest" MPD syndrome. High profile cases are in the media. We should also remember Orne's 1959 research showing that students who received false information a week earlier in lecture on hypnosis showed the behavior when they were hypnotized.

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Janet's disaggregation (dissociation) theory said hysterics and hypnotized people responded to ideas dissociated from the main stream of consciousness. So his contemporaries thought that spontaneous amnesia was a defining feature of hypnosis; yet it is not thought to be so in our era. The idea may have circulated in Janet's time, by popular culture.

MPDs are always highly suggestible so can respond to circulating accounts in the media, and every account that reaches the media can influence these people.

We could abandon the diagnosis of MPD in favor of Spiegel's "disorder of self integration." It is less provocative, does not imply any clinical benefit in the benefits of seeking out more personalities. This might reduce the incidence of this disorder, or likelihood that a suggestible person would develop the disorder iatrogenically.

Davidson, T. M.; Bowers, K. S. (1991). Selective hypnotic amnesia: Is it a successful attempt to forget or an unsuccessful attempt to remember. Journal of Abnormal Psychology, 100, 133-143.

Subjects in two experiments learned a 16-item, 4-category word list and were then administered hypnotic suggestions to be amnesic for all the words in one of the categories. Even when selective amnesia was completely successful, subjects in both experiments revealed a high level of recall for words not targeted for amnesia; moreover, these words were recalled in a highly organized, category-by-category fashion. Evidently, attention to relevant retrieval (i.e., organizational) cues does not oblige recall of words targeted for amnesia. Forgetting in the presence of such powerful mnemonic cues seems to characterize hypnotic amnesia and some spontaneous forms of forgetting as well.

Grabowski, Karen L.; Roese, Neal J.; Thomas, Michael R. (1991). The role of expectancy in hypnotic hypermnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 193-197.

Previous research has yielded equivocal evidence of hypnotic memory enhancement. This study assessed effects of expectancy and hypnotizability on recall for videotaped material under waking and hypnotic conditions. Ss (n = 138) were informed of hypnotic induction either before (expectancy condition) or after (no expectancy condition) watching a videotaped enactment of a crime and completing an initial waking recall test (R1). Both groups then underwent hypnotic induction, and completed the test again (R2). Ss' raw recall scores were significantly greater under hypnotic than waking conditions, but this hypermnesia was not evident when scores were corrected for mere increase in rate of responding. Ss expecting later hypnosis scored significantly higher than Ss with no such expectations, but again, this difference was not evident in corrected scores. Hypnotizability of Ss was, however, related to corrected recall, with high hypnotizability Ss displaying the greatest increase in rate of responding from R1 to R2. No evidence for the hypothesized "suppression effect" underlying hypnotic hypermnesia was found.

Thus Ss tended to answer more questions on R2 but most of this increase was error. Moreover, high hypnotizability Ss displayed this pattern to a far greater extent than other Ss, indicating that they were more likely than others to increase the no. of responses made between tests.

The finding of an interaction effect between hypnotizability and corrected recall suggests that hypnosis does play some role in the hypnotic hypermnesia described in

the literature, possibly refuting the findings of several recent studies (e.g., Nogrady, McConkey, & Perry, 1986; Register & Kihlstrom, 1987). High hypnotizability Ss increased the number of responses made from R1 to R2 to a greater extent than other Ss. The lack of an interaction between hypnotizability and expectancy, however, fails to support the suggestion by Salzberg and DePiano (1980) that people of differing hypnotizabilities differ also in their susceptibility to demand biases. As both Klazky and Erdelyi (1985) and Whitehouse et al. (1988) have noted, however, the use of hypnosis with witnesses of crimes may be useful if it can stimulate individuals to share uncertain recollections, perhaps providing otherwise unconsidered clues. The present data suggest that such guessing may also be increased by mere expectation of hypnosis. The value of forensic hypnosis may, therefore, be in part one similar to placebo: the simple notion of hypnosis placed in witnesses' minds may be sufficient to inspire useful leads.

Hasher, L.; Stoltzfus, E. R.; Zacks, R. T.; Rypma, B. (1991). Age and inhibition. Journal of Experimental Psychology: Learning, Memory, and Cognition, 17 (1), 163-169.

Two experiments assess adult age differences in the extent of inhibition or negative priming generated in a selective-attention task. Younger adults consistently demonstrated negative priming effects; they were slower to name a letter on a current trial that had served as a distractor on the previous trial relative to one that had not occurred on the previous trial. Whether or not inhibition dissipated when the response to stimulus interval was lengthened from 500 ms in Experiment 1 to 1,200 ms in Experiment 2 depended upon whether young subjects were aware of the patterns across trial types. Older adults did not show inhibition at either interval. The age effects are interpreted within the Hasher-Zacks (1988) framework, which proposes inhibition as a central mechanism determining the contents of working memory and consequently influencing a wide array of cognitive functions.

Jansen, C. K.; Bonke, B.; Klein, J.; van Dasselaar, N.; Hop, W. C. J. (1991). Failure to demonstrate unconscious perception during balanced anaesthesia by postoperative motor response. Acta Anaesthesiologica Scandinavica, 35, 407-410.

Eighty patients undergoing a standardized balanced anaesthesia were randomly assigned to either a suggestion group (N = 38) or a control group (N = 42), in a double-blind design. Anaesthesia was maintained with nitrous oxide, enflurane and fentanyl. Patients in the suggestion group were played seaside sounds, interrupted by statements of the importance of touching the ear during a postoperative visit, by means of a prerecorded audiotape and headphones. Tapes containing these suggestions were played from 30 min after the first incision, for a duration of 15 min. Patients in the control group were only played seaside sounds. There were no significant differences between the groups in either the number of patients touching their ears postoperatively or the number and duration of ear touches.

This research follows upon other studies in which patients carried out postoperative motor responses while still being amnesia for the source of the suggestions for the action (e.g. Bennett, Davis, & Giannini, 1985; Goldmann, Shah, & Hebden, 1987). The earlier studies used widely varied anesthesia techniques, small sample sizes, and did not measure baselines for those responses or clearly delimit the amount of time for recording the responses postoperatively. This investigation was an attempt to improve on the research design of earlier investigations that had obtained positive results.

Patient assignment to groups was stratified over three levels of estimated intensity of pain stimulation during surgery (based on the type of surgery).

The outcome measure, number of ear touches and their duration, was made by the anesthetist and an observer during the first 10 minutes of the pre- and postoperative interviews. (The observer was blind for the patient group assignment.) 75 of the patients were interviewed on the first postoperative day, and the remainder on the second postoperative day. The interview included questions regarding recall of the intravenous administration of drugs and of events during surgery. The outcome data may be seen in the Table below.

Distribution of ear touches during the first 10 min of the preoperative interview and, after the intraoperative suggestion, during the first 10 min of the postoperative interview. -----

No. of patients with ear touches for all responders		Total no. of ear touches for all responders		Duration of ear touches for all responders		Grp		N		Pre					
Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre				
S	38	2	3	2	9	62	155	C	42	5	3	8	4	38	23

S = suggestion group C = control group

In discussing their results, the authors offer several reasons why they might not have obtained the same results as those of previous investigators. "First, our anaesthetic techniques were different from those used in the studies of Bennett et al., 1985, and Goldmann et al., 1987" (p. 408).

"A second reason for the discrepancy between our results and those of the other two studies could be that our suggestion was perhaps less meaningful to the patients undergoing surgery than the one used by our fellow researchers. It has been argued that recollection of perioperative events is influenced by the salience of the stimuli [Dubovsky & Trustman, 1976, Anesth Analg; Goldmann & Levey, 1986 (letter) Anaesthesia]. This salience depends largely on the content of the message. It may be that the requested response, i.e., to touch the ear, is one that in our culture, or environment, has insufficient emotional impact and is thus ignored. It is interesting to note in this context that the percentage of patients touching the ear postoperatively was significantly lower (Fisher's exact test: P<0.01) in our study than in the study by Bennett et al., both for the suggestion group and the control group. On the other hand, recent findings showed robust effects with emotionally neutral stimuli [Jelicic, Bonke, & Appelboom, 1990, Lancet; Roorda- Hrdlickova, Wolters, Bonke, & Phaf, 1990, in Bonke, Fitch, Millar, Eds. Memory and awareness

in anesthesia. Amsterdam: Swets & Zeitlinger]. Salience also depends on the timbre and strength of the requesting person's voice, the manner in which the response is requested and, possibly, many other subtle factors. We tried to increase the emotional impact of the message by adding reassuring phrases, as had been done in the previous studies. Furthermore, we had the message recorded by the anaesthetist who also conducted the pre- and post-operative interviews, assuming this would make the voice more familiar to the patient. During all interviews, as well as on the tape, the anaesthetist clearly introduced himself to the patient, mentioning his name a number of times. This was done to increase the possibility that the voice was 'recognized'" (p. 409).

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1990

Bonnano, George A. (1990). Remembering and psychotherapy. *Psychotherapy*, 27, 175-186.

Reviews some of the empirical literature demonstrating the reconstructive nature of memory. The notion that the memory trace can consist of different forms of information is integrated with J. S. Bruner's (see PA, Vol 38:6801) tripartite model of representation, using the concepts of narrative and memory schemata. A case illustration demonstrates the pervasive organizing quality of the nuclear script and how, through such a structure, childhood events can hold a lasting impact on adult

behavior. It is concluded that conceptual understanding can be translated into schematic terminology provided it is adequately modified to account for the reconstructive nature of memory.

Evans, Frederick J. (1990). Behavioral responses during sleep. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and Cognition (pp. 77-87). Washington, DC: American Psychological Association.

Subjects were 19 male student nurses who met a criterion of having EEG alpha density of at least 40% during an eyes closed, waking condition. They slept in the laboratory for two nights in succession, while being monitored by an EEG, and were told only that sleep cycles were being studied. Suggestions were presented while they were sleeping, e.g. "Whenever I say the word itch, your nose will feel itchy until you scratch it" "Whenever I say the word pillow, your pillow will feel uncomfortable until you move it." Then they were tested by Experimenter saying the cue word ("itch" or "pillow") during the word pillow, your pillow will feel uncomfortable until you move it." Then they were tested by Experimenter saying the cue word ("itch" or "pillow") during subsequent REM periods later that night and again on the next night. (The suggestions were not repeated on the second night; but two new suggestions were given on the second night when possible.)

After the Subjects awakened in the morning, they were interviewed to test their memory for the events that had occurred, and also cue words were presented in the context of a word association test to assess memory indirectly by observing behavioral and physiological responses. A more detailed inquiry was made after the second night.

The results were as follows. Ss responded to a mean of 21% of cue words administered. Ss continued to demonstrate REM sleep for at least 30 seconds for 71% of all cues administered, indicating that they were not aroused by the cue. When a suggestion was successfully completed (i.e., without eliciting alpha activity) it was not repeated. However, the cue words were tested in several subsequent REM periods. Cue word testing occurred immediately (during the same REM period as the suggestion) on the same night, as well as in a later REM period, and during REM on Night 2 (after the suggestion had been given during Night 1).

Correct responses were given for 20% of immediate, 23% of delayed, and 23% of carry-over conditions. Ss did not remember the suggestion, verbal cues, or their responses when they awoke. Since Ss often responded to the cue the next night without repetition of the suggestion itself, the authors inferred amnesia rather than forgetting had occurred. Responses were not elicited by repeating the cue word in the waking state, but appeared to be specific to the sleep condition.

Six Ss returned five months later for a third night of testing. Four had shown carryover response on Night 2 to a Night 1 suggestion. When verbal cues were presented (without re-administering the suggestion) those 4 Ss responded, even though there was no intervening waking memory about the procedure or the suggestions. Some Ss responded even more frequently than during the original two nights; hypnotic depth did not seem to account for the increased responsivity.

Experimenters attempted to reverse the amnesia observed during the waking condition by using hypnosis, age regression, and other hypnotic techniques, with some positive effect. The author speculates that perhaps the techniques originally used to probe morning recall were not sufficiently sensitive. He also raises the question of whether this waking state amnesia is related to the amnesia for night dreams when people awaken in the morning.

The relationship between hypnotizability and sleep suggestibility was analyzed. Hypnotizability was measured with the Harvard Group Scale, several weeks later, by Experimenters who were blind to the Ss' rate of responding to suggestions given during sleep. More hypnotizable Ss slept through the verbal stimuli more than low hypnotizable Ss; so they slept longer and more cues could be tested. Ss who responded most frequently to sleep-induced suggestions were more responsive to hypnosis. Analysis of response rate percentage (which controls for higher number of cues administered when Ss slept longer) showed that correlations between sleep suggestibility and hypnotizability were higher for percentage of delayed responses than for percentage of immediate responses.

Analysis by type of item on the hypnotizability scales suggested that the correlation with sleep suggestibility was due to the hallucinatory-reverie and the posthypnotic-dissociative clusters of hypnotic behavior, which are more difficult kinds of items. Correlations were significant for carry-over responses but not for immediate responses. These items represent phenomena experienced by Subjects who can be deeply hypnotized. The author reports that this relationship observed between hypnotizability and response to sleep-induced suggestions was not significant in a later study by Perry et al. (1978).

This author raises a question about why high hypnotizable subjects sleep better than low hypnotizables. The 6 Ss who were least susceptible accounted for 48% of all awakenings that occurred during the 2 experimental nights; the 6 Ss who were most hypnotizable accounted for only 26% of the awakenings ( $p < .01$ ).

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Because sleep learning ("hypnopedia") has been extensively practiced in Russia and Eastern Europe, especially for language learning, the author investigated language learning with nine subjects. (Hoskovec, 1966, and Rubin, 1968, have reviewed the hypnopedia literature, which suggests that only "suggestible" subjects respond; it is not clear whether "suggestible" refers to hypnotizable, or whether expectation of success is cultivated by information given in the waking state.) The nine Ss had responded to the suggestions at least twice while remaining asleep, had no waking recall of the suggestions, but were given pre-sleep instructions (increasing expectancy) that they would learn during sleep.

The verbal association material ("A is for apple; P is for palace;" etc.) was given during EEG sleep stages 2, 4, and REM. (Eight letter-word stimuli pairs were given, two per sleep stage whenever possible.) When they awakened, Ss were asked to

check "any familiar word" on a list of 10 words beginning with the letter A, with the letter P, etc. So the probability was .10 for each of the eight lists that they might check one correct word by guessing. They also responded to two dummy lists containing letter-word pairs not used during sleep.

None of the dummy list words were checked, whereas 28% of the administered words were correctly checked; also, Ss selected the correct letter (without identifying the word and with instructions not to "guess") in an additional 17% of all lists. Words were rarely recalled from Stages 2 and 4, but Ss often recognized letters from those stages. False positives (incorrectly recalled words or letters) was almost never observed. Furthermore, no control Subjects (people who had not received a presleep set that they would recall) recalled any words correctly.

It was observed that whenever words presented during REM were later recalled, a transient slower frequency alpha (10.25 Hz vs. 9.64 Hz,  $p < .01$ ) had been evoked within 30 sec after the presentation of the stimuli during sleep.

Total recall of words correlated with the Harvard Group Scale of Hypnotic Susceptibility .69 and the Stanford individually administered scale .42, for the 7 Ss administered hypnotizability tests.

The author concludes that under optimal conditions, sleep learning of relatively easy material can occur with subsequent waking recall.

Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. *American Journal of Clinical Hypnosis*, 32, 201-207.

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales.

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The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the

MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

"The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items related to modifications of regulatory control, changes in self- monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10- point scale. The items related to the experience of disturbances in identity, memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202- 203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205).

"All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Monty, Richard A. (1990). Hypnosis and hypnotizability in cognitive task performance. British Journal of Experimental and Clinical Hypnosis, 7 (2), 103-107.

Gwynn, Maxwell I.; Quigley, Celia; Perlini, Arthur; Glatt, Richard; Spanos, Nicholas P. (1990, August). Eyewitness testimony: Effects of hypnotic interrogation and witness preparation. [Paper] Presented at the annual meeting of the American Psychological Association, Boston.

There is notable absence of empirical research on the effects of witness preparation on subsequent testimony. The present study investigates the separate and combined effects of hypnotic recall procedures and witness preparation on subjects' confidence in, and maintenance during cross-examination, of mug-shot identifications.

Session 1: Subjects viewed a 65 second videotape of a mock crime involving a shooting. The offender in this video was a male approximately 40-50 years old, whose face was partially obscured by the brim of a baseball cap.

Subjects were then taken individually to another room, where a second experimenter presented them with a series of five photographic mug shots. Half of the series contained the mug shot; the other did not. Subjects indicate if any portrayed the offender and then to rate their confidence in their identification.

Subjects for Session 2 were randomly assigned to one of two conditions:

Hypnotic condition ... followed by "reliving" instructions modeled after Reiser's procedures used in training police detectives.

Nonhypnotic condition ... Each subject was then presented with the mug shot lineup and rated their confidence as in Session 1 with the same second experimenter.

Subjects who in Session 2 identified any mug shot as portraying the offender returned about one week after for a mock courtroom appearance. Subjects were randomly assigned to either a "prepared" condition, or a "nonprepared" condition, with the restriction of equal numbers of offender-present vs. offender-absent lineups and hypnotic vs. nonhypnotic subjects in each condition ... The subject-witness was questioned by the third same experimenter under direct examination and then cross-examined by a fourth experimenter in the role of defense attorney.

Subjects in the prepared condition were given pointers concerning their courtroom appearance. These pointers included counseling to answer all of the questions fully, to speak in complete sentences, and to present themselves confidently.

The videotapes of the subjects' testimonies were then shown to independent blind raters who rated the degree of confidence displayed by the subject-witness at two points, first after direct examination, and again after cross-examination.

To summarize the results: 1) As in a number of previous studies, eyewitness confidence was unrelated to mug shot identification accuracy. 2) The use of hypnotic techniques as practiced by many police investigators did not lead to an increase in the frequency or accuracy with which subjects identified a mug shot as portraying a previously viewed offender. 3) Again consistent with previous research, the use of hypnosis did lead to an increase in eyewitness confidence, without a corresponding increase in accuracy, and this confidence increase was correlated with pretested levels of hypnotic susceptibility. 4) Contrary to the speculation of researchers such as Orne, Laurence & Perry, hypnotic procedures did not lead to the creation of unshakable witnesses who were impervious to cross-examination. And, 5) The usual practice of pre-trial preparation of witnesses did lead to a resistance of witnesses to be broken down under cross-examination.

In conclusion, the key factor found to affect eyewitness confidence and mug shot identification was not the use of hypnotic memory enhancement techniques, but rather the usual practice of pre-trial witness preparation.

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespectively whether they are of opioid or nonopioid nature)" (p.550)

Kihlstrom, John F.; Schacter, Daniel L.; Cork, Randall C.; Hurt, Catherine A.; Behr, Steven E. (1990). Implicit and explicit memory following surgical anesthesia. Psychological Science, 1, 303-306.

Paired associates were presented to 25 surgical patients following the induction of anesthesia by thiopental, vecuronium, and isoflurane. Postoperative testing (immediately or after two weeks) showed no free recall for the list; nor was there significant cued recall or recognition, compared to a matched control list. However, a free-association task showed a significant priming effect on both immediate and

delayed trials. At least under some conditions, adequate surgical anesthesia appears to abolish explicit, but not implicit, memory for intraoperative events. anesthesia appears to abolish explicit, but not implicit, memory for intraoperative events.

Labelle, L.; Laurence, J. R.; Nadon, R.; Perry, C. (1990). Hypnotizability, preference for an imagic cognitive style, and memory creation in hypnosis. Journal of Abnormal Psychology, 99, 222-228.

1989

The author notes a current trend toward viewing multiple personality disorder (MPD) and its variants as a form of chronic post-traumatic stress disorder based solely on exogenous childhood trauma, and cautions against prematurely reductionistic hypotheses. He focuses on Kluff's Third Etiological Factor, which includes the various developmental, biological, interpersonal, sociocultural, and psychodynamic shaping influences and substrates that determine the form taken by the dissociative defense. He hypothesizes a credibility continuum of childhood and contemporary memories arising primarily from exogenous trauma at one end, and endogenous trauma (stemming from intrapsychic adaptational needs) at the other. The author offers alternative multidetermined explanations for certain unverified trauma memories that currently are being accepted and validated as factual experiences by many therapists. He describes some potentially deleterious effects of validating unverified trauma memories during psychotherapy, and recommends that the MPD patients' need for unconditional credibility be responded to in the same manner as other transference-generated productions.

Lindsay, D. S.; Johnson, M. K. (1989). The eyewitness suggestibility effect and memory for source. Memory and Cognition, 17, 349-358.

Examined the possibility that eyewitness suggestibility reflects failures of the processes by which people normally discriminate between memories derived from different sources. Misled and control subjects were tested either with a yes/no recognition test or with a "source-monitoring" test designed to orient Ss to attend to information about the sources of their memories. The results demonstrate that suggestibility effects obtained with a recognition test can be eliminated by orienting Ss toward thinking about the sources of their memories while taking the test. Findings indicate that although misled Ss are capable of identifying the source of their memories of misleading suggestions, they nonetheless sometimes misidentify them as memories derived from the original event. The extent to which such errors reflect genuine memory confusions (produced, for example by lay judgment criteria) or conscious misattributions (perhaps due to demand characteristics) remains to be specified.

1988

Boeke, S.; Bonke, B.; Bouwhuis-Hoogerwerf, M. L.; Bovill, J. G.; Zwaveling, A. (1988). Effects of sounds presented during general anaesthesia on postoperative course. British Journal of Anaesthesia, 60, 697-702.

In a double-blind, randomized study, patients undergoing cholecystectomy were administered one of four different sounds during general anaesthesia: positive suggestions, nonsense suggestions, seaside sounds or sounds from the operating theatre. The effect of these sounds on the postoperative course was examined to assess intraoperative auditory registration. No differences were found between the four groups in postoperative variables.

Postoperative course was evaluated by 5 variables: pain, nausea and vomiting, evaluation by nursing staff, subjective well-being, and duration of postoperative hospital stay. From the chart they used amount of postoperative analgesia, volume of nasogastric suction or drainage and fluid lost through vomiting over 6 days post-operatively; duration of postoperative hospital stay was registered after discharge. See p. 699 for details, including wording of questions. They cite their own earlier study that got positive results, and explain the difference as possibly due to use of only male voices on tapes, lack of difference in the sounds on tapes in this study, insensitivity of outcome measures (patients stayed longer in first study than in this one), and sample too small in this study (106).

Boeke et al. (1988) report that this double-blind, randomized study of positive suggestions, noise or sounds from the operating theatre presented to 3 groups of patients undergoing cholecystectomy during general anaesthesia had positive results for older patients. patients > 55 years who received positive suggestions had a significantly shorter postoperative hospital stay than the other patients in this age category.

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

Dywan, Jane (1988). The imagery factor in hypnotic hypermnesia. International Journal of Clinical and Experimental Hypnosis, 36, 312-326.

Week-long repeated recall attempts were used as baseline against which to assess the effects of hypnosis on the recall of pictures. Hypnosis increased errors for all Ss but especially for high hypnotizables. In Experiment 1, dividing Ss on the basis of imagery ability had the same effect on recall as dividing them on the basis of hypnotic ability. In Experiment 2, imagery ability was found to interact with hypnosis in mediating the level of error during waking trials. Results do not support the claim that hypnosis enhances recall, but they do suggest that further study is needed to clarify the role that imagery ability plays in recall patterns over time

Author reviews research indicating that introduction of confident errors is a reliable finding in hypnosis-memory research, and notes that the role of imagery ability has not as yet been examined even though imagery is viewed as important to memory functioning. She also reviews the imagery- hypnotizability correlation literature.

**EXPERIMENT 1** involved 54 Ss screened by Harvard Scale and SHSS:C, divided into highs (7-12) and lows (1-6) by SHSS:C. Stimuli were 60 black and white line drawings. There were 3 baseline trials in the lab; Ss were then given 6 envelopes, each containing a 60 blank item recall sheet, and asked to complete one each day and return it via campus mail. (When unable to recall more items, they were asked to draw a line under the last item recalled and then use "educated guesses." ) After a week of repeated recalls, Ss in the hypnosis condition were told they would be able to 'see' the slides appear before them; in the task motivating condition Ss were informed about such things as context dependent recall, the importance of focused attention, and the importance of good recall for forensic investigations.

Results were analyzed for increase in recall over the cumulative number of correct items recalled. Neither hypnotizability nor visual imagery ability influenced the cumulative baseline measures. High hypnotizable Ss produced a small but significantly greater increase in new, correct information during hypnosis than other Ss, but also made 3 times as many errors.

Dividing Ss by imagery score produced similar results. That is, people with very good imaging ability reacted in the same manner as the highly hypnotizable Ss: in hypnosis they increased the number of items they were willing to call a memory but also increased the number of errors.

**EXPERIMENT 2** differed from Experiment 1 in that Ss were selected for hypnotic ability and imagery ability so that both would be adequately represented. (The high hypnotizable - low visual imagery group is a group that hasn't been represented much in earlier research, and the author notes that those Ss are rather difficult to locate. ) The task motivation condition was not used, based on results of Experiment 1. Ss who were low on hypnotizability and imagery ability served as the controls.

Ss were told that they could be either in a hypnosis condition or a control condition but actually all Ss received a hypnotic induction. (This is like the London- Fuhrer, 1961, research design, which goes on the assumption that low hypnotizables do not enter into hypnosis even though they are exposed to an induction. Thus, hypnotic effects are not assumed for lows in the hypnotic condition and they become "controls.")

Results of correct and error recall over the baseline week were analyzed. There was no difference in correct recall as a function of hypnotic ability or visual imagery ability. However, there was a main effect for visual imagery ability and for hypnotizability, and a significant interaction between trials, for cumulative errors over the baseline week.

Effects of hypnosis were weaker than in Experiment 1 but followed same pattern. Those Ss most likely to have been hypnotized (highs) produced slightly more correct information than lows, and showed a greater increase in errors than lows. However high and low visualizers did not differ in response to hypnosis for correct information or for errors.

Since there was an interaction between hypnotic ability and visual imagery ability for error rate during waking trials, the author tested for the interaction during hypnosis. Using a 2 x 2 ANOVA with new errors as the dependent measure; no interaction was found. Hypnotic ability was therefore responsible for determining Ss' responses in the hypnosis condition. Author attributes the effect to being hypnotized rather than to individual differences in hypnotizability or to context effects.

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DISCUSSION includes the author's delineation of differences between the two experiments that might explain differences in results. The increase in errors that was observed may be due to increased fluency in producing items under hypnosis (Sheehan & Tilden, 1984, 1986) or to a shift in reporting criterion (e.g., M. T. Orne, Soskis, Dinges, & E. C. Orne, 1984).

"Both high and low hypnotizable Ss produced more memories in the task-motivating condition, and low hypnotizables are not totally immune from the effect

in the hypnotic context. What the report-criterion hypothesis does not explain is the reason why the memory reports of high hypnotizable Ss are differentially affected by task demands (e.g., task-motivating instructions versus hypnosis in Experiment 1) nor why hypnotized Ss so often seem surprised by the ease with which information seems to be 'recalled' during hypnosis. An alternative hypothesis is that being hypnotized results in a shift to a more imagistic style of information processing. The enhanced vividness of items generated during the retrieval process may convince Ss that these items must have been part of the original stimulus presentation (Dywan, 1985).

"Whatever the mechanisms might be, it is clear that the hypnotic effect is the result of an interaction between contextual factors and pre-existing characteristics of the individual. Moreover, these same mechanisms would likely be at work when hypnosis is actually used in the forensic situation, where the pressure to retrieve information could be more acute than what can be mustered in the experimental context. This should cause some concern because the differential increase in errors did not occur only for the relatively small proportion of Ss who were very high in hypnotic ability. The 'high' hypnotizable group in these experiments consisted of Ss of moderate to high levels of hypnotic ability and so the results can be generalized to at least one-half the population" (p. 323).

"In summary, it would seem that any pressure for Ss to increase their recall--whether it be repeated trials, task-motivating instructions, or hypnotic suggestion--results in higher levels of output and lower levels of accuracy. Repeated recall attempts lead to increases in recall and in errors. Some Ss (viz., those with high levels of hypnotic ability and low levels of imagery ability) are particularly prone to producing false-positive responses over the course of repeated recall attempts. When Ss are pressed to recall more information, they all try to do so by increasing their output and this increased output is usually accompanied by an increase in error. When hypnosis is introduced, however, those Ss who are hypnotizable show a differential increase in output. The amount of new correct information retrieved by hypnotized Ss is small and not a highly reliable phenomenon. The increase in errors that occurs in the recall of hypnotized individuals, however, is a substantial and highly reliable effect. Irrespective of how many errors were made as a function of repeated recall attempts, hypnosis can be counted on to increase errors over and above the increases in errors that occur when Ss are not hypnotized. Further work is needed to identify the mechanisms involved in the hypnotic distortion of recall. The role that imagery ability might have in the context of waking and hypnotic recall has not been resolved and this also presents an interesting problem for future study" (pp. 323-324).

Gudjonsson, Gisli H. (1988). The relationship of intelligence and memory to interrogative suggestibility: The importance of range effects. British Journal of Clinical Psychology, 27 (2), 185-187.

60 normal adults and 100 adult psychiatric patients completed a suggestibility scale and the Wechsler Adult Intelligence Scale (WAIS). Clear range effects of IQ and memory were evident in their relationship with suggestibility

**Kingsbury, Steven J. (1988). Hypnosis in the treatment of posttraumatic stress disorder: An isomorphic intervention. American Journal of Clinical Hypnosis, 31, 81-90.**

**Reviews literature on hypnosis treatment for PTSD and presents a rationale, based on the type of symptoms presented (blunting vs intrusions). Case presentations are provided.**

**"Several types of physiological processes may underlie dissociation. State-dependent learning, in which that learned during drug-induced alterations in consciousness may only be recalled during later similar alterations, is believed to be dependent upon hippocampal mechanisms (Gerrien & Chechile, 1977).The relationship of state-dependent learning to hypnosis has remained at the level of theory (Hilgard, 1977; Rossi, 1986). A second possible explanatory construct suggests everyday experience is primarily (but not exclusively) mediated by verbal, dominant hemisphere functioning. The images and sets mediating hypnosis, PTSD, and other forms of dissociation may be mediated by analogic processing and the nondominant hemisphere (Carter, Elkins, & Kraft, 1982; Galin, 1974; Hilgard, 1977; Watzlawick, 1978)" (p.83).**

**Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.**

**The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience**

**during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.**

**Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.**

**They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures**

the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

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Geiselman, R. Edward; Machlovitz, Helen (1987). Hypnosis memory recall: Implications for forensic use. American Journal of Forensic Psychology, 1, 37-47.

Examines 38 major published experiments (1930-1985) on hypnosis memory recall. Concludes that differences in experimental methodology significantly predict the success versus failure of hypnosis aided recall and remarks that, "Even if forensic hypnosis aids in the solution of only a small percentage of cases, it is still a valuable tool from the perspective of law enforcement." As Tarasoff has balanced the right of the victim to enjoy protection from violence with the patient-litigant's right to confidentiality, so too does the increased acceptance of hypnotically induced testimony go toward redressing in part the uneven balance between the slender compensations afforded the innocent victim of violent crime and the multiple constitutional protections and indemnities enjoyed by criminal perpetrators in our judicial system.

Goldmann, Les (1987, October). Ways of maximizing patient memory for events during anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

Reported a series of experiments: 1. Under atropine, we did not get an orienting response to things having to do with the operation, but did get an orienting response to jokes, dogs barking, and the name of a polite anesthetist. 2. Replicated the research by Bennett and didn't get ear pulling response. 3. Studied cardiac patients. Gave subjects a pre-anesthesia speech of importance [of hearing under anesthesia? Notes here are not clear.] and a chin touch suggestion that was successful. 7 of 30 subjects gave reports of recall - usually recalled something of particular interest to them. These 7 subjects appeared more anxious postoperatively than previously. 4. Recognition study: Pre-op "IQ" test. Gave subjects answers to the questions while they were under anesthesia, and postoperatively they had better performance than previously. 5. Recall study, double blind. Interviewer learned something about the patient, and told them something about what was learned about the patient during anesthesia e.g., You have a lovely garden. After surgery they were hypnotized by someone who did not know what information was given, and then recall for information "heard" under anesthesia was tested. 6. 10 female patients who were good hypnotic subjects, all received the same statement under anesthesia, that they would believe for a moment that they had green hair. During the interview, one said she was fascinated by green things, one wanted to go home and wash her hair.

Kihlstrom, John F. (1987). The cognitive unconscious. Science, 237, 1445-1452.

Contemporary research in cognitive psychology reveals the impact of nonconscious mental structures and processes on the individual's conscious experience, thought, and action. Research on perceptual-cognitive and motoric skills indicates that they are automatized through experience, and thus rendered unconscious. In addition, research on subliminal perception, implicit memory, and hypnosis indicates that events can affect mental functions even though they cannot be consciously perceived or remembered. These findings suggest a tripartite division of the cognitive unconscious into truly unconscious mental processes operating on knowledge structures that may themselves be preconscious or subconscious.

1986

American Medical Association Council on Scientific Affairs (1986). Scientific status of refreshing recollection by the use of hypnosis. International Journal of Clinical and Experimental Hypnosis, 34, 1-12.

The Council finds that recollections obtained during hypnosis can involve confabulations and pseudomemories and not only fail to be more accurate, but actually appear to be less reliable than nonhypnotic recall. The use of hypnosis with witnesses and victims may have serious consequences for the legal process when testimony is based on material that is elicited from a witness who has been hypnotized for the purposes of refreshing recollection.

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Davidson, Thomas McCabe (1986, January). Recall organization and volitional/non-volitional experiencing in posthypnotic and intrahypnotic amnesia: Inattention versus dissociation hypotheses (Dissertation, University of Waterloo). Dissertation Abstracts International, 47 (7), 3103-B.

"Two studies are reported which seek to evaluate the relative merits of two differing hypotheses concerning the cognitive processes underlying suggested hypnotic amnesia. The inattention hypothesis maintains that amnesia effects are produced when subjects volitionally divert attention from relevant retrieval cues so that recall is inefficient. The dissociation position is that amnesic subjects are prevented from utilizing normally relevant retrieval cues by a dissociative barrier that blocks access to target memories -- a forgetting over which subjects experience no volitional control. The two hypotheses were evaluated by means of a selective amnesia suggestion in the recall organization paradigm. "In the first experiment, high, medium, and low hypnotic susceptible subjects were administered either hypnotic induction or task-motivating instructions. Results indicated that there was no disorganization of amnesia trial recall or forgetting of words not targeted for amnesia, contrary to predictions from the inattention hypothesis. "In the second experiment, high hypnotizable subjects received the selective amnesia suggestion in both posthypnotic and intrahypnotic conditions. Intrahypnotic subjects were also separated into one group that received a ten second interval between the administration of the amnesia suggestion and the amnesia trial, and another group that had a delay between the suggestion and the amnesia trial equivalent to the posthypnotic group. Eight subjects who had testified that they were volitionally amnesic on a pre- screening amnesia test were also included in the posthypnotic condition. Again, the results indicated no recall disorganization or

reduction in recall of words not targeted for amnesia. Subjects also uniformly provided evidence that their amnesia was experienced as non-volitional. There was, however, evidence that some amnesiacs were aware during the amnesia trial of the specific category targeted for amnesia. "The most important finding of both experiments is that subjects may attend to normally relevant retrieval cues and yet continue to evidence amnesia. The evidence is therefore consistent with the dissociation hypothesis, but disconfirms the inattention account of hypnotic amnesia. It appears that the selective amnesia context effectively prevents the successful use of volitional forgetting strategies. (Abstract shortened with permission of author)" (p. 3103).

**Laurence, Jean-Roch; Nadon, Robert; Nogrady, Heather; Perry, Campbell (1986). Duality, dissociation, and memory creation in highly hypnotizability subjects. International Journal of Clinical and Experimental Hypnosis, 34, 295-310.**

The present paper reports an initial attempt to create a pseudomemory in a group of highly hypnotizable individuals. It was found that for approximately 50% of Ss tested, recall of a specific event was modified when Ss integrated hypnotically suggested material which then posthypnotically was believed to be veridical. This modification in a previously reported memory was linked to a particular cognitive style found in high hypnotizable Ss, namely dual cognitive functioning. Ss reporting duality in hypnotic age regression, and, to a lesser extent, the hidden observer effect, were found to be the most prone to accept a suggested memory as real. These findings suggest the need to emphasize the importance of a cognitive-phenomenological approach to hypnosis and hypnotizability.

**1985**

**Acosta, Enrique; Crawford, Helen J. (1985). Iconic memory and hypnotizability: Processing speed, skill or strategy differences?. International Journal of Clinical and Experimental Hypnosis, 33, 236-245.**

The purported relationship between hypnotizability and speed of information transfer from iconic to short-term memory was studied in a comparison of 12 low and 12 high hypnotizable Ss. As in Ingram, Saccuzzo, McNeill, and Ss. As in Ingram, Saccuzzo, McNeill, and McDonald (1979), high hypnotizable Ss showed less interference from a visual mask in the report of a briefly presented item than did low hypnotizable Ss when the mask delays were predictable. When the delay of the mask could not be anticipated, however, differences between high and low hypnotizable Ss disappeared. It is suggested that differences in information processing related to hypnotizability may be due to differences in strategy, skills, or other factors, rather than underlying information processing speed.

Hypnosis may require concentrative or selective attention, which usually is measured by self-report (e.g. Absorption) or by experimental measures. Several investigations indicate that high hypnotizable people are better than low hypnotizables at focusing on a task and ignoring extraneous information (Brown,

Crawford, Smith, Leu, & Brock, 1983; Graham & Evans, 1977; Karlin, 1979; Miller, 1975; Wallace, 1979; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976). One way to study attentional processes is through the effect of presenting a mask (e.g. \$\$\$\$) shortly after presenting a stimulus (e.g. ABCDE). Ingram (1979) found that highs had faster information processing, but that might be due to anticipation bias associated with the method of limits employed. This study uses both an ascending method of limits, like Ingram, and a condition in which the mask delays were presented randomly within another block of trials.

## RESULTS

"While the present study replicated Ingram et al.'s (1979) findings when an ascending method of limits was used (the same used by Ingram et al.) differences were not found in processing when ISIs were presented randomly. Thus, these results suggest that high and low hypnotizable Ss do not differ in their information transmission rates, but rather they may differ in other aspects which mediate performance in this task" (pp. 241- 242).

"Several lines of evidence point towards strategy or skill differences between high and low hypnotizable Ss as a possible explanation for the present findings. First, it was found that when Ss could anticipate the mask delay (the ascending condition), high hypnotizable Ss outperformed the low hypnotizables. When this anticipation was controlled, as in the random condition, the two groups did not differ when the data were scored by serial position. When the data were scored by a free recall scheme, there was a nonsignificant trend for high hypnotizable Ss to score higher than did the low hypnotizables. This trend suggests that high hypnotizable Ss may be more willing to guess, and to guess more accurately than low hypnotizables, when they have partial information about a letter, and/or they may have greater skill in perceiving incomplete information. The latter suggestion finds indirect support from Crawford (1981) who reported that high hypnotizable Ss can process fragmented stimuli (Gestalt Closure tests, see Thurstone & Jeffrey, 1966), significantly better than can low hypnotizables. High imagers have been shown also to perform significantly better than low imagers in Gestalt Closure tasks (Ernest, 1980). At a speculative level, given that recent research has suggested that iconic memory may be a right hemisphere phenomenon (e.g. Cohen, 1976, but also see DiLollo, 1981), and high hypnotizable Ss outperform low hypnotizables on certain right hemisphere tasks (e.g. Crawford, 1981), it may be asked if the trends found with the free recall scoring scheme in the present study might be a reflection of differential right hemisphere processing. Such a hypothesis could be investigated in future research by comparing the performance of high and low hypnotizable Ss, as possibly moderated by visuo-spatial ability, for stimuli presented to the left versus the right visual hemifield (Ernest, 1983).

"A second set of evidence in favor of strategy differences was found in Saccuzzo et al. (1982) which was published after the data for the present experiment were collected. In the Saccuzzo et al. (1982) paper, which was an extension and replication of Ingram et al. (1979), the same mask delay was used throughout a 10-trial block. The order of the blocks (i.e., the mask delays) was random. Thus, while S did not know which mask delay was used in the first trial of a block, the

remaining 9 trials were the same and could be anticipated. During the first session, high hypnotizable Ss outperformed the low hypnotizables, but these differences disappeared on the second testing session. These results suggest that practice may have affected performance, rather than any underlying information processing speed differences" (pp. 242-243).

1985

Bennett, Henry L.; Davis, H. S.; Giannini, Jeffrey A. (1985). Non-verbal response to intraoperative conversation. British Journal of Anesthesiology, 57, 174-179.

In a double-blind study, 33 patients (herniorrhaphy, cholecystectomy and orthopedic) were randomly assigned to either suggestion or control groups. Under known clinical levels of nitrous oxide and enflurane or halothane anesthesia, suggestion patients were exposed to statements of the importance of touching their ear during a postoperative interview. Compared with controls, suggestion patients did touch their ear (tetrachoric correlation 0.61,  $P < 0.02$ ). test, U (Mann-Whitney frequently more so did they and

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects related their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension.

Eich, Eric; Reeves, John L.; Katz, Ronald L. (1985). Anesthesia, amnesia, and the memory/awareness distinction. Anesthesia and Analgesia, 64, 1143-1148.

Several studies have shown that surgical patients cannot consciously recall or recognize events to which they had been exposed during general anesthesia. Might evidence of memory for intraoperative events be revealed through the performance of a postoperative test that does not require remembering to be deliberate or intentional? Results of the present study, involving the recognition and spelling of semantically biased homophones, suggest a negative answer to this question and imply that intraoperative events cannot be remembered postoperatively, either with or without awareness.

question and imply that intraoperative events cannot be remembered postoperatively, either with or without awareness.

"In this experiment, we attempted to apply the distinction between memory and awareness of memory to the question of whether adequately anesthetized and apparently unconscious patients can register and retain what is said in their presence during surgery. Prior research relating to this question has focused, for the most part, on the ability of postoperative patients to recall or recognize a specific item....The inference need not be drawn, however, that 'patients in so-called surgical planes of anesthesia cannot hear' (15, p. 89) or that anesthetized patients cannot encode and store in memory events that transpire during their surgery. The possibility remains that even though the effects of memory for intraoperative events may not--and probably cannot--be revealed in postoperative tests of retention that require remembering to be deliberate or intentional, such effects might be evident in the performance of tests that do not demand awareness of remembering.

"To explore the possible dissociation between memory and awareness of memory for intraoperative events, we modeled our experiment after a recent neuropsychological study by Jacoby and Witherspoon (5)" (p. 1143).

"...it appears that the prior presentation of a word has a substantial impact on its subsequent interpretation and spelling, regardless of whether or not the word is correctly classified as 'old' in a later test of recognition memory" (p. 1144).

"Approached from the standpoint of anesthesia theory and practice, the idea that recognition and spelling tap different memory processes or systems raises an interesting question for research. Specifically, suppose that during surgery, an anesthetized patient listens to a series of short, descriptive phrases, each consisting of a homophone and one or two words that bias the homophone's less common interpretation (e.g., war and PEACE, deep SEA). Suppose further that several days after surgery, the patient is read a list composed chiefly of old and new homophones (i.e., ones that either had or had not been presented intraoperatively) on two successive occasions. On one occasion, the patient is simply asked to spell each list item aloud; on the other occasion, the patient is asked to state aloud which list items he or she recognizes as having been presented during surgery. Given the situation sketched above, might the patient spell significantly more old than new homophones in line with their less common interpretations, and yet fail to reliably discriminate between the two types of items in the test of recognition memory" (p. 1144).

Geiselman, R. Edward; Fisher, Ronald P.; MacKinnon, David P.; Holland, Heidi L. (1985). Eyewitness memory enhancement in the police interview: Cognitive retrieval mnemonics versus hypnosis. Journal of Applied Psychology, 70, 401-412.

Compared effectiveness of three interview procedures for optimizing eyewitness memory performance: (a) the 'cognitive interview' based on memory-retrieval mnemonics from current memory theory, (b) the presently controversial hypnosis interview, and (c) the standard (control) police interview. Both the cognitive and hypnosis procedures elicited a significantly greater number of correct items of information from the Ss than did the standard interview. This result, which held

even for the most critical facts from the films, was most pronounced for crime scenarios in which the density of events was high. The number of incorrect items of information generated did not differ across the three interview conditions. The observed memory

Klatzky, Roberta L.; Erdelyi, Matthew H. (1985). The response criterion problem in tests of hypnosis and memory. International Journal of Clinical and Experimental Hypnosis, 33, 246-257.

Past experimental research on the effects of hypnosis on memory indicates both that hypnosis produces increases in correct recalls and that hypnosis produces increased vulnerability to misleading information and intrusions in recall. The present paper uses the framework of signal detection theory to account for this pattern of data. It suggests that the effects of hypnosis on memory cannot be ascertained from previous work, because of a general failure to discriminate between effects on the amount of information retrieved from memory and the criterion adopted by Ss for reporting what they remember.

Past experimental research indicates that hypnosis produces increases in correct recalls and as well as increased vulnerability to misleading information and intrusions in recall. This paper uses signal detection theory to account for the data. Signal detection theory describes performance as reflecting two underlying parameters--the information accessible to S at any point in time (designated as  $d'$ ) and the criterion adopted by S when making decisions about memory reports (report or decision criterion, response bias, or Beta). They review the recent literature on hypnosis and memory and conclude:

1. When the response output is not controlled, hypnotic instructions and/or hypnotizable have been found to produce increases in the number of correct recalls but this does not mean that the accessible information in memory has increased. What may be changing is the criterion for report.
2. When the response output is not controlled, hypnotic instructions and/or hypnotizable have been found to produce increases in incorrect recalls, i.e., intrusions, and compliance with leading questions, but this does not mean diminution or distortion of accessible memory ( $d'$ ). What may be changing is the criterion for report.
3. When response bias is controlled, hypnosis has been found to produce no enhancement of recognition but this does not imply that (a) Beta cannot change in recognition tests where it is allowed to vary, nor that (b) hypnosis has no effect on recall.
4. The proper experiment to determine whether hypnosis affects the accessibility of information in memory should place demands on the retrieval process and control the criterion for memory report.

The most decisive experimental outcome for the forensic situation would be a null or negative one: the demonstration that hypnosis does not enhance measures of memory accessibility. Then there would be no reason to use hypnosis to enhance memory.

1983

Crawford, Helen J.; Allen, Steven N. (1983). Enhanced visual memory during hypnosis as mediated by hypnotic responsiveness and cognitive strategies. Journal of Experimental Psychology: General, 112 (4), 662-685.

To investigate the hypothesis that hypnosis has an enhancing effect on imagery processing, as mediated by hypnotic responsiveness and cognitive strategies, four experiments compared performance of low and high, or low, medium, and high hypnotically responsive subjects in waking and hypnosis conditions on a successive visual memory discrimination task that required detecting differences between successively presented picture pairs in which one member of the pair was slightly altered. Consistently, hypnotically responsive individuals showed enhanced mean number of correct performance during hypnosis, whereas nonresponsive ones did not. Hypnotic responsiveness correlated .52 ( $p < .001$ ) with enhanced performance during hypnosis, but it was uncorrelated with waking performance (Experiment 3). Reaction time was not affected by hypnosis, although high hypnotizables were faster than lows in their responses (Experiments 1 and 2).

Subjects reported enhanced imagery vividness on the self-report Vividness of Visual Imagery Questionnaire during hypnosis. The differential effect between lows and highs was in the anticipated direction but not significant (Experiments 1 and 2).

Two cognitive strategies appeared to mediate visual memory performance: (a) detail strategy (memorization and rehearsal of individual details) and (b) holistic strategy (looking at and remembering the whole picture with accompanying imagery). Both lows and highs reported predominantly detail-oriented strategies during waking; however the highs shifted to a more holistic strategy during hypnosis. It appears that high hypnotizables have a greater capacity than lows for cognitive flexibility (Battig, 1979).

Results are discussed in terms of Paivio's (1971) dual coding theory and Craik and Tulving's (1975) depth of processing theory. The authors also discuss whether hypnosis involves a shift in cerebral dominance, as reflected by the cognitive strategy changes and enhanced imagery processing.

Dillon, F. Richard; Spanos, Nicholas P. (1983). Proactive interference and the functional ablation hypothesis: More disconfirmatory data. International Journal of Clinical and Experimental Hypnosis, 31, 47-56.

According to the functional ablation hypothesis, memories for which amnesia has been hypnotically suggested do not interact with other information in memory do not interact with other information in memory.

Geiselman, Ralph E.; Fishman, D. L.; Jaenicke, C.; Lerner, B. R.; MacKinnon, D. P.; et al. (1983). Mechanisms of hypnotic and nonhypnotic forgetting. Journal of Experimental Psychology: Learning, Memory, and Cognition, 9, 626-635.

40 undergraduates participated in 2 experimental sessions designed to study laboratory-induced amnesia, one using a standard hypnosis paradigm and one using a nonhypnotic directed forgetting paradigm. Two independent sources of variation were derived from the hypnotic amnesia data: retrieval inhibition and inhibition release. In the nonhypnotic directed-forgetting procedure, some items were cued to be either forgotten or remembered. At test, over 39% of the variance in the recall of the to-be-forgotten items could be accounted for by the inhibition and release constructs obtained with hypnosis. These relations between the 2 procedures were not mediated by verbal ability (WAIS) or cognitive style (Hidden Figures Test). It is concluded that the mechanisms of forgetting involved in laboratory demonstrations of hypnotic and nonhypnotic amnesia are related, and the implication is that some of them are the same, namely, retrieval inhibition and inhibition release. Possible demand characteristics that accompany the hypnosis procedure were not apparent with the nonhypnotic procedure. Results provide evidence that hypnotically induced amnesia is not entirely the result of Ss' reactions to demand characteristics.

Kihlstrom, John F.; Easton, Randolph D.; Shor, Ronald E. (1983). Spontaneous recovery of memory during posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 31, 309-323.

Repeated testing of posthypnotic amnesia indicates that some Ss, initially responsive to the suggestion, show appreciable recovery of memory before the pre-arranged signal is given to cancel the amnesia. Comparison of Ss who received 2 successive memory tests during amnesia with others who received only a single test preceded by a distracting activity indicated that the recovery effect was attributable to the passage of time rather than to prior testing. There were wide individual differences in the extent of recovery, with some Ss maintaining a fairly dense amnesia on the second test. Those Ss who maintained amnesia were more hypnotizable, and showed a denser initial amnesia, than those who breached it. An analysis of subjective reports lent credence to the notion of partial response among some hypnotizable Ss who fail to meet a standard criterion of complete amnesia, and pseudoamnesia among some insusceptible Ss who appear to pass it. Some Ss reported voluntarily engaging in cognitive activity designed to induce forgetting, but these reports were related to neither the occurrence of initial amnesia nor its persistence. A failure of memory which reflects momentary disorientation upon transition from one mental state to another should be conceptually distinguished from a reversible amnesia initiated by hypnotic suggestion.

by hypnotic suggestion

1981

Bower, Gordon H. (1981). Mood and memory. American Psychologist, 129-148.

This article describes experiments in which happy or sad moods were induced in subjects by hypnotic suggestion to investigate the influence of emotions on memory and thinking. One result was that subjects exhibited mood-state-dependent memory in recall of word lists, personal experiences recorded in a daily diary, and childhood

experiences; people recalled a greater percentage of those experiences that were affectively congruent with the mood they were in during recall. Second, emotion powerfully influenced such cognitive processes as free associations, imaginative fantasies, social perceptions, and snap judgments about others' personalities (e.g., angry subjects generated angry associates, told hostile stories, and were prone to find fault with others). Third, when the feeling-tone of a narrative agreed with the reader's emotion, the salience and memorability of events in that narrative were increased. Thus, sad readers attended more to sad material, identified with a sad character from a story, and recalled more about that character. An associative network theory is proposed to account for these several results. In this theory, an emotion serves as a memory unit that can enter into associations with coincident events. Activation of this emotion unit aids retrieval of events associated with it; it also primes emotional themata for use in free association, fantasies, and perceptual categorization.

1979 Cole, Randy D. (1979). Use of hypnosis in a course to increase academic and test-taking skills. International Journal of Clinical and Experimental Hypnosis, 27 (1), 21-28.

The present study was undertaken to provide additional information on the effects of hypnosis on academic and test-taking skills. Previous research indicated inconclusive results with inadequate experimental design and statistical methodology. The present study used an experimental research design with appropriate statistical analysis. Ss were 93 college students and treatment was administered by pre-recorded cassette tapes over a 4-week period during regular class time. Tapes consisted of hypnotic and waking suggestions related to course content and general academic skills. Results indicated hypnotic and waking suggestions did not facilitate academic skill learning significantly more than class curriculum alone. Pre-post comparisons did indicate significant improvement by all groups on reading, writing, study skills, and spelling variables.

Holroyd, Jean; Nuechterlein, Keith; Shapiro, David; Ward, Frederick (1979). Biofeedback and hypnotizability. In Burrows, Graham D.; Collison, David R. (Ed.), Hypnosis 1979: Proceedings of the 8th International Congress of Hypnosis and Psychosomatic Medicine, Melbourne, Australia (pp. 335-343). New York: Elsevier/North Holland Biomedical Press.

8 high and 8 low hypnotizable Ss used biofeedback and hypnosis to lower blood pressure in one session and forehead EMG activity in another session. Results were analyzed by repeated measures analyses of covariance using baseline physiological level on the dependent variable as the covariate. Electromyographic level was reduced more immediately by biofeedback than by hypnosis. When the task was to lower blood pressure, blood pressure and skin conductance were more effectively reduced by hypnosis than by biofeedback, considering only the first half of each session to eliminate within-session transfer effects.

Hypnotizability did not predict overall outcome. Factors which may have prevented demonstrating a clearer relationship between hypnotizability and success using biofeedback or hypnosis are discussed. State and trait anxiety, cognitive strategies used during the tasks, and self-reported hypnotic depth are examined for correlates of successful performance.

1977

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

Delprato, D. J. (1977). Pavlovian conditioning of Chevreul's movement. American Journal of Clinical Hypnosis, 20, 124-130.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

Garver, R. B. (1977). Enhancement of human-performance through neuro-motor facilitation and control of arousal level. American Journal of Clinical Hypnosis, 19, 177-181.

Coe, William C.; Basden, B.; Basden, D.; Graham, C. (1976). Posthypnotic amnesia: Suggestions of an active process in dissociative phenomena. Journal of Abnormal Psychology, 85, 455-458.

A retroactive inhibition design was used to examine the process of posthypnotic amnesia. The results supported the notion that "forgotten" material is as available to amnesic subjects at some level as it is to nonamnesic subjects. Further, so-called forgetting appears to be the result of an active process, that is, something the subject does. Implications for understanding dissociative phenomena in general are discussed.

Coe, William C.; Baugher, R. J.; Krimm, W. R.; Smith, J. A. (1976). A further examination of selective recall following hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 13-21.

29 Ss were tested for posthypnotic amnesia on SHSS:C. They rated each item for emotional tone (pleasant-unpleasant) and judged whether or not they had passed or failed it. There was some support for the notion that failed items are judged more unpleasant than passed items, but the emotional tone of an item was not related to its being recalled posthypnotically. There were minimal findings to suggest that Ss recall items which stand out in their experience. Discrepancies with earlier findings and the possible role of processes associated with normal memory are discussed.

Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, 18, 153-171.

The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.

Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it! American Psychologist, 29, 785-795.  
Psychologist, 29, 785-795.

Illovsky, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97.

This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children

had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).

Johnson, R. F. Q. (1976). Hypnotic time distortion and the enhancement of learning: New data pertinent to the Krauss-Katzell-Drauss experiment. American Journal of Clinical Hypnosis, 19, 98-102.

Krauss, Katzell, and Krauss (1974) reported that free-recall learning can be markedly enhanced by suggestions given under hypnosis that three minutes of study time is equivalent to 10 minutes of study time. The present investigation, which incorporated features similar to the Krauss et al. study, did not yield similar results. Subjects learned a comparable number of words for a comparable amount of study time, regardless of whether they were exposed to hypnotic time distortion instructions, special motivating instructions, or control instructions. The results are discussed in terms of general problems in modern research on hypnotism.

1975

Cowings, Patricia S. (1975, September). Observed differences in learning ability of heart rate self-regulation as a function of hypnotic susceptibility. [Paper] Presented at the 3rd Congress of the International College of Psychosomatic Medicine, Rome.

Three groups of eight men and women were given personality tests and were taught to control their own heart rates. Experimental group I and the control group had low hypnotic susceptibility (Stanford Hypnotic Susceptibility Scale), and subjects in experimental group II had high hypnotic susceptibility. The experimental groups received autogenic therapy and biofeedback, while the control group was given biofeedback only. Subjects who received autogenic therapy and biofeedback performed better than the control group. Significant differences, however, were found in all psychological test scores between high and low hypnotic susceptibles.

Cedercrentz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.

In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercrutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

Goldstein, M. S.; Sippelle, Carl N. (1970). Hypnotically induced amnesia versus ablation of memory. *International Journal of Clinical and Experimental Hypnosis*, 19 (3), 211-216. (Abstracted in *Current Contents*, 2, 35, 21)

Divided 33 hypnotizable undergraduates, all capable of achieving the criterion of amnesia for a 7-digit number, into 3 groups: 2 hypnotized and 1 pretend. The distributions of errors for an amnesic performance of these groups were compared with the theoretical chance distribution of errors expected in an amnesic performance

errors expected in an amnesic performance. Both hypnotized groups differed significantly from the pretend group and from the theoretical distribution, while the performance of the pretend group did not differ significantly from the chance distribution. The performance of the pretend group conformed to the expectancy for amnesia significantly better than did the performance of either of the hypnosis groups. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Graham, K. R.; Patton, Ann (1968). Retroactive inhibition, hypnosis, and hypnotic amnesia. *International Journal of Clinical and Experimental Hypnosis*, 16, 68-74.

**THE RELATIONSHIP OF HYPNOSIS AND POSTHYPNOTIC AMNESIA TO RETROACTIVE INHIBITION. 4 GROUPS OF 10 STUDENTS EACH LEARNED LISTS OF ADJECTIVES IN A RETROACTIVE INHIBITION PARADIGM. 2 GROUPS LEARNED THE INTERVENING LIST WHILE THEY WERE HYPNOTIZED. SS OF 1 OF THESE WERE GIVEN INSTRUCTIONS FOR POSTHYPNOTIC AMNESIA, WHILE SS OF THE OTHER WERE TOLD TO RECALL WHAT THEY HAD LEARNED UNDER HYPNOSIS. THE SAVINGS AND RECALL SCORES OF BOTH GROUPS FOR ITEMS OF THE ORIGINAL LIST WERE NOT DIFFERENT FROM A 3RD GROUP WHICH HAD LEARNED ALL 3 LISTS IN THE WAKING STATE. ALL GROUPS SHOWED SUBSTANTIAL RETROACTIVE INHIBITION WHEN COMPARED TO CONTROLS WHO HAD LEARNED NO INTERVENING LIST. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1966**

**Edmonston, William E., Jr.; Stanke, F. James (1966). The effects of hypnosis and meaningfulness of material on verbal learning. American Journal of Clinical Hypnosis, 8 (4), 257-260.**

**Results: "The number of trials to criterion for each subject was analyzed in a two-way analysis of variance. The analysis indicates that hypnosis does not significantly effect the learning process. A significant difference does appear between the acquisition of high and low meaning words, the former being learned more rapidly. Also there are no interaction effects between hypnosis and the meaningfulness level of the material to be learned. The apparent gain of the hypnosis-low meaning over the nonhypnosis-low-meaning group is not statistically significant ( $t = 1.53$ ;  $p = .20$ )" (p. 258).**

**Evans, Frederick J.; Thorn, Wendy A. (1966). Two types of posthypnotic amnesia: Recall amnesia and source amnesia. International Journal of Clinical and Experimental Hypnosis, 14 (2), 162-179.**

**Posthypnotic recall amnesia refers to S's inability to recall, when challenged posthypnotically, the events which occurred during hypnosis. Posthypnotic source amnesia, occurs when S subsequently remembers the experiences of hypnosis, but has no recollection of acquiring the experiences. Data from 3 samples are presented to support the distinction between the 2 types of amnesia. Of 243 Ss, 18 experienced recall amnesia, 26 displayed source amnesia, but only 4 developed both kinds. There were no differences in rated depth of hypnosis of these 3 subgroups. Recall amnesia and source amnesia correlated .37, .38, and .39, respectively ( $p < .001$ ) in the 3 samples. The evidence indicates the 2 types of amnesia are different phenomena. Similarities between source amnesia and certain (dissociative) normal and psychopathological memory processes are discussed. (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

samples. The evidence indicates the 2 types of amnesia are different phenomena. Similarities between source amnesia and certain (dissociative) normal and psychopathological memory processes are discussed. (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

LeCron, Leslie M. (1963). Uncovering early memories by ideomotor responses to questioning. International Journal of Clinical and Experimental Hypnosis, 11, 137-142.

The author argues for the veridicality of birth and prenatal memories elicited by hypnosis, and in any event states they are therapeutically useful fantasies. He also advocates use of ideomotor signalling as a means of access to unconscious material. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Dorcus, Roy M. (1960). Recall under hypnosis of amnesic events. International Journal of Clinical and Experimental Hypnosis, 8 (1), 57-61.

The author reported on hypnosis work with eight cases, four dealing with attempts to recall misplaced or lost articles and four dealing with recall of information related to the commission of crimes. He concluded "that recall is not greatly improved under hypnosis. However, when strong emotional elements surround the events to be recalled some additional information may be secured" (p. 60).

1954

Hammer, Emanuel Frederick (1954). Post-hypnotic suggestion and test performance. Journal of Clinical and Experimental Hypnosis, 2, 178-185

College students were tested in Normal and Post-hypnotic suggestion conditions, in balanced order (N-P-P-N, or P-N-N-P) but were actually hypnotized before the Normal as well as the Post-hypnotic trials (i.e. without and with post-hypnotic suggestions, with suggestions for amnesia for the events in the hypnotic state).

"Summary. The purpose of this investigation was to determine whether or not post-hypnotic suggestion can improve some aspects of hypnotizable students' application and efficiency as applied to a number of selected performances connected directly or indirectly to schoolwork. Before the post-hypnotic testing periods, each subject was given post-hypnotic suggestions of ease, confidence, motivation, and increased ability. The study consisted of a comparison of normal and post-hypnotic performances of nine subjects in the areas of motor capacity, attention and perception, association, learning and memory, speed of reading comprehension, and application of abstract ability.

To the extent to which psychomotor speed and endurance, physical fatigue, span and duration of attention, clerical performance, speed of learning (as tested by Meaningful Syllable Lists and Digit Symbol Substitution), speed of association, mental alertness, concentration, mental efficiency, application of abstract number abilities, and speed of reading comprehension are related to schoolwork, the

hypothesis is supported that post-hypnotic suggestion can be of aid in hypnotizable college students' schoolwork" (p. 184).

Guze, Henry (1953). Posture, postural redintegration and hypnotherapy. Journal of Clinical and Experimental Hypnosis, 1, 76-82. (Abstracted in Psychological Abstracts 53: 6559)

The use of postural analysis, and directives regarding posture and their importance in hypnotherapy are discussed. Theoretically, it is indicated that a chronic postural condition may act to elicit an emotional state with which it was originally associated. Such an emotional condition may have caused the posture in the first place, and then established a feed-back relationship with it. The breaking of feed-back mechanisms of this kind depends largely upon postural change when a chronic situation is established in the absence of realistic cause for the emotion. Posture may also act redintegratively, when directly suggested, in rearousing traumatic memories. Several clinical cases are reported.

### **Mental retardation**

**1991**

Kunzendorf, Robert G.; Beltz, Susan McLaughlin; Tymowicz, Gina (1991-92). Self-awareness in autistic subjects and deeply hypnotized subjects: Dissociation of self-concept versus self-consciousness. Imagination, Cognition and Personality, 11, 129-141.

By refining past tests of self-awareness in mirrors, current testing demonstrates that autistic subjects' percepts are dissociated from self-concept, whereas hypnotized subjects' sensations are dissociated from self-consciousness. In the current test of self-concept, subjects could not directly see a line inside the box on their lap, but subjects could see the line indirectly in a televised mirror image. When instructed to touch the line, autistic subjects reached towards the televised line, whereas nonautistic subjects reached towards the actual line occluded inside the box. This first result suggests that the autistic subject's visual percept of the televised line is dissociated from its spatial relationship to the subject's self-concept. In the current test of self-consciousness, subjects were told to use a televised mirror-image to move their hands together until touching, but were not told that they were actually seeing a pre-recorded tape of their hands struggling unsuccessfully to touch. When queried, hypnotized subjects denied that their tactually joined hands were touching, whereas nonhypnotized subjects confirmed that their hands were touching. This latter result suggests that the hypnotized subject's hand-touching sensations are dissociated from the immediate and incontrovertible self-consciousness that one is perceiving the hands touching (not imaging them touching).

**1977**

Lazar, Billie S. (1977). Hypnotic imagery as a tool in working with a cerebral palsied child. International Journal of Clinical and Experimental Hypnosis, 25 (2), 78-87.

Hypnotic imagery was used with a moderately severe athetoid cerebral palsied 12-year-old boy who was mildly retarded and a poor hypnotic subject. Techniques included imagery, observation of the self, revivification of relaxing experiences, proprioceptive feedback about the athetoid movements, and dealing with feelings and motivation. Athetoid movements were reduced, results extended beyond the treatment situation, and improvement was made in practical skills.

1976

Illovsky, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97.

This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).  
ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).

1963

Sternlicht, M.; Wanderer, Z. W. (1963). Hypnotic susceptibility and mental deficiency. International Journal of Clinical and Experimental Hypnosis, 11, 104-111.

There are few reports in the literature of the tested hypnotic susceptibility of mental defectives. A susceptibility experiment on a group of 20 children suggests that, contrary to speculation, mental defectives are as hypnotizable as normals. Hypnotic depth potential may be related to intelligence within narrow ranges. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Das, J. P. (1961). Body-sway suggestibility and mental deficiency. International Journal of Clinical and Experimental Hypnosis, 13-15.

50 mental defectives were subjected to the body-sway test of suggestibility. Contrary to expectations the defectives did not differ from each other when taken according to grades of deficiency, nor do they differ, as a group, from normal (college) controls. From Psyc Abstracts 36:02:2JI13D. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

McCord, Hallack (1960). A note on a change in mental age accompanying hypnosis of a teen-age-girl. International Journal of Clinical and Experimental Hypnosis, 8 (4), 259-262.

An adolescent with questionable diagnosis (mental retardation due to organic brain damage or functional psychological disorder) was given the E-G-Y test for an estimate of verbal intelligence. After initial testing, in which attention span was limited and she was very negativistic, she was re-tested in light hypnosis. Her mental age "more than doubled -- went up by six years -- "in the intervening 24 hours. The author ascribes improvement to relaxation from light hypnosis and opined that the 10 year level achieved under hypnosis was close to her "true" level of functioning. Subsequent attempts to hypnotize her were not successful, possibly due to short attention span and negativistic tendencies.

1956

McCord, Hallack (1956). Hypnosis as an aid to the teaching of a severely mentally retarded teenage boy. Journal of Clinical and Experimental Hypnosis, 4 (1), 21-23. (Abstracted in Psychological Abstracts 57: 3729)

A 16 year old boy with I.Q. measured at 55 was hypnotized for 20 minutes daily for one month. During each session he was given material to learn (multiplication tables, spelling words, reading recognition, and general information -- only one presented during each hypnosis session). "At the end of 90 days, the subject was still retaining almost 100 percent of all material presented except for the multiplication tables which showed about 50 percent loss" (p. 22). "As a result of routinely introduced hypnotic suggestions for well-being, happiness, desire to learn, and assurance of acceptance, Ben's motivation to learn in the classroom situation took a sharp surge upward. (It was for this reason that giving him parallel material in the normal state to be used to measure comparative learning rates promptly became scientifically unsound as a control in this study.)" (p. 22). Although he was not given material to study in between sessions, "it was known that he mentally reviewed the material while working and playing in the school program" (p. 23). measure comparative learning rates promptly became scientifically unsound as a control in this study." (p. 22). Although he was not given material to study in

between sessions, "it was known that he mentally reviewed the material while working and playing in the school program" (p. 23).

**McCord, Hallack (1956). The hypnotizability of the mongoloid-type child. Journal of Clinical and Experimental Hypnosis, 4 (1), 19-20.**

Seven mentally retarded people ranging in age from 9 to 30 were involved in a pilot study. The induction involved eye fixation coupled with sleep suggestions and lasted not more than 30 minutes. Five were judged to go into light trances; one "seemed to enter a trance, but she failed all of the usual tests through [sic] successfully meeting all challenges" (p. 19) and one appeared not to become hypnotized.

**1954**

**Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)**

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whom restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

**Mesmer**

**2000**

**Elter-Nodvin, Edeltraud (2000). Computerized content analysis: A comparison of the verbal productions of high hypnotizable, low hypnotizable and simulating subjects (Dissertation). (<http://www.televid.com/elternodvin/dissertation/>)**

This research was designed to investigate the domain of hypnosis and to explore how the ""state"" of hypnosis, along with the susceptibility to hypnosis relate to lexical choice in verbal productions as well as to primary/secondary process mentation. ... College students were screened for level of hypnotic susceptibility ... [yielding] 32 high hypnotizable subjects and 57 low hypnotizable subjects [randomly assigned to two groups] ... 29 low hypnotizable subjects and 28 low hypnotizable simulating subjects.

Responses to six Thematic Apperception Test (TAT) cards and responses to five free speech story-openings were collected and tape-recorded during [counterbalanced waking and hypnosis conditions]... verbal productions were transcribed and [computer] analyzed by ... the Dartmouth Adaptation of The General Inquirer ... and COUNT with the Regressive Imagery Dictionary ... .

To summarize, findings suggest that the changes in SECONDARY PROCESS and THOUGHT, as well as the DAGI-III-variable EMOTION and the COUNT-RID-variable EMOTION, may be a result [sic] other than hypnotic ability or the hypnotic experience. The possibility has been raised, that subjects who had been instructed to simulate hypnosis were successful in discerning the experimental, implicit demands to respond with decreased SECONDARY PROCESS and THOUGHT as measured by the DAGI-III and COUNT-RID respectively and to present the appearance of a genuinely hypnotized subject. The same was true for the increase in EMOTION as measured by the DAGI-III as well as by the COUNT-RID. The interaction between the condition (baseline vs. hypnosis) and the group (level of hypnotic susceptibility) would have provided the strongest support for the assertion that hypnosis changes a dimension (e.g. enhances primary process responding or decreases secondary process mentation) in highly hypnotizable subjects.

The likelihood that the hypnotic main-effect can be attributed at least to some extent to demand characteristics has been supported by the current results. The hypnotic \_\_state\_\_, even though it can be measured through behavioral measures such as the HGSHS and the CAH, cannot be measured by content measures of verbal productions.

Findings are discussed in regard to previous literature suggesting a link between primary process and hypnosis and suggestions for future research are made. In addition, theoretical and practical implications are discussed. - From dissertation at web site <http://www.televi.com/alternodvin/dissertation/>

Gallo, D.A. & Finger, S. (2000). The power of a musical instrument: Franklin, the Mozarts, Mesmer, and the glass armonica.. History of psychology, 3, 326-343..

Benjamin Franklin's invention of the the armonica became the favorite instrument of Mesmer. In both Vienna and Paris, Mesmer used background armonica music to faciliate the effect of animal magetism. With the demise of mesmerism following the report of the French royal commissions, the armonica also faded into history2256

Ludwig, Arnold M. (1964). An historical survey of the early roots of mesmerism. International Journal of Clinical and Experimental Hypnosis, 12 (4), 205-217.

Many believe that Franz Anton Mesmer helped lay the foundations upon which modern hypnotic theory and practice evolved. However, as one views the history of healing through suggestion prior to Mesmer, it becomes apparent that neither his theories nor his practices showed much originality. In fact, there is good evidence that Mesmer plagiarized the work of others. With this in mind, it appears that Mesmer's contribution to later psychological healing and theory was related more to his personality than to his originality. (Journal Abstract)

1957

Conn, Jacob H. (1957). Historical aspects of scientific hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (1), 17-24.

The author relates the history of hypnosis beginning with pre-historic therapeutic suggestion, the trances of Persian Magi and Indian Yogi, and incubation or temple sleep in Egypt and Greece. Touching on practices among Egyptians, Romans, Greeks and the Middle Ages in Europe, he writes in more detail about Mesmer, John Elliotson, James Braid, Ambroise Auguste Liebault, Hyppolyte Marie Bernheim, and Jean Martin Charcot.

Meta-Analysis

2002

Montgomery, Guy H.; David, Daniel; Winkel, Gary; Silverstein, Jeffrey H.; Bovbjerg, Dana H. (2002). The effectiveness of adjunctive hypnosis with surgical patients: A meta-analysis. Anesthesia and Analgesia, 94, 1639-1645.

Hypnosis is a nonpharmacologic means for managing adverse surgical side effects. Typically, reviews of the hypnosis literature have been narrative in nature, focused on specific outcome domains (e.g., patients' self-reported pain), and rarely address the impact of different modes of the hypnosis administration. Therefore, it is important to take a quantitative approach to assessing the beneficial impact of adjunctive hypnosis for surgical patients, as well as to examine whether the beneficial impact of hypnosis goes beyond patients' pain and method of the administration. We conducted meta-analyses of published controlled studies (n = 20) that used hypnosis with surgical patients to determine: 1) overall, whether hypnosis has a significant beneficial impact, 2) whether there are outcomes for which hypnosis is relatively more effective, and 3) whether the method of hypnotic induction (live versus audiotape) affects hypnosis efficacy. Our results revealed a significant effect size (D = 1.20), indicating that surgical patients in hypnosis treatment groups had better outcomes than 89% of patients in control groups. No significant differences were found between clinical outcome categories or between methods of the induction of hypnosis. These results support the position that hypnosis is an effective adjunctive procedure for a wide variety of surgical patients.

**IMPLICATIONS:** A meta-analytical review of studies using hypnosis with surgical patients was performed to determine the effectiveness of the procedure. The results indicated that patients in hypnosis treatment groups had better clinical outcomes than 89% of patients in control groups. These data strongly support the use of hypnosis with surgical patients. [National Library of Medicine Abstract]

**1996**

**Kirsch, Irving (1996).** Hypnosis in psychotherapy: Efficacy and mechanisms. Contemporary Hypnosis, **13** (2), 109-114.

Meta-analyses have established that different psychotherapies have different outcomes. Cognitive-behavioural therapies are significantly more effective than psychodynamic therapies, and their superiority increases when long-term follow-up is assessed. Hypnosis enhances the efficacy of both psychodynamic and cognitive-behavioural psychotherapy, and this effect is especially strong in long-term outcome of treatment for obesity. The paucity of procedural differences between hypnotic and non-hypnotic treatments in many of the studies demonstrating a substantial advantage for hypnosis suggests that the effect depends on the use of the word 'hypnosis'. Hypnosis can be regarded as an empirically-validated, non-deceptive placebo, the effects of which are mediated by response expectancies.

**Kirsch, Irving (1996).** Hypnotic enhancement of cognitive-behavioral weight loss treatments--Another meta-reanalysis. Journal of Consulting and Clinical Psychology, **64** (3), 517-519.

In a 3rd meta-analysis of the effect of adding hypnosis to cognitive-behavioral treatments for weight reduction, additional data were obtained from authors of 2 studies, and computational inaccuracies in both previous meta-analyses were corrected. Averaged across posttreatment and follow-up assessment periods, the mean weight loss was 6.00 lbs. (2.72 kg) without hypnosis and 11.83 lbs. (5.37 kg) with hypnosis. The mean effect size of this difference was 0.66 SD. At the last assessment period, the mean weight loss was 6.03 lbs. (2.74 kg) without hypnosis and 14.88 lbs. (6.75 kg) with hypnosis. The effect size for this difference was 0.98 SD. Correlational analyses indicated that the benefits of hypnosis increased substantially over time ( $r=.74$ ).

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**1995**

Kirsch, Irving; Montgomery, Guy; Sapirstein, Guy (1995). Hypnosis as an adjunct to cognitive behavioral psychotherapy: A meta-analysis. Journal of Consulting and Clinical Psychology, 63 (2), 214-220.

A meta-analysis was performed on 18 studies in which a cognitive-behavioral therapy was compared with the same therapy supplemented by hypnosis. The results indicated that the addition of hypnosis substantially enhanced treatment outcome, so that the average client receiving cognitive-behavioral hypnotherapy showed greater improvement than at least 70% of clients receiving nonhypnotic treatment. Effects seemed particularly pronounced for treatments of obesity, especially at long-term follow-up, indicating that unlike those in nonhypnotic treatment, clients to whom hypnotic inductions had been administered continued to lose weight after treatment ended. These results were particularly striking because of the few procedural differences between the hypnotic and nonhypnotic treatments.

1993

Saperstein, Guy; Montgomery, Guy; Kirsch, Irving (1993, August). Cognitive-behavioral hypnotherapy: A meta-analysis. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Meta-analysis was used to compare the effectiveness of cognitive-behavior therapy (CBT) to that of cognitive-behavior therapy with hypnosis (CBHT). A review of the literature revealed 18 studies in which 20 hypnotic treatments were compared to similar non-hypnotic treatments and in which sufficient data were presented for the calculation of effect sizes. Effect sizes were weighted for sample size and then averaged. This resulted in a mean effect size of 1.37 standard deviation units, indicating that the average client receiving cognitive-behavioral hypnotherapy is better off than 90 percent of clients who receive the same treatment in a nonhypnotic context. Substantial variance in effect sizes was found, indicating the presence of a moderator variable. Further analyses indicated that this variance was limited to treatments in which obesity was the presenting problem. The mean effect size for the addition of hypnosis to treatments of obesity was larger ( $M = 1.98$ ) and more variable (variance = 4.10) than that for the addition of hypnosis to treatments for other presenting problems ( $M = .52$ ; variance = .06). Also, studies of clinical samples yielded larger effects ( $M = 1.72$ ) than analogue studies with college student samples ( $M = .07$ ). The effect of hypnosis was independent of whether relaxation training was included in the nonhypnotic treatment or whether the hypnotic treatment included suggestions that were not included in the nonhypnotic treatment. Consistent with response expectancy theory, these data indicate that the substantial positive effect obtained was due to labeling the treatment 'hypnosis,' rather than to any substantive change in clinical procedure. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.) to treatments for other presenting problems ( $M = .52$ ; variance = .06). Also, studies of clinical samples yielded larger effects ( $M = 1.72$ ) than analogue studies with college student samples ( $M = .07$ ). The effect of hypnosis was independent of whether relaxation training was included in the nonhypnotic treatment or whether the

hypnotic treatment included suggestions that were not included in the nonhypnotic treatment. Consistent with response expectancy theory, these data indicate that the substantial positive effect obtained was due to labeling the treatment 'hypnosis,' rather than to any substantive change in clinical procedure. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

1992

Kirsch, Irving (1992, August). Cognitive-behavioral hypnotherapy. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The use of hypnosis to augment cognitive behavior therapy was described. Hypnotic inductions establish a context in which the effects of therapeutic interventions can be potentiated for clients with positive attitudes and expectancies toward it. Hypnosis can also provide a disinhibiting context for both clients and therapists, allowing them to behave in ways that are therapeutic, but that might seem awkward in other contexts. A meta-analysis of outcome studies in which the effects of a cognitive-behavioral treatment were compared to the effects of the same treatments supplemented by hypnosis resulted in a mean effect size of 0.87 standard deviations, indicating the average client receiving cognitive-behavioral hypnotherapy is better off at the end of it than more than 80 percent of clients who receive the same treatment in a nonhypnotic context. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Lyons, Larry C. (1992, October). Absorption and hypnotizability: Meta-analysis of studies to determine if contextual effects are important. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

Correlations between hypnotizability and Absorption range from .20 to .40; Council et al. suggest the correlation between these variables is a context effect (expectancy). In our review there was no statistically significant difference between correlations that were found in and out of context (.26 and .23, weighted means) in more than 40 studies with more than one correlation per study.

When Absorption was measured before hypnosis experience the  $r = .25$ ; after the hypnosis experience,  $r = .32$  (significantly different), which also was different from what context hypothesis would predict. Any context difference may be a function of length of time between the Absorption and hypnosis sessions.

Data does not support the context hypothesis. Measuring Absorption after hypnosis resulted in higher mean correlations with susceptibility. However, the magnitude of this relationship was small. Variation due to test reliability and small sample size are likely explanations of the differences in the magnitude of the correlations across studies. We also must consider scale reliability and sample error (samples less than 1000 have departures from the population correlation that are fairly large).

**CONCLUSION.** We should construct confidence intervals around observed correlations and look at the overlap; don't look only at the significance of the difference between correlations.

Author is in the process of conducting a mail survey to obtain unpublished results on context effect.

**1991**

**Hinshaw, Karin E. (1991).** The effects of mental practice on motor skill performance: Critical evaluation and meta-analysis. Imagination, Cognition and Personality, 11, 3-35.

21 studies that met the criteria of having both an adequate control and a mental practice alone group were included. The 44 separate effect sizes resulted in an overall average effect size of .68 (SD = .11) indicating that there is a significant benefit to performance of using mental practice over no practice. A series of General Linear Models revealed that the use of "internal" imagery produced a larger average effect size than the use of "external" imagery, and that mental practice sessions of less than one minute or between ten and fifteen minutes in length produced a larger average effect size than sessions of three to five minutes in length. These findings suggest the complexity of the relationship between variables that influence mental practice.

**Marzi, C. A.; Bisiacchi, P.; Nicoletti, R. (1991).** Is interhemispheric transfer of visuomotor information asymmetric? Evidence from a meta-analysis. Neuropsychologia, 29, 1163-1177.

Using a meta-analytic procedure we have analysed 16 studies employing a simple unimanual reaction time (RT) paradigm and lateralized visual stimuli to provide an estimate of interhemispheric transfer time in normal right-handed subjects. We found a significant overall RT advantage of the left visual field over the right and of the right hand over the left. These asymmetries can be explained by a superiority of the right hemisphere for the detection of simple visual stimuli and by a corresponding superiority of the left hemisphere for the execution of the manual response, respectively. Alternatively, they may be interpreted as related to an asymmetry of interhemispheric transmission of visuomotor information, with transfer from the right hemisphere (side of stimulus entry) to the left (side of response generation) faster than in the reverse direction. Although a direct test of these hypotheses is still lacking, we think that the evidence available is more in keeping with the latter possibility.

**Weisz, G. (1991, December).** Meta-analysis of hypnosis and biofeedback pain control with children, adolescents and young adults (Dissertation, Pace University). Dissertation Abstracts International, 52 (6), 3321-B. (Order No. DA 9132945)

This study used meta-analysis to investigate the issues related to treatment efficacy with hypnosis and biofeedback in anxiety management and in child, adolescent, and

young adult pain. Analysis revealed that hypnosis and biofeedback were effective in pain and anxiety reduction and appeared equally effective. This contrasts with metaanalysis results by Malone & Strube (1988) showing almost triple superiority of hypnosis and autogenic training over biofeedback. The study notes methodologic variables that may distort or reduce the size of obtained effects.

**1990**

**Bornstein, Robert F. (1990). Critical importance of stimulus unawareness for the production of subliminal psychodynamic activation effects: A meta-analytic review. Journal of Clinical Psychology, 46, 201-210.**

Performed meta-analysis that assessed the magnitude of behavior change produced by subliminal vs supraliminal drive-related stimuli (DRS) on 11 subliminal psychodynamic activation (SPA) studies (published 1966-1989) that employed both types of stimuli. The analysis revealed that subliminal presentation of DRS produced significantly stronger effects on behavior than supraliminal presentation of the same stimuli. Stimulus content, type of outcome measure, and S characteristics influenced the magnitude of subliminal/supraliminal response differences. Results support L. H. Silverman's (1983) hypothesis that DRS must be presented subliminally to produce SPA effects.

**1989**

**Epley, Kenneth R.; Abrams, Allan I.; Shear, Jonathan (1989). Differential effects of relaxation techniques on trait anxiety: A meta-analysis. Journal of Clinical Psychology, 45, 957-974.**

Conducted a meta-analysis of studies on the effects of relaxation techniques on trait anxiety. Effect sizes for the different treatments (e.g., progressive relaxation, biofeedback, meditation) were calculated. Most treatments produced similar effect sizes, although transcendental meditation (TM) produced a significantly larger effect size than other forms of meditation and relaxation. A comparison of the content of the treatments and their differential effects suggests that this may be due to the lesser amount of effort involved in TM. Meditation that involved concentration had a significantly smaller effect than progressive relaxation.

**Johnson, Blair; Eagly, Alice H. (1989). Effects of involvement on persuasion: A meta-analysis. Psychological Bulletin, 106 (2), 290-314.**

Defines involvement as a motivational state induced by an association between an activated attitude and the self-concept. Integration of the available research suggests that the effects of involvement on attitude change depended on the aspect of message recipients' self-concept that was activated to create involvement: (a) their enduring values (value-relevant involvement), (b) their ability to attain desirable outcomes (outcome-relevant involvement), or (c) the impression they make on others (impression-relevant involvement). Findings showed that (a) with value-relevant

involvement, high- involvement subjects were less persuaded than low-involvement subjects;

1988

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Metabolism

1985

Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novametrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self- hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimediation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

1982

Throll, D. A. (1982). Transcendental meditation and progressive relaxation: Their physiological effects. Journal of Clinical Psychology, 38 (3), 522-530.

Measured oxygen consumption, tidal volume, respiration rate, heart rate, systolic and diastolic blood pressure before the Ss learned Transcendental Relaxation Meditation (Transcendental meditation: N = 21) or Jacobson's Progressive Relaxation (PR: N = 18). Ss were tested immediately after learning either technique and again 5, 10, and 15 weeks later. While there were no significant differences between groups for any of the physiological variables at pretest, the Transcendental meditation group displayed more significant decreases during meditation and during activity than did the Psychological Review group. Both groups displayed significantly lowered metabolic rates during Transcendental meditation or PR. The generally more significant and comprehensive results for meditators were explained primarily in terms of the greater amount of time the Transcendental meditation group spent on their technique, plus the differences in the two techniques themselves. Several avenues for future research are discussed.

1980

Crosson, B. (1980). Control of skin temperature through biofeedback and suggestion with hypnotized college women. International Journal of Clinical and Experimental Hypnosis, 28 (1), 75-87.

4 groups of 9 college women attempted to raise finger temperature relative to forehead temperature during hypnosis. After a hypnotic induction, each group of Ss received 1 of the following treatments for temperature control: (a) biofeedback, (b) suggestion and imagery, (c) biofeedback plus suggestion and imagery, and (d) a relaxation, false-feedback control. Groups were initially balanced for hypnotic susceptibility. Between-subject differences in baseline temperatures were statistically controlled. After 4 training sessions, only Ss in the groups receiving biofeedback and biofeedback plus suggestion and imagery demonstrated evidence of

learned temperature control, and only Ss in the biofeedback group demonstrated a significantly greater ability to control skin temperature than Ss in the control group. Changes in temperature during hypnotic induction did not appear to affect changes during the subsequent treatment. There was no significant correlation between hypnotic susceptibility and temperature control for Ss in any group, contrary to popular assumption. Future research should attempt to ascertain if combined use of biofeedback and hypnosis offers any advantages to the use of biofeedback alone.

**1979**

**Jackson, J. Arthur; Gass, Gregory C.; Camp, Elizabeth M. (1979). The relationship between posthypnotic suggestion and endurance in physically trained subjects. International Journal of Clinical and Experimental Hypnosis, 27, 278-293.**

55 male Ss were assigned to 5 groups: control, hypnosis alone, motivation alone, low susceptible hypnosis with motivation, or high susceptible hypnosis with motivation. Ss performed 2 runs on a treadmill to their maximum capacity, as measured by oxygen consumption, blood lactate concentration, and respiratory quotient. Groups involving hypnosis performed in the posthypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.

**1966**

**Vandenbergh, R. L. (1966). Effects of hypnotically induced emotional stress on carbohydrate and lipid metabolism in patients with diabetes mellitus. Psychosomatic Medicine, 28, 382-390.**

Effects of hypnotically induced emotional stress on carbohydrate and lipid metabolism in patients with diabetes mellitus

**1959**

**Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. ( Abstracted in Psychological Abstracts, 61: 6626)**

**Topic headings include:**

**Experimental Techniques (Depth, Type of suggestion, Other variables)**

**Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)**

**Respiration**

**Urogenital System**

**Gastrointestinal System**

**Metabolism and Temperature**

**Endocrine System**

**Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)**

**Special Senses (Hearing, Taste)**

**Urogenital System**

**Gastrointestinal System**

**Metabolism and Temperature**

**Endocrine System**

**Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)**

**Special Senses (Hearing, Taste)**

**METAPHOR**

**METAPHOR**

**2000 Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

**This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.**

**1999 Harper, Gary W. (1999). A developmentally sensitive approach to clinical hypnosis for chronically and terminally ill adolescents. American Journal of Clinical Hypnosis, 42 (1), 50-60.**

Adolescents who suffer from terminal and/or chronic medical illnesses must face difficult developmental issues coupled with increased burdens of physical discomfort and uncertainty about survival. Clinical hypnosis is one technique that can be used to help these individuals gain a sense of comfort and control over their lives. I describe the use of a developmentally sensitive hypnotherapeutic intervention for chronically and terminally ill adolescents. I have used the technique for the reduction of various types of physical and psychological discomfort secondary to a range of medical problems such as cancer, end-stage renal disease, organ transplant, and HIV disease. The treatment focuses on the use of personalized procedures that attempt to increase perceptions of control through interactive formats. Movement through a personally intriguing journey is used as a metaphor for controlling and moving away from discomfort. I also present three case examples as well as general treatment recommendations for clinical use.

**1997 Krause, C.; Revenstorf, D. (1997). Ausformung therapeutischer Metaphern. Hypnose und Kognition, 14 (1+2), 83-104.**

**Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.**

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginative sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

**1990**

**Hartmann, Walter; Golden, Gail A. (1990). A "magic" aid for hypnosis and suggestion in crisis management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (3), 157-161.**

Mentions use of the stone talisman in several kinds of cases: case of an 8-year-old girl who fell at school and broke her ankle; a case of mother and child in an automobile crash; patients with presurgery anxiety; case of suicidal rumination of a patient in ongoing psychotherapy; case of post-mastectomy fear of attending follow-up clinic. The "magic" tool is intended to help patient in carrying out suggestions. "The tool and its transfer appear to help meet the commonly observed need for

something tangible in complex situations--the need for ritual to symbolize and embody our perceptions and understandings of difficult and abstract processes" (p. 159). J. Holroyd

**1989**

Eisen, Marlene R. (1989). Return of the repressed: Hypnoanalysis of a case of total amnesia. International Journal of Clinical and Experimental Hypnosis, 37 (2), 107-119.

A case study is presented of a woman suffering from global amnesia so profound that she had lost all sense of personal identity. Hypnotherapy was used to establish, through imagery, a solid inner core on which to rebuild a sense of self. From the image of a strong column on which rested a book with a golden lock (her history), to reading about other lives, books and stories were utilized to establish a safe external environment in which the reawakening of repressed memories was not longer perceived as dangerous. A discussion of relevant literature on the subjects of global amnesia, loss of personal identity, and post-traumatic stress is offered as a basis for discussing the present case.

**1988**

Kirmayer, Laurence J. (1988). Word magic and the rhetoric of common sense: Erickson's metaphors for mind. International Journal of Clinical and Experimental Hypnosis, 36 (3), 157-172.

Milton Erickson did not produce a systematic theory of psychotherapy. His talent was as a storyteller, inventing metaphors and more extended healing fictions for his patients. A great many of Erickson's cases did not involve hypnosis in any conventional sense of the term. He used a wide range of persuasive rhetorical forms to encourage behavioral change in his patients. Nevertheless, taken together his work represents a significant shift in paradigm from prevailing schools of psychotherapy. Erickson captured the power of word magic in the language of common sense. This coupling of magical power with folk psychology accounts for much of his current popularity. Attempts to experimentally test his techniques are likely to be unsuccessful because these techniques were unique inventions tailored to the individual idiosyncrasies of patient and context. Although regularities in his work can be found, Erickson's most important contributions are not techniques but changes in the values or ethos under which psychotherapy is conducted.

This paper focuses Erickson's implicit models of mind and the values they carry. "It is here that Erickson made his most significant contribution to the general practice of psychotherapy . Erickson avoided systematization. His writing is unusually anecdotal, even for psychotherapy (Erickson, 1980; Vol IV, passim). Erickson's writing format consists of 'thin' case descriptions, freely recycled in parable or homiletic form to serve his immediate rhetorical purpose. ... For Erickson, flexibility and eclecticism were not signs of a lack of coherence but a spirited rejection of rigid dogma that needlessly limited therapeutic possibilities" (pp. 158-59).

Erickson used language of the common man rather than a technical vocabulary, even when speaking of 'hypnosis' or 'trance' or 'the unconscious.' He called his approach 'naturalistic' and viewed hypnotic phenomena as an extension of normal experience and behavior. His common sense descriptions of events and techniques are easily understood in general terms. "Erickson took magic and dressed it in the familiar clothes of common sense. Some of his less critical followers, however, seem intent on taking common sense and dressing it in the cloak of magic" (p. 163).

Erickson used metaphors as a way of actively involving the patient in conceptual, affective, and sensory qualities of experiences, i.e. as a "tool for thought" (p. 164).

In attempting to understand Erickson's psychotherapy, one must note his "elastic use of the word 'hypnosis.' Sometimes Erickson uses the term narrowly with a focus on the elicitation of trance or dissociative phenomena, but more often he uses it broadly to mean any state of absorption" (p. 165). For him, this was "\_a state of special awareness characterized by a receptiveness to ideas\_" [Erickson, 1985, p. 223, emphasis in original]. By this he does not mean exclusively the classic suggestion effect where motor acts are experienced as involuntary (Evans, 1967). ... The hypnotic subject exhibits a "\_special willingness to examine ideas for their inherent values\_" [p. 224, emphasis in original]. ... For Erickson, any move in the direction of increased absorption is an instance of hypnosis. Dissociation accounts for a great deal but not all of hypnotic behavior" (p. 165). That is why he used the word hypnosis to describe heightened attention that might occur when someone is surprised. But in fact, his published cases include many other kinds of interventions, such as reframing, symptom prescription, etc.--forms of influence and persuasion used by many therapists who do not consider themselves working with hypnosis.

Erickson also emphasized that hypnosis enables one to work with 'the unconscious.'

1986

Gibson, Michael; McCue, Peter A. (1986). Discussion commentary On Crowley's and Mills 'The nature and construction of therapeutic metaphors for children'. [Comment/Discussion] .

The authors are critical of the methods and conclusions of Crowley & Mills. They also offer an example of Milton Erickson claiming that a subject was hypnotized when it appeared to other experts present that the subject was nonresponsive to inductions by both Erickson and by Weitzenhoffer

the place where things just 'happen to us.' Erickson reversed this attribution, emphasizing the unconscious as the agent of active control working for the benefit of the patient while consciousness adopts the attitude of 'wait and see.' This leads consciousness into reverie--the state where images and events move of their own accord, animated by emotion, before the 'passive audience' of consciousness" (p. 167). So Erickson viewed hypnosis as liberating the unconscious. There was healing potential in helping the ego to relinquish "rigid control over the creative and benevolent processes of the unconscious" (p. 168). From this theoretical position, the patient and therapist are seen as allies and psychotherapy is a collaboration; there is no need for the Freudian concepts of resistance and defense.

**"Erickson's metaphors for hypnotherapy link it with normal processes of learning and imagining. His image of the unconscious as a storehouse of creative potential supports a non-pathologized view of man amid all his troubles and craziness. In contrast to psychiatry's current preoccupation with nosology, and the emphasis of psychoanalysis on the dimensions of human frailty, Erickson adopted a non-pathologizing attitude. He did not deny his patient's difficulties but neither was he excessively fascinated by them. He recognized that healing depends not on cataloguing deficiency but on fully mobilizing the person's intelligence, imagination, and integrity. This message of therapeutic optimism was balanced by his own example of the benefits and limitations of hypnotherapeutic practice" (p. 170).**

**1983**

**Eisen, Marlene R.; Fromm, Erika (1983). The clinical use of self-hypnosis in hypnotherapy: Tapping the functions of imagery and adaptive regression. International Journal of Clinical and Experimental Hypnosis, 31 (4), 243-255.**

**The authors present a new method of interweaving hetero-hypnotic psychotherapy and self-hypnosis. In the hetero-hypnotic sessions, the hypnotherapist acts as a dependable parent figure who is supporting and available when that is desirable, but who also encourages and fosters the patient's efforts to develop his/her inner resources and ability to function autonomously. Self-hypnosis is utilized for its rich idiosyncratic imagery. The hypnotherapist uses and elaborates on this rich, affect-loaded imagery. At other times the therapist takes a guiding role in producing therapeutic metaphors of positive valence. The patient uses and enlarges on these during self-hypnosis between the weekly therapeutic hours. In addition, the hypnotist may counteract any negative strong self-hypnotic images during hetero-hypnosis. Self-directed self-hypnosis allows patients to experience openness and receptivity to internal and unconscious processes against which they may defend themselves in the dyadic relationship with the therapist. For patients struggling with issues of control and for patients fighting their own regressive pull towards dependency, this mode of therapy appears to be particularly effective. The emphasis in this paper is on imagery and on the inter-twining of the two modalities, hetero-hypnosis and self-hypnosis.**

**1961**

**Moss, C. Scott (1961). Experimental paradigms for the hypnotic investigation of dream symbolism. International Journal of Clinical and Experimental Hypnosis, 9, 105-117. (Abstracted in Psychological Abstracts, 62: 3 II 05M)**

**Objectified study of dream phenomenon attempted through employment of Osgood's Semantic Differential with hypnotically induced dreams. Several innovations in technique outlined. Results are discussed in terms of the principle of congruity, illuminating some aspects of the psychological laws underlying the acquisition and modification of sign significance involved in dream symbol production. From Psyc Abstracts 36:01:3II05M. (PsycINFO Database Record (c) 2002 APA, all rights reserved).**

## **MILITARY**

**1984**

**Barabasz, Arreed F. (1984). Antarctic isolation and imaginative involvement - preliminary findings: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (3), 296-300.**

**Group 1 Ss (N = 9) were interviewed in Antarctica prior to and following 1 year of Antarctic isolation. Group 2 Ss (N = 7) were exposed to 3 weeks of Antarctic field-site isolation and were interviewed upon return to the United States. A control group of 10 Ss was also interviewed on 2 occasions, paralleling Group 1. Group 1 showed a significant increase in imaginative involvement from pre- to post-Antarctic isolation. Group 2 showed a significantly greater level of imaginative involvement than the control Ss. The possibility that Antarctic living may have revived the mental processes available to these Ss as children is considered within both regression and learning explanations.**

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

**Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.**

**1973**

**Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703.**

**This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of**

heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

Military

1992

Mittleman, K. D.; Doubt, T. J.; Gravitz, Melvin A. (1992). Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water. Aviation, Space & Environmental Medicine, 63, 689-695.

The efficacy of self-induced posthypnotic suggestion to improve thermogenic responses to head-out immersion in 25 degrees C water was evaluated in 12 males. An online computerized system permitted the change in body heat storage to be used as the independent variable and immersion time as the dependent variable. Two one- hour hypnotic training sessions were used. There were no differences in rates of heat production, heat loss, mean skin temperature, or rectal temperature between control and hypnotic immersions. Individual hypnotic susceptibility scores did not correlation with changes in thermal status. Ratings of perceived exertion during exercise were similar for both immersions, but perceived sensation of cold was lower during the second rest period of the hypnotic immersion. Three subjects used images of warm environments during their hypnotic immersion and lost heat at a faster rate than during control immersions. These results indicate that brief hypnotic training did not enhance the thermogenic response to cool water immersion.

1990

Spiegel, David; Cardena, Etzel (1990, October). New uses of hypnosis in the treatment of posttraumatic stress disorder. Journal of Clinical Psychiatry (Supplement), 51, 39-43.

Vietnam veterans with PTSD and those abused as children have above average hypnotizability. Hypnosis provides controlled access to memories that may otherwise be kept out of consciousness. New uses of hypnosis with PTSD victims involve coupling access to the dissociated traumatic memories with positive restructuring of those memories. Hypnosis can be used to help patients face and bear a traumatic experience by embedding it in a new context, acknowledging helplessness during the event, and yet linking that experience with remoralizing memories, such as efforts at self-protection, shared affection with friends who were killed, or the ability to ttheenvironment at other times. In this way, hypnosis can be used to provide controlled access to memories that are then placed into a broader perspective. Patients can be taught self-hypnosis techniques that allow them to work through and thereby reduce spontaneous, unbidden, intrusive recollections.

1989

Cooper, Nancy A.; Clum, George A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. Behavior Therapy, 20 (3), 381-391.

14 Vietnam veterans suffering from posttraumatic stress disorder (PTSD) were assigned either to standard treatment (control group), or standard treatment plus imaginal flooding (experimental group). The 2 groups were closely matched on medications and combat roles and tours of duty were comparable. Experimental Ss received up to 14 sessions of flooding for a maximum of one and one-half hours per session. Self-report measures were administered at pre-treatment, post-treatment, and at 3-mo follow-up. These measures included the Behavioral Avoidance Test, the Beck Depression Inventory, and a Modified Vietnam Experiences Questionnaire. Results indicate that flooding increased the effectiveness of usual treatment, particularly in such areas as re-experiencing symptoms and sleep disturbances. However, flooding had no effect on level of depression, trait anxiety, and violence-proneness.

1958

Moss, C. Scott (1958). Therapeutic suggestion and autosuggestion. Journal of Clinical and Experimental Hypnosis, 6 (2), 109-115. (Abstracted in Psychological Abstracts, 62: 3 II 09M)

The author describes the hypnotherapeutic treatment of a 32 year old man with a chronic anxiety reaction dating to the torpedoing of his ship 15 years previous, when only two out of 101 men in his compartment survived. "A frequently expressed objection to the use of hypnosis in psychotherapy is that such treatment is purely symptomatic and temporary. The thesis proposed here is that symptomatic relief is a legitimate therapeutic goal and that hypnosis skillfully applied provides a method of greatly increasing suggestive potency, especially when heterosuggestion is reinforced through the continuous practice of autohypnosis" (p. 109).

1954

Schneck, Jerome M. (1954). The divided personality: A case study aided by hypnosis. International Journal of Clinical and Experimental Hypnosis, 2 (3), 220-232.

"Summary. Amnesia as a symptom assumes proportions more complex than would appear on the surface and the role of memory loss with specific reference to hypnotic recovery methods has been presented in several reports. Hypnotherapy would appear to be a preferred technique for resolving the symptom and at times for more extensive investigation of the underlying problems. The case reported now involved an extensive memory loss for past life, including personal identity. This was followed after nearly a year by recall and concurrent amnesia for the intervening time period. The latter amnesia was dispelled by recall at first under hypnosis and then by post-hypnotic extension and elaboration of the nuclear material. The patient's history was outlined and several facts of apparent

importance in relation to the memory loss were revealed. The purposive and motivational features were stressed. Therapy was conducted in a medico-disciplinary setting with limitations based on administrative requirements. Military-legal complications of the patient's personality disorder and functioning were outlined. The concept of the divided personality was introduced and related to multiple personality and to another type of behavior which is quite similar to the divided personality except that periods of amnesia are not involved. The divided personality involves major cleavages in the continuity of living with amnesia and the establishment of the individual in a setting where he undergoes extensive, significant operations relating to work, general activities, and even courtship and marriage. Unlike the generally accepted attributes of multiple personality involving considerable overt behavior, affect, and attitude alterations, the divided personality continues to function with his accustomed overt attitudes, interests, affect, and method of relating on an interpersonal level. Descriptively and overtly he is not too different if at all, but he seems to begin life anew in terms of setting and personal contacts. Cases of this type should be studied further with care, whenever possible, for further elicitation [sic] of psychodynamics. Hypnosis as a tool in treatment and investigation should prove helpful and is to be considered important.

1953

Conn, Jacob H. (1953). Hypnosynthesis III. Hypnotherapy of chronic war neuroses with a discussion of the value of abreaction, regression and revivication. Journal of Clinical and Experimental Hypnosis, 1, 29-43. (Abstracted in Psychological Abstracts, 53: 6687)

Author's Summary - Three examples of chronic war neuroses which were successfully treated by hypnotherapy are presented. The clinical material would seem to indicate that the patient in the trance state is greatly influenced by the attitude and goal of the therapist and tends to produce the type of material which is expected of him. The protocols reveal that the hypnotized patient responds to a permissive, calm, attitude with relatively little emotional display, and by talking about harrowing war experiences in a matter-of-fact manner.

It would appear that merely to recall the traumatic experience without a personalized, constructive, emotional relation to a supporting, understanding therapist is of little therapeutic value. The crux of the therapeutic problem in every approach, whether it be narcosynthesis, narco-analysis, hypno-synthesis, or the hypnotic intensification of an emotion is to bring about the integration of unbearable experiences which previously had been dissociated and obliterated from memory or which automatically reappear and disrupt smooth ego functioning.

It is postulated that the hypnotic trance state provides a unifying, integrating interpersonal experience which is of value in the treatment of chronic war neuroses.

1947

Kaufman, M. R.; Beaton, L. (1947). A psychiatric treatment in combat. Bulletin of the Menninger Clinic, 11, 1-14.

Describes use of hypnosis in treating "combat fatigue" in field conditions during the Pacific campaign of WWII. Hypnosis was utilized for sleep and rest in tent hospitals in or near combat to avoid chemical sedation as well as for reliving and mastering traumatic events. The milieu was one of expectant recovery with patients pitching tents, digging foxholes and serving as litter bearers. Psychiatric admissions were 12.8% of the total with return to duty rates varying with intensity of combat and duration of campaign with over half returned to combat duty. Four detailed cases are reported.

## Mind-body

1995

Olness, Karen N.; Lee, Lai (1995, November). Effects of self-induced mental imagery on autonomic reactivity in children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

One study that shows an IgA increase with hypnotic suggestion has been replicated and is in press.

The present study emerges from work using hypnosis with biofeedback. Morgan's work with athletes has suggested the relationship between imagery and physiological activation. This has been observed clinically but not heretofore documented.

We are not using formal hypnosis. Each child was asked to think about being in a quiet place, doing exciting activities, baseline, etc. The children exhibited no neurological disorders, cognitive dysfunction, nor were they on medications at time of the study.

We confirmed our clinical experience: there was an increase in pulse rate when imagery changed to activity. Skin temperature continued to go up during the period (despite imagery of being active like being on roller coaster). Skin conduction went down during baseline. EDA [electrodermal activities] was higher during active imagery.

How do average daily thinking processes impact on autonomic changes over long periods of time? Do these changes affect cardiovascular status?

Clinically we observed that some children are more labile in different modalities, and under stress they react more in that system.

1993

Covino, Nicholas A.; Frankel, F. M. (1993). Hypnosis and relaxation in the medically ill. Psychotherapy and Psychosomatics, 60, 75-90.

Interest in the application of hypnotic techniques for patients with medical disorders seems to rise and fall over the years. Enthusiasm for this work comes both from patients and from clinicians. Often, however, these techniques are offered without regard to the psychological theories that should inform their operation and the limits that clinical and experimental research suggest. This article offers a brief description of the elements of hypnosis and a review of the history of the use of

hypnotic techniques with a variety of medical problems, including asthma, habits, pain, cardiology, surgical preparation, irritable bowel syndrome, persistent nausea and vomiting, trichotillomania, and infection and immunity. Special attention is placed on the psychological and physiological principles that help to establish the valid use of hypnotherapy.

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

Hall, Howard R.; Papas, Angela; Tosi, Michael; Olness, Karen (1993, October). Bi-directional changes in neutrophil adherence following hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

At the last time that I presented a paper, I talked about the neutrophil. The neutrophil is a model of convenience because it responds quickly to psychological interventions, it is important in upper respiratory infections, and it can be measured reliably in vitro.

We had found that Ss with two weeks of relaxation/imagery training showed an increase in stickiness of neutrophils. We wanted to replicate and extend that study. We wanted one group to increase, another group to decrease, stickiness in neutrophils. There were a total of three groups, including a resting control group. The model of investigation involves two weeks of training in self hypnosis or simply resting.

**Session 1**

**1 week of practice**

**Session 2**

**Results.** The Control group increased adherence in neutrophils. The imagery-increase group and imagery-decrease group both decreased adherence. (In the first study the controls had no previous experience in relaxation. Also, the experimental group that was tested showed a decrease in first week and increased in the second week.)

Imagery is work, and that may result in less adherence. Pulse rate increased for the group trying to increase stickiness, in Session 1--implying less relaxation for them.

Hypnotizability (measured with the Pennsylvania State University Scale) was not correlated with increase in neutrophil adherence.

**Olness, Karen N. (1993, October). Intentional immunomodulation - does it exist?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

Robert Ader coined the term psychoneuroimmunology. The immune system is modulated by feedback mechanisms mediated via neural and endocrine processes, and by feedforward mechanisms, as well (see the second edition of Ader's book).

Ader, Grotta, and Cohen have shown that the immune system of animals also can influence behavior (e.g. genetic influences on preference for chocolate). She thinks this should be considered in designing controlled studies.

In her review of studies, some investigators request Ss to focus on changing an immune parameter; others to "relax." There is evidence for intentional influence on the immune response. Black in England and Good in the U.S. presented studies (Manteaux, histamine sensitivity, etc.) and all were laboratory studies.

Olness (1986) worked with children: they were given self hypnosis practice with instructions to "increase the immune stuff in your spit." This suggestion or request resulted in an increase in saliva IgA. [N.B. In giving suggestions to children, don't use the words "I want you to ..." because that phrasing may arouse resistance.]

The area of hypnosis and suggestion curing warts has a lot of research papers. We are doing a consortium study on treatment of warts with hypnosis and found that basic agreement on methods, such as "how you define a wart," don't exist.

**Patterson, David R. (1993, October). Managing burn pain through hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

Since 1955 there were 13 published reports on managing burn pain through hypnosis, with generally positive results; but almost all were anecdotal, with a lack of standardized measures. Time, location, and duration of the hypnotic interventions were not specified, cost-effectiveness was hard to detect, and medications used were not reported. Publications don't even report the type of hypnotic intervention used.

Hypnosis is indicated for procedural pain more than for during resting periods. Going through dressing changes is typically more painful than the burn itself. Opioid medications don't control all the pain. In our research we use J. Barber's Rapid Induction Analgesia, which entails suggestions for: 1. Slow breathing 2. Going down 20 steps 3. Confusion and amnesia 4. Anchoring post-hypnotic suggestions 5. Touching cue for reinstating the hypnosis 6. Relaxing scenario (Patterson added this to the Barber script) 7. Returning up the steps

This intervention is good because it's replicable, and it's easy to train students to use it. The hypnosis is done the morning before the dressing change.

Instructions for nurses are: 1. Read the card 2. Have patient lie down comfortably, etc. 3. Provide post hypnotic cue (usually a touch on the shoulder)

In the first study we used patients refractory to opioids, and also used a historical control group. This was published in the American Journal of Clinical Hypnosis. Our subsequent study was published in the Journal of Consulting and Clinical Psychology (1992). We stabilized administration of opioids; then patients had hypnosis or anxiolytics or were in the control condition. There was significant reduction in pain for hypnosis.

Patterson et al (current study). Compared Benzodiazapines to hypnosis using four groups: Hypnosis plus Lorazepam Hypnosis and placebo Lorazepam Hypnosis attention control and Lorazepam Placebo hypnosis and placebo pills

Analgesia stabilized on 2 days. There was not an effect, no significant drop in pain scores for either hypnosis or Lorazepam. Perhaps we didn't get a significant drop in pain ratings because in this study we were taking all patients who applied and their initial pain ratings were not as high as in the other study. We have found no relationship or pain reduction with hypnotizability either.

Why did we not get the positive results found previously for hypnosis? There are several possibilities. There is always a trend toward a drop in pain ratings over time. People generally bottom out with a rating of 3 or 4, and it looks like a floor effect. Also, the efficacy of hypnosis may be partly contingent on baseline pain level, and motivation to cooperate with the intervention.

Could there be the same relation to baseline for benzodiazepines?

We have noted that improved application of opioids early on means pain is lower. Marks & Sacher, Annals of Internal Medicine, 1973, indicate physicians under-prescribe opiates. Also Melzack in the Scientific American states this.

We feel that we should not push hypnotherapy so much that we feed in to opioidphobia. Hypnosis is a useful adjunct to opiates. We believe that you should stabilize the patient with opioids, and if they are not responding well, then use hypnosis.

In future research we want to find out which patients do best with hypnosis.

**Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.**

**This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.**

**About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned**

**Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the *\_subjective sense\_ of \_altered state\_ --SSAS [30]*), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.**

**Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.**

**Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more**

aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Ewin, Dabney M. (1992). Hypnotherapy for warts (*verruca vulgaris*): 41 consecutive cases with 33 cures. American Journal of Clinical Hypnosis, 35, 1-10.

Published, controlled studies of the use of hypnosis to cure warts are confined to using direct suggestion in hypnosis (DSIH), with cure rates of 27% to 55%. Prepubertal children respond to DSIH almost without exception, but adults often do not.

Clinically, many adults who fail to respond to DSIH will heal with individual hypnoanalytic techniques that cannot be tested against controls. By using hypnoanalysis on those who failed to respond to DSIH, 33 of 41 (80%) consecutive patients were cured, two were lost to follow-up, and six did not respond to treatment. Self-hypnosis was not used. Several illustrative cases are presented.

"I do not consider self-hypnosis necessary, and I believe it may be contraindicated. Once the change in sensation has been acknowledged by an ideomotor signal, I suggest that the subconscious will take care of healing the warts and that the patient

should ignore them and get interested in other things. Self-hypnosis would require regularly giving attention to the warts, and a high rate of cure is obtained without it. In their controlled study using DSIH with adults, Johnson and Barber (1978) included daily self-hypnosis and got cures in only 3 of 11 (27%) of the hypnotic group. This is the poorest result in the published literature. Their control group of 11 patients was given waking suggestions to 'practice imagining that the specified wart(s) were tingling for a few minutes each day until they were gone' and got no change in 3 months. Hellier (1951) got remission in 27 of 74 (36%) patients just using sham x-ray, (waking suggestion without any self-hypnosis). Spanos et al. (1988) instructed their hypnotic group to 'count their warts every day, and after each counting to close their eyes and spend 3 to 4 minutes imagining the warts on their target hand disappearing.' Only 2 of 8 patients (25%) with a single wart cleared, while 9 of 14 (69%) with multiple warts lost one or more warts at 6- weeks' follow-up. My impression is that conscious daily attention to the lesion is contrary to normal body healing of injuries such as cuts, burns, sprains, in which healing progresses best when ignored while undue attention increases suffering" (pp. 3-4). All Ss were private patients referred for hypnotherapy; most were diagnosed clinically.

"...I found that there were sexual implications in 7 of the 16 miscellaneous warts in patients over 13, so I separated the cases into pre- and postpuberty to evaluate the results" (p. 4).

"An early success was with a medical student (Case 28) with whom I used suggestions of warmth, with the blood vessels dilating and bringing in antibodies, leukocytes, opsonins, etc. Changes were visible in 3 days. This biased me toward using 'warm,' but two of the children (Cases 6 and 9) got no result until I gave them a choice. Using ideomotor signals they chose cold. Only two healed with 'warm,' while five did with 'cold.' All of them had either had the warts cauterized or frozen previously and had a personal feeling about heat and cold. I've learned to give the patient a choice on the first visit" (p. 5).

"Three... were first treated using DSIH without result and later responded to hypnoanalysis. After obtaining an ideomotor signal that there was no more subconscious value to the warts, the suggestion was given that the body's healing processes would take over without any more conscious attention by the patient. No self-hypnosis was prescribed" (pp 7-8).

Gainer, Michael J. (1992). Hypnotherapy for reflex sympathetic dystrophy. American Journal of Clinical Hypnosis, 34, 227-232.

Reflex sympathetic dystrophy (RSD) is an unusual, debilitating, chronic pain syndrome thought to be the result of a continuous excessive discharge of regional sympathetic nerves. Supportive and stress-reduction psychotherapies are commonly recommended as adjunctive treatments. Biofeedback is a more direct symptomatic treatment. Although hypnotherapy is effective in altering sympathetic reflex and pain responses, there are no reports of its use for the treatment of RSD. This article reviews some promising results of hypnotherapy with three RSD sufferers. I discuss

the role of hypnotherapy as a supportive adjunct to medical treatment. I also explore the possible role of hypnotherapy as a complementary treatment. discuss the role of hypnotherapy as a supportive adjunct to medical treatment. I also explore the possible role of hypnotherapy as a complementary treatment.

"Hypothetically, RSD represents a continuous excessive discharge of the regional sympathetic nerves. Such discharge normally occurs in response to an injury. In RSD this reflex response is unremitting despite the cessation or absence of an external stimulus" (p. 227).

The psychosomatic aspects of RSD are highly disputed. Some studies suggest a relationship between RSD and various psychopathological conditions. Also proposed is a predisposing character type, sometimes termed 'Sudeck personality' ... patients who are generally anxious, inactive, and hypertensive. ... Others cite chronic pain as the cause, not the result, of certain 'typical' behavior patterns and emotional responses (Abram, 1990; Ecker, 1984)" (p. 228).

"Reports of four cases described RSD treatment with temperature biofeedback. These studies suggest that the patients learned to warm the affected limb through increasing cutaneous circulation. The temperature change was associated with decreased regional sympathetic activity and decreased pain. Complete remission of symptoms is reported in three of these cases; significant improvement is reported in the fourth" (p. 228).

"Abram (1990) reported that in two independent studies the incidence of RSD was 6.3% and 10.7% of patients admitted to pain clinics" (p. 228).

"I hypothesized that hypnotic interventions could facilitate a decrease in local sympathetic nervous discharge. This would result in vasodilation and warming of the affected limb, decreased spasticity, and decreased pain. The following is a report of the effective treatment of three RSD cases with hypnotherapy" (p. 228).

Case #1. "The eventual resolution of her RSD symptoms was due, in part, to resolution of psychodynamic conflicts. ... She had a grade-four profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). In later sessions she readily demonstrated superior hypnotic capacity, achieving such phenomena as spontaneous amnesia, negative hallucination, and somnambulism" (p. 229).

Case #2. ... "She had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978) Because of the success with the first patient, I used visualization techniques initially. ... She responded more readily to kinesthetic and tactile suggestions. ... These interventions produced dramatic improvement in the RSD symptoms" (p. 230).

Case #3. ... "He had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). He was readily able to use visualization techniques. He was able to affect dramatic temperature changes (8-10 degrees F) by visualizing 'warm' vacation scenes and imagining the feeling of the 'warm sun' on the affected limb" (p. 231).

DISCUSSION mentioned, "The patients presented in this report were all highly motivated and demonstrated an above-average to superior hypnotic capacity. Despite the obvious limitations of such a selective sample, the actual treatment results support the initial hypothesis. The treatment results of these three cases

indicate that hypnotherapy can be an adjunctive treatment to alleviate pain. Moreover, these results indicate that hypnotherapy can be a complementary treatment in RSD.

Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social-cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

1991

Acosta-Austan, Frank (1991). Tolerance of chronic dyspnea using a hypnoeducational approach: A case report. American Journal of Clinical Hypnosis, 33, 272-277.

A 48-year-old woman with severe, chronic obstructive pulmonary disease was instructed in the use of peak-flow feedback and hypnotically induced relaxation to reduce the intensity of dyspnea during periods of anxiety. Peak-flow information provided physiologic feedback as well as a safety feature in the event that subjective improvement did not correspond with objective physiologic improvement. I used a progressive relaxation method for inducing hypnosis and gave her suggestions of well-being and muscle relaxation. Peak-flow feedback was useful in enhancing the patient's confidence that hypnotic relaxation was successful in improving respiratory function.

Blankfield, Robert P. (1991). Suggestion, relaxation, and hypnosis as adjuncts in the care of surgery patients: A review of the literature. American Journal of Clinical Hypnosis, 33, 172-186.

He notes that the authors provide little information re complications, and length of stay (LOS) is one of the most sensitive response measures used in these studies. The mean difference in LOS for 5 studies that have randomized assignment is 1.3 days. The N's are 80-100 for 3 of the studies, 39 and 60 for others. For two well controlled studies that did not achieve significance, the N's were 40 and 45. Many studies mixed the diagnosis and types of surgeries, making it difficult to interpret the results

Bodden, Jack L. (1991). Accessing state-bound memories in the treatment of phobias: Two case studies. American Journal of Clinical Hypnosis, 34, 24-28.

Two cases of simple phobia demonstrate the inadequacies of both behavioral and psychodynamic theories. These cases and their treatment outcomes provide support for the state-dependent memory and learning theory. Hypnosis and ideomotor signaling proved to be not only effective treatments but also useful means of illuminating the role and nature of symptom function. Issues of symptom removal and substitution are also discussed in relation to these cases

The authors state that Rossi and Cheek (1988) summarize a number of experimental studies on animal memory that demonstrate that different information substances are involved in different learning situations. For example, ACTH and cortisol are involved in avoidance learning while angiotensin is involved in operant conditioning. In hypnosis, state dependent memory seems to be implicated. "Hilgard (1977) interpreted the state-dependent memory studies by Overton and others as entirely consistent with and supportive of his theory of hypnosis. Milton Erickson (1948) has also strongly suggested that it is the altered levels of arousal and affect that are responsible for the encoding and recall of stress-related problems with hypnosis" (p. 26).

"Affective experiences are apparently stored independently from their intellectual counterparts, or the emotional unit from one set may attach itself to a constellation of cues that make up a totally different cognitive set. Hypnosis may facilitate recall by providing relevant cues during an altered state of consciousness" (p. 27).

"In commenting upon [one of Erickson's cases], Rossi (1986) states that Erickson was effective because he helped the patient access state-bound memories by reviewing the context and sensory-perceptual cues that surrounded their original acquisition" (p. 27).

When traditional behavior therapy fails it may be because the original fear stimulus is state bound or unconscious. What is conscious to the patient are those stimuli that are similar in some important respect to the original phobic stimulus and are acquired by stimulus generalization. Desensitization may reduce the patient's reactivity to the associated or acquired stimuli but cannot desensitize the original stimulus until it can be accessed consciously" (p. 27).

"The two main psychological explanations of phobic behavior are psychodynamic and behavioral. The psychodynamic approach is built upon the early writings of Freud (1956) on the traumatic basis of neurosis. Freud speculated that the intense anxiety (psychic pain) associated with the emotional trauma lead to dissociation, repression, and amnesia. Symptoms represented a dissociated or symbolic vestige of the repressed ('forgotten') trauma.

"Behavioral explanations (e.g., Rimm & Masters, 1974) are built upon classical and operant conditioning models of learning. Classical conditioning explains how a neutral stimulus (e.g., a bridge) can acquire reactivity and elicit a fear response. Avoidant behavior, which preserves the phobia, is acquired and maintained by operant conditioning. Treatment apparently involves gradual extinction of the fear response.

"These two divergent explanations have spawned quite different therapeutic approaches, with the behavioral approach (systematic desensitization) demonstrating greater empirical support for its effectiveness (Kaplan & Sadock, 1986). The problem is made complex theoretically by the fact that desensitization doesn't always work, even when applied in a competent fashion" (p. 25).

"Freud's early work on the traumatic basis of neurosis pointed to but offered an incorrect explanation of phobias whose origins were unconscious or state bound (i.e., not available to recall during the normal conscious state)" (p. 25).

Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co..

Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for

consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.

The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

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The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209).

Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action.

The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a 'distributed society of specialists that is equipped with a working memory, called a global workspace, whose contents can be broadcast to the system as a whole (p. 42)'" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

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Grossarth-Maticek, R.; Eysenck, H. J. (1991). Creative novation behaviour therapy as a prophylactic treatment for cancer and coronary heart disease: Part II - Effects of treatment. Behaviour Research and Therapy, 29, 17-31.

Reports on what they call creative novation behavior therapy or "autonomy training" to prevent cancer and coronary heart disease in prone individuals. This individually tailored cognitive-behavioral program includes the use of hypnosis and of imagery. When administered individually (20-30 hours) in a group (6-15 sessions of up to several hours) or via bibliotherapy with 4-6 hours of individual therapy, the outcome was better than that of control subjects. After 13 years, 45 of 50 cancer-prone subjects in individual treatment were still alive (and none of the 5 deaths were from cancer), while among 50 control subjects, 31 died, 16 from cancer. This study along with Spiegel et al. (1989) article in Lancet have important implications for health care.

Hopkins, Mildred B.; Jordan, Jeanette M.; Lundy, Richard M. (1991). The effects of hypnosis and of imagery on bleeding time: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 134-139.

2 studies are reported, one using hypnotized Ss selected on hypnotizability and one using Ss selected on imagery vividness, whose purpose is to examine whether non-patient Ss can control their bleeding in a laboratory setting. All Ss were cut on both arms with the "Surgicutt" device, an instrument that automatically makes a cut that will bleed from 2 to 10 minutes. Results suggest that Ss, who are instructed to reduce the bleeding time in one arm and to let the other arm bleed normally, are not able to control bleeding time.

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Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

Palan, Bhupendra M.; Lakhani, Jitendra D. (1991). Converting a 'threat' into a 'challenge': A case of stress-related hemoptysis managed with hypnosis. American Journal of Clinical Hypnosis, 33 (4), 241-247.

A 24-year-old patient was treated using hypnosis for chronic repeated episodes of hemoptysis. The symptom episodes were related to academic examinations (perceived as a threat by the patient). Clinical examinations and laboratory investigations failed to indicate an organic cause for hemoptysis. He did not respond to empirical treatment trials. These negative findings suggested the psychosomatic nature of the illness. We used hypnotherapeutic ego-strengthening and guided-imagery approaches. This reduced his acute anxiety but failed to check hemoptysis. Use of explorative hypnotic dreaming revealed an emotional trauma as the possible cause of origin of the symptoms. We restructured the trauma experience during hypnotic regression. We advised him to skip the upcoming examination and conducted a total of six therapeutic sessions. The patient continued using self-hypnosis throughout the follow-up period of 3 years during which he remained symptom free and achieved remarkable academic progress. He now perceives an examination as a challenge.

1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each \_cell\_ is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're \_both\_ going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific

suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespectively whether they are of opioid or nonopioid nature)" (p.550)

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.

This chapter is a reprint of an article published in the American Journal of Clinical Hypnosis in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Lazarus, A. A.; Mayne, T. J. (1990). Relaxation: Some limitations, side effects, and proposed solutions. Psychotherapy, 27, 261-266.

Deep-muscle relaxation has been widely regarded as anxiety inhibiting, and the relaxation response an antidote to tension and stress. However, some relaxation techniques have been shown to have negative effects. These include relaxation-induced anxiety and panic, paradoxical increases in tension, and parasympathetic rebound. Specific indications and contraindications are discussed.

The following unpleasant side effects have been observed: "unpleasant sensations of heaviness, warmth, perspiration, tingling, numbness, dizziness, floating, coolness; paradoxical increases in tension; rapid heart rate; feelings of physical and psychological vulnerability; depression; fear of losing control; depersonalization; dissociation; myoclonic jerks; spasms; headache; akathisia; negative auditory, gustatory, and olfactory reactions; intrusive images and thoughts; anxiety; irritability; guilt; regressive urges; hallucinations; and panic" (p. 261).

People have been observed to have "negative or untoward reactions to meditation ([Lazarus, 1976]; French, Schmid & Ingalls, 1975; Kennedy, 1976), relaxation (Borkovec & Grayson, 1980; Carrington, 1977; Edinger & Jacobsen, 1982), and biofeedback (Miller & Dworkin, 1977). In his doctoral dissertation Heide (1981) found that more than half of his subjects under focused relaxation reported increased tension due to the relaxation session. Recently, the concept of RIA--relaxation-induced anxiety--has appeared in the literature (Heide & Borkovec, 1983; 1984). Clients suffering from generalized anxiety appear to be especially prone to RIA" (pp. 261-262).

Others have suggested that relaxation may be counterindicated for asthmatics, because the small airways dilate with sympathetic nervous system arousal. The specific instructions of autogenic training may be counterindicated for patients with gastrointestinal disease because focusing on a sense of warmth in the abdomen tends to produce more peristalsis, increased blood flow in the gastric mucosa, and acidity in the gastric juice (Luthe & Schultz, 1979). Even the standard relaxation therapy for tension headache (as well as other pain problems) is being replaced with cognitive behavioral therapy, which may have relaxation as only one component. "The point again is that relaxation is not a panacea, and that an informed selection and administration of treatments is mandated, even in disorders where relaxation has traditionally been held second only to medication" (p. 264).

Interviews suggest people with relaxation induced anxiety (RIA) fear losing control. "Some are afraid of heightened arousal; others refer to helplessness, depression, some unidentified internal or external danger, a fear of going crazy, a negative association with anesthetics, a fear of falling from heights, plus any number of catastrophic expectations (Chambless & Goldstein, 1980)" (p. 264). Lazarus recommends that if someone displays RIA, the therapist may try alternative techniques, which might include for example tensing-relaxing muscles, passive receptivity, positive or pleasant imagery, focus on breathing, subvocal monotonous chant or mantra, or the Vipassana meditation practice of achieving awareness of spontaneous sensations and thoughts. The relationship with the therapist,

differences in room illumination, amount of time per session, and sitting or reclining may be important.

"If a therapist deduces that a client is likely to derive benefit from relaxation training, three obvious questions arise: (1) Which of the many types of relaxation training programs is this particular client likely to respond to? (2) How frequently, and for what length of time, should the client practice the selected relaxation sequence? (3) Will treatment adherence be augmented or attenuated by the supplementary use of cassettes for home use?" (P. 262).

The authors describe their Structural Profile Inventory (SPI; Lazarus, 1989), a 35-item questionnaire, which may be used to predict the preferred sequences and forms of relaxation to employ with individual clients. "A predominantly imagery/sensory reactor, for example, may do well with visualization and autogenic training, whereas a highly active/cognitive client might be better advised first to engage in strenuous exercise followed by calming self-statements (Zilbergeld & Lazarus, 1988)" (p. 265). They suggest that for those patients who are perfectionistic and simply can't "just let go," they might simply fill a bathtub with warm water and sit in it for 10-20 minutes and rest with a magazine (rather than "relax") once or twice a day.

Mason, Albert A. (1990, January). A psychoanalyst looks at a hypnotist; or, where the elephant skinned boy took me. [Paper] Presented at the Psychoanalytic Center of California Scientific Meeting.

"The results of working with hypnotism experimentally in the production of anaesthesia for surgery, dentistry and obstetrics; in controlled series of treatments of asthmatics, skin disorders, and allergic manifestations; as well as its clinical use, have convinced me that it is a delusional state akin to mania which depends on the omnipotent denial of mental pain. The mania is stimulated by the hypnotized subject having phantasies of an omnipotent object that it fuses with and shares in the omnipotence. The hypnotist has similar unconscious phantasies about himself. Both subject and hypnotist projectively identify with each others' phantasies, and together produce phenomena like anaesthesia which can be likened to delusional states. In fact, true hallucinations can also be deliberately produced.

"I believe that similar psychotic mechanisms can also occur in life between parents and children and in other relationships, and produce delusional states. These form a continuum from intractable narcissism on the one side, through Christian Science and the denial of evolution in the center, to frank folie a deux and transexualism on the other side. The therapeutic course of these states seems quite dissimilar from that of psychosis arising without the encouragement of external objects."

Prior, A.; Colgan, S. M.; Whorwell, P. J. (1990). Changes in rectal sensitivity after hypnotherapy in patients with irritable bowel syndrome. Gut, 31, 896-898.

Fifteen patients with irritable bowel syndrome were studied to assess the effect of hypnotherapy on anorectal physiology. In comparison with a control group who received no hypnotherapy, significant changes in rectal sensitivity were found in patients with diarrhoea-predominant irritable bowel syndrome both after a course

of hypnotherapy and during a session of hypnosis ( $p < .05$ ). Although patient numbers were small, a trend towards normalization of rectal sensitivity was also observed in patients with constipation- predominant syndrome. No changes in rectal compliance or distension-induced motor activity occurred in either subgroup nor were any changes in somatic pain thresholds observed. The results suggest that symptomatic improvement in irritable bowel syndrome after hypnotherapy may in part be due to changes in visceral sensitivity  
Sensitivity.

This research involved 15 patients diagnosed with irritable bowel syndrome (IBS), which was defined as abdominal pain with abdominal distension and 'an altered bowel habit'--10 had diarrhea mostly and 5 had constipation mostly. Patients with this disease usually have an exaggerated colon sensitivity to many different stimuli, as well as lower threshold to a balloon inflated in the bowel for diagnostic purposes. The patients were treated with ten sessions of hypnosis, 30 minutes each, over a three month period. Dependent variables included self ratings of abdominal pain, abdominal distention, and 'bowel habit disturbance.' Each of the three variables received a score of 0-10; the total score therefore could range from 0-30.

Other ratings were obtained using the inflation of a rectal balloon as stimulus. "After a basal period of at least 15 minutes the rectal balloon was serially inflated with air at intervals of 1 min in 20 ml increments up to 100 ml and then in 50 ml increments up to the sensation of discomfort. The study was repeated after a rest period of 15 minutes. After hypnotherapy the S was restudied first in the waking state and then, after 15 min, following induction of hypnosis" During this procedure they measured balloon volume, rectal compliance (a function of volume and pressure), and presence or absence of repetitive rectal contractions.

In order to learn whether the analgesia being experienced in the rectal or bowel area transferred to other areas, patients experienced cold water immersion induced pain on one hand, for a measure of time until discomfort was felt (pain threshold, essentially).

The control group of 15 patients diagnosed with IBS received the same measures of balloon volume, rectal compliance, and presence or absence of repetitive rectal contractions.

The total symptom score (which might have ranged 0-30) dropped from 23.5 to 9.6, and 13 of the 15 patients rated their symptoms as much improved. The two Ss who did not experience improvement also did not return for the assessment using the balloon. Therefore, the physiological assessment included only 13 Subjects, the ones who rated themselves as 'improved.'

"In patients with diarrhoea-predominant irritable bowel syndrome a decreased rectal sensitivity occurred after hypnotherapy which was significant for the sensations of gas and urgency. This was most pronounced in patients who could initially tolerate only small rectal balloon volumes (Fig 1). During hypnosis the results for rectal sensitivity in the diarrhoea-predominant group were similar to those noted after the course of hypnotherapy but were of a greater magnitude, reaching significance for all sensations (Fig 2).

**"In the constipation-predominant Subjects there was a tendency for rectal sensitivity to move towards normal values both after the course of hypnotherapy and during hypnosis. Patient numbers in this subgroup were small, however, and the changes were not significant (Figs 1 and 2). Rectal compliance and distension induced motor activity were unaffected by hypnotherapy in both the diarrhoea and constipation- predominant patients" (p. 897).**

**It was noted that of patients who had manifested depression and/or anxiety (8 of 13), most showed psychological improvement--3 of them to a great degree--but there was no correlation between psychological improvement and the degree that visceral sensitivity was diminished. Also, the ten sessions of hypnotherapy did not affect length of time subjects could tolerate hand immersion in cold water.**

**"In the control group of 15 patients with the irritable bowel syndrome who did not receive hypnotherapy no changes in rectal sensory or motor parameters occurred when manometry was repeated on the same day or on a second study day nine to 12 weeks later (Table II)" (p. 897).**

**In their Discussion, the authors remark that "hypnotherapy seemed to produce a trend towards normalization of visceral sensitivity (Figs 1 and 2). This was most pronounced in the patients with diarrhoea-predominant irritable bowel syndrome who initially had particularly low sensation thresholds" (p. 898).**

**They continue, "The pathophysiological abnormalities which lead to the symptoms of the irritable bowel syndrome remain unclear. The increased visceral sensitivity found in the large [7-9] and small intestine [18, 19] in some patients with the irritable bowel syndrome may contribute to their perception of pain. In addition, an increase in rectal sensitivity might also contribute to the symptoms of urgency and frequency of defecation seen in many patients with diarrhoea-predominant irritable bowel syndrome. ... Hypnotherapy also induces an improvement in well being by increasing coping capacities, and may therefore decrease perceived stress" (p. 898).**

**"The present study suggests therefore that hypnotherapy might operate by a variety of mechanisms in patients with the irritable bowel syndrome. In those with visceral hypersensitivity it seems to alter the perception of rectal sensation, although the mechanism by which this is achieved is unknown. Modification at a cortical level or more locally along afferent pathways are possibilities. This does not, however, explain the symptomatic improvement in all subjects and hypnotherapy is probably also acting in a non-specific psychotherapeutic sense" (p. 898).**

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1989

Alvarado, C. S. (1989). Dissociation and state-specific psychophysiology during the nineteenth century. Dissociation, 2, 160-168.

Reviews examples of state-specific psychophysiology in nineteenth century reports of dissociative disorders. These cases occurred in the context of rapid developments both in neurology and in the understanding of phenomena suggesting the possible influence of the mind, emotions, or psychological states on general health and specific bodily functions (e.g., the study of hypnosis and hysteria). It is argued that interest in such cases was part of a general concern with mind/body interactions. The explanations offered to account for these cases reflected different orientations to the mind/body problem prevalent during this era.

Barabasz, Arreed F.; Barabasz, Marianne (1989). Effects of restricted environmental stimulation: Enhancement of hypnotizability for experimental and chronic pain control. International Journal of Clinical and Experimental Hypnosis, 37, 217-231.

Enhancement of hypnotizability and pain tolerance has been demonstrated using restricted environmental stimulation therapy (REST) with university students as Ss (A. F. Barabasz, 1982). The purpose of the present study was to determine whether or not similar results could be obtained with chronic pain patients. Ss consisted of outpatients in treatment for conditions in which pain is prominent who also demonstrated low hypnotizability after repeated hypnosis plateau sessions. 2 groups of Ss were exposed to REST. Situational demand characteristics (Orne, 1962) favored an increase in hypnotizability for REST Group 1 (high demand). REST Group 2 (low demand) was exposed to situational demand characteristics designed to disguise the experimental hypothesis. 2 groups of control Ss were exposed to the same alternative demand characteristic manipulations as the experimental groups, but environmental stimulation was maintained. The Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and E. R. Hilgard (1962), including a posthypnotic suggestion for an anesthetic reaction, and an ischemic pain test were administered prior to treatment and again immediately following treatment. After 6 hours of REST, significant increases in SHSS:C scores were found for high-demand and low-demand experimental Ss, as well as for high-demand control Ss. No such increase was found for low-demand controls. Significant decreases in pain scores were found for both high- and low-demand experimental groups. No significant pain score decreases were found for either

control group, suggesting a relatively weak effect of demand characteristics. An independent postexperimental inquiry suggested all Ss believed they received active treatments. The inquiry, conducted 10-15 days after the experiment, also revealed a majority of experimental Ss were using hypnosis on a daily basis to reduce pain with a substantial decrease in pain medication. Only 2 control Ss (highest in hypnotizability) reported similar success. Anecdotal reports of pain reduction experiences using hypnosis after REST intervention were supportive of E. R. Hilgard's (1977) neodissociation theory.

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The authors note that because they used the posthypnotic suggestion of anesthesia for all Subjects, "it is not possible to determine whether the lowered pain reports of REST Ss were due to the posthypnotic suggestion because of enhanced hypnotizability or whether the lowered pain sensitivity was a nonsuggested collateral consequence of REST" (p. 226).

The data support the conclusion that REST enhances hypnotizability and concomitantly decreases ischemic pain reports after a posthypnotic suggestion. This effect, of course, may or may not be mediated by a response to hypnotic suggestion. "It is important to recognize the quality of the anecdotal pain control reports as

remarkably consistent with E. R. Hilgard's (1977) neodissociation theory of hypnosis. Successful pain controllers did not anesthetize their clinical pains, as asked to do for the ischemic pain, but rather dissociated their pain to other parts of their bodies or outside their bodies" (p. 227).

Griffiths, M. D.; Gillett, C. A.; Davies, P. (1989). Hypnotic suppression of conditioned electrodermal responses. Perceptual and Motor Skills, 69, 186.

With 5 subjects who had previously been aversively conditioned to a stimulus, during hypnosis previously acquired electrodermal responses were found to be significantly lower than in 12 control Ss. Thus previously conditioned electrodermal responses were suppressed. This contradicts findings of Edmonston (1968) who found that neutral hypnosis does not influence conditioned electrodermal responses and the validity of Pavlov's (1927) conditioning (inhibition) theory of hypnosis.

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

Hall, Howard R. (1989). Research in the area of voluntary immunomodulation: Complexities, consistencies, and future research considerations. International Journal of Neuroscience, 47, 81-89.

It is speculated that the successful voluntary alteration of one's immune functioning is a complex phenomenon associated with a number of possible factors. Evidence suggests the importance of prior experience in self-regulation and the role of practice, the ability of subjects to become relaxed and reduce sympathetic arousal, the importance of the nature and content of images, the complex role of hypnosis and hypnotizability, the importance of individual differences, and the choice of immune measures. Conclusions are drawn about the need for more experimental attention to these variables and future research with both experienced and inexperienced subjects.

Harvey, R. F.; Hinton, R. A.; Gunary, R. M.; Barry, R. E. (1989). Individual and group hypnotherapy in treatment of refractory irritable bowel syndrome. Lancet, 1 (8635), 424-425.

Thirty-three patients with refractory irritable bowel syndrome were treated with four 40-minute sessions of hypnotherapy over 7 weeks. Twenty improved, 11 of whom lost almost all their symptoms. Short-term improvement was maintained for 3 months without further formal treatment. Hypnotherapy in groups of up to eight patients was as effective as individual therapy.

## DISCUSSION

The mechanisms by which hypnotherapy improves symptoms of IBS remain unclear. A placebo effect alone is unlikely, because few patients who improved on hypnotherapy suffered a relapse after formal treatment ended at 7 weeks; many patients continued to improve after the end of formal treatment. There was no disproportionate improvement in the feeling of wellbeing of patients who improved, and most of the patients who became nearly symptom-free had no initial tension or anxiety, as judged by GHQ scores. This suggests that the treatment is not just producing a psychological effect.

The effects... were less striking than those reported by Whorwell and colleagues. Nevertheless, the results were encouraging because all 33 had been refractory to conventional medical treatment."

Holroyd, Jean; Maguen, Ezra (1989). And so to sleep: Hypnotherapy for lagophthalmos. American Journal of Clinical Hypnosis.

We used hypnosis to facilitate eye closure during sleep for a 44-year-old woman whose nocturnal lagophthalmos prevented use of a contact lens following cataract surgery and could have resulted in severe corneal damage. On three separate occasions the symptoms remitted following a very brief course of treatment. We discuss the results in terms of alternate theories of hypnotic performance.

The Discussion section notes, "There was an excellent correlation between the onset of hypnotherapy and the cessation of the recurrent corneal erosion secondary to nocturnal lagophthalmos. Healing of corneal erosion, disappearance of the superficial punctate keratopathy, and alleviation of ocular foreign body sensation occurred promptly following hypnotherapy (with two separate therapists)" (pp. 267-268). The authors present the view that "heightened suggestibility, more vivid imagery, and more specific influence of thoughts upon organ systems probably came into play (Brown & Fromm, 1986; Holroyd, 1987). Social influence explanations (role taking, expectancy, compliance) seem less relevant as explanations. This highly motivated patient had not been able to keep her eyes closed during sleep despite her conscious efforts, her "good-patient" role, her positive expectations about the benefits of standard treatments, and respectful incorporation of the assistance provided by her ophthalmologist" (p. 268).

Jirout, J. (1989). Reaction of the cerebral vertebrae in imagined changes in the shape of the cervical spine. Ceskoslovenska Neurologie a Neurochirurgie, 52, 75-77.

Postural reaction of the cervical vertebrae on imagined, but actually not performed, changes in the shape of the cervical spine in the sagittal plane are described. The percentage of reacting vertebrae is relatively high. The findings seem to indicate that, (1) the described phenomena belong to the constant features of the spinal dynamics, (2) that there probably exist residual traces of preceding activities, and (3) that these changes are due to the activation of the polymetameric system of the intrasegmental muscles. Abstracted in *American Journal of Clinical Hypnosis*, 1990, v. 32, p. 213.

Klein, Kenneth B.; Spiegel, David (1989). Modulation of gastric acid secretion by hypnosis. *Gastroenterology*, 96, 1383-1387.

"The ability of hypnosis to both stimulate and inhibit gastric acid secretion in highly hypnotizable healthy volunteers was examined in two studies. In the first, after basal acid secretion was measured, subjects were hypnotized and instructed to imagine all aspects of eating a series of delicious meals. Acid output rose from a basal mean of 3.60 to 6.80 ... with hypnosis, an increase of 89% ( $= .0007$ ). In a second study, subjects underwent two sessions of gastric analysis in random order, once with no hypnosis and once under a hypnotic instruction to experience deep relaxation and remove their thoughts from hunger. When compared to the no-hypnosis session, with hypnosis there was a 39% reduction in basal acid output ... and an 11% reduction in pentagastrin-stimulated peak acid output ...  $p < .05$ . We have shown that different cognitive states induced by hypnosis can promote or inhibit gastric acid production, processes clearly controlled by the central nervous system. Hypnosis offers promise as a safe and simple method for studying the mechanisms of such central control."

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Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. *Zeitschrift für Psychosomatische Medizin und Psychoanalyse*, 35, 48-58.

Regional cerebral blood flow (rCBF) was measured by means of the <sup>133</sup>Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the

left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

Murphy, A. I.; Lehrer, P. M.; Karlin, R.; Swartzman, L.; Hochron, S.; McCann, B. (1989). Hypnotic susceptibility and its relationship to outcome in the behavioral treatment of asthma: Some preliminary data. Psychological Reports, 65, 691-698.

Twelve subjects from an experiment on relaxation therapy for asthma were given the Harvard. Hypnotizability was positively correlated, at a borderline significance, with improvement in the methacholine challenge test, a measure of asthma severity. Performance on the amnesia item of the Harvard was correlated with improvement in self-reported symptoms of asthma.

Reid, S. (1989). Recalcitrant warts: Case report. British Journal of Experimental and Clinical Hypnosis, 6, 187-189.

Recalcitrant warts which persisted for 5 years despite treatment cleared in 51 days with hypnotherapy. A cause/effect relationship between hypnotherapy and resolution was shown by at first excluding and then including the left hand from the suggestions given.

Rossi, Ernest L. (1989). Mind-body healing, not suggestion, is the essence of hypnosis: Invited discussion of Cohen's 'Clinical uses of measures of hypnotizability'. American Journal of Clinical Hypnosis, 32 (1), 14-15.

Initially, the 'classical' hypnotic phenomena were observed as part of normal or abnormal behavior, and then later it was noted that these phenomena could often be elicited with 'suggestion.' Therefore suggestion is not a necessary cause for the classical hypnotic phenomena. The mind-body connection has in recent years been under-emphasized by those who developed scales of hypnotizability, whereas James Braid (who originated the word 'hypnosis') wrote about 'psychophysiological' phenomena, and Wetterstrand (1902) distinguished between suggestibility and mind-body interaction (p. 14).

wrote about 'psychophysiological' phenomena, and Wetterstrand (1902) distinguished between suggestibility and mind-body interaction (p. 14).

"Wetterstrand (1902), who was one of Bernheim's foremost students, made a careful distinction between suggestibility and mind-body communication (what he termed the 'ideo-plastic faculty') that has been ignored by the makers of hypnotic susceptibility scales:

'Suggestion, or rather suggestibility, is composed of two elements: an ability to receive an impulse from without and the ideo-plastic faculty. As these are absolutely independent of each other, we must distinguish between them. There are patients who are very impressionable and who accept a suggested idea with absolute confidence; the influence, however, of the idea upon their physiological functions is feeble. They do not realize the suggestions and their morbid symptoms yield with

great difficulty, as their ideoplastic conception is small. Others, on the contrary, accept suggestions slowly, are incredulous, and even resist them. Nevertheless, we find that the physiological and pathological processes are easily modified by the psychic influence, sometimes by auto-suggestions''' (Wetterstrand, 1902, p. 14). The author suggests that clinicians need a way of measuring (and facilitating) this type of mind-body communication and healing, which is an interpersonal process, just as suggestibility is an interpersonal process.

1988

Anderson, Edgar L.; Frischholz, Edward J.; Trentalange, Mark J. (1988). Hypnotic and nonhypnotic control of ventilation. American Journal of Clinical Hypnosis, 31, 118-128.

The present study examined the effects of: 1) breathing air versus breathing 5% CO<sub>2</sub>; 2) waking versus self-hypnotic conditions; and 3) neutral versus reduced respiratory rate instructions on four measures of ventilatory functioning (respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Twelve high-hypnotizable normal volunteer subjects were studied in a repeated-measures, multivariate analysis of variance design; Significant main effects were observed for each experimental condition, whereas none of the two or three way interactions proved noteworthy. Breathing 5% CO<sub>2</sub> produced increased ventilatory functions (e.g., increased respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Being in a state of self-hypnosis is associated with reduced respiratory rate, with a significant increase in expired minute ventilation and end-tidal Pco<sub>2</sub>, but with no significant increase in tidal volume. Finally, reduced respiratory rate instructions were effective in significantly reducing respiratory rate and expired minute ventilation when breathing 5% CO<sub>2</sub> as evidenced by increases in end-tidal Pco<sub>2</sub> levels that were used to monitor ventilation outcomes.

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing.

Evans, C.; Richardson, P. H. (1988). Improved recovery and reduced postoperative stay after therapeutic suggestions during general anesthesia. Lancet, 2 (8609), 491-493.

The clinical value of suggestions during general anesthesia was assessed in a double-blind randomized placebo-controlled study. 39 unselected patients were allocated to

suggestion (N = 19) or control (N = 20) groups who were played either recorded suggestions or a blank tape, respectively, during hysterectomy. The patients in the suggestion group spent significantly less time in the hospital after surgery, suffered from a significantly shorter period of pyrexia, and were generally rated by nurses as having made a better-than-expected recovery. Patients in the suggestion group, unlike the control group, guessed accurately that they had been played an instruction tape.

Goldmann, Les; Ogg, T. W.; Levey, A. B. (1988). Hypnosis and daycase anaesthesia. A study to reduce preoperative anxiety and intraoperative anesthesia requirements. Anesthesia, 43, 466-469.

52 female patients having gynecological surgery as day cases received either a short preoperative hypnotic induction or a brief discussion of equal length. Hypnotized patients who underwent vaginal termination of pregnancy required significantly less methohexitone for induction of anesthesia and were significantly more relaxed as judged by their visual analogue scores for anxiety. Less than half the patients were satisfied with their knowledge about the operative procedure even after discussions with the surgeon and anesthetist. A significant correlation was found between anxiety and perceived knowledge of procedures. Results suggest that preoperative hypnosis can provide a quick and effective way to reduce preoperative patient anxiety and anesthetic requirements for gynecological daycase surgery.

Morrison, J. B. (1988). Chronic asthma and improvement with relaxation induced by hypnotherapy. Journal of the Royal Society of Medicine, 81, 701-704.

After one year of hypnotherapy, 16 chronic asthmatic patients inadequately controlled by drugs had a fall in admissions from 44 in the year before starting therapy to 13 in the year after. Duration of stay was reduced for 13 patients by 249 days; prednisone was withdrawn in 6, reduced in 8, and increased in none. Side effects of drugs were reduced. Although 62% reported improvement on a visual analogue scale, observations of air flow gave variable results.

1987

Frankel, Fred H. (1987). Significant developments in medical hypnosis during the past 25 years. International Journal of Clinical and Experimental Hypnosis, 35, 231-247.

Selected significant investigative studies on the use of hypnosis in the medical context over the past 25 years are discussed. The topics covered include anxiety and pain, asthma, migraine, skin disease, burns, nausea and vomiting, surgery, haemorrhagic disorders, and cancer and immunity. The importance of hypnotizability ratings in the methodology is emphasized.

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rapport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Kotses, H.; Rawson, J. C.; Wigal, J. IK.; Creer, T. L. (1987). Respiratory airway changes in response to suggestion in normal individuals. Psychosomatic Medicine, 49, 536-541.

Thirty normal individuals were told they were inhaling a substance that would either cause breathing difficulty (N - 15) or not affect breathing (N - 15). Total respiratory resistance was measured prior to and during inhalation. In reality, the subjects inhaled no substances; inhalation consisted of breathing normally into a respiratory resistance recorder. Individuals who received the former suggestion exhibited increased total respiratory resistance, whereas individuals who received the latter suggestion did not. These observations demonstrated that the ability of suggestion to affect the respiratory airway is not limited to asthmatic individuals

Locke, Steven E.; Ransil, Bernard J.; Covino, Nicholas A.; Toczydlowski, Janice; Lohse, Christopher M.; Dvorak, Harold F.; Arndt, Kenneth A.; Frankel, Fred H. (1987). Failure of hypnotic suggestion to alter immune response to delayed-type hypersensitivity antigens. Annals of the New York Academy of Sciences, 496, 745-749.

The ability to alter delayed-type hypersensitivity via hypnotic suggestion was tested in 12 highly hypnotizable, untrained subjects and 30 non-hypnotized controls. Subjects were skin tested bilaterally with a standardized panel of delayed hypersensitivity antigens and instructed either to enhance or suppress the skin test response (STR) unilaterally. Compared to controls, STR's showed no effect of hypnotic suggestion with regard to either the area of induration or the degree of inflammation assessed histologically

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal

lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

"Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

Pastorello, E. A. (1987). The role of suggestion in asthma. I. Effects of inactive solution on bronchial reactivity under bronchoconstrictor or bronchodilator suggestion. Annals of Allergy, 59, 336-338.

Twenty-eight Ss affected by perennial asthma were selected in order to investigate the possibility of inducing or relieving an asthmatic attack by means of suggestion. 25 were positive to a methacholine challenge test, and among them, 11 reacted to an ultrasonic nebulized distilled water test. The effect of suggestion on airway response was assessed by 8 inhalations of normal saline at 32 degrees Centigrade alternately presented as a bronchoconstrictor or as a bronchodilator drug. 8 inhalations of the same diluent without any psychic stimulus were used as a control test. 7 patients reacted with bronchoconstriction to both positive and negative suggestion and to the control test. Further, this group of patients showed a lower methacholine PD10 when compared with the other Ss. In this study, the effects of suggestion on

bronchial reactivity were not observed and bronchoconstriction belonged to an individual hyperactivity of the airways.

Pastorello, E. A.; Codecasa, L. R.; Gerosa, A.; Buonocore, E.; Sillano, V.; Zanussi, C. (1987). The role of suggestion in asthma. II. Effects of a bronchoconstrictor drug on bronchial reactivity under bronchoconstrictor or bronchodilator suggestion. Annals of Allergy, 59, 339-340.

Previous studies have shown that suggestion may modify bronchial reactivity to both inactive diluents and pharmacologically bronchoconstrictor or dilator substances. In our study, 14 patients were subjected to 2 methacholine -tients were subjected to 2 methacholine challenge tests presented, respectively, as a bronchoconstrictor or as a bronchodilator drug. Forced expiratory volumes in one second were recorded and a PD20 was determined. No significant differences were reported in PD20 values of each patient after the 2 kinds of suggestion.

Patterson, David R.; Questad, Kent A.; Boltwood, Michael D. (1987). Hypnotherapy as a treatment for pain in patients with burns: Research and clinical considerations. Journal of Burn Care and Rehabilitation, 8 (3), 263-268.

Hypnotherapy has increasingly been included in the management of burn patients, particularly in the area of acute pain. To better understand such issues as (1) overall efficacy of hypnotherapy to alleviate acute burn pain, (2) instances in which hypnotherapy is contraindicated, (3) interaction of hypnotherapy with medication, (4) standard induction techniques to use with various age groups, (5) role of nursing and other staff in facilitating hypnotic effects, and (6) future methodological directions, they examined the clinical and methodological merits of recent studies of hypnoanalgesia. A literature search found 17 studies in which hypnotherapy was applied to the management of burns. The literature generally supports the efficacy of this approach to reduce burn pain; however, little else can be concluded from these studies. Several recent studies have applied hypnotherapy to aspects of burn care other than pain using excellent experimental designs. It is suggested that future studies of acute pain management follow suit.

Brink, Nicholas E. (1986-87). Three stages of hypno-family therapy for psychosomatic problems. Imagination, Cognition and Personality, 6, 263-270.

In dealing with psychosomatic complaints it has been found useful and necessary to bring together three stages or techniques of psychotherapy. First, along with teaching relaxation, the therapist directs the client to define the symptom in a symbolic or figurative way describing size, shape, color, consistency, smell, and sound. These descriptors assess intensity and, over time, change in intensity of the symptom. Second, several hypnotic techniques are used to determine the dynamic pattern that has created the symptom. Such uncovered patterns have been found to invariably involve family dynamics. Third, hypnotic and family therapy techniques assist the client in changing the pattern. Examples are presented.

Cerny, M. (1986). Hypnosuggestive interventions in emotional stress and in stress disorders. Activitas Nervosa Superior, 2, 141-143.

This paper represents a review of results using the PSA technique (Posthypnotic Suggestion evoked by Autostimulation) as a means of protection against stress. The best results were obtained in Ss with high susceptibility. This fact limits the practical use of the PSA method. However, this method can serve as a model approach in another more exact study of psychophysiological self-regulatory mechanisms in relation to coping with stress.

Olness, Karen N. (1986, March). Hypnotherapy in children: New approach to solving common pediatric problems. Postgraduate Medicine, 79 (4), 95-105.

Hypnotherapy, once thought of as magical and mysterious, is rapidly becoming accepted as an appropriate form of treatment for a wide range of disorders. Some primary care physicians are beginning to discover the value of hypnotherapy in controlling chronic disease and pain, in changing negative behavior, and in facilitating self-regulation of autonomic responses. Dr. Olness explores such use of hypnotherapy in children, the age-group that most readily acquires self-hypnosis skills and in which this technique has had dramatic results.

1986

Omer, Haim; Friedlander, Dov; Palti, Zvi (1986). Hypnotic relaxation in the treatment of premature labor. Psychosomatic Medicine, 48, 351-361.

Hypnotic relaxation was used as an adjunct to pharmacologic treatment with 39 women hospitalized for premature contractions in pregnancy. The control group received medication alone and consisted of 70 women. Treatment was started at the time of hospitalization and lasted for 3 hr on the average. patients were also given cassettes with a hypnotic - relaxation exercise for daily practice. The rate of pregnancy prolongation was significantly higher for the hypnotic - relaxation than for the medication- alone group. Infant weight also showed the advantage of the hypnotic - relaxation treatment. Background variables of the two groups were compared and it was shown that they could not have explained the treatment effect obtained

1985

Bolocofsky, David N.; Spinler, Dwayne; Coulthard-Morris, Linda (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41 (1), 35-41.

109 17-67 year olds completed a behavioral treatment for weight management either with or without the addition of hypnosis. Results show that, at the end of the 9-week program, both interventions resulted in significant weight reduction. However, at 8-month and 2-year follow-ups, the hypnosis Ss showed significant additional weight loss, while those in the behavioral-treatment-only group exhibited little further

change. More Ss who used hypnosis also achieved and maintained their personal weight goals. It is suggested that hypnosis may have been an effective motivator for Ss to continue practicing the more adaptive eating behaviors acquired during treatment. Findings support the utility of employing hypnosis as an adjunct to a behavioral weight management program. (25 ref)

Finer, B. (1985, August). Altered substance P concentrations in CSF during hypnotic analgesia. [Paper] Presented at the 10th International Congress of Hypnosis and Psychosomatic Medicine, Toronto, Canada.

Substance P is present at many sites of endorphins or enkephalons. Sometimes a strange sleepiness follows triggerpoint stimulation. Acupuncture also may lead to similar changes (e.g. feeling groggy; having difficulty standing - lasts 1-4 hours). If you inject 4 mgms (10 times the ordinary dose) of Naloxone into Ss it leads to groggy sleepiness, for Naloxone-reversed hypnotic analgesia.

Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novamatrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self-hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

1984

Achterberg, J. (1984, October). Cancer, immunology, psychological factors, and imagery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Author developed a way of scoring imagery (which will be published in Imagery and Disease.). In terms of predicting who will die and who will survive, the content of the images doesn't seem to be as important as the quality (strength, vividness, etc.), which supports Bernauer Newton's (1984) findings. "The image seems to be a basic pre-verbal component of our species that has survival value."

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention.

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

Brown, Erick L.; Kinsman, Robert A. (1984). Resolving intractable medical problems through psychological intervention: A clinical report. Psychotherapy, 21, 452-455.

Treatment of chronic physical illness is often complicated by psychological factors that maintain and exacerbate the illness. Hypnotic techniques, coupled with insight-oriented psychotherapy comprised an effective strategy for favorably influencing medical outcome. A clinical report illustrates how psychological intervention initiated the resolution of severe medical problems in an asthmatic patient.

Conn, Lois; Mott, Thurman, Jr. (1984). Plethysmographic demonstration of rapid vasodilation by direct suggestions: A case of Raynaud's Disease treated by hypnosis. American Journal of Clinical Hypnosis, 26, 166-170.

Raynaud's Disease is a painful vasospastic disorder of the fingers and toes precipitated by cold or emotional stimuli. Treatment has usually included protection from cold stimuli and vasodilators. Biofeedback, imagery, relaxation, and hypnosis have also been used. The relationship between response to treatment and hypnotizability has been inconclusive. A case of Raynaud's Disease was treated using hypnosis. The patient was highly hypnotizable and responded rapidly to direct suggestion with a fourfold increase in her blood volume. The implications of this rapid response and its relationship to hypnotizability are discussed with suggestions for further studies.

The authors review experimental literature on the usefulness of hypnosis in modifying peripheral circulation, finding both positive (Barabasz and McGeorge, 1978, Roberts, Kewman, and MacDonald, 1973) and negative (Peters, Lundy, and Stern, 1973; Black, Edholm, Fox, and Kidd, 1963) outcomes. Experiments relating

outcome to hypnotizability also have positive (Block, Levitsky, Teitelbaum, and Valletta, 1977) and negative (Crosson, 1980; Roberts et al, 1973) results.

Clinical literature found that peripheral circulation could be influenced (Crasilneck & Hall, 1975; Norris & Huston, 1956; Jacobson et al., 1973) but none of those studies reported the hypnotizability of the patients. In the Crasilneck and Hall (1975) investigation, 60% of their 48 Raynaud's patients experienced marked improvement in symptoms or remission.

Hypnotizability has been investigated with respect to biofeedback results, finding both no relationship (Holroyd et al., 1982) and a positive relationship (Andreychuk and Skriver, 1975).

In this investigation, the highly hypnotizable (Stanford Hypnotic Susceptibility Scale, Form A, score = 11) female patient was treated with hypnosis when the blood vessels in her hands were constricted. Either she had arrived at the office with poor circulation, or a Raynaud's attack was induced with ice water. Hypnosis involved progressive relaxation followed by suggestions to visualize the blood vessels in her hand opening up, the blood warming and nourishing her hands. "With each beat of your pulse your hand becomes warmer as more blood reaches your fingers. It is as though you are lying in the warm sun. Try to visualize the blood vessels in your hand opening up...." (P. 168).

The patient was asked to use self hypnosis and a cassette of the office session twice a week between sessions, but in fact she either failed to practice or did the exercise once between weekly sessions.

With neutral hypnosis (no specific suggestions about circulation) there was little change in pulse volume; with suggestions to open up her blood vessels, there was an increase in blood volume that began within 20 seconds, reaching four times the baseline in 45 seconds. This increase was reproduced in later sessions, and a somewhat lesser degree of change could be produced with self hypnosis.

In their Discussion, the authors question whether the positive results depend on someone who is high in hypnotizability, and/or on someone with a labile vascular system. They refer to a model of biological information processing to explain how suggestions might have been incorporated by the patient. "Bowers (1977) has speculated that hypnotized patients process information in a way different from when they are not hypnotized. He presents a number of different studies which have shown a significant relationship between hypnotizability and treatment response in patients with illnesses with a clear cut physiological component, including asthma, warts, and ichthyosis. He then speculates that 'suggestions delivered to deeply hypnotized subjects can be transduced into information that is somatically encodable, thereby producing a selective and specific impact on body function and structure.' This kind of processing of information could explain the very rapid response described in the patient presented here.

"In reviewing the cases in which blistering has been produced by hypnotic suggestion, Chertok (1981) states, 'It therefore clearly emerges that these experiments have all been conducted with highly hypnotizable subjects, including a very large proportion of true somnambulists. Inversely, there is not a single

known case where a blister has been produced without the subject having been deeply hypnotized beforehand''' (p. 169).

Elkins, Gary R. (1984). Hypnosis in the treatment of myofibrositis and anxiety: A case report. American Journal of Clinical Hypnosis, 27, 26-30.

A 38-year-old woman with chronic myofibrositis pain was treated by the use of hypnosis and psychotherapy. Hypnotherapeutic techniques, including symptom alteration, relaxation, and insight, are described. This regimen resulted in reduction in pain and emotional distress, which was maintained at three months and one year after treatment.

Gould, Sol S.; Tissler, Doreen M. (1984). The use of hypnosis in the treatment of herpes simplex II. American Journal of Clinical Hypnosis, 26, 171-174.

Hypnosis training was used to treat the painful lesions and emotional symptoms associated with Herpes Simplex II in two females, ages 32 and 26. Three weekly sessions of hypnosis and daily practice sessions were initiated in the first case. During this time, the patient experienced a decline in the subjective level of pain and severity of the lesions, as well as an elevation in mood level. On three-month followup, she reported no pain or skin eruptions and significantly less feelings of stress and anxiety. The second case utilized two sessions of hypnosis and daily practice sessions, and similar results were obtained. A traumatic event caused a relapse in the latter patient, but she was again able to use hypnosis to bring the virus back under control and to experience an elevation in mood level as well. A seven-month follow-up indicated no eruptions and an improvement in self-esteem.

In the first case the tape included ego-strengthening suggestions (Hartland, 1971); another tape used the patient's fantasy of water and snow skiing. The patient felt that hypnosis helped her acquire a more positive attitude toward herself and relief of guilt and blame, as well as an improved ability to cope with the unpleasant sensations.

In treatment session, ego strengthening suggestions were followed by 2 minutes of quiet for integration of suggestions, then visualization used in cancer therapy (Simonton): suggestions of a strong cell structure, perfect skin, hormonal balance, cleanliness, and a cooling refreshed feeling in the area of the vagina and perineum; imagery of internally controlled friendly white sharks was used to "devour" the virus; of water and snow skiing, imagery of cool breezes, white refreshing snow, clean fresh water; visualized herself forgiving and releasing her previous boyfriend of guilt, thereby allowing her anger to abate.

For second patient it was similar, plus visualization of being bathed in white lights and traveling through concentric circles radiating peace and protection, being purified as she traveled through the circles until she emerged as flawless as a diamond, reflecting only clarity and light. Both patients scored 4 on Spiegel's Hypnotic Induction Profile (HIP).

Hall, Howard R. (1984, October). Hypnosis, imagery, and the immune system. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Studied the relationship of hypnosis to immune functions, using imagery methods like the Simontons did with their cancer patients. Twenty normal volunteers were hypnotized and asked to imagine their white blood cells (WBCs) attacking weak germs like strong sharks would attack something, and they were told that the sharks would continue working after they came out of hypnosis (a post-hypnotic suggestion). They were asked to "feel it and experience it any way you can," to avoid emphasizing visual imagery too much. Then they were taught self hypnosis and sent home to practice twice a day for a week.

Three blood measures increased after hypnosis: --B-cells increased with pokeweed stimuli (an allergen) for younger Ss, not older Ss --WBC's increased for highly hypnotizable Ss who were young, not for poor hypnotizable Ss or for any older Ss (Age range was 22-80.) --Lymphocyte count increased, approaching significance for highly hypnotizable Ss who were young but not for poor hypnotizable Ss or for older Ss. A personality test administered before the hypnosis, the SLC-90, suggested that the higher the distress level, the lower the lymphocyte count before hypnosis training. Two scores that summed up the distress level correlated -.49 and -.53, respectively. The psychological distress measured by the personality test decreased after the week of self-hypnosis practice. Of the two scores that summed up distress, one decreased for everyone (General Severity Index) and the other decreased only for highly hypnotizable Ss (Positive Symptom Total). Thus, a week of self hypnosis with imagining one's WBC's eating up weak germs in the blood led to both an increase in immune response indicators and a decrease in psychological distress. Psychological distress decreased as lymphocytes increased.

Dr. Hall repeated these procedures with a small number of Ss who were told just to "lie down and rest" rather than being hypnotized and given instructions to imagine their WBC's increasing. None of the above changes occurred. However, he cautions that his research doesn't indicate whether the positive effects are due to relaxation, imagery, or hypnosis since all three were involved.

Krenz, Eric W. (1984). Improving competitive performance with hypnotic suggestions and modified autogenic training: Case reports. American Journal of Clinical Hypnosis, 27, 58-63.

Although traditionally trainers of athletes have emphasized physiological refinements for the optimal performance of complex motor skills, research has revealed that heightened levels of stress and anxiety may adversely affect performance. As a result, many athletic training programs, taking into consideration the complex interrelationship of the mind and the body, include "mental training" in an attempt to reduce the negative effects of excess stress. These programs have incorporated various psychological interventions such as post hypnotic suggestions, sensory conditioning, and mental imagery and rehearsal. Modified Autogenic Training, a teaching model based on Standard Autogenic

Training, synthesizes the strengths of hypnotic techniques to achieve optimal athletic performance. Athletes trained in these concepts can manage unexpected incidences during competition. The concepts of Modified Autogenic Training are described and four case studies are reported.

Lewith, G. T.; Kenyon, J. N. (1984). Physiological and psychological explanations for the mechanism of acupuncture as a treatment for chronic pain. Social Science & Medicine, 1367-1378.

Many suggestions have been made about the possible mechanism of acupuncture as an analgesic therapy. This review provides a comprehensive account of the neurological, neurohumoral and psychologically-based hypotheses put forward. Although the exact mechanism of this treatment remains unclear, it is apparent that reproducible neurological and chemical changes occur in response to acupuncture, and that these changes almost certainly modify the response to, and perception of, pain. The mechanism of chronic pain is incompletely understood, but within this framework we understand acupuncture as completely as most other types of analgesic treatment.

Newton, Bernauer (1984, October). The use of imagery in the treatment of cancer patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Several hundred cancer patients were treated with the Simonton visualization method, with the additional factor that they were hypnotized for the visualization. In a long term follow-up study, those patients who were treated for at least 6 months and are still alive had imagery that was vivid, persistent, positive, and passive ("passive" here meaning an underlying sense of calm). Those who died had the opposite kind of images, and retrospective review of clinical notes indicates their aggressive images reflected desperation. Of the patients who were treated less than six months, a few lived. Their images also were vivid, persistent, and positive.

Raynaud, Jeanne; Michaux, Didier; Bleirad, Guilhem; Capderou, Andre; Bordachar, Janine; Durand, Jacques (1984). Changes in rectal and mean skin temperature in response to suggested heat during hypnosis in man. Physiology and Behavior, 33, 221-226.

Rectal temperature, mean skin temperature and heart rate were recorded in 7 subjects during hypnosis, induced either alone or while sensations of heat were suggested. During hypnosis alone, a fall in the heart rate of about 10 beat-min<sup>-1</sup> was the only autonomic response observed; body temperatures were unaltered. In contrast, during hypnosis with suggestion of heat, the following changes occurred: (1) Mean rectal temperature decreased 0-.20 degrees C. (p<.05) within 50 min. Its mean time course differed significantly from that for hypnosis alone (p<0.001). (2) Comparison of individual rectal temperature time sequences showed that in fact this temperature only declined in 4 subjects out of 7, and tended to form a plateau

located 0.35 degrees C below the value of the preceding waking state. Despite reinforcement of heat suggestion, the plateau continued until the end of the hypnotic trance. (3) Mean skin temperature tended to rise. (4) When hypnosis with suggestion ceased, both rectal and skin temperatures very slowly returned to their levels during the preceding waking state.

1981

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136.

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6 seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

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The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory.

The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum. ...

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is associated with altered states of consciousness (Tebecis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in

fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that \_hypnosis\_ has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical \_pain\_ were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

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Elkind, Leonard (1981). Effects of hypnosis on the aging process. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (4), 132-137. (Also presented at the annual meeting of the Am Soc of Psychosomatic Dentistry and Medicine in San Francisco, CA)

This study investigated the possibility of altering physiological measures associated with aging through the use of posthypnotic suggestions of increased youthfulness and vitality. Subjects were 20 women ranging in age from 39 to 56 years old. They were tested individually on Morgan's Adult Growth Examination, the AGE. Test-retest scores of the Control group were not significantly different, the median change being zero. The Experimental group, however, showed a decrease in Body Age for all of the subjects, the range of change from -3 to -18 years with a median change of -11 years.

1978

Barber, Theodore Xenophon (1978). 'Hypnosis,' suggestions, and psychosomatic phenomena: A new look from the standpoint of recent experimental studies. In Fosshage, J. L.; Olsen, P. (Ed.), Healing: Implications for psychotherapy (pp. 269-297). New York: Human Sciences Press.

"The first part of this chapter summarizes recent experiments that indicated that suggestions (1) can prevent the skin reaction (contagious dermatitis) that is produced by plants such as poison ivy, (2) can give rise to a localized inflammation of the skin, (3) can stimulate the remission of warts, (4) can ameliorate congenital ichthyosis (fish skin disease), and (5) can stimulate additional growth of the

mammary glands in adult women. The underlying theme throughout the first part of the paper is that "suggestions" (statements that something is occurring or will occur) affect cutaneous and glandular functions when subjects accept the suggestions and incorporate them into their own ongoing cognitions (their ongoing thoughts, images, and feelings). The second part of the paper (1) summarizes recent psychophysiological experiments and biofeedback studies that indicated that our thoughts, images, and feelings affect blood flow to the skin and other organs, and (2) postulates that the aforementioned phenomena produced by suggestions (e.g., the prevention of dermatitis, the production of inflammation, and the remission of warts) may be partly due to the localized alterations in blood flow that occur when the suggestions are accepted and become part of ongoing cognitions" (pp 269-270).

1977

Davidson, R. J.; Goleman, D. J. (1977). The role of attention in meditation and hypnosis: A psychobiological perspective on transformations of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 291-308.

A temporally based scheme for investigation of changes in consciousness, applicable to areas such as meditation and hypnosis, is proposed and is divided into 3 basic epochs: before -- predispositional variables that affect response to consciousness altering techniques; during -- the state effects of the particular technique; and after -- the trait effects of the practice.

Research is surveyed which indicates the role of attentional processes during each of these 3 basic epochs in both meditation and hypnosis. Attentional flexibility is a predispositional variable affecting response to both meditation and hypnosis. The state effects of concentrative meditation involve alterations in stimulus set while the state effects of hypnosis may reflect primarily response set. The trait effects elicited by meditation depend critically on the psychobiological systems which are called into play. Evidence is discussed which suggests that concentrative meditation shares with relaxation an autonomic quiescence, but in addition enhances some attentional skills. A mindfulness technique involving the adoption of a particular attentional stance toward all objects of awareness appears to enhance cortical specificity, but a concentration technique does not. Some implications of attentional self-regulation are discussed.

1976

Barber, Theodore Xenophon (1976). Introduction. Self-control: Temperature biofeedback, hypnosis, yoga, and relaxation. In Barber, Theodore Xenophon (Ed.), Biofeedback and self-control: 1975/76 (pp. xiii-xxix). Chicago: Aldine.

Discusses control of skin temperature, hypnosis, yoga, relaxation, and biofeedback. Concludes that hypnosis is not unique in producing somatic effects.

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

**1974**

**Galín, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583.**

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanism for at least some instances of repression and an anatomical locus for the unconscious mental contents.

**Hilgard, Ernest R. (1974, October). Visceral control through hypnosis. [Paper] Presented at the International Congress of Physiological Sciences, New Delhi.**

The author reviews evidence of hypnosis and/or suggestion effects on skin: removal of warts, raising blisters, controlling chemically induced inflammation, modifying temperature. He concludes that although there may be dramatic results, the contributions of suggestion and hypnosis 'remain ambiguous.'

**1973**

**Roberts, Alan H.; Kewman, Donald G.; Macdonald, Hugh (1973). Voluntary control of skin temperature: Unilateral changes using hypnosis and feedback. Journal of Abnormal Psychology, 82 (1), 163-168**

To demonstrate the ability of human Ss to achieve control over specific autonomic functions, hypnosis and auditory feedback were used to train a select group of hypnotically talented subjects to produce a difference in skin temperature in one hand relative to the other in a direction specified by the experimenter. Large and reliable effects were shown demonstrating that some individuals are capable of achieving a high degree of voluntary control over the autonomic processes involved

in peripheral skin temperature regulation. Individual differences between subjects were noted, and variables that might account for these are discussed.

All Ss felt hypnosis helped (p. 167). However there were no waking control subjects. The study confounds hypnosis with auditory feedback (p. 168). They observed a relationship between hypnotic depth and physiological control.

**1970**

**Bowers, Kenneth S.; Kelly, P. (1970). Stress, disease, psychotherapy, and hypnosis. Journal of Abnormal Psychology, 490-505.**

Presents evidence for the importance of suggestion and hypnotic ability in the healing or amelioration of various somatic disorders. It is argued that even in some treatment interventions that are not explicitly hypnotic, suggestion and hypnotic ability may be hidden factors that help to promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

**1964**

**Black, Stephen (1964). Mind and body. London: Kimber**

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

"There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

1963

Black, Stephen; Edholm, O. G.; Fox, R. H.; Kidd, D. J. (1963). The effect of suggestion under hypnosis on the peripheral circulation in man. Clinical Science, 26, 223-230.

"Summary. 1. The effects on the circulation in the forearm and hand of both direct and indirect suggestion under hypnosis of thermal stimuli have been studied. 2. The induction of hypnosis did not significantly alter the forearm blood flow, but a small reduction in hand blood flow was usually observed. Pulse rate in general slowed slightly as did respiration rate. 3. The effect of body heating on forearm and hand blood flow was not modified by hypnosis. 4. Direct suggestion under not modified by hypnosis. 4. Direct suggestion under hypnosis of body heating or body cooling, with and without body heating, produced only small changes. 5. The changes associated with suggestion were not related to the thermal suggestion. Whatever the suggestion, the usual response was a reduction in hand blood flow and an increase in forearm blood flow. 6. The rise of body temperature with heating was

not modified by direct suggestion, under hypnosis, of body cooling. 7. No change in body temperature could be elicited by suggestion. 8. In a few experiments marked changes in forearm blood flow occurred. These appeared to resemble the changes in the circulation produced by emotional stimuli. 9. The smaller changes more frequently observed were also similar to those produced by mild emotional stimuli" (p. 229). [N.B. The Subjects were normal, healthy adults, N = 9, between 21-45 years old; highly hypnotizable, amnesic for trance.]

Paul, Gordon L. (1963). The production of blisters by hypnotic suggestion: Another look. Psychosomatic Medicine, 25 (3), 233-244.

Presents a critical evaluation of reported attempts to produce nonherpetic skin blisters through hypnotic suggestion. Even though the majority of these reports are grossly lacking in controls, experimental design, etc., and are subject to alternative explanations, the author concludes that skin anomalies have been produced by suggestion in some instances. Additional studies of psychogenic vascular changes add credence to the possibility of central control of these phenomena. It is also concluded that these reactions do not appear to be limited only to hypnotized Ss.

1954

Howarth, Edgar (1954). Postscript to a new theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 91-92.

Referring to a theory of internal and external signalling systems, the author describes situations in which an individual's behavior comes under other than willed control by virtue of external circumstances. "In normal behavior the individual provides his own 'will' and may, to some extent, choose among a variety of alternative action sequences on the basis of guiding integrations between the second (externally directed) signalling system and the primary (internally directed) signalling system. ... it appears that a considerable degree of control may be obtained by the 'top' semantic command system over internal process, particularly those 'inhibited' by the cranial and sacral subdivisions of the 'autonomic' nervous system. .. [In anecdotal case reports] control was gained over breathing, heart rate and bladder and the person may feign death for several days. In such cases surface wounds do not exude other than lymph. The method for such control remains for experimental examination, but a necessary part of the procedure seems to be the use of mild occasional reward during a prolonged period of fasting. Solitary confinement is also necessary and both deserts and prison cells are reported ... to have been used" (pp. 91-92).

Modeling

1986

Gorassini, Donald R.; Spanos, Nicholas P. (1986). A social-cognitive skills approach to the successful modification of hypnotic susceptibility. Journal of Personality and Social Psychology, 50, 1004-1012.

Subjects low and medium in hypnotic susceptibility were administered cognitive strategy and instructional set information and also practiced responding to test suggestions in order to enhance susceptibility. Those in one modification treatment received this information both from the experimenter and by observing a videotaped female model who responded successfully to suggestions and reported on the cognitive strategies she used to do so. Those in a second modification treatment received the information and practice but were not exposed to the model. Low and medium susceptibles in a third condition (practice alone) received a hypnotic induction procedure and practice suggestions but neither modification information nor modeling. No-treatment controls performed a filler task. All subjects were posttested on two different susceptibility scales. Information plus modeling produced significantly greater increments on all objective and subjective indices of susceptibility on both posttests than did practice- alone or control treatments. Susceptibility increments in the information without model treatment always fell between those of the model and practice-alone treatments. In the modeling treatment, over half of the initial low susceptibles and over two thirds of the initial medium susceptibles scored as high susceptibles on both posttests. These findings provide strong support for a social-cognitive skill formulation of hypnotic susceptibility.

Spanos, Nicholas P.; Cross, Wendi P.; Lepage, Mark; Coristine, Marjorie (1986). Glossolalia as learned behavior: An experimental demonstration. Journal of Abnormal Psychology, 95, 21-23.

60 Ss listened to a 60-s sample of glossolalia (defined to them as pseudolanguage) and then attempted to produce glossolalia on a 30-s baseline trial. Afterward, half of the Ss received two training sessions that included audio- and videotaped samples of glossolalia interspersed with opportunities to practice glossolalia. Also, live modeling of glossolalia, direct instruction, and encouragement were provided by an experimenter. Both the trained subjects and untreated controls attempted to produce glossolalia on a 30-s posttest trial. About 20% of subjects exhibited fluent glossolalia on the baseline trial, and training significantly enhanced fluency. Seventy percent of trained subjects spoke fluent glossolalia on the posttest. Our findings are more consistent with social learning than with altered state conceptions of glossolalia.

1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control

The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsiveness was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

1) Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive-behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsiveness" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive-behavioral skill inductions were shown to be equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b)

Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsiveness. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsiveness generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).  
hypnotic response expectancies" (p. 439).

Harris, Gina M.; Johnson, Suzanne Bennett (1983). Coping imagery and relaxation instructions in a covert modeling treatment for test anxiety. Behavior Therapy, 14, 144-157.

The present study compared the efficacy of instructing test anxious subjects to use personalized coping imagery based on nonacademic experiences of competence with coping imagery based on academic experiences of competence. The effect of relaxation was also examined and the relationship of imagery elaborateness and content to treatment effectiveness was assessed. Sixty-three subjects were randomly assigned to one of four treatments or a waiting list control group. Test anxiety as measured by a self-report instrument significantly decreased in all treatment groups. Improvement in grade point average occurred for all treatment groups except for academic coping imagery without relaxation which was also the least efficient treatment. The waiting list control group significantly deteriorated in academic performance. Relaxation training did not appear to enhance treatment effectiveness or influence the elaborateness or content of the imagery used. Test anxiety scenes elicited highly response-oriented images by all subjects. However, the stimulus/response content of the subjects' images was not influenced by treatment outcome. In contrast, successful treatment was primarily associated with reduction in negative coping imagery descriptions, although an increase in positive coping statements cured as well.

1980

Bornstein, Philip H.; Devine, David A. (1980). Covert modeling-hypnosis in the treatment of obesity. Psychotherapy: Theory, Research and Practice, 17 (3), 272-276.

Investigated the efficacy of a covert modeling/hypnosis treatment package in the control of obesity. 48 overweight female volunteers (who had been administered the Harvard Group Scale of Hypnotic Susceptibility, Eating Patterns Questionnaire, and Rotter's Internal-External Locus of Control Scale) were randomly assigned to 1

of the following groups: (a) covert modeling/hypnosis, (b) covert modeling, (c) no-model scene control, and (d) minimal treatment (where Ss received a shortened version of the covert modeling/hypnosis procedure following an 8-wk no-treatment period.) Results indicate a significant effect for weight loss from pretreatment to follow-up across all groups combined. Proportion weight loss measures indicated significantly greater weight loss only for the covert modeling/hypnosis group as compared to the no-model controls. Implications for combining behavior therapy and hypnotic techniques are discussed. (30 ref).

Diamond, Michael Jay (1980). The client-as-hypnotist: Furthering hypnotherapeutic change. International Journal of Clinical and Experimental Hypnosis, 28, 197-207.

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist. Relevant theoretical processes are discussed as are mutual hypnosis, modeling, and the uncommon techniques of Erickson (1964). 3 case illustrations are presented and implications discussed. It is hypothesized that the 'client-as-hypnotist' may in certain special situations further hypnotherapy by: (a) increasing client motivation; (b) enhancing therapeutic rapport; (c) increasing both client trust and skills in utilizing unconscious processes; (d) overcoming resistance and increasing hypnotizability; (e) providing a useful psychodiagnostic and behavior assessment index; (f) presenting a role 'model' for dealing with feelings, alterations in consciousness, and self-control; (g) providing a client-centered framework for subsequent therapeutic interventions; (h) increasing client self-esteem, mastery, and ego strength; and (i) increasing client self-control skills. Potential risks and contraindications for use of the technique are also discussed.

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1977

Botto, R. W.; Fisher, S.; Soucy, G. P. (1977). The effect of a good and a poor model on hypnotic susceptibility in a low demand situation. International Journal of Clinical and Experimental Hypnosis, 25, 175-183.

A review of recent studies reveals that there has yet to be a clear demonstration of a behavioral model affecting hypnotic levels. Two studies were conducted to test whether a peer model who portrayed deep or light hypnosis could affect S hypnotizability under minimal demand conditions. Using a low demand version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the first study showed a difference (Good Model scoring higher than Poor Model) that only approached significance. A replication on a larger sample,

however, showed significantly higher scores for those Ss observing a good model rather than a poor model. Although base scores were not obtained on these Ss, norms from comparable populations suggest that the poor model seems more effective than the good model; but this difference does not appear attributable to differential attitudes created by the models.

Havens, Ronald A. (1977). Using modeling and information to modify hypnotizability. International Journal of Clinical and Experimental Hypnosis, 25, 167-174.

Ss were 117 college students divided into 3 groups. 1 group observed a model being reinforced for hypnotizable behavior, 1 observed a model being punished for hypnotizable behavior, and the third did not observe a model. Previously, each S had completed 1 of 3 randomly-distributed programmed learning texts containing facilitative information about hypnosis, non-facilitative information, or information unrelated to hypnosis. Hypnotizability was subsequently determined by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962). Significantly higher HGSHS:A scores were obtained from Ss exposed to the reinforced model than from Ss exposed to the punished model. Facilitative information yielded higher HGSHS:A scores than non-facilitative or unrelated information. No interaction effects were obtained. In order for individuals to obtain maximum hypnotic responsiveness, it is desirable that members of the general population not be exposed either to hypnotic Ss being punished or ridiculed and that non-facilitative statements be avoided. Facilitative information presented in a programmed-learning-text format may be a useful technique for enhancing hypnotizability.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

Motivation

**2000**

**Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

**This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.**

**1999**

**Bargh, John A.; Chartrand, Tanya L. (1999). The unbearable automaticity of being. American Psychologist, 54 (7), 462-479.**

**What was noted by E. J. Langer (1978) remains true today: that much of contemporary psychological research is based on the assumption that people are consciously and systematically processing incoming information in order to construe and interpret their world and to plan and engage in courses of action. As did E.J. Langer, the authors question this assumption. First, they review evidence that the ability to exercise such conscious, intentional control is actually quite limited, so that most of moment-to-moment psychological life must occur through nonconscious means if it is to occur at all. The authors then describe the different possible mechanisms that produce automatic, environmental control over these various phenomena and review evidence establishing both the existence of these mechanisms as well as their consequences for judgments, emotions, and behavior. Three major forms of automatic self-regulation are identified: an automatic effect of perception on action, automatic goal pursuit, and a continual automatic evaluation of one's experience. From the accumulating evidence, the authors conclude that these various nonconscious mental systems perform the lion's share of the self-regulatory burden, beneficently keeping the individual grounded in his or her current environment.**

Wegner, Daniel M.; Wheatley, Thalia (1999). Apparent mental causation: Sources of the experience of will. American Psychologist, 54 (7), 480-492.

The experience of willing an act arises from interpreting one's thought as the cause of the act. Conscious will is thus experienced as a function of the priority, consistency, and exclusivity of the thought about the action. The thought must occur before the action, be consistent with the action, and not be accompanied by other causes. An experiment illustrating the role of priority found that people can arrive at the mistaken belief that they have intentionally caused an action that in fact they were forced to perform when they are simply led to think about the action just before its occurrence.

In the section on the principle of consistency ("the thought should be compatible with the action"), the authors discuss motor automatisms, including the Chevreul pendulum. "The perceived involuntariness of the movement seems to derive from thought-action inconsistency arising in the sheer unwieldiness of the pendulum. Moving the hand in one direction produces an impulse to the pendulum in the opposite direction, so the control of the movement is like trying to write while looking at one's hand in a mirror. ... The involuntariness of a variety of the motor automatisms appears traceable to movement confusion that interferes with perceptions of consistency (Wegner, in press)" (p. 485). The authors go on to discuss how people in hypnosis come to think that they are automatically doing what the hypnotist suggests. "The development of involuntariness in hypnosis may occur, then, through the learning of a causal interpretation for one's action that leaves out any role for one's own thoughts. This view is consistent with the longstanding notion that hypnosis is an interpretive exercise in which people are encouraged to view their actions as events caused by the hypnotist rather than by their own thoughts (Bowers, 1992; Kihlstrom, 1985; Kirsch & Lynn, 1997). As suggested by Spanos (1982), 'Interpreting behavior as an action involves attributing causality to the self (e.g., I did it), while interpreting it as a happening requires that causality be attributed to sources other than the self (e.g., It happened to me)' (p. 200)" (p. 487).

1997

Barsby, Michael (1997). Hypnosis in the management of denture intolerance. In Mehrstedt, Mats ; Wikstrom, Per-Olof, (Eds.) (Ed.), Hypnosis international monographs : Number 3 : Hypnosis in dentistry (pp. 71-78). Munich Germany: M.E.G.-Stiftung.

Intolerance of dentures may have dental or psychological causes. It is within the latter group of patients, provided that they are genuinely motivated to wear a denture, that the use of hypnosis may be helpful. The importance of careful patient assessment and exploration of appropriate treatment strategies with the patient is emphasised. Principles of treatment including relaxation, controlled breathing, visual imagery and reframing are described. All of these techniques may be used in conjunction with conditioning / desensitisation and a gradual progression to denture wearing.

**Council, James R. (1997). Context and consistency: The Canadian connection. International Journal of Clinical and Experimental Hypnosis, 45 (3), 204-211.**

Issues related to context effects in hypnosis research are briefly reviewed. The contributions of Canadian hypnosis researchers to current theory and research on context effects are acknowledged. Bowers and colleagues at the University of Waterloo emphasized the scope and subtlety of contextual influences on correlates of hypnotic suggestibility, and they promoted the development of a consistency motivation theory of context effects. Spanos and colleagues at Carleton development of a consistency motivation theory of context effects. Spanos and colleagues at Carleton University generalized context effects within the domain of hypnosis, prompting extension of this work to general personality measurement. Implications of findings on consistency motivation for hypnosis research are discussed in terms of person-by-situation interactions. -- Journal Abstract

**Patterson, David R.; Adcock, Rebecca J.; Bombardier, Charles H. (1997). Factors predicting hypnotic analgesia in clinical burn pain. International Journal of Clinical and Experimental Hypnosis, 45 (4), 377-395.**

The use of hypnosis for treating pain from severe burn injuries has received strong anecdotal support from case reports. Controlled studies provide less dramatic but empirically sound support for the use of hypnosis with this problem. The mechanisms behind hypnotic analgesia for burn pain are poorly understood with this patient population, as they are with pain in general. It is likely that, whatever the mechanisms are behind hypnotic pain analgesia, patients with burn injuries are more receptive to hypnosis than the general population. This article postulates some variables that may account for this enhanced receptivity, including motivation, hypnotizability, dissociation, and regression.

**Ready, David J.; Bothwell, Robert K.; Brigham, John C. (1997). The effects of hypnosis, context reinstatement, and anxiety on eyewitness memory. International Journal of Clinical and Experimental Hypnosis, 45 (1), 55-68.**

The effects of hypnosis, context reinstatement, and motivational instructions on accuracy of recall for factual information and facial recognition accuracy following a stressful event were assessed. None of the three techniques had a significant effect on factual memory or susceptibility to suggestion as assessed by true-false and multiple-choice tests. However, participants high in hypnotic susceptibility showed somewhat better memory on the true-false test, and hypnosis affected performance on the two photograph line-ups. In addition, hypnosis appeared to enhance facial recognition accuracy for participants who were low in anxiety, but not for those high in anxiety. Finally, there was evidence of a curvilinear relationship between self-reported anxiety at time of retrieval and facial recognition accuracy. -- Journal Abstract

Ruehle, Beth L.; Zamansky, Harold S. (1997). The experience of effortlessness in hypnosis: Perceived or real. International Journal of Clinical and Experimental Hypnosis, 45 (2), 144-157

Hypnotized individuals who successfully respond to a suggestion typically report that the response requires little or no cognitive effort. It is important, however, to distinguish between whether this effect occurs in actual effort or is only perceived. In addition, the authors distinguish between cognitive effort expended to initiate a response and that required to maintain it. The authors examine the different predictions of four theories-compliance theory, sociocognitive theory (Lynn & Rhue, 1991), Hilgard's (1986) neodissociation theory, and Bowers's (1992) theory of dissociated control-regarding both of these distinctions. Experimental evidence bearing on the various predictions is examined. Additionally, the authors propose a number of design modifications that may help sort out the variables contributing to the effortlessness of the hypnotic response. -- Journal Abstract

1994

Barsby, Michael (1994). The use of hypnosis in the management of 'gagging' and intolerance to dentures. British Dental Journal, 176, 97-102.

Hypnosis is not a therapy but can provide the clinician with a set of techniques which may be used to augment or facilitate a particular course of treatment. The importance of the patient's history and clinical findings in the diagnosis of intolerance to dentures and the selection of patients for hypnosis is discussed. Principles of treatment using relaxation, anxiety control, conditioning / desensitisation and confidence boosting techniques are described. Some examples of typical case histories are used to illustrate the application of a variety of techniques that have been found to be successful.

Wagstaff, Graham F.; Royce, C. (1994). Hypnosis and the treatment of nail biting: A preliminary trial. Contemporary Hypnosis, 11, 9-13.

A clinical trial was conducted examining the relative efficacy of therapeutic suggestions preceded by and without a hypnotic induction in the treatment of nail biting in 17 students. Outcomes showed a hypnotic induction added significantly to therapeutic benefits and was the only condition that resulted in symptom improvement. Results from only one session showed that 7 of 11 hypnosis subjects stopped nail biting compared to only 1 of 6 control subjects. Reports of "believed in efficacy" predicted treatment success better than ratings of motivation, hypnotic induction per se, or scores on the Creative Imagination Scale. However, within the group receiving hypnotic induction, hypnotic- depth scores significantly correlated with treatment success, suggesting that state factors such as dissociation might be involved.

The hypnotized Ss were given the T. X. Barber (1969) induction, a request for their depth estimate on a scale of 0-10, and then a set of suggestions to discourage nail

biting. The suggestions were of four types: (1) to have a positive attitude, that nail biting is a habit that can be broken and that stopping will enhance attractiveness and self esteem; e.g., 'With just a little self control you will stop biting your nails and feel better about yourself.' (2) to stop the habit; e.g. to say to themselves, 'I will not bite my nails today/tomorrow,' five times each morning and at night, and whenever the temptation arose. (3) to improve feelings of self-efficacy; e.g., 'If you ever feel the urge to bite your nails tell yourself that you want to break the habit and that you are perfectly capable of doing so. You are not weak.' (4) that the results would be outstanding; e.g. 'After only ten days or so ... you will have no desire to bite your nails, indeed the very thought of doing so will repulse you.'

Control subjects received the same instructions, without a hypnotic induction; the procedure was labeled a 'positive attitude for self discipline' technique

Judges rated improvement without being aware of the Ss' self-report on whether they had stopped biting their nails. Judges' ratings correlated  $r = .94$  with Ss' statements about whether they had stopped the habit. Improvement scores also correlated significantly with belief the treatment would be effective ( $r = .60$ ) and Creative Imagination Scale scores ( $r = .53$ ), but not with motivation. The hypnosis group had significantly higher belief scores than the control group. Within the hypnosis group itself, hypnotic depth was the only variable to correlate significantly with improvement.

-nificantly with improvement.

The Discussion stated, "However, taken together, the findings indicate that hypnotic induction added significantly to the therapeutic benefits of suggestions for the cessation of nail biting, and that Johnson and Barber's (1978) concept of 'believed-in efficacy' was more important in accounting for therapeutic success than motivation (at least as measured here), hypnotic induction per se, or the subject's proclivity for imaginative involvement. Nevertheless, belief still accounted for less than 40% of the variance in improvement. This may have been due to measurement error or insensitivity in the measures. Alternatively, or additionally, other factors may have been influential. For example, if CIS scores are considered to be indirect measures of hypnotic susceptibility, then belief was more influential than hypnotic susceptibility; however, from a hypnotic state theory perspective, the significant correlation between hypnotic depth (LSS scores) and improvement within the hypnosis group might suggest that some further feature of the 'hypnotic state' could still have been at work, such as a dissociative process (Hilgard, 1986). On the other hand, from a non-state perspective, perhaps subjects receiving hypnotic induction and reporting high depth scores might have felt more obliged to respond to the demand characteristics of the study, and tried harder to please the experimenter (Wagstaff, 1981); the general motivation questions used here could have been insensitive to such an effect" (p. 12).

1993

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.

Spiegel, David; Frischholz, Edward J.; Fleiss, Joseph L.; Spiegel, Herbert (1993). Predictors of smoking abstinence following a single-session restructuring intervention with self hypnosis. American Journal of Psychiatry, 150, 1090-1097.

Examined the relation of smoking and medical history, social support, and hypnotizability to outcome with Spiegel's smoking-cessation program. A consecutive series of 226 smokers were treated with the single-session approach and followed up for 2 years. With a total abstinence criterion, 52% success was found after 1 week, and 23% abstinence at 2 years. Hypnotizability and having been previously able to quit smoking for at least a month significantly predicted the initiation of abstinence. Hypnotizability and living with a significant other person predicted 2-year maintenance. The results are superior to those of spontaneous efforts to stop smoking and suggest it is possible to predict which patients are most likely to respond and which patients are least likely to respond to such a brief intervention.

1992

Kunzendorf, Robert; Carrabino, Carlene; Capone, Daniel (1992-93). 'Safe' fantasy: The self-conscious boundary between wishing and willing. Imagination, Cognition and Personality, 12, 177-188.

This experiment tested the hypothesis that a fantasy will impel people to 'act out' only if they fail to distinguish the fantasy from the anticipated reality. In the experiment, one task obtained a baseline measure of how long subjects could resist eating popcorn, then measured how long subjects could resist popcorn while fantasizing its taste. Another task instructed subjects to merge three circular images with three circular percepts of equal vividness, then presented subjects unexpectedly with only two of the three circular percepts. Some subjects thought that there were three circular percepts during the merger, and for these subjects, the length of resistance to popcorn was significantly shorter during the popcorn fantasy. But for subjects who self-consciously differentiated the two real circles from the three merging images, the normal 'boundary' between wishful fantasy and willful eating was intact.

This research investigated whether people can fantasize without acting out. The authors place the study in the context of theories proposed by Freud and William James. Kunzendorf's source monitoring theory of self-consciousness suggests that "self-consciousness that one is imaging is the phenomenal consequence of neurally monitoring the central source of one's imaged sensations, and self-consciousness that one is perceiving is the subjective quality of neurally monitoring the peripheral source of one's perceived sensations" (p. 178).

The ability to carry out source monitoring varies. Those who have difficulty monitoring whether they are imaging or perceiving may also have trouble distinguishing wishful fantasy from anticipatory imagery, and therefore they might act on it.

This research "identified subjects with poor source monitoring--nondiscerners of reality--and investigated the effect of fantasy on their impulse control" (p. 179).

#### **METHODS.**

Subjects sat in front of a computer monitor for all tests; they completed Eysenck's seventh impulsivity questionnaire for measures of impulsivity, venturesomeness, and empathy, Marks' Vividness of Visual Imagery Questionnaire (VVIQ).

The study used a test in which subjects maintained in mental imagery a red, green, and yellow filled circle that had been on screen, with eyes closed; were instructed to open eyes and merge their 3 imaginary circles with the 3 on the screen (but when they opened eyes only 2 were there), and they were then asked questions about how many circles they saw when they opened their eyes.

Then they were given a taste of popcorn, told to resist eating any more (but could press a key to receive a little if they couldn't resist), and then were told to resist by imagining that they were eating popcorn.

#### **RESULTS.**

Those who discerned the two real circles while imaging a third circle of equal vividness (the Discerners), could resist eating popcorn for 137 sec in the baseline condition and 132 sec in the fantasy condition. Those who could not discern two real circles while imagining a third (Nondiscerners) could resist eating popcorn for 127 sec in the baseline treatment but only 95 sec in the fantasy treatment.

Discerners could identify the missing circle as the red one, whereas nondiscerners could not do so with any certainty; there was no effect of "image vividness".

"Vivid imagers" whose imagery matched real yellow circles of greater illuminance, exhibited more vivid imagery on the VVIQ as well.

more vivid imagery on the VVIQ as well.

In their Discussion, the authors suggest that "fantasy impels people to 'act out' only if they fail to distinguish fantasized sensations from perceived sensations. ... [the theory] is applicable to sexual fantasy and aggressive fantasy as well. This theory--Kunzendorf's 'source monitoring' theory of self-consciousness--implies that fantasies of the sensory consequences of a behavior should not lead to the behavior, so long as the fantasies are self-consciously known to be imaginal and are not expected to be perceptual... But for people who cannot self-consciously distinguish between wishful images of pure fantasy and anticipatory images of perceptual

reality, between wishing and willing, fantasies of gastronomical, sexual, or aggressive sensations are implicitly unsafe.

"Indeed, as Baars notes, 'the issue of voluntary control is at the very core of human psychopathology' [31, p. 254]. But recently, Baars' and others' theories of volition have emphasized the computer-metaphoric distinction between conscious 'willful' behavior and unconscious 'automatic' action [31, 39-40], and have neglected James' distinction between conscious willing and conscious wishing. Decades ago, when pre-computational theorists like Janet used the term 'automatism' to describe psychopathological behavior, they meant that an abnormally behaving patient was \_consciously 'possessed' by a fantasy\_--a wishful image, a hypnotic suggestion, or a fantasized personality [41]. In reemphasizing the phenomena of wishing, willing, and possession by fantasies, the present article redefines the latter phenomenon as possession by 'unmonitored' fantasies, which are distinguishable from anticipatory images impelling action" (pp. 184-185).

1992

Spanos, Nicholas P.; Simulates, Ann; de Faye, Barbara; Mondoux, Thomas J.; Gabora, Natalie J. (1992-93). A comparison of hypnotic and nonhypnotic treatments for smoking. Imagination, Cognition and Personality, 12, 23-43.

Three experiments administered variants of Spiegel's (1970) smoking cessation procedure to smokers in hypnotic and nonhypnotic treatments. Follow-up periods were from twelve to twenty-four weeks depending on the experiment. Complete abstinence was an infrequent outcome in all three experiments. Greater-than-control reductions in smoking for treated subjects were obtained in two of the experiments but, in both cases treatment and control subjects failed to differ significantly before the end of the follow-up period. Hypnotic and nonhypnotic treatments produced equivalent smoking reductions in all studies, and neither hypnotizability nor questionnaire assessments of motivation to quit correlated significantly with treatment outcome. Implications are discussed.

When the experimenters compared number of treatments they simply compared two sessions of Spiegel's one-session treatment with four sessions of it. The authors make the point that perhaps they should vary the four sessions.

"In all three of the present experiments the abstinence rates associated with the Spiegel treatment were very low. Our abstinence rates were similar to those reported in one earlier study [4 - Perry et al.], but substantially lower than those reported in three other studies [2, 22, 25]. The reasons for these discrepancies between studies remains unclear, but experiment 3 suggests that these discrepancies cannot be accounted for simply in terms of whether the subjects were drawn from a university or nonuniversity population, and experiment 2 suggests that the discrepancies are unrelated to the number of treatment sessions administered to subjects.

"The finding that hypnotic and nonhypnotic subjects in all three experiments attained equivalent reductions in smoking is consistent with other comparison studies in this area which indicate that hypnotic treatments are no more effective than various nonhypnotic procedures at inducing reductions in smoking [22, 25, 30].

More generally, these findings are consistent with comparison studies on a wide variety of clinical disorders (headache pain, warts, phobias, obesity) which indicate that hypnotic treatments are no more effective than nonhypnotic ones at producing therapeutic change (see [3] for a review).

1991

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

1988

Pavia, M.; Stanley, R. O. (1988). Effect of defining induction as hypnosis or relaxation. Australian Journal of Clinical and Experimental Hypnosis, 16, 11-21.

Previous studies have shown that the perceived definition of an induction may sometimes affect the subject's responses to the induction. These variations in the effect of induction definition may be due to interactions between a subject's motivations and expectations of the induction technique and the way the induction is defined. These authors explored this interaction with groups of clinical and student subjects. Differing definitions of induction as 'hypnosis' or 'relaxation' did not result in significant differences in response among either group, though subjects in neither group were found to have high expectations of motivation (sic).

1986

Markus, Hazel; Nurius, Paula (1986). Possible selves. American Psychologist, 41 (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self-relevant form, meaning, organization, and direction to these dynamics.

Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self- distortion, and the relationship between the self-concept and behavior

**1985**

**Bolocofsky, David N.; Spinler, Dwayne; Coulthard-Morris, Linda (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41 (1), 35-41.**

**109 17-67 year olds completed a behavioral treatment for weight management either with or without the addition of hypnosis. Results show that, at the end of the 9-week program, both interventions resulted in significant weight reduction. However, at 8-month and 2-year follow-ups, the hypnosis Ss showed significant additional weight loss, while those in the behavioral-treatment-only group exhibited little further change. More Ss who used hypnosis also achieved and maintained their personal weight goals. It is suggested that hypnosis may have been an effective motivator for Ss to continue practicing the more adaptive eating behaviors acquired during treatment. Findings support the utility of employing hypnosis as an adjunct to a behavioral weight management program. (25 ref)**

**1980**

**Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.**

**In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.**

**1979**

**Jackson, J. Arthur; Gass, Gregory C.; Camp, Elizabeth M. (1979). The relationship between posthypnotic suggestion and endurance in physically trained subjects. International Journal of Clinical and Experimental Hypnosis, 27, 278-293.**

55 male Ss were assigned to 5 groups: control, hypnosis alone, motivation alone, low susceptible hypnosis with motivation, or high susceptible hypnosis with motivation. Ss performed 2 runs on a treadmill to their maximum capacity, as measured by oxygen consumption, blood lactate concentration, and respiratory quotient. Groups involving hypnosis performed in the posthypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.  
identical suggestions given to high susceptible Ss.

Perry, Campbell; Gelfand, Robert; Marcovitch, Phillip (1979). The relevance of hypnotic susceptibility in the clinical context. Journal of Abnormal Psychology, 88 (5), 592-603.

Despite experimental evidence that hypnotic susceptibility is a relatively stable characteristic of the individual, and one that is very difficult to modify, clinical investigators tend to see susceptibility as irrelevant to therapeutic outcome. Such investigators view motivational and interpersonal variables as more essential to the therapeutic change. The evidence for the clinical relevance of hypnotizability is sparse and contradictory. Most existing studies stem from medical hypnosis and indicate that susceptibility plays an important role in the successful treatment of such conditions as clinical pain, warts, and asthma. Two studies are reported that seek to pursue a contrary finding reported by Perry and Mullen, who found that susceptibility was unrelated to the successful treatment of a socially learned behavior (cigarette smoking). Both studies confirmed the earlier finding of a lack of relation. In Study 1, however, stepwise multiple regression analysis located three inventory items concerning the motivation of cigarette smokers. The combination of items was found to predict outcome for 67.39% of 46 clients treated either by hypnosis or by rapid smoking. The finding was replicated in Study 2, which utilized a combined hypnosis - rapid smoking technique and employed a different therapist. The outcome for 9 of the 13 quitters and 37 of the 62 nonquitters across the two studies could be predicted by the three motivational questionnaire variables.

1976

Jackson, T. L.; Barkley, R. A.; Pashko, S. M. (1976). The effects of hypnotic induction versus high motivation on oral temperature. International Journal of Clinical and Experimental Hypnosis, 24, 22-28.

The hypothesis that changes in oral temperature are associated with neutral hypnotic induction was investigated using neutral hypnosis and a high motivation

condition as controls. 33 Ss were assigned to 3 experimental conditions: (1) neutral hypnotic induction, (2) high motivation control, and (3) no treatment control. Ss in all 3 conditions received pre- and post-treatment oral temperature measurements after a 20-minute temperature stabilization showed a significantly greater increase in oral temperature as compared to Ss in both the high motivation and no treatment control conditions. Ss in the latter 2 conditions did not differ from each other in this regard. The methodological considerations of future research in this area are also discussed.

London, Perry (1976). Kidding around with hypnosis. International Journal of Clinical and Experimental Hypnosis, 24 (2), 105-121.

This paper reviews a long term research project relating hypnotic susceptibility to performance and personality variables. Several experiments indicated that people who are low in hypnotic susceptibility try harder than high susceptibles for maximum performances on strength, endurance, psychomotor coordination, and cognitive tests, though high susceptibles are generally more pleased with their own performances. Other experiments indicated that people of high hypnotic susceptibility have slower brain-wave patterns under relaxed, nonhypnotic conditions, than do low susceptibles. These findings, together with a third set of findings on the developmental character of hypnotic susceptibility, led to the theory that

-mental character of hypnotic susceptibility, led to the theory that hypnotic susceptibility and brain-wave patterns are both inversely correlated with achievement motivation and with its developmental roots in childhood independence training. An elaborate research program was initiated to investigate the hypothesized relationships.

1975

Aletky, Patricia J.; Carlin, Albert S. (1975). Sex differences and placebo effects: Motivation as an intervening variable. Journal of Consulting and Clinical Psychology, 43 (2), 278.

" ... the present findings would suggest that future studies of placebo effects should take into account the nature of the dependent variable and the pertinent differential sex-role expectations" (p. 278). The performance measure was a dynamometer pull task. The placebo was a jelly applied to the forearm "and alleged to relieve muscular fatigue" (p. 278). The motivational instructions were telling Subjects that "individuals in good health and with normal muscle tonus would be expected to show improved performance on the posttreatment trial" (p. 278).

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

1970

Crasilneck, Harold B.; Hall, James A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18 (3), 152-158.

Hypnotherapy has been found of value in rehabilitation of many patients experiencing difficulty in the usual procedures which follow cerebrovascular or traumatic brain injury. 3 cases are reported to illustrate the approach taken. Of 25 similar cases seen over a 9-year period, 4 were unresponsive to hypnosis. Although an increase in motivation for recovery seemed to be the major change elicited by hypnotherapy, other theoretical possibilities are mentioned. Hypnosis may be a useful way of approaching motivational problems in rehabilitating patients who manifest negativism toward conventional treatment.

1969

Secter, Irving I.; Tremaine, Donahue L. (1969). The psychology of learning applied to hypnosis. American Journal of Clinical Hypnosis, 11, 191-194.

Some generally held principles of learning have been stated. The statements hold even when the word 'hypnosis' is substituted for the word 'learning.' Teaching does not guarantee learning. A hypnotic induction verbalization does not guarantee the development of hypnotic states. The process and the learner would seem to be of greater importance than the teacher or hypnotist. The latter's main function should be to create a favorable environment for learning and to help remove the obstacles to learning. When the resistances to learning are inoperative, induction of hypnosis takes place rapidly

Thorne, D. Eugene (1969). Amnesia and hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 225-241.

Explored the relative effects of 2 factors on short-term memory for a paired-associate learning task. 36 undergraduate and graduate paid volunteers were stratified, according to their Harvard Group Scale of Hypnotic Susceptibility, Form A scores, into 3 groups of 12 Ss each. The Ss within each of the 3 groups were then

evenly but randomly assigned to 3 treatment conditions, which differed in terms of the kind of motivational procedure in which suggestions of amnesia for a recently learned paired-associate task were given. Results did not directly support or were sometimes contrary to predictions derived from popular hypnosis theories, which assert that posthypnotic amnesia is a reliable behavioral criterion for the "hypnotic state." (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1967**

Hartman, B. J. (1967). Hypnotizability as affected by attitudinal and motivational variables. International Journal of Clinical and Experimental Hypnosis, 86-90.

ATTEMPTED TO DISCOVER WHETHER TASK-MOTIVATED SS WOULD BE MORE HYPNOTIZABLE THAN THOSE NOT GIVEN TASK-MOTIVATION INSTRUCTIONS, AND WHETHER THE ATTITUDE OF THE E WOULD AFFECT SS" HYPNOTIZABILITY. THE BARBER SUGGESTIBILITY SCALE WAS EMPLOYED FOR MEASURING SUSCEPTIBILITY TO HYPNOSIS. SS WERE DIVIDED RANDOMLY INTO 6 GROUPS OF 10: TASK-MOTIVATED, E NEUTRAL; NON-TASK-MOTIVATED, E NEUTRAL; TASK-MOTIVATED, E FRIENDLY; TASK-MOTIVATED, E HARSH; NON-TASK-MOTIVATED, E FRIENDLY; AND NON-TASK-MOTIVATED, E HARSH. ANALYSES OF VARIANCE, BOTH FOR OBJECTIVE AND SUBJECTIVE SCORES, DID NOT YIELD SIGNIFICANT RESULTS FOR THE TASK-MOTIVATION VARIABLE BUT DID YIELD SIGNIFICANT RESULTS (P = .01) FOR THE VARIABLE DEALING WITH E ATTITUDE. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1965**

Evans, Frederick J.; Orne, Martin T. (1965). Motivation, performance, and susceptibility to hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (2), 103-116.

Earlier reports found that the waking base level performance of Ss who are relatively insusceptible to hypnosis is higher than the waking base level of highly susceptible Ss on tasks of muscular strength, endurance, coordination, and verbal learning and that any increment in performance under hypnosis tends to be at least as great with insusceptible Ss as with highly susceptible Ss. These previous studies were carefully replicated, but the results were not confirmed. No differences in base level or hypnosis performance were found, except for poorer hypnosis performance of Ss of medium susceptibility to hypnosis, arising in part from the emphasis on relaxation in the induction procedure, and in part because of subtle demand characteristics present in the counterbalanced experimental design. (22 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Levitt, Eugene E.; Brady, J. P. (1964). Muscular endurance under hypnosis and in the motivated waking state. International Journal of Clinical and Experimental Hypnosis, 12, 21-27.

8 female Ss scoring at least 10 on the Stanford Hypnotic Susceptibility Scale were required to hold a weight in the outstretched hand in 3 states: (a) under hypnosis, (b) under hypnosis with the upper arm and shoulder anesthetized hypnotically, and (c) in the waking state with motivation provided by a verbal exhortation and monetary payment. Order of performance in the 3 states was varied. No significant differences among states were found. The interaction between states and orders was significant, but it appears more likely to be the result of intersubject variability rather than of position or fatigue effects. Ss' expectancies and estimates of performance time, obtained postexperimentally, did not appear to be related to performance itself. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Furieux, W. D. (1963). Neuroticism, Extraversion, answer suggestibility: A comment. International Journal of Clinical and Experimental Hypnosis, 11, 201-202.

Author develops hypotheses about the relationships between scores on the Maudsley Personality Inventory (MPI) and suggestibility.

"(a) The effective-drive experienced by a S in a suggestibility test, or hypnosis situation, is positively correlated with both neuroticism and with extraversion, as measured by the MPI.

(b) Effective-drive is also a function of the "press" of the test situation, and of the S's previous experience.

(c) Within the range of values of effective-drive lower than the Yerkes-Dodson optimum for the test being studied, the magnitude of response to a suggestibility test (or hypnosis) is a positive function of drive.

(d) For values of effective-drive greater than the Yerkes-Dodson optimum, response is a negative function of drive" (p. 201).

1962

Levitt, Eugene E.; Lubin, B.; Zuckermann, M. (1962). The effect of incentives on volunteering for an hypnosis experiment. International Journal of Clinical and Experimental Hypnosis, 10 (1), 39-42.

The data indicated that neither education about hypnosis nor payment for participating in an experiment are likely to bias a student volunteer group for an hypnotic experiment. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Fowler, William L. (1961). Hypnosis and learning. International Journal of Clinical and Experimental Hypnosis, 9, 223-232.

3 studies are reported in which hypnotic suggestion was used for the purpose of increasing the motivation and self-confidence of college students suffering reading difficulties. While the subjects reported a variety of benefits, objective tests provided no evidence that hypnosis did improve reading performance. From *Psyc Abstracts* 36:04:4II23F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneau, W. D. (1961). Neuroticism, extroversion, drive, and suggestibility. *International Journal of Clinical and Experimental Hypnosis*, 9, 195-214. (Abstracted in *Psychological Abstracts*, 62: 4 II 95F)

In the group studied, the body-sway scores of stable extraverts and neurotic introverts tended to be large, whereas they were smaller for stable introverts and neurotic extraverts. This result was explained in terms of a theoretical model in which the effective drive produced in a S by a test-situation is a function of both his neuroticism and his extraversion. The author believes that the theoretical model generates a number of predictions and suggestions which can serve to guide future experimental work in this field. From *Psyc Abstracts* 36:04:4II95F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Pearson, R. E. (1961). Response to suggestion given under general anesthesia. *American Journal of Clinical Hypnosis*, 4, 106-114.

Employed a double-blind design with placebo control. Audio tapes containing therapeutic suggestions were played to 43 experimental patients during anesthesia. The main theme of the suggestions was that the patient would cope better and recover faster if he could become relaxed. Placebo tapes (music or blank tapes) were played to the 38 control patients. Only E, who had no contact with the patients, knew which tape was played to a given patient. Three postoperative variables were studied: (a) number of doses of narcotics in the first 5 postoperative days; (b) a numerical rating by the surgeon of the postoperative course; and (c) number of postoperative days until release. Although no significant differences were found between the suggestion group and placebo group on need for narcotics or rated course of recovery, patients receiving suggestions were discharged an average of 2.42 days sooner ( $p < .05$ ).

Schneck, Jerome M. (1961). Hidden determinants in deceptive requests for hypnoanalysis. *International Journal of Clinical and Experimental Hypnosis*, 9, 261-267. (Abstracted in *Psychological Abstracts*, 62: 4 II 61S)

Evaluation of the motives underlying the request for hypnoanalysis leads to the conclusion that often these patients do not wish for this form of treatment at all. Thus, requests for hypnoanalysis are often deceptive (a method of changing therapists during a period of negative transference). The implications of these hidden determinants are discussed and brief case references are given. From *Psyc*

Abstracts 36:04:4II61S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Salzberg, Herman Carl (1960). The effects of hypnotic, posthypnotic, and waking suggestion on performance using tasks varied in complexity. International Journal of Clinical and Experimental Hypnosis, 8, 251-258.

This article probably is based on the dissertation, reported as follows in the PsychInfo database:

An experimental investigation of the differential effects of hypnotic, post-hypnotic and waking suggestion on learning, with tasks varied in complexity

AU: Salzberg, Herman Carl

SO: Dissertation Abstracts. 21, 1961, pp. 2017-2018

AB: 5 Ss were instructed to respond with a reaction time key to colors and figures presented tachistoscopically. In the 1st series of experiments a steady reaction to figures (with the right hand) and to colors (with the left hand) was established. In the 2nd series figures and colors were presented 1 by 1 at random, and the Ss had to react according to the previously established habit. In the 3rd series combinations of figures and colors were shown and the Ss had to react with both hands at the same time. 4 different types of reactions were observed in the last series depending upon the shifting or the distribution of attention. From Psyc Abstracts 36:01:3CE87P. From Psyc Abstracts 36:01:3CF06N. From Psyc Abstracts 36:01:3CF14L. From Psyc Abstracts 36:01:3CF17S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Conn, Jacob H. (1958). Meanings and motivations associated with spontaneous hypnotic regression. Journal of Clinical and Experimental Hypnosis, 6 (1), 21-44.

"The motivational influences and meanings associated with spontaneous regression have been discussed. It is postulated that when a patient spontaneously regresses he has the wish to recreate a previous life situation --one in which he was completely helpless. The clinical material indicates that the patient can be brought out of regression without any attempt being made to re-orient him to the present, and during spontaneous regression the patient can discuss topics which are subsequent to the regressed age level. The patient does not revive old memories but 'memory romances' which are rationalizations and wish fulfilling fantasies.

"The patient in the hypnotic trance is not passive, but is an active agent, who uses the therapist as a means of restoring the patient's feeling of mastery and control. A painful, baffling life situation which formerly had been the source of conflict, guilt or self-depreciation is in this manner mastered, so that the patient can start all over again as if he were 'reborn,' and can go on to a normal, healthy way of life.

"This is in keeping with Whitehorn's view (16) that 'symptoms have meaning in a motivational sense, that morbid patterns of reaction are part of an adaptational struggle, that one of the main tasks in psychiatric work is to conduct an

individualized study of each patient to point up the main recurrent theme of dissatisfaction and conflict and to assess the individual's currently unused potentialities for dealing with this issue ..." (p. 42).

1958

Rosenberg, M. J.; Gardner, C. W. (1958). Some dynamic aspects of posthypnotic compliance. Journal of Abnormal and Social Psychology, 57, 351-366.

Within the context of a general, psychoanalytically-oriented theory of hypnosis there were presented two hypotheses on the nature of compliance with posthypnotic suggestions. According to the first, such compliance is viewed as facilitated by the subjects being able to interpret the posthypnotic suggestion in a manner consistent with the mechanisms and affective reactions that, for him, characterize and maintain the hypnotic relationship. In the second, compliance with a posthypnotic suggestion is viewed as facilitated if that suggestion permits the subject safely to express and indulge a previously warded-off and conflicted drive. Case record data drawn from a recent experimental study were presented which tend to confirm these two hypotheses.

1955

Meares, Ainslie (1955). A note on the motivation for hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 222-228. (Abstracted in Psychological Abstracts 57: 1129)

"Summary. The logical reasons of the patient for desiring hypnosis, and of the therapist in advising it, operate on a background of unconscious mechanisms. These mechanisms are important factors in determining whether or not the logical reasons become effective. An understanding of such motivation helps the therapist in the selection of cases and the choice of the particular form of hypnotherapy to be used" (p. 228).

Patient motivations for hypnosis include magical expectations, paranoid belief that one is under the control of a malevolent influence, a (paradoxical) belief that hypnosis will be ineffective with neurotic symptoms and therefore justify continuation of the symptoms, latent aggression ("hypnotize me if you can" attitude) or an excess of passivity ("humiliate me"), erotic motivation or a wish for a more intimate relationship with the therapist, search for new or unusual experiences in life, a last ditch effort to cope with chronic pain and illness, etc.

Patient motivations against hypnosis include fear of being overpowered or the threat of authority, aggressive feelings that would be motivated if the hypnotist seems to be an authority, or association of hypnosis with the erotic. The author has observed "a surprising number of people" with the latter association. "With these people, it is more of an attitude of mind in which any close or intimate relationship is regarded as erotic. They see in hypnosis an intimate relationship with the therapist, and they avoid it without being aware of their reasons for doing so" (p. 226).

Therapist motivations for hypnosis include unconscious mechanisms as well, such as a drive for power (sometimes manifested in desire to demonstrate the technique to a wider audience than simply colleagues in a workshop). When tinged with eroticism the drive can become sadistic. Also, erotic drives can find vicarious expression as "The intensity of the rapport between patient and psychotherapist in waking psychotherapy, is increased many times in hypnosis" (p. 227).

Therapist motivations against hypnosis include fear of failure (which is more obvious when a patient doesn't follow a suggestion than in lack of response to medicine), fear of erotic involvement, fear of one's own aggression, etc.

1953

Kirkner, Frank J.; Dorcus, R. M.; Seacat, Gloria (1953). Hypnotic motivation of vocalization in an organic motor aphasic case. Journal of Clinical and Experimental Hypnosis, 1 (3), 47-49.

Authors' Summary - A 41 year old male patient with a history of mutism on an organic basis for a year and a half failed to respond to speech retraining efforts. Comprehension was good and motivation poor. With the aid of hypnosis, he was induced to vocalize. Following vocalization, oral speech retraining progress was steady. Retraining efforts in writing met with repeated failure.

The patient had suffered a cerebral vascular accident, attributed at the time to an embolism.

Movement

1997

Jasiukaitis, Paul; Nouriani, Bitia; Hugdahl, Kenneth; Spiegel, David (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere?. International Journal of Clinical and Experimental Hypnosis, 45 (2), 158-177.

Research and theory over the past couple decades have suggested that the right cerebral hemisphere might be the focus of brain activity during hypnosis. Recent evidence from electrodermal responding, visual event-related potentials, and Stroop interference, however, can make a case for a role of the left hemisphere in some hypnotic phenomena. Although hemispheric activation on hypnotic challenge may depend in large part on the kind of task the challenge might involve, several general aspects of hypnosis might be more appropriately seen as left-rather than right-hemisphere brain functions. Among these are concentrated attentional focus and the role of language in the establishment of hypnotic reality. A left-hemisphere theory of hypnosis is discussed in light of recent findings and theories about a left-hemisphere basis for synthetic or generational capabilities (Corballis, 1991) and a neuro-evolutionary model of a left-hemisphere dopaminergic activation system for the implementation of predetermined motor programs (Tucker & Williamson, 1984). -- Journal Abstract

1996

**Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.**

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning treatment with hypnosis. Evidence regarding efficacy of hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

**Montgomery, Guy; Kirsch, Irving (1996). The effects of subject arm position and initial experience on Chevreul pendulum responses. American Journal of Clinical Hypnosis, 38 (3), 185-190.**

Some clinicians maintain that responses to the Chevreul pendulum illusion are facilitated by resting one's elbow on a table. Others claim the reverse. We compared these two methods in a counterbalanced crossover design by having 32 counterbalanced crossover design by having 32 university students perform the Chevreul pendulum illusion with their elbows supported on a table and with their elbows unsupported. Although there was no main effect for method (elbow supported versus elbow unsupported), subjects who rested their elbows on a table on the first trial were more successful in responding on both trials. This suggests that supporting the elbow does facilitate responding, but only on the initial trial. Performance on subsequent trials is determined by degree of success on the first trial. Similar data from a previous study comparing different hypnotic inductions suggests that this phenomenon is generalizable beyond the Chevreul pendulum illusion and supports the hypothesis that the test-retest reliability of suggestibility scales may be due to a stabilization of response expectancy by a person's first experience of imaginative suggestions.

**Weitzenhoffer, Andre M. (1996). Catalepsy tests: What do they tell us?. International Journal of Clinical and Experimental Hypnosis, 44 (4), 307-323.**

In a survey of 200 clinicians regarding their use of catalepsy tests, three fourths of the respondents indicated that they used these tests. In light of this response, and considering both the scientific importance of being able to identify the presence of

hypnosis and the fact that catalepsy may account for up to eight of the other indications of hypnosis in use, it is relevant to inquire into the reliability and validity of catalepsy tests. It was found that of the three tests of catalepsy currently in use, only one has the potential for being a test of hypnosis proper and can also justifiably be said to be "of catalepsy." This one test, however, has many serious weaknesses that need to be eliminated if it is to be truly useful. - Journal Abstract

1993

Gruzelier, John; Warren, Kristen (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. Psychological Medicine, 23, 93-101.

Individuals with high and low susceptibility to hypnosis were compared in a baseline condition and after instructions of hypnosis on tests of anterior left and right hemispheric functions of word fluency to letter categories, word fluency to semantic categories, design fluency and bilateral finger tapping dexterity. With hypnosis high susceptibles showed a reduction in word generation to letter categories, no significant change in word generation to semantic categories, an improvement in design fluency, and bilateral reductions in finger tapping dexterity. Low susceptibles showed the opposite changes except for the improvement in design fluency. These results, together with correlational results, were interpreted as evidence of central inhibitory processes, particularly of the left hemisphere, in response to instructions of hypnosis in high susceptibles.

The authors discussion of their study includes the following statements. "The main result of the study was the differential influence of instructions of hypnosis on high and low susceptibles for word fluency to letter designated categories, as distinct from semantic categories, and design fluency" (p. 98).

"The absence of effects of hypnosis on word generation to semantic categories (left fronto-temporoparietal) versus letter categories (left frontal) has a bearing on evoked potential evidence (Gruzelier et al. 1987). Bilateral comparisons at temporal lobe and central locations showed that high susceptibles were characterized by asymmetric changes in evoked

potential amplitude (N116 component) with hypnosis. Activity at the central electrodes was compatible with a left-to-right hemispheric shift of function, but this was not the case at the temporal electrodes. Instead of an inhibition of left temporal activity with hypnosis activation was maintained. Maintenance of activity in the left temporal lobe follows consideration of the fact that hypnosis requires sustained attention to the voice of the hypnotist, which is predominantly a left temporal function" (p. 99).

"The absence of differences in the pre-hypnotic condition between high and low susceptibles indicates that hemisphericity per se may not be a factor that characterizes susceptibility. The fact that lateral differences were found in some experiments (e.g. Gruzelier et al. 1984; Gruzelier & Brow, 1985) but not others (e.g. Cikurel & Gruzelier, 1990; McCormack & Gruzelier, 1993) may indicate that such effects, when apparent, were secondary to another factor such as cognitive flexibility as conceptualized by Crawford (1989)" (p. 99).

Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical processes of the brain and performance. International Journal of Psychophysiology, 14, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

Morgan, William P. (1993, October). Use of hypnosis in exercise and sport psychology. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Performance of exercise is rated as equal effort with hypnosis and waking conditions; but with hypnotic suggestion they will perceive it as more or less effortful (uphill exercise vs going down the hill). When they think they are going up hill both cardiac and respiratory response increase physiologically, with catecholamine differences.

Mitchell (1981) suggests that respiration changes with exercise do not result from muscle feedback, but that central motor brain signals go to both the cardiovascular centers and to exercising muscle. Actually, it appears that both muscle and cortex give signals, and their synergy governs whether ventilation or heart rate increase.

Wang & Morgan, Psychophysiological responses to imagined exercise, Sport Psychology Lab, University of Wisconsin-Madison. Reported that both external (watching someone else) and internal (imagining oneself) visualizing give responses similar to actual exercise.

We have done research on the prediction of respiratory distress (dyspnea) - work we have done with fire fighters. The best predictor of this on treadmill with air supply is trait anxiety. Sometimes the firefighters who took off face mask even though they had air did not know why they did. It is an opportunity to use hypnotic age regression. SCUBA divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

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divers described in Lynn & Rhue also were age regressed to obtain information that was repressed. They have demonstrated stress responses like panic in a 12 foot tank also.

For active people and athletes there is an "iceberg" profile on the POMS, below average on tension, depression, anger, fatigue, and confusion, but higher on vigor. But the divers who panic have a flat profile, around the 50th percentile on all POMS scales.

Middleman et al used Navy divers in 25 degree C. water and used hypnosis to increase and decrease their body temperature--one of the best papers on the topic. Ss who were best able to use imagery, to think of a beach, had the poorest responses; the ones who could relax did poorest, because shivering produces heat and keeps you warm. It is opposite of what is needed.

In our work, we took 5 highest and 5 lowest anxiety Ss; the latter had higher rates of respiration than the former.

All Ss are similar in oxygen use whether volunteers or not. When people volunteer for research before they know hypnosis will be used, the males are lower than females [on hypnotizability?] when they finally volunteer. [He presents a lot of different tests on which volunteers do not differ from nonvolunteers personality wise.]

Ikai & Steinhaus is a classic study of Disinhibition of Inhibitory Mechanisms. Taking Ss up to their maximum (in weight training) to a plateau, Ikai & Steinhaus said this is a pseudomaximum. They showed that strength increases if - you fire a starter pistol behind them - you ask them to shout just as they do it - they have alcohol - they have amphetamine sulfate - they have hypnosis It is disinhibition of the inhibitory mechanisms.

[He referred to the book Mind of the Marathoner.]

In Tibet an anthropologist was amazed to see a man running into their camp, and he ran straight through--a monk carrying messages. He created a non-cultic form of meditation in the laboratory (trained to visually "fix" on mountaintop, to have respiration in synchrony with locomotion, and to use a pseudo mantra "down" each time they put their foot down). Placebo condition was used also. Ss were tested by blinded lab assistants. Endurance time increased from 16 minutes to 20, while controls decreased a minute.

Now we can predict who will win a race. Elite runners do not dissociate; they use association strategy. They pay close attention to race strategy, they monitor themselves constantly (they slow down when they feel bad), and attempt informally to stay loose, not get tight, and relax. Dissociation has, however, been used for the last 300 meters of a marathon (New Zealander Dixon).

1992

Appel, Philip R. (1992). Performance enhancement in physical medicine and rehabilitation. American Journal of Clinical Hypnosis, 35, 11-19.

Performance enhancement or mental practice is the "symbolic rehearsal of a physical activity without any gross muscular movements" to facilitate skill acquisition and to increase performance in the production of that physical activity.

Performance- enhancement interventions have been well known in the area of sports psychology and medicine. However, clinical applications in physical medicine and rehabilitation have not flourished to the same extent, though the demand for improved physical performance and the acquisition of various motor skills are as important. In this paper I will describe how hypnosis can potentiate mental practice, present a model of mental practice to enhance performance, and describe how to help patients access an ideal performance state of consciousness.

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**Goodman, Linda; Holroyd, Jean (1992). Ego receptivity and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 40 (2), 63-67.**

Ego receptivity has been described as important for the psychotherapy process and as a characteristic of hypnosis (Deikman, 1974; Dosamantes-Alperson, 1979; Fromm, 1979). Receptivity also has been associated with a measure of absorption (Tellegen, 1981). In the first pilot study with 6 dance/movement therapy students, higher observer ratings of receptivity were associated with greater hypnotizability ( $r = .79$ ,  $df = 4$ ,  $p < .05$ , 2-tailed test). In the second pilot study, the correlation was replicated ( $r = .51$ ,  $df = 12$ ,  $p = .06$ , 2-tailed test) with 14 dance/movement therapy students. In the second pilot study, receptivity did not correlate with absorption. Receptivity and absorption, however, accounted for 54% of hypnotizability population variance in a step-wise multiple regression. Receptivity accounted for a unique part of the variance after the effects of absorption were removed. It was concluded that receptivity should be explored as a potential predictor of hypnotizability, and that a reliable scaled measure of receptivity should be developed.

Receptivity was rated by dance instructor on the following scale. "TABLE 1 Criteria for Ranking Ss on Receptivity A. Individuals were rated high if they could consistently do the following most of the time:

1. If they moved with emotional involvement.
  2. If they could readily verbally describe their movement experience in terms of sensations or feelings.
  3. If they were able to image while moving. That is, their movement experience could be transformed into representational visual images.
  4. In their describing their movement experience verbally, if they readily alluded to the images which were generated from their body movement.
  5. If they could relate their movement experiences to other contexts outside of the therapeutic one.
  6. If they could develop a working alliance with the therapist (based on students' capacity to risk experiencing self with increased emotional depth).
- B. Individuals were rated low, if they were not able to do the above most of the time. C. Individuals were rated in the mid-range if they were able to do the above some of the time" (p. 65).

Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.

The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD.

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

**"The concept of a stratified cognition is central to the notion of a mental state ... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.**

**He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).**

**"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) ... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).**

**The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).**

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**"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).**

**"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact**

it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Hinshaw, Karin E. (1991). The effects of mental practice on motor skill performance: Critical evaluation and meta-analysis. Imagination, Cognition and Personality, **11**, 3-35.

21 studies that met the criteria of having both an adequate control and a mental practice alone group were included. The 44 separate effect sizes resulted in an overall average effect size of .68 (SD = .11) indicating that there is a significant benefit to performance of using mental practice over no practice. A series of General Linear Models revealed that the use of "internal" imagery produced a larger average effect size than the use of "external" imagery, and that mental practice sessions of less than one minute or between ten and fifteen minutes in length produced a larger average effect size than sessions of three to five minutes in length. These findings suggest the complexity of the relationship between variables that influence mental practice

Lucic, Karen S.; Steffen, John J.; Harrigan, Jinni A.; Stuebing, Roger C. (1991). Progressive relaxation training: Muscle contraction before relaxation?. Behavior Therapy, **22** (2), 249-256.

Demonstrated support for E. Jacobson's (1938) position that tensing muscle groups prior to relaxation is physiologically detrimental to the relaxation process. 48 undergraduates participated in 1 of 3 conditions: muscle contraction (MC) relaxation, relaxation without muscle contraction (WMC), and self-induced relaxation control. Ss participated in a single session of progressive relaxation. Ss had no previous relaxation training and had moderate trait anxiety scores. A significant main effect for group resulted for the electromyograph (EMGH) measures. The mean EMGH measures identified the WMC group as most relaxed (i.e., experiencing the least amount of muscle tension), followed by the control group and then the MC group.

Marzi, C. A.; Bisiacchi, P.; Nicoletti, R. (1991). Is interhemispheric transfer of visuomotor information asymmetric? Evidence from a meta-analysis. Neuropsychologia, **29**, 1163-1177.

Using a meta-analytic procedure we have analysed 16 studies employing a simple unimanual reaction time (RT) paradigm and lateralized visual stimuli to provide an estimate of interhemispheric transfer time in normal right-handed subjects. We found a significant overall RT advantage of the left visual field over the right and of the right hand over the left. These asymmetries can be explained by a superiority of

the right hemisphere for the detection of simple visual stimuli and by a corresponding superiority of the left hemisphere for the execution of the manual response, respectively. Alternatively, they may be interpreted as related to an asymmetry of interhemispheric transmission of visuomotor information, with transfer from the right hemisphere (side of stimulus entry) to the left (side of response generation) faster than in the reverse direction. Although a direct test of these hypotheses is still lacking, we think that the evidence available is more in keeping with the latter possibility.

This research relates to issues of hemispheric dominance during hypnosis, for high hypnotizable subjects

1990

McAleney, Patrick J.; Barabasz, Arreed; Barabasz, Marianne (1990). Effects of flotation restricted environmental stimulation on intercollegiate tennis performance. Perceptual and Motor Skills, 72, 1023-1028.

The study investigated the effects of flotation Restricted Environmental Stimulation (REST) with an imagery message on the competitive performance of intercollegiate tennis players (10 men, 10 women). Pre- and posttreatment athletic performance was measured during intercollegiate competition. Posttreatment results indicated that subjects exposed to flotation REST with an imagery message performed significantly better than subjects exposed to imagery only on a measure of first service accuracy. Findings suggest that flotation REST can be used to enhance the performance of a well learned skill by athletes of high ability

Wain, Harold J.; Amen, Daniel G.; Jabbari, Bahmann (1990). The effects of hypnosis on a Parkinsonian tremor: Case report with polygraph/EEG recordings. American Journal of Clinical Hypnosis, 33, 94-98.

Although Parkinsonian tremors typically disappear during sleep and are reduced during relaxation periods, the effects of hypnosis on this type of movement disorder have been generally ignored. We observed a patient's severe Parkinsonian tremor under hypnosis and monitored it with EEG and EMG studies. The patient was taught self-hypnosis and performed it three to four times daily in conjunction with taking medication. The results suggest that daily sessions of self-hypnosis can be a useful therapeutic adjunct in the treatment of Parkinsonian tremors.

The patient scored low on the Hypnotic Induction Profile scale of hypnotizability and was unable to experience any classical hypnotic phenomena, but was motivated to learn self-hypnosis. For self hypnosis he visualized a relaxing scene.

1989

Snodgrass, M.; Lynn, Steven Jay (1989). Music absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 41-54.

The present study investigated differences between high (N = 15), medium (N = 20), and low (N = 16) hypnotizable Ss' involvement in imaginative versus nonimaginative music. Ss were first screened for hypnotizability with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). In a second session presented as a study of music appreciation, Ss listened to classical music of high- and low-rated music imaginativeness. Ss' involvement was indexed by absorption, imagery elaboration reported in open-ended essays, and reaction time to a pure tone. High hypnotizable Ss reported more absorption than low hypnotizable Ss, regardless of the imaginativeness level of the music. Ss reported more imagery elaboration in the imaginative than in the low-imaginative passages. High hypnotizable Ss tended to differ in their imagery elaboration in response to the imaginative passages but not in response to the nonimaginative passages. Reaction time results were nonsignificant. No sex differences were found. Medium hypnotizable Ss were indistinguishable from both high- and low-hypnotizable Ss. The findings are generally compatible with J. R. Hilgard's (1970, 1974) construct of imaginative involvement.

Yousufzai, N. M. (1989). Rheumatoid arthritis and hypnosis: Case report. British Journal of Experimental and Clinical Hypnosis, 6 (3), 178-181.

[http://www.imp-muenchen.de/The\\_effect\\_of\\_hypnos.698.1.html](http://www.imp-muenchen.de/The_effect_of_hypnos.698.1.html)

From: Psychology and Health, 2000, vol 14, p. 1089.

Horton-Hausknecht J, Mitzdorf U, Melchart D: The effect of hypnosis therapy on the symptoms and disease activity in rheumatoid arthritis .

In this study we aimed to assess the effectiveness of clinical hypnosis on the symptoms and disease activity of rheumatoid arthritis (RA). 66 RA patients participated in a controlled group design. 26 patients learnt the hypnosis intervention, 20 patients were in a relaxation control group, and 20 patients were in a waiting-list control group. During hypnosis , patients developed individual visual imagery aimed at reducing the autoimmune activity underlying the RA and at reducing the symptoms of joint pain, swelling, and stiffness. Subjective assessments of symptom severity and body and joint function, using standardized questionnaires and visual analogue scales, were obtained. Objective measures of disease activity via multiple blood samples during the therapy period and at the two follow-ups were also taken. These measurements were of erythrocyte sedimentation rate, C-reactive protein, hemoglobin, and leukocyte total numbers. Results indicate that the hypnosis therapy produced more significant improvements in both the subjective and objective measurements, above relaxation and medication. Improvements were also found to be of clinical significance and became even more significant when patients practiced the hypnosis regularly during the follow-up periods.

"The effect of hypnotic suggestion on pain and mobility of joints was remarkable. On the fifth session there was hardly any pain, and shoulder movements were almost normal" (p. 179).

1988

Houge, Donald R.; Hunter, Robert E. (1988). The use of hypnosis in orthopaedic surgery. Contemporary Orthopaedics, 16, 65-68.

Some patients postpone or refuse indicated orthopaedic surgery because of fear or a medical contraindication to anesthesia. Clinical hypnosis previously has been used mainly as an adjunct to chemical anesthesia. However, hypnosis was shown to be entirely effective when used as the sole anesthesia in three of four orthopaedic cases. These four procedures included a radical head resection, the removal of a sideplate and Richard's screw from the hip, and two cases of arthroscopic knee surgery. The preparation required for the surgery and the experiences of the patients during these procedures are described, and the kinds of patients most likely to benefit from the use of hypnosis in orthopaedic surgery are reviewed.

Jones, Lynette A. (1988). Motor illusions: What do they reveal about proprioception. Psychological Bulletin, 103 (1), 72-86.

Five illusions involving distortions in the perception of limb position, movement, and weight are described in the context of their contribution to understanding the sensory processes involved in proprioception. In particular, these illusions demonstrate that the position sense representation of the body and the awareness of limb movement results from the cross-calibration of visual and proprioceptive signals. Studies of the vibration illusion and phantom-limb phenomenon indicate that the perception of limb movement and position are encoded independently and can be dissociated. Postural aftereffects and the illusions of movement induced by vibration highlight the remarkable lability of this sense of limb position, which is a necessary feature for congruence between the spatial senses. Finally, I discuss the role of corollary discharges in the central processing of afferent information with respect to the size-weight and vibration illusions.

Neiss, Rob (1988). Reconceptualizing arousal: Psychobiological states in motor performance. Psychological Bulletin, 103 (3), 345-366

This review of research dealing with psychologically induced arousal and motor performance focuses on the hypothesized inverted-U function relating arousal to performance. The inverted-U hypothesis is supported only in a weak and psychologically trivial fashion. More useful research in human motor performance would investigate discrete psychobiological states, which include affect and cognition as well as physiology. Examination of profound individual differences in response to incentive and threat suggests that psychobiological states have their genesis in response expectancies and hypnotic-like self-inductions. The cognitive and affective components of these states are highly interactive and perhaps not profitably separated. Because performance anxiety is a central problem in the motor realm, it is carefully delineated and the test anxiety literature is scrutinized. Psychophysiological test batteries and other investigations in the area are described, and guidelines for future research are provided.

Neiss, Rob (1988). Reconceptualizing relaxation treatments: Psychobiological states in sports. Clinical Psychology Review, 8 (2), 139-159.

Reviews studies relating relaxation treatments to motor performance and attempts to explain these treatments from a psychological perspective. The inverted-U hypothesis is based on arousal, which has construct validation problems and is a physiological, rather than a psychological, construct. Arousal cannot distinguish among fear, anger, sexuality, and other psychobiological states; predictive validity is low in the area of motor performance. The inverted-U hypothesis is effectively refutable in current usage, and empirically weakly supported. Relaxation treatments are reconceptualized as relatively nonspecific psychological therapies, potentially useful in alleviating dysphoric, debilitating psychobiological states. These treatments are particularly apt for athletics, where performance anxiety is a pervasive problem.

1987

Jacobs, Sharon B.; Salzberg, Herman C. (1987). The effects of posthypnotic performance-enhancing instructions on cognitive-motor performance. International Journal of Clinical and Experimental Hypnosis, 35, 41-50.

The effects of performance-enhancing instructions on a cognitive-motor task (typing) was assessed using 3 groups: hypnosis and control groups with performance-enhancing instructions, and a control group without instructions. Unlike previous hypnosis research, the performance-enhancing instructions were given after substantial learning had occurred. Results indicated that posthypnotic performance-enhancing instructions, or performance-enhancing instructions alone, did not have a facilitative effect on performance. The results also suggested potential negative performance effects following hypnotic induction, depending on Ss' initial typing ability. The implications of these findings are discussed.

The research investigated whether hypnotic suggestions could influence various factors thought to inhibit peak performance by increasing confidence, increasing motivation, and decreasing performance anxiety. 84 undergraduates of varying levels of typing ability were recruited, not mentioning in advance that the research involved hypnosis (in order to avoid selection bias). The experimental materials included a modified version of the Apple Typing Tutor program, which measures words per minute (WPM), key strokes missed (KM), and net words per minute (NWPM, which was obtained by subtracting 2 (KM) from WPM). These measures were obtained for the average of every 9 paragraphs.

Subjects received nine practice sessions and then were assigned to Experimental or Control group based on NWPM and sex. The hypnosis group received the Stanford Hypnotic Susceptibility Scale, Form C, minus suggestions for drowsiness, sleepiness, or posthypnotic amnesia. Additional suggestions for performance enhancement were introduced. The control group watched a film. The average of every nine paragraphs was used.

The analyses of variance for dependent measures revealed no significant effects except for one interaction effect that actually was in the unexpected or wrong

direction. That effect appeared to be spurious as it was due to extreme errors produced by one subject.

"Only speed of typing (WPM) changed from pre to posttreatment, and this effect interacted with ability level. Post hoc analyses (Scheffe) indicated that beginner typists became less proficient, intermediate typists did not change, and advanced typists became more proficient" (p. 46).

Hypnotizability on SHSS:C did not correlate with change on NWPM.

A 3 x 3 x 2 ANOVA indicated a significant change over time on KM. "Although no change occurred from pretreatment to posttreatment, there was a decrease in errors at follow-up. There was also a significant Group x Level x Time interaction for KM ( $F = 2.57, p < .05$ ). This was accounted for by post hoc analyses showing that hypnotized beginner Ss changed over time, while control beginner Ss did not. Hypnotized Ss made significantly more errors following hypnosis than at pretreatment or follow-up" (p. 46).

"There was a significant main effect for time on NWPM. ... The Ss' overall typing performance decreased from pretreatment to posttreatment, but increased at follow-up. Only the advanced Ss demonstrated significant improvement between pretreatment and follow-up.

"There was also a significant interaction between time and ability level on WPM. ... beginner Ss typed significantly slower at posttreatment than at pretreatment or follow-up" (p. 47).

In their Discussion, the authors note that the outcomes of their investigation are consonant with results obtained by other investigators studying hypnosis effects on skills (Arnold, 1971; Edmonston & Marks, 1967). In contrast, earlier studies on reaction time demonstrated that either motivational instructions and/or alert hypnotic inductions improved performance (e.g. Ham & Edmonston, 1971; Rader, 1972). They raise the question whether Ss' relaxation following hypnosis may have slowed response time and canceled the effects of motivating instructions.

"When looking at all groups combined, Ss did not improve between pretreatment and posttreatment. At follow-up, however, Ss showed significant improvement on two out of the three measures. This suggests that learning had occurred, but that temporary inhibitory factors such as S restlessness and indifference observed by Es may have affected performance at posttreatment. The length of the task (90 minutes in one sitting) may have been responsible for the fatigue and boredom that seemed to set in. It is probable that the performance-enhancing instructions were not potent enough to counteract these effects. At follow-up (which took much less time) fatigue and boredom were apparently absent, hence typing improved. In addition, other factors may have affected performance (e.g., anxiety, lack of motivation). The data indicate that Ss of different ability levels responded differently over time.

"The results of the present study cast doubt on the utility of hypnosis in improving performance on a cognitive-motor task. Although there are many anecdotal reports of hypnosis improving performance, research studies indicate that hypnosis, with motivational instructions, is effective only in improving reaction time and not more complex measures of performance. This apparent inconsistency may be explained by considering the level of motivation of participants. It is likely that a person

requesting hypnosis to help improve performance is more motivated than experimental Ss" (p. 48).

**1985**

Pajntar, M.; Roskar, E.; Vodovnik, L. (1985). Some neuromuscular phenomena in hypnosis. In Waxman, D.; Misra, P.C.; Gibson, M.; Basker, M.A. (Ed.), Modern trends in hypnosis (pp. 181-206). New York: Plenum Press.

The phenomena presented here allow us to conclude that with hypnosis, the functioning of the neuromuscular system may be significantly influenced, either by increasing or decreasing the functioning of voluntary or electrically stimulated contractions, and that the function of movements may be improved. Two suggestions proved to be most efficient: 1) physical and mental relaxation, and 2) age regression. In age regression the patient recalls the ideomotor system, which is likely to result in a reconstruction of the forgotten motor contractions or in a strong intensification of these contractions under additional suggestions. With regard to relaxation, on one hand it intensifies the functioning of the voluntarily stimulated neuro-muscular systems, and on the other hand it prevents an excessive functioning of the involuntarily reflex stimulated antagonistic systems" (pp 202; 204).

**1983**

Thakur, Kripa; Thakur, Aruna (1983, November). Hypnotherapy for dysphagia. [Paper] Presented at the annual meeting of the American Society for Clinical Hypnosis, Dallas, TX.

The authors present six cases. They describe the act of swallowing as a complex neuromuscular activity involving a series of conditioned reflexes that get mingled with the voluntary act of swallowing, resulting in an automatic functioning of the mouth, pharynx, and the esophagus.

**1982**

Finkelstein, S. (1982). Re-establishment of traumatically disrupted finger flexor function: A brief communication. International Journal of Clinical and Experimental Hypnosis, 30 (1), 1-3.

Age regression during hypnosis and mental rehearsal while in trance, using a cassette tape for induction, enabled a patient, with disruption of flexor function of the fifth finger of her right hand, to restore full function, even though she did not have a strong belief system in hypnosis.

**1981**

Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.

Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to

gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

Wallace, Benjamin; Hoyenga, Katharine Blick (1981). Performance of fine motor coordination activities with an hypnotically anesthetized limb. International Journal of Clinical and Experimental Hypnosis, 29, 54-65.

3 experiments were conducted to determine the effects of induced hypnotic anesthesia in S's dominant arm upon the performance of various motor coordination tasks. Experiment 1 assessed the ability of Ss to tap a pencil within a 20 mm diameter circle while the limb performing the task was or was not anesthetized. Experiment 2 determined the effect of hypnotic anesthesia upon the ability to perform a hand-turn task. Experience 3 considered the effects of hypnotic anesthesia on the ability to draw and duplicate a sine- wave pattern. IN all 3 experiments, hypnotic anesthesia adversely affected task performance. Their results were interpreted as indicating a possible relationship between induced hypnotic anesthesia and mimicked cerebellar dysfunction.

-thesia on the ability to draw and duplicate a sine- wave pattern. IN all 3 experiments, hypnotic anesthesia adversely affected task performance. Their results were interpreted as indicating a possible relationship between induced hypnotic anesthesia and mimicked cerebellar dysfunction.

"Although the induction of hypnotic anesthesia in a limb appears to mimic cerebellar dysfunction or damage, the present authors are not implying that this is actually happening. In fact, there are few physiological correlates of hypnosis or hypnotic anesthesia (Evans, 1979; Sarbin & Slagle, 1979) and, to date at least, cerebellar involvement does not appear to be one of them. There appears to be a curious relationship, however, between performance on a motor task as a function of induced hypnotic anesthesia in a limb and as a function of cerebellar damage. This relationship may simply be coincidental at best but before it can be dismissed as such, further experimentation should take place to study this interesting phenomenon" (p. 61).

1980

Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral

nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.

In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.

Wallace, Benjamin; Hoyenga, K. B. (1980). Production of proprioceptive errors with induced hypnotic anesthesia. International Journal of Clinical and Experimental Hypnosis, 28 (2), 140-147.

The present study assessed the ability of Ss to localize their noses with the forefinger of their dominant hands. This was accomplished while S had his eyes closed and while the limb performing the task was or was not hypnotically anesthetized. In performing this task with an anesthetized limb, 2 error types were observed. The first involved a localization error of missing the nose location. A second error involved an increased amount of time required to find the nose location. An inverse relationship was found to exist between these error types such that a large localization error was associated with a short latency period while a small localization error was associated with a long latency period. Neither error type was evident when hypnotic anesthesia was absent

Weitzenhoffer, Andre M. (1980). Hypnotic susceptibility revisited. American Journal of Clinical Hypnosis, 22, 130-146.

The concept and measurement of hypnotic susceptibility are re-examined in their relation to hypnotizability, hypnotic depth and suggestibility. The Stanford Scales and similar instruments are found to have failed to take into account essential features defining traditional hypnosis and suggestibility and to have created confusion in the scientific inquiry into hypnotism. Other available measures have not been particularly successful, but some bear further attention. Recent claims that hypnotizability can be trained have failed to distinguish between hypnotizability proper and accessory processes, leaving some question about what is actually being trained. Possible future directions of work on susceptibility are considered. Attempts to distinguish between 'clinical' and 'laboratory' hypnotizability are examined and found to have been premature and loosely based on facts.

1979

Dosamantes-Alperson, Erma (1979). The intrapsychic and the interpersonal in movement psychotherapy. American Journal of Dance Therapy, 3, 20-31.

The adaptive function of two states of consciousness and corollary movement experiences is described. Movement in which a relaxed state of attention is maintained on inner kinesthetic sensations and imagery is contrasted with movement which is characterized by conscious, active interacting with the external world of people and events. Clinical examples from individual and group psychotherapy sessions are cited to demonstrate how meaning and conflict resolution may be achieved by clients while moving in either mode.

Hilgard, Ernest R.; Crawford, Helen J.; Wert, A. (1979). The Stanford Hypnotic Arm Levitation Induction and Test (SHALIT): A six-minute hypnotic induction and measurement scale. International Journal of Clinical and Experimental Hypnosis, 27 (2), 111-124.

The Stanford Hypnotic Arm Levitation Induction and Test (SHALIT) has been designed as a short (6-minute) induction and measurement method for screening Ss according to hypnotizability for either clinical or experimental purposes. In Experiment 1 conducted with college students in two institutions, SHALIT was substituted for the eye closure induction of the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) of Weitzenhoffer and E. R. Hilgard (1959) and followed by the remaining SHSS:A items. The SHALIT levitation score correlated .63 (N = 64) with SHSS:A. Some Ss who participated in the study were invited back for Experiment 2. This second experiment yielded a correlation of .52 (N = 27) between SHALIT and the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & E. R. Hilgard, 1962). Alternative simplified scoring methods designed for maximal convenience also proved satisfactory. The limitations of short tests as adequate measures of hypnotizability are noted.

Jackson, J. Arthur; Gass, Gregory C.; Camp, Elizabeth M. (1979). The relationship between posthypnotic suggestion and endurance in physically trained subjects. International Journal of Clinical and Experimental Hypnosis, 27, 278-293.

55 male Ss were assigned to 5 groups: control, hypnosis alone, motivation alone, low susceptible hypnosis with motivation, or high susceptible hypnosis with motivation. Ss performed 2 runs on a treadmill to their maximum capacity, as measured by oxygen consumption, blood lactate concentration, and respiratory quotient. Groups involving hypnosis performed in the posthypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater

endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.

-hypnotic state. A significant increase in endurance performance was revealed in the motivation alone Ss and in high susceptible hypnosis Ss who were given motivational suggestions. Maximum ventilation was significantly increased in high susceptible hypnosis Ss when compared with control Ss and significant increases in blood lactate concentrations were revealed when the high susceptible hypnosis Ss were compared with low susceptible hypnosis and motivation alone Ss. The reasons for the changes in metabolic variables are discussed. Findings demonstrated that in achieving greater endurance performance, motivational suggestions alone are as effective as identical suggestions given to high susceptible Ss.

1978

Delprato, D. J.; Holmes, P. A. (1978). Facilitation of arm levitation by responses to previous suggestions of a different type. International Journal of Clinical and Experimental Hypnosis, 26 (3), 167-177.

This experiment tested the hypothesis that responses to suggestions (confirmations of them) facilitate responses to subsequent suggestions. Experimental Ss first received 5 different suggestions (e.g., falling forward, index fingers coming together) that included instructions designed to help them experience involuntary performance of the suggested response. Control Ss were given the suggestions without the instructions. A subsequent, identical, arm levitation test revealed significantly more involuntary responding in experimental Ss than in control Ss. 10 prior confirmations of suggestions were more effective in differentiating control from experimental treatment than was a smaller number of confirmations. Results were discussed in terms of the contribution of learning and social control factors to suggestion effects.

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

Lazar, Billie S. (1977). Hypnotic imagery as a tool in working with a cerebral palsied child. International Journal of Clinical and Experimental Hypnosis, 25 (2), 78-87.

Hypnotic imagery was used with a moderately severe athetoid cerebral palsied 12-year-old boy who was mildly retarded and a poor hypnotic subject. Techniques included imagery, observation of the self, revivification of relaxing experiences,

proprioceptive feedback about the athetoid movements, and dealing with feelings and motivation. Athetoid movements were reduced, results extended beyond the treatment situation, and improvement was made in practical skills.

Stillman, Richard C.; Wolkowitz, Owen; Weingartner, Herbert; Waldman, Ivan; DeRenzo, Emil V.; Wyatt, Richard J. (1977, Dec 15). Marijuana: Differential effects on right and left hemisphere functions in man. Life Sciences, **21** (12), 1793-1799.

Marijuana, smoked at moderate doses, produced a differential impairment of the reaction times of right-handed males to pictorial stimuli presented to the left and right cerebral hemispheres. After smoking marijuana responses to pictorial stimuli presented to the right hemisphere were slowed significantly less than to the left hemisphere. Responses to verbal stimuli (trigrams) were slowed equally in both hemispheres, preserving an initial left hemisphere superiority for this material. This suggests that marijuana may differentially change the processing speed or relative dominance of man's two cerebral hemispheres, depending on the nature of the material being processed.

1976

Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, **18**, 254-262.

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

1975

Bender, V. L.; Navarett, F. J.; Nuttman, D. (1975). Effects of neutral hypnosis on a conditioned physiological response. Psychological Reports, **37**, 1155-1160.

The objective of the present experiment was to determine whether hypnosis without explicit suggestion of analgesia would diminish physiological responses to an operationally defined painful shock stimulus. Muscle tension (EMG) was significantly lower during hypnosis than pre- or posthypnosis. Pulse rate remained stable throughout all conditions. Also, the question of whether a tone paired with shock might acquire some unique property because of that association was investigated. It was found that EMG response to the tone alone was significantly

greater than to the tone-shock combination, in prehypnosis and posthypnosis, but not during hypnosis.

Weitzenhoffer, Andre M. (1972). The postural sway test: A historical note. International Journal of Clinical and Experimental Hypnosis, 17-24.

Presents historical evidence disputing that the postural or body sway test of hypnotic susceptibility was originated by C. L. Hull. Excerpts from French scientific literature between 1887 and 1914 are cited indicating that the French physician Lucien Moutin should receive credit as the originator. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1970

Perry, Campbell (1970). A possible kinesic indicator of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 18 (1), 52-60.

Reports a significant association between a kinesic variable and hypnotic susceptibility for 39 male undergraduate volunteers. Highly susceptible Ss tended to undergo hypnotic induction with their legs uncrossed; medium susceptible and insusceptible Ss crossed their legs. The phenomenon was present both in an experimental context in which Ss were being tested primarily for their ability to experience hypnotic analgesia and in a diagnostic hypnotic rating situation. There is some evidence to suggest that leg crossing in insusceptible Ss represents a reaction to their inability to meet the implicit demands of a hypnotic induction. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Garmize, L. M.; Marcuse, F. L. (1969). Some parameters of body sway. International Journal of Clinical and Experimental Hypnosis, 17, 189-194.

Investigated the effects of 4 variables on body sway with 160 undergraduates. A 4-dimensional analysis of variance was performed on the body sway scores obtained. None of the main effects were significant. 1 of the interactions was significant, but might have been due to chance. Results are consistent with those of past researchers. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hunt, Sonja M. (1969). The speech of the subject under hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 209-216.

Attempts to objectify changes taking place in the speech of 12 undergraduates under hypnosis as compared with their waking speech. A series of open-ended questions was asked in the waking and hypnotized states and the responses compared. Results indicate that the latency of response may be longer, the rate of speech slower, and the number of words in the response fewer under hypnosis. The rate of speech of E, however, also differed significantly between Ss in waking and hypnotized

conditions. It was therefore not possible to attribute the speech changes only to the hypnotized state. They could have arisen from E's differential verbal treatment of hypnotized and waking Ss. The need for future research and its nature are discussed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1968**

Dittborn, Julio M. (1968). A brief nonthreatening procedure for the evaluation of hypnotizability. International Journal of Clinical and Experimental Hypnosis, *16*, 53-60.

DESCRIBES A TECHNIQUE FOR THE SELECTION OF SS POTENTIALLY HIGH IN HYPNOTIZABILITY WITHOUT INFORMING THEM THAT HYPNOSIS IS BEING INDUCED. IT INVOLVES AN OBJECTIVE BEHAVIORAL OUTPUT (SLEEP WRITING) AS WELL AS CLINICAL SIGNS THAT CAN BE USED TO EVALUATE HYPNOTIZABILITY. IT HAS THE ADVANTAGE OF BEING ABLE TO BE ADMINISTERED BY INDIVIDUALS OTHERWISE UNTRAINED IN HYPNOTIC TECHNIQUES. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1967**

Lindner, Harold; Stevens, Harold (1967). Hypnotherapy and psychosomatics in the syndrome of Gilles de la Tourette. International Journal of Clinical and Experimental Hypnosis, *15*, 151-155.

REPORTS A CASE STUDY OF HYPNOTHERAPEUTIC TREATMENT OF A 19-YR-OLD MALE WITH GILLES DE LA TOURETTE SYNDROME. FROM A CONSIDERATION OF THE PROBABLE PSYCHODYNAMICS OF THE PATIENT, IT SEEMS THAT THE SYNDROME, A PRESUMED NEUROLOGICAL STATE, IS RESPONSIVE TO PSYCHOTHERAPY AND HYPNOSIS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, *12* (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the

Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Brady, J. P. (1964). Muscular endurance under hypnosis and in the motivated waking state. International Journal of Clinical and Experimental Hypnosis, *12*, 21-27.

8 female Ss scoring at least 10 on the Stanford Hypnotic Susceptibility Scale were required to hold a weight in the outstretched hand in 3 states: (a) under hypnosis, (b) under hypnosis with the upper arm and shoulder anesthetized hypnotically, and (c) in the waking state with motivation provided by a verbal exhortation and monetary payment. Order of performance in the 3 states was varied. No significant differences among states were found. The interaction between states and orders was significant, but it appears more likely to be the result of intersubject variability rather than of position or fatigue effects. Ss' expectancies and estimates of performance time, obtained postexperimentally, did not appear to be related to performance itself. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, *11*, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Crasilneck, Harold B.; Hall, James A. (1962). The use of hypnosis with unconscious patients. International Journal of Clinical and Experimental Hypnosis, *10* (3), 141-144.

8 of 10 patients dying of cancer were found to continue a simple motor response to a hypnotic command, even though they revealed no other evidence of interaction with the environment and were considered unconscious by their physicians. Certain theoretical considerations are mentioned. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

**Das, J. P. (1961). Body-sway suggestibility and mental deficiency. International Journal of Clinical and Experimental Hypnosis, 13-15.**

**50 mental defectives were subjected to the body-sway test of suggestibility. Contrary to expectations the defectives did not differ from each other when taken according to grades of deficiency, nor do they differ, as a group, from normal (college) controls. From Psyc Abstracts 36:02:2JI13D. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Mishchenko, M. (1961). The hypnotic condition as a process of nervous excitation. In Proc. Third World Congress of Psychiatry, Montreal, Canada, I. (pp. 704-708). (Abstract in American Journal of Clinical Hypnosis 1964, 7, 101.)**

**Subjects were selected with certain predispositions for the hypnotic state and studied in the waking, hypnotic and experimental sleep states by motor conditioned reflexes modified to a specific function of the frontal system. Excitable, active students of music and literature were found most excitable as subjects, subjects tending to be passive showed no hypnotic responses. Experimental sleep abolished the motor-conditioned reflexes, quite contrary to hypnotic findings. (M.H.E. abstract in AJCH).**

**1959**

**Das, J. P.; O'Connor, N. (1959). Body-sway suggestibility in paranoid and nonparanoid schizophrenics. International Journal of Clinical and Experimental Hypnosis, 7 (3), 121-128.**

**Twenty paranoid and twenty nonparanoid schizophrenics were tested for body-sway suggestibility and verbal conditioning. Paranoids showed greater sway than nonparanoids and both groups swayed more forward than backward. Forward sway was found to be a more reliable measure than backward sway. Both static ataxia and suggested sway were found to be highly reliable over short test-retest periods. The smaller sway of the nonparanoids was explained in terms of difficulty of communication. With regard to the verbal conditioning, it was found that the difficulty of inhibiting an already acquired conditioned response was positively related to the amount of sway produced by suggestion. This was tentatively interpreted as due to the degree of weakness of the capacity to inhibit responses" (p. 128).**

**1955**

**Schneck, Jerome M. (1955). Transference and hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 3 (3), 132-135.**

**"Summary. This report describes an extreme posture in hypnosis, spontaneously assumed by a male patient, when the patient, seated in a chair, curved his head, neck, and upper body far forward so that his face finally was turned inward toward his body at the level of lower abdomen or pubis. This spontaneous motor**

phenomenon, aside from serving as an addition to spontaneous sensory and motor phenomena described previously, continued throughout a series of sessions and reflected symbolically a combination of broad rather than limited interest in treatment and its implications were accepted and used as a base in determining the direction and management of therapy. The constellation of events furnished an additional example of incorporation of hypnotic technique into psychotherapy" (p. 135).

1954

Koster, S. (1954). Experimental investigation of the character of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 42-54.

In waking, hypnosis, and sleep states 6 subjects were tested for knee-jerk height, key pressing to metronome signal, doing sums, recalling a story, etc. The Summary states:

"1. The height of the knee-jerk of all 6 subjects both in T and in "S" was much lower than in (W), the average height of all knee-jerks computed of the 6 subjects was both in T and in "S" only 39% of the average height in (W).

2. The [arm] catalepsy in T and in "S" continually existed.

3. The subjects in T and in "S" could hear well and perform active movements, though they reacted somewhat more slowly, and less forcibly than in (W) and sometimes only after some provocations.

4. The subjects both in T and in "S" could not only hear well, but could also present more or less complicated psychic impressions, reproducing them later again in "S" and also after the end of the experiment" (p. 50).

The author concluded, "Hypnosis is a sleeping-condition, but a special one. The specific difference consists of the fact that the subject's many impressions, which he would observe in a waking-condition, he does not observe now, and does not react to, aside from impressions coming to him through the hypnotist. It can then be said that there is not an absence but a decrease of the active relation with the outer world. This is exactly the same state as the one during sleepwalking and the writer must repeat after all his investigations, what has already been stated: Essentially there is no difference between the condition of a hypnotized person and that of a sleepwalker" (p. 51).

Guze, Henry (1953). Posture, postural redintegration and hypnotherapy. Journal of Clinical and Experimental Hypnosis, 1, 76-82. (Abstracted in Psychological Abstracts 53: 6559)

The use of postural analysis, and directives regarding posture and their importance in hypnotherapy are discussed. Theoretically, it is indicated that a chronic postural condition may act to elicit an emotional state with which it was originally associated. Such an emotional condition may have caused the posture in the first place, and then established a feed-back relationship with it. The breaking of feed-back mechanisms of this kind depends largely upon postural change when a chronic situation is established in the absence of realistic cause for the emotion. Posture may

also act redintegratively, when directly suggested, in rearousing traumatic memories. Several clinical cases are reported.

## **Muscle**

**1996**

**Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.**

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning treatment with hypnosis. Evidence regarding efficacy of hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

**1991**

**Clarke, J. H.; Reynolds, P. J. (1991). Suggestive hypnotherapy for nocturnal bruxism: A pilot study. American Journal of Clinical Hypnosis, 33, 248-253.**

Although one can find many case reports of hypnotherapy for bruxism, there is a paucity of scientific research on the subject. This study describes the use of suggestive hypnotherapy and looks at its effectiveness in treating bruxism. Eight subjects who reported bruxism with symptoms such as muscle pain and complaints of bruxing noise from sleep partners were accepted into the study. An objective baseline of the bruxing was established using a portable electromyogram (EMG) detector attached over the masseter muscle during sleep. Hypnotherapy was then employed. Both self-reports and posttreatment EMG recordings were used to evaluate the hypnotherapy. Long-term effects were evaluated by self-reports only. The bruxers showed a significant decrease in EMG activity; they also experienced less facial pain and their partners reported less bruxing noise immediately following treatment and after 4 to 36 months.

**Lucic, Karen S.; Steffen, John J.; Harrigan, Jinni A.; Stuebing, Roger C. (1991). Progressive relaxation training: Muscle contraction before relaxation?. Behavior Therapy, 22 (2), 249-256.**

Demonstrated support for E. Jacobson's (1938) position that tensing muscle groups prior to relaxation is physiologically detrimental to the relaxation process. 48 undergraduates participated in 1 of 3 conditions: muscle contraction (MC) relaxation, relaxation without muscle contraction (WMC), and self-induced relaxation control. Ss participated in a single session of progressive relaxation. Ss had no previous relaxation training and had moderate trait anxiety scores. A significant main effect for group resulted for the electromyograph (EMGH) measures. The mean EMGH measures identified the WMC group as most relaxed (i.e., experiencing the least amount of muscle tension), followed by the control group and then the MC group.

EMGH measures identified the WMC group as most relaxed (i.e., experiencing the least amount of muscle tension), followed by the control group and then the MC group.

Somer, Eli (1991). Hypnotherapy in the treatment of the chronic nocturnal use of a dental splint prescribed for bruxism. International Journal of Clinical and Experimental Hypnosis, 39, 145-154.

A behavioral medicine case is described in which the patient was treated with a combined approach involving both hypnoanalytic and hypnbehavioral techniques. A 55-year-old man with bruxism was referred after 10 years of craniomandibular treatment because of his dependency on a dental splint prescribed for nocturnal use. A projective hypnoanalytic exploration helped to uncover and consequently resolve an earlier conflict that had been reactivated in the patient's work situation and which had become a constant source of mental and muscular tension. The hypnoanalytic exploration was followed by a cognitive-behavioral hypnotic intervention that was tape-recorded and prescribed for bedtime practice. Pre- and posttherapy psychological, physiological, and self-report measurements corroborated the patient's sense of well being that came with his newly found ability to sleep without the dental splint. The importance of considering multiple etiological factors in the treatment of such psychosomatic disorders as bruxism is discussed.

1988

Radil, T.; Snyderova, I.; Hacik, L.; Pfeiffer, J.; Votava, J. (1988). Attempts to influence movement disorders in hemiparetics. Scandinavian Journal of Rehab. Med. Suppl., 17, 157-161.

Step duration, measured in hemiparetic patients walking on a circular path, showed that step duration of the affected foot is usually longer. Functional electrical stimulation of the peroneal nerve in the swing phase of the step (eliminating foot drop) shortened step duration in the majority of cases. Hypnosis induced by the verbal fixation technique was used in hemiparetic patients (a) to ascertain whether the patients' mobility would increase during hypnosis and to determine (in positive cases) whether this approach might be used to predict the effect of rehabilitation

performed by classical methods; (b) to use hypnosis as a method of auxiliary treatment. The general finding was that the extent of movements of the hemiparetic upper extremity considerably improved during and immediately after hypnosis. This effect could be observed both at the level of severe impairment (at the beginning of treatment) and during the later stages when mobility greatly improved due to rehabilitation and recovery.

1986

Rudnick, David (1986). Hypnosis in movement disorders. [Paper] Presented at UCLA Neurobehavioral Seminar/Case Conference.

This case conference involved presentation of 4 cases of torticollis movement disorders and discussion of the role of hypnosis in treatment. Author asked: What are dystonias? What is hypnosis? What is the effect of movement disorders on hypnosis? He noted that the close mind-body relationship was an interest of Mesmer, and of Charcot in study of epilepsy. In one case, hypnosis was used for: 1. movement exercises (often incorporated into imagery) once the patient is hypnotized, to exercise muscles. 2. tactile and imagery-based suggestions for healing brain center and neck (e.g. imaging change and growth in atrophied muscles) 3. psychodynamic explorations of possible contributory factors (e.g. a patient who had no history of neurological insult, but talked about guilt over raising an illegitimate son). 4. Self-hypnosis tapes (specific motor exercises and nonspecific relaxation techniques) 5. simulating typing, taking dictation under hypnosis

Author notes that we are beginning to get some understanding of the neuropathology and neuroanatomy of movement disorders. They are involuntary, happen without people trying to make them happen. We used to think they all disappear during sleep, but Tourette's tics occur during sleep. Based on known syndromes (Parkinson's and Huntington's diseases), it appears that movement disorders involve extrapyramidal and basal ganglia, subthalamic nuclei, substantia nigra, red nucleus, direct connection to spinal levels and to thalamus. Neurotransmitters involved include dopamine, GABA, etc.

There is still an argument whether these movement disorders are psychogenic or neurogenic. In the past torticollis was considered psychogenic, caused by single traumatic event. Then hypnosis was used a la Freud. There were early case reports of improvement with hypnosis, but no long-term follow-up of results. The author thinks they attributed improvement with hypnosis to the wrong reasons. Hypnosis also was being applied to clearly neurogenic disorders at that time.

Various theories of hypnosis have neurological aspects: 1. Hypnosis is related to neurologic regression (exemplified by animals staying still in face of danger), involving the phylogenetically older brain. 2. Hysteria equals state of hypnosis (but hysteria itself isn't well-defined). Most hysterics have some neurological problems.

See recent articles by Bruce Miller 3. Hypnosis is a state of partial sleep (a la Pavlov), but EEG patterns during hypnosis are similar to waking EEG. There are reports of people placed into hypnosis and then given suggestions to go to sleep, and EEG changes are observed (but not sleep pattern). 4. William Kroger, M.D., theorizes that the part of brain "calling the shots" during hypnosis is an older part of the brain, with something separating out the cortex, so that memory storage is different, and reality identified is different. 5. Some evidence points to role of the reticular activating system -- which integrates afferent sensory pathways; only some neocortex projects to the system. Functionally, the reticular activating system relates to motor phenomena and especially to attention. 6. Electrophysiological changes may occur in hypnosis. Roberts (1960 NCEH) says it's a specific electrophysiological state of brain: arousal of reticular activation system, inhibition of behavioral arousal, and sensory suppression.

The author asks, How does cortical inhibition occur in hypnosis? There is a subcortical delta wave that "drives the separation of cortex (three persistent rhythmic stimuli). He asks, Is there some way to teach subcortical changes? He notes a connection between hypnosis and movement disorders. The reticular activating system and extrapyramidal connections are inhibited by hypnosis, so they are no longer responsible for decreasing the movement disorders. Finally, why do some people stop movements during hypnosis while, the movements return after hypnosis termination?

1985

Miller, Lorence S.; Cross, Herbert J. (1985). Hypnotic susceptibility, hypnosis, and EMG biofeedback in the reduction of frontalis muscle tension. International Journal of Clinical and Experimental Hypnosis, 33, 258-272.

Biofeedback and hypnosis have been used in the treatment of similar disorders. While each has been useful, it is unclear whether they involve similar or conflicting processes. Bowers & Kelly (1979) have hypothesized that high hypnotizable Ss are more likely to benefit from hypnosis and similar procedures, than moderate and low hypnotizable individuals. In contrast, Qualls & Sheehan (1979, 1981 a, b, c) have argued that hypnosis and biofeedback involve antithetical abilities. In the present study, high, moderate, and low hypnotizable individuals (N = 60) were randomly assigned to either EMG biofeedback or hypnosis conditions and instructed to relax. It was found that the mean percent reduction in frontalis muscle tension over the last 5 trials was significantly greater for the high hypnotizable Ss during hypnosis than the moderate and low hypnotizable Ss. The moderate and low hypnotizable Ss demonstrated greater reductions in frontalis muscle tension during EMG biofeedback than during hypnosis. These findings are partly supportive of the predictions of Qualls and Sheehan that hypnosis and biofeedback involve antithetical processes.

Qualls and Sheehan (1979, 1981a) "have hypothesized that biofeedback and hypnosis abilities involve antithetical or antagonistic cognitive processes. Specifically, they argued that the biofeedback signal interferes with the natural ability of high absorption Ss to 'direct their attention in an effortless manner toward

subjective, imaginal experience [1981a, p. 33],' by forcing them to attend to the external environment. In contrast, low absorption Ss, as well as moderate hypnotizable Ss, possess inadequate abilities to direct their attention in such an effortless and absorbing manner towards inner, subjective experiences, and therefore, the biofeedback signal better enables them to focus their attention. While the pattern of EMG results among the high, moderate, and low hypnotizable Ss ... was somewhat consistent with these predictions, the self-report data did not reveal differences in Ss' awareness of the biofeedback signal or hypnotic suggestions. In addition, there was only a trend for the high hypnotizable Subjects to report less effort in attempting to relax. It is, therefore, unclear whether the explanations postulated by Qualls and Sheehan (1979, 1981a) for the differences found in this study are valid" (p. 269).

Subjective relaxation response results were complex. Ss were asked how relaxed they were during the experimental session in comparison to the previous hypnosis sessions (screening tests). Biofeedback Ss rated the experimental session less favorably than hypnosis Ss. Ss were asked to what degree the feedback (or hypnotic suggestions) helped them to relax; there were significant main effects for treatment and trait, as well as a significant trait x sex interaction. Hypnosis Ss reported that this procedure was more helpful than was reported by the biofeedback Ss. Newman-Keuls comparison revealed that the main effect for trait was due to the high hypnotizable Ss reporting more help from the procedures than the low hypnotizable Ss, and moderate hypnotizable Ss. The Trait x Sex interaction was the result of the high hypnotizable female Ss indicating more help from either relaxation procedure, than was reported by the low hypnotizable male Ss and moderate hypnotizable female Ss and the high hypnotizable male Ss indicated that the procedures were significantly more helpful than was reported by the low hypnotizable male Ss

Pajntar, M.; Roskar, E.; Vodovnik, L. (1985). Some neuromuscular phenomena in hypnosis. In Waxman, D.; Misra, P.C.; Gibson, M.; Basker, M.A. (Ed.), Modern trends in hypnosis (pp. 181-206). New York: Plenum Press.

The phenomena presented here allow us to conclude that with hypnosis, the functioning of the neuromuscular system may be significantly influenced, either by increasing or decreasing the functioning of voluntary or electrically stimulated contractions, and that the function of movements may be improved. Two suggestions proved to be most efficient: 1) physical and mental relaxation, and 2) age regression. In age regression the patient recalls the ideomotor system, which is likely to result in a reconstruction of the forgotten motor contractions or in a strong intensification of these contractions under additional suggestions. With regard to relaxation, on one hand it intensifies the functioning of the voluntarily stimulated neuro-muscular systems, and on the other hand it prevents an excessive functioning of the involuntarily reflex stimulated antagonistic systems" (pp 202; 204).

1984

**Funch, Donna P.; Gale, Elliot N. (1984). Biofeedback and relaxation therapy for chronic temporomandibular joint pain: Predicting successful outcomes. Journal of Consulting and Clinical Psychology, 52 (6), 928-935.**

Fifty-seven patients with chronic temporomandibular joint (TMJ) pain were randomly assigned to receive either relaxation or biofeedback therapy. Therapy efficacy was assessed (immediate posttreatment and 2-year follow-up), and pretherapy factors (demographic, clinical, personality) were used to predict successful outcomes for each therapy group. Although there were no significant differences in outcomes, characteristics of patients with successful outcomes were not similar for the two therapies. Successful patients in the relaxation condition tended to be younger, had experienced TMJ pain for a shorter period of time, and had reported problems with other psychophysiological disorders. Successful patients in the biofeedback group tended to be older, married, had experienced TMJ pain for a longer period of time, and had not received prior equilibration treatment. Only two of these factors, equilibration and presence of other disorders, were related to both short- and long-term outcomes, suggesting that they may be particularly useful as predictors of outcome. These findings do suggest that knowledge of pretherapy factors, particularly clinical, may allow for more optimal assignment to therapy conditions.

**Murphy, Joseph K.; Fuller, A. Kenneth (1984). Hypnosis and biofeedback as adjunctive therapy in blepharospasm: A case report. American Journal of Clinical Hypnosis, 27, 31-37.**

The efficacy of ophthalmologic, hypnotic, and biofeedback treatment procedures in a case of blepharospasm was evaluated. Manual eye rubbing and eye opening served as dependent measures which were assessed by the patient during treatment and a three month follow-up. Results indicated that ophthalmologic treatment had a limited effect. In contrast, brief hypnosis had a dramatic but short-lived effect and biofeedback had a moderate but sustained effect. Results are discussed in terms of the efficacy of psychological intervention, the limitations of the report, and the need for future research.

**Stam, Henderikus J.; McGrath, Patricia A.; Brooke, Ralph I. (1984). The effects of a cognitive-behavioral treatment program on temporo-mandibular pain and dysfunction syndrome. Psychosomatic Medicine, 46, 534-545.**

Sixty-one patients, clearly diagnosed as suffering from temporo-mandibular pain and dysfunction syndrome (TMPDS), were randomly assigned to one of three groups, (1) hypnosis and cognitive coping skills, (2) relaxation and cognitive coping skills, or (3) a no-treatment control group. All patients were evaluated with a standard hypnotic susceptibility scale prior to treatment. The two treatment groups received four weekly sessions of their respective treatments. Patients in the hypnosis and relaxation groups reported equivalent decrements in pain, abnormal sounds in the temporomandibular joint, and limitations of jaw mobility. Hypnotic susceptibility was significantly correlated with reductions in reported pain for the

treatment groups. Patients' age and the duration of pain prior to treatment were not related to treatment outcome. Patients who dropped out of treatment had fewer limitations in jaw movement but did not differ on any other variable from patients who remained in treatment. These findings are discussed in relation to the hypothesis that TMPDS is a stress related muscular pain and dysfunction.

1983

Schandler, Steven L.; Dana, Edward R. (1983). Cognitive imagery and physiological feedback relaxation protocols applied to clinically tense young adults: A comparison of state, trait, and physiological effects. Journal of Clinical Psychology, 39, 672-681.

Examined changes in targeted and general tension behaviors as well as reductions in physiological tension associated with cognitive imagery and electromyographic biofeedback relaxation procedures. Three groups of 15 female college students participated. During three weekly sessions each person received either guided cognitive imagery relaxation, frontalis muscle feedback relaxation, or a self-rest control procedure. The Anxiety Differential was administered before and after each session, while frontalis EMG, heart rate, and skin temperature were monitored continuously. A second Temperament Analysis was administered after the final session. The imagery procedure was associated with moderate reductions in physiological tension and significant reductions in state anxiety and three tension-related personality dimensions. Self-rest persons displayed lesser reductions in general tension with little physiological change. While biofeedback persons showed the largest reductions in physiological tension, they displayed only small and variable changes in state anxiety and personality dimensions. The data raise continued questions about the application of physiologically based operant relaxation procedures and support the use of cognitively mediated protocols for the treatment of specific or general anxiety behaviors.

Thakur, Kripa; Thakur, Aruna (1983, November). Hypnotherapy for dysphagia. [Paper] Presented at the annual meeting of the American Society for Clinical Hypnosis, Dallas, TX.

The authors present six cases. They describe the act of swallowing as a complex neuromuscular activity involving a series of conditioned reflexes that get mingled with the voluntary act of swallowing, resulting in an automatic functioning of the mouth, pharynx, and the esophagus.

1980

Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.

In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle

groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.

1967

Schubot, Errol David (1967). The influence of hypnotic and muscular relaxation in systematic desensitization of phobias (Dissertation). Dissertation Abstracts, 27 (n10-B), 3681-3682.

"15 snake phobic subjects had desensitization treatment and 15 matched subjects had desensitization treatment with a hypnotic and muscular relaxation induction. Rate of moving through the fear hierarchy was based on three variables fear report, report of body tension, and time of signaling anxiety. Analysis of results took into consideration initial approach (to snake) level of subjects. Both treatments were effective. However, hypnotic relaxation was significantly important in desensitization for the most phobic subjects (those who couldn't approach closer than 5 feet, initially) though not for less fearful subjects. In fact, the most fearful subjects did not show improved approach behavior if they did not get the hypnosis relaxation treatment, though bodily tension and fear were reported as less while working on early items in the hierarchy. The Waking group, compared to the Relaxation hypnosis group, manifested significantly less improvement in approach and slower progress in desensitization. Hypnotizability was significantly correlated with improvement for the Relaxation subjects, as was vividness of imagery. In summary, hypnosis (a relaxation induction) facilitated desensitization treatment of highly anxiety snake-phobic subjects with the hypnotic relaxation induction, treatment outcome was related both to hypnotizability and to imagery vividness" (p. 3681- 3682).

1965

Schneck, Jerome M. (1965). Hypnotherapy for vaginismus. International Journal of Clinical and Experimental Hypnosis, 13 (2), 92-95.

The literature on hypnotherapy contains few comments, usually generalizations, on vaginismus. 2 patients with this problem are presented here. Methods used and degrees of success are described. Major stress was on hypnotic relaxation with supporting, persuading, and graded, encouraging measures. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Moskowitz, Arnold E. (1964). A clinical and experimental approach to the evaluation and treatment of a conversion reaction with hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (4), 218-227.

A combination of hypnotherapeutic techniques within a clinical and experimental context provided a method of understanding, evaluating, and predicting the course of a conversion reaction. During waking and hypnotic conditions, 5 trials of dynamometer presses were obtained from a patient having primary symptoms of paralysis of his left arm. Difference scores between the left and right hands during waking and hypnotic conditions were evaluated. Findings were: (a) At the beginning of treatment, significant differences were found between the waking and hypnotic conditions (b) The largest differences between the waking and hypnotic conditions occurred during the early stages of treatment, while the smallest differences occurred on the final day of treatment. (c) With a complete remission of the patient's symptoms, no significant differences between the waking and hypnotic conditions were found. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Cedercreutz, Claes (1961). Hypnosis in surgery. International Journal of Clinical and Experimental Hypnosis, 9, 93-95.

(Author's Summary) "It is possible to treat painful conditions and spasms in the alimentary canal by hypnosis. In the rehabilitation of patients with limb injuries and fractures, hypnosis has also proved useful. There is seldom reason to resort to this method of inducing anaesthesia in surgery" (p. 95).

Music

1992

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

**Excluded:** Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

**Music:** Herb Ernst, Dreamflight II. **Suggestions:** Music background, permissive, based on Evans & Richardson's study.

**Outcome Measures:** Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

1990

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. International Journal of Psychosomatics, 37, 82-85.

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilità musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

Clark, Duncan B.; Agras, W. Stewart (1990). The assessment and treatment of performance anxiety in musicians. American Journal of Psychiatry, 148 (5), 598-605.

94 adults with a performance anxiety problem were recruited by mass media announcements and were seen in a university-based outpatient psychiatric clinic. Assessments were questionnaires for all 94 ss, diagnostic interview of 50 ss, and laboratory performance of 34 ss. Treatment conditions were 6 weeks of buspirone, 6 weeks of placebo, a five-session group cognitive-behavior therapy program (CBTP) with buspirone, or the CBTP with placebo. All Ss fulfilled criteria for Diagnostic and Statistical Manual of Mental Disorders-III-Revised (DSM-III-R) social phobia. Of the 15 full-time professional musicians, 10 had tried propranolol and 3 had stopped performing. Most Ss had substantial anxiety and heart rate increases during lab speech and musical performances. CBTP resulted in significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence.

1989

Snodgrass, M.; Lynn, Steven Jay (1989). Music absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 41-54.

The present study investigated differences between high (N = 15), medium (N = 20), and low (N = 16) hypnotizable Ss' involvement in imaginative versus nonimaginative music. Ss were first screened for hypnotizability with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). In a second session presented as a study of music appreciation, Ss listened to classical music of high- and low-rated music imaginativeness. Ss' involvement was indexed by absorption, imagery elaboration reported in open-ended essays, and reaction time to a pure tone. High hypnotizable Ss reported more absorption than low hypnotizable Ss, regardless of the imaginativeness level of the music. Ss reported more imagery elaboration in the imaginative than in the low-imaginative passages. High hypnotizable Ss tended to differ in their imagery elaboration in response to the imaginative passages but not in response to the nonimaginative passages. Reaction time results were nonsignificant. No sex differences were found. Medium hypnotizable Ss were indistinguishable from both high- and low-hypnotizable Ss. The findings are generally compatible with J. R. Hilgard's (1970, 1974) construct of imaginative involvement.

1983

Smith, Howard V.; Forrest, Derek W.; Sheehan, Eugene P. (1983). Suggested improvement, music, and the visual acuity of myopes: A reply. [Comment/Discussion] .

This is a reply to Wagstaff, G.F. suggested improvement of visual acuity: A statistical reevaluation. IJCEH, 1983, 31, 239-240. Here, the authors suggest yet a third way of analysing the data initially presented by Sheehan, Smith, & Forrest in 1982 (A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes, IJCEH, 30, 138-146).

Mysticism

1997

Court, John (1997). Hypnosis, healing and the Christian. Carlisle United Kingdom: Paternoster Press.

Seeks to explore the interface between hypnotic phenomena and religious experiences. On the basis of clinical examples, and historical review, argues that the constraints expressed by some churches against hypnosis cannot be justified. Rather that there is a good deal of support for seeing religious experiences and clinical phenomena as similar. Challenges the use of the Old Testament to discount hypnosis in favor of more positive evaluations from the New Testament.

1993

**Kokoszka, Andrzej (1993). Occurrence of altered states of consciousness among students: Profoundly and superficially altered states in wakefulness. Imagination, Cognition and Personality, 12, 231-247.**

In a questionnaire survey waking altered states of consciousness (ASC) are found to be common among 174 Polish students. The experience of Superficially Altered States of Consciousness (SASC) was reported by 96 percent of subjects and more than half of them had such experiences often. Whereas an experience of Profoundly Altered States of Consciousness (PASC) was confirmed by 75 percent and about one-third of them had them often. The comparison of the experiences accompanying the ASC indicates that SASC are characterized by disturbances in experiencing the reality and oneself combined with positive, pleasant feelings and with quietness. On the other hand, PASC are accompanied by experiences related to an absolute, universal, eternal, and existential or religious matters. PASC are accompanied by extremely strong positive emotions of happiness, total love, etc. and are experienced as more rational than SASC, and with significantly less feelings of cognitive disturbances than in SASC. The comparison of circumstances of the ASC occurrence indicates that SASC occur in usual and common states and situation of everyday life, whereas PASC mainly in the context of religion and nature. The congruence of these findings with an integrated model of the main states of consciousness suggests a natural tendency for a cyclical occurrence of ASC, or more precisely, the differentiated waking states of consciousness.

**1992**

**Richeport, Madeleine M. (1992). The interface between multiple personality, spirit mediumship, and hypnosis. American Journal of Clinical Hypnosis, 34, 168-177.**

The author draws parallels between multiple personality disorder (dissociative identity disorder), spirit mediumship, and hypnosis. She uses historical, anthropological, and clinical perspectives. According to the author, Milton Erickson's view of multiple personality disorder was that it was not necessarily pathological, and he employed hypnosis to gain access to personalities and to transform their behavior from involuntary to voluntary actions. "Natural trance therapies in other cultures offer a new perspective for viewing the normalcy or pathology of "other selves"" (p. 168).

**1991**

**Nelson, Peter L. (1991-92). Personality attributes as discriminating factors in distinguishing religio-mystical from paranormal experients. Imagination, Cognition and Personality, 11, 389-406.**

In the first section of this article, an operationalized notion of preternatural experience is described which includes two general classes of experience: religio-mystical (Ontic) and paranormal (Perceptual). The exploratory study which follows uses the personality measures of the complete Tellegen Differential Personality Questionnaire taken from 120 subjects who reported having had spontaneous

religio- mystical and/or paranormal experiences at some time in the past. The scores on all eleven primary dimensions, three higher order affect factors, and two validity scales were used individually, in univariate ANOVAs, and together, in a Direct Discriminant Function Analysis, to successfully separate two classes of preternatural experients from non- experients and from each other.

1984

Burnham, John C. (1984, October/1986). The fragmenting of the soul: Intellectual prerequisites for ideas of dissociation in the United States. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 63-84). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

"Reductionism was a relentless pursuit of the idea that knowledge of components led to knowledge of causes. In this context, I propose to show how, in the psychological-medical realm, the initial concept was the soul, and the final intellectual product was dissociative phenomena" p. 64.

Decker, Hannah S. (1984, October/1986). The lure of nonmaterialism in materialist Europe: Investigations of dissociative phenomena, 1880-1915. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 31-62). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

Janet's career paralleled an increased interest in dissociation, because he had contact with scientists studying spiritism, used hypnosis, and insisted on a scientific approach. He coined the words "subconscious" and "dissociation." As his sphere of influence declined, so did scientific interest in dissociation--especially multiple personality disorder.

Scientific study of dissociation began with investigations into religious exorcism and spirit possession. For example, at the behest of Prince Max Joseph of Bavaria, Mesmer duplicated the exorcisms of Father Gassner (causing convulsions) using hypnosis. Following Mesmer, there were reports of multiple personalities (e.g. an "exchanged personality" in Germany, reported in 1791 by Eberhardt Gmelin).

"Partly because of this growth of knowledge of multiple personality, a new model of the mind developed during the early 19th century: the mind was dual; there were conscious and unconscious mental states. Later, it was said that there was a dominant conscious personality with a group of underlying subpersonalities. Eventually it was declared that split fragments of personality could act autonomously" p. 37.

The scientific study of these phenomena continued under the leadership of Frederic Myers of The Cambridge Society for Psychical Research. According to William James, Myers was the first to consider the phenomena of hallucination, hypnotism, automatism, double personality, and mediumship as connected parts of one whole

subject. The Cambridge Society was involved in the transition from the use of automatic writing by mediums to its use for clinical purposes and experimental research in the 1880's and 1890's.

Increasing numbers of multiple personalities reported in the literature in late 19th century led to increased interest in hypnosis and to the concept of dissociation. The author details the contributions of Janet, and then explains how interest declined in dissociation and in hypnosis due to the following: 1. Experimental psychologists in Germany (e.g. Wundt) refused to deal with anything that resembled the "unconscious," and neglected the point of view of the experiencing person. 2. Those few psychologists interested in the unconscious found projective tests (Rorschach, TAT) an easier avenue than hypnosis or automatic writing. 3. Many mediums were exposed as frauds, e.g. Flournoy's popular "From India to the Planet Mars". 4. Janet himself was very critical of parapsychology. 5. When Charcot died suddenly, it was discovered that some of his assistants had rehearsed the behavior of hypnotized patients. 6. Hypnotists' extravagant claims (e.g. past life age regression) led to a wave of reaction against them. 7. Questions were raised about the iatrogenic nature of multiple personality. 8. Conscientious hypnotists discovered drawbacks

- not everyone could become good hypnotists (e.g. Freud)
- not everyone could be hypnotized
- some patients faked hypnosis
- extreme sensitivity of hypnotized patients to the hypnotist's wishes led to biased results
- hypnotist sometimes was conditioned to things in certain way by his first patient

9. Janet didn't have the personality of a leader, and he argued with the psychoanalysts about who should get credit for certain ideas

**1980**

Prince, Raymond (1980). Variations in psychotherapeutic procedures. In Triandis, Harry C.; Draguns, Juris G. (Ed.), Psychopathology (6, pp. 291-349). Boston: Allyn & Bacon.

Prince points out that indigenous practitioners often capitalize on the organism's endogenous healing mechanisms which develop spontaneously when the individual is distressed. "healers around the world have learned to manipulate and build upon these endogenous mechanisms in a variety of ways to bring about resolution of life's problems and alleviation of suffering" (p. 292). Prince is referring here to altered states of consciousness such as dreams, trance states, dissociations, and mystical experiences of various sorts which are cultivated and elaborated by indigenous healers for therapeutic purposes. In general, Western type practitioners have denigrated these procedures...." (from Ann. Rev. of Psychol., 1982, pp 243-244).

**1977**

Sacerdote, Paul (1977). Application of hypnotically elicited mystical states to the treatment of physical and emotional pain. International Journal of Clinical and Experimental Hypnosis, 25, 309-324.

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

**1963**

**King, C. D. (1963). The states of human consciousness. New York, NY: University Books. (Reviewed in *American Journal of Clinical Hypnosis* 7, 1964, 96.)**

From the book review by Stanley Abrams, *AJCH*: [The book] "is more philosophical and mystical than scientific. ... [and describes] the four states of consciousness: sleep, waking, awakeness, and objective consciousness. ... For man to attain completeness and normalcy he must achieve the state of awakeness. According to the author, however, only a relatively few have approached this stage of consciousness and his description of it is quite vague. When one has reached awakeness he is able to understand and actually perceive the world in a novel and unique manner. ... The final stage of awareness, objective consciousness, is characterized as the experiencing of cosmic phenomena in the same fashion as external reality is understood in the awakened state. The author indicated that this stage has not as yet been attained by man, but it does lie within his potential. ... The only treatment of hypnosis is the author's statement that the waking state is the same as the hypnotic state because suggestibility exists in both" (p. 96).

## **N RESEARCH**

**Nausea**

**2002**

**Edser, Stuart J (2002, March). Hypnotically-facilitated counter-conditioning of anticipatory nausea and vomiting associated with chemotherapy: A case study.. Australian Journal of Clinical Hypnotherapy and Hypnosis, 23 (1), 18-30.**

Presents an account of a cancer patient who suffers from severe anticipatory nausea and vomiting in the lead-up to chemotherapy treatment. The paper briefly contextualises the symptomatology of the presenting problem in the behavioural and hypnotic literature and recounts the rationale and methods that the writer used in assisting the patient to overcome the problem. Counter-conditioning was used to

desensitise the patient to the aversive stimuli and hypnosis used to enhance this effect and to facilitate the final outcome.

1997

Faymonville, M. E.; Mambourg, P. H.; Joris, J.; Vrijens, B.; Fissette, J.; Albert, A.; Lamy, M. (1997). Psychological approaches during conscious sedation. Hypnosis versus stress reducing strategies: A prospective randomized study. Pain, **73** (3), 361-367.

Stress reducing strategies are useful in patients undergoing surgery. Hypnosis is also known to alleviate acute and chronic pain. We therefore compared the effectiveness of these two psychological approaches for reducing perioperative discomfort during conscious sedation for plastic surgery. Sixty patients scheduled for elective plastic surgery under local anesthesia and intravenous sedation (midazolam and alfentanil upon request) were included in the study after providing informed consent. They were randomly allocated to either stress reducing strategies (control: CONT) or hypnosis (HYP) during the entire surgical procedure. Both techniques were performed by the same anesthesiologist (MEF). Patient behavior was noted during surgery by a psychologist, the patient noted anxiety, pain, perceived control before, during and after surgery, and postoperative nausea and vomiting (PONV). Patient satisfaction and surgical conditions were also recorded. Peri- and postoperative anxiety and pain were significantly lower in the HYP group. This reduction in anxiety and pain were achieved despite a significant reduction in intraoperative requirements for midazolam and alfentanil in the HYP group (alfentanil: 8.7 +/- 0.9 microg kg(-1)/h(-1) vs. 19.4 +/- 2 microg kg(-1)/h(-1), P < 0.001; midazolam: 0.04 +/- 0.003 mg kg(-1)/h(-1) vs. 0.09 +/- 0.01 mg kg(-1)/h(-1), P < 0.001). Patients in the HYP group reported an impression of more intraoperative control than those in the CONT group (P < 0.01). PONV were significantly reduced in the HYP group (6.5% vs. 30.8%, P < 0.001). Surgical conditions were better in the HYP group. Less signs of patient discomfort and pain were observed by the psychologist in the HYP group (P < 0.001). Vital signs were significantly more stable in the HYP group. Patient satisfaction score was significantly higher in the HYP group (P < 0.004). This study suggests that hypnosis provides better perioperative pain and anxiety relief, allows for significant reductions in alfentanil and midazolam requirements, and improves patient satisfaction and surgical conditions as compared with conventional stress reducing strategies support in patients receiving conscious sedation for plastic surgery.

Abstract from National Library of Medicine, PubMed

1994

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

**Case #1:** Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class.

In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of *Charlotte's Web* (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of *Charlotte's Web*. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by *Charlotte's Web* permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

**1993**

**LaGrone, Randy G. (1993).** Hypnobeavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. *American Journal of Clinical Hypnosis*, 36, 132-136.

A 10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnobeavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress.

1992

Levitan, Alexander A. (1992). The use of hypnosis with cancer patients. Psychiatric Medicine, 10, 119-131.

Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

Syrjala, Karen L.; Cummings, Claudette; Donaldson, Gary W. (1992). Hypnosis or cognitive behavioral training for the reduction of pain and nausea during cancer treatment: A controlled clinical trial. Pain, 48, 137-146.

Few controlled clinical trials have tested the efficacy of psychological techniques for reducing cancer pain or post-chemotherapy nausea and emesis. In this study, 67 bone marrow transplant patients with hematological malignancies were randomly assigned to one of four groups prior to beginning transplantation conditioning: (1) hypnosis training (Hypnosis); (2) cognitive behavioral coping skills training (CB); (3) therapist contact control (TC); or (4) treatment as usual (TAU; no treatment control). Patients completed measures of physical functioning (Sickness Impact Profile; SIP) and psychological functioning (Brief Symptom Inventory; BSI), which were used as covariates in the analyses. Biodemographic variables included gender, age and a risk variable based on diagnosis and number of remissions or relapses. Patients in the Hypnosis, CB, and TC groups met with a clinical psychologist for two pre-transplant training sessions and ten in-hospital "booster" sessions during the course of transplantation. Forty-five patients completed the study and provided all covariate data, and 80% of the time series outcome data. Analyses of the principal study variables indicated that hypnosis was effective in reducing reported oral pain for patients undergoing marrow transplantation. Risk, SIP, and BSI pre-transplant were found to be effective predictors of inpatient physical symptoms. Nausea, emesis and opioid use did not differ significantly between the treatment groups. The cognitive behavioral intervention, as applied in this study, was not effective in reducing the symptoms measured.

Hypnotizability was not measured in this study.

The authors hypothesized that "(1) patients receiving hypnosis training would report the least pain, but the cognitive behavioral group would report less pain than

the untreated group; and (2) both treatment groups would report less nausea and emesis than the control groups" (p. 138). The adult patients were undergoing their first marrow transplant, had survived at least 19 days post-transplant, and had participated in at least the first 8 of 10 possible inpatient sessions; five additional patients completed the study but had missing data.

Each patient in the TC (therapist contact), CB (cognitive behavioral coping skills), and Hypnosis groups participated in two 90 minute training sessions with a psychologist, 2-4 days apart, on an outpatient basis. Once admitted to hospital, twice each week they participated in a total of ten 30-minute sessions designed to reinforce use of the interventions. The TAU (treatment as usual) group had no psychologist contact. For the TC control group, the psychologist simply talked with the patients about whatever was on their minds.

The CB group received multiple interventions: training in relaxation (2 techniques-progressive muscle relaxation and abbreviated autogenic relaxation) with tapes provided; cognitive restructuring (Turk et al., 1983) which included training in attention redirection and restructuring self-defeating cognitions; preparing coping self-statements or affirmations, by focusing attention on neutral or pleasant events or objects, or by occupying their attention through mental repetition of affirmations, songs or prayer; encouragement to think of negative events as time limited; provision of information, especially the beneficial vision of information, especially the beneficial effects of reducing physiological arousal and attention to pain and nausea; assistance in setting short-term progress-related goals for self-care such as exercise, caloric intake, and mouth care; exploration of the meaning of their illness and of bone marrow transplant.

For the Hypnosis group, individually tailored Ericksonian inductions (Lankton & Lankton, 1983) with relaxation and multi-sensory imagery were taped and given to the patient to use in daily practice, in between sessions. The suggestions were directed at reducing pain, nausea, and the emotional reactions to those symptoms; there also were suggestions about health, well-being, self-control and enhanced coping capabilities.

The results were analyzed by ANCOVA (except where non-parametric analysis was required with the opioid data). Due to gender differences in reported pain (men experiencing more) and the fact that the TAU group had an over-representation of men, the TAU group could not be used in the pain analyses. However, there were no gender differences in nausea reports, so that all four groups could be used for nausea outcome analyses.

The Hypnosis group evidenced the lowest amount of post-transplant pain, and used (nonsignificantly) less opioids than the other groups. No significant treatment effects were observed for either nausea or emesis.

In their discussion, the authors noted that "The hypnosis group's peak pain was lower and of a shorter duration than the other three groups. Opioid use closely followed the course of pain intensity. ... The gender effect may be characteristic of this particular sample [since it was unexpected].

"Nausea and emesis followed a less predictable course than pain. ... nausea fluctuated dramatically from day to day within treatment groups. As nausea

moderated after completion of conditioning, the day to day fluctuations remained striking. This lack of symptom predictability may have contributed to the difficulty patients had in using the interventions effectively" (p. 143).

"The lack of significant differences between treatment groups in opioid use indicates that lower pain report in the hypnosis group cannot be explained by increased opioid use. Results do not support the second hypothesis that both hypnosis and cognitive behavioral training would reduce chemotherapy or radiation-induced nausea and emesis

"In MT patients, several factors may limit the impact of either cognitive behavioral training or hypnosis on nausea and emesis. First, MT patients receive higher doses of emetogenic agents than are given to most other cancer patients. Second, patients in this study had only two sessions in which to learn relaxation techniques; this may not have provided adequate training. Third, the most severe emetic challenge began immediately with the first dose of chemotherapy rather than having a gradual onset. This did not permit patients to master the techniques with milder symptoms before applying training to intense symptoms. Fourth, for all patients, psychological interventions were provided as adjuncts to medications rather than as substitutes for antiemetics or opioids. Both antiemetics and opioids have substantial cognitive side effects which, in high doses, may impact patients' abilities to implement interventions which are in essence cognitive. This combination of factors may have provided too severe a challenge to a newly learned skill. In contrast to nausea, oral pain developed over a number of days, permitting practice while symptoms were mild and before administration of opioids.

"Results suggest that the imagery component of the hypnosis intervention was central to its efficacy. Not only was the cognitive behavioral intervention without imagery not effective in reducing the symptoms measured, but we found in clinical practice that patients intermittently began to refuse sessions with relaxation alone. Even hypnosis patients, when under the physical stresses of treatment, had shortened attention spans that necessitated briefer inductions, less time spent on relaxation, and more active, engaging imagery.

"... Since, in clinical practice, imagery is frequently a component of cognitive behavioral treatment, these results would not generalize to those settings where imagery is combined with other skill training.

"Several other possible limitations of the cognitive behavioral intervention merit consideration. Our experience indicates that the number of components used in the two training sessions were more than patients could competently learn in a short time. ... A further possibility is that maladaptive cognitions, which are the targets of cognitive restructuring, may be the exception rather than the rule among MT patients who tend to focus, with their families, on positive, hopeful attitudes toward their treatment" (pp. 144- 145).

The authors note that the relatively small sample size may have provided inadequate statistical power to demonstrate effects with some of the outcome variables.

Walker, Leslie G. (1992). Hypnosis with cancer patients. American Journal of Preventative Psychiatry & Neurology, 3, 42-49.

Overviews the uses of hypnosis with cancer, for example to ameliorate side effects of treatment, help patients adjust to having cancer and its symptoms, reduce the distress caused by painful procedures, and to attempt to alter mechanisms of immunity with a view to improving prognosis. Studies in these areas are reviewed.

1991

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, 59 (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

Zeltzer, Lonnie K.; Dolgin, M. J.; LeBaron, Samuel; LeBaron, C. (1991). A randomized, controlled study of behavioral intervention for chemotherapy distress in children with cancer. Pediatrics, 88, 34-42.

Subjects were randomly assigned to hypnosis, nonhypnotic distraction/relaxation, or attention placebo control. Children in the hypnosis group reported the greatest reduction in both anticipatory and postchemotherapy symptoms. Distraction/relaxation kept symptoms from getting worse, but they did not get better, and the control children's symptoms became much worse.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

1986

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

1984

Margolis, Clorinda G. (1984). Hypnosis and cancer: An overview of the field. [Unpublished manuscript]

This paper apparently was presented either at American Psychological Association or the Society for Clinical and Experimental Hypnosis. The author has two tables summarizing types of cancer associated with pain, and pain syndromes in patients with cancer

Table 3 is a list of Erickson's procedures for Controlling Pain: --Direct hypnotic suggestion for total abolition of pain --Permissive indirect hypnotic abolition of pain --Amnesia --Hypnotic analgesia --Hypnotic anesthesia --Hypnotic replacement or substitution of sensations --Hypnotic displacement of pain --Hypnotic dissociation

Time and body disorientation --Hypnotic reinterpretation of pain experience --Hypnotic time distortion --Hypnotic suggestions effecting a diminution of pain (from Rossi, Ed., Innovative Hypnotherapy, Vol. IV of the Collected Papers of Milton H. Erickson on Hypnosis, 1980

Table 4 is a list of Sacerdote's Procedures for Controlling Pain: --Teleological approach --Reinterpretation of signals --Associating and conditioning --Dissociation --Simile of electric wiring --Development of amnesia --Positive and negative hallucinations --Induction of dreams --Time and space distortion, and elicitation of mystical states --Relaxation techniques --Glove anesthesia and analgesia --Pain management through control of autonomic functions

(from Barber & Adrian, Eds., Psychological Approaches to the Management of Pain, 1982)

The author describes cases treated by Erickson (one in which he used 12 hours of training, in one session, reported in Rossi's 1980 edited writings of Milton Erickson, Vol. IV) and by Sacerdote.

Author notes that the Hilgards, in Hypnosis in the Relief of Pain (1975), describe the use of hypnosis in treating patients with cancer pain. In all three--Butler (1954), Lea, Ware, and Monroe (1960), and a larger study by Cangello (1961), both success and failure are reported. As the Hilgards point out, about 50% of the patients studied were able to reduce their pain--a percentage the Hilgards remark is rather close to what successful clinicians tend to report.

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

-sented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched- pairs signed ranks test) were found in nausea ( $Z = 2.37, p < .02$ ), vomiting ( $Z = 2.52, p < .01$ ), bother ( $Z = 2.24, p < .02$ ), and disruption of activities ( $Z = 2.38, p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

Lyles, Jeanne Naramore; Burish, Thomas G.; Krozely, Mary G.; Oldham, Robert K. (1982). Efficacy of relaxation training and guided imagery in reducing the aversiveness of cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 509-524.

Fifty cancer patients receiving chemotherapy, 25 by push injection and 25 by drip infusion, were assigned to one of three conditions for their chemotherapy treatments: (a) progressive muscle-relaxation training plus guided-relaxation imagery; (b) therapist control, in which a therapist was present to provide support and encouragement but did not provide systematic relaxation training; and (c) no-treatment control. Patients participated in one pretraining, three training, and one follow-up session. Results indicated that during the training sessions, patients who received relaxation training, relative to patients in either of the other two conditions, (a) reported feeling significantly less anxious and nauseated during chemotherapy, (b) showed significantly less physiological arousal (as measured by pulse rate and systolic blood pressure) and reported less anxiety and depression immediately after chemotherapy, and (c) reported significantly less severe and less protracted nausea at home following chemotherapy. The attending nurses' observations during chemotherapy confirmed patient reports. In general, patients in the therapist control condition and the no-treatment control condition did not differ significantly from each other. The differences among conditions generally remained significant during the follow-up session. The data suggest that relaxation training may be an effective procedure for helping cancer patients cope with the adverse effects of their chemotherapy.

Fuchs, K.; Paldi, E.; Abramovici, H.; Peretz, B. A. (1980). Treatment of hyperemesis gravidarum by hypnosis. International Journal of Clinical and Experimental Hypnosis, 28 (4), 313-323

Nausea and vomiting are the most common complaints in the first trimester of pregnancy. Hyperemesis gravidarum presents a unique challenge to the obstetrician trained in medical hypnosis. Between the years 1965-1977, 138 women suffering from extremely severe vomiting in the first trimester of pregnancy were successfully

treated by medical hypnosis. 87 patients were treated in groups and 51 received individual therapy. The results with patients in group hypnotherapy were markedly better than those with patients in individual hypnotherapy. With group hypnotherapy, hospitalization was not necessary; treatment [sic] was given to a number of patients simultaneously and the women felt safer and less lonely. The common motivation of the patients consolidated the psychotherapeutic effect. This made treatment easier and more efficient.

**1979 Clarke, Christopher (1979). Hypnotherapy in the treatment of alcoholism. Australian Journal of Clinical and Experimental Hypnosis, 7 (1), 1-5.**

If an aversive technique is used as a part of a hypnotic or behavior therapy treatment programme for problem drinking, the therapist is faced with the question of which aversive stimulus (or image) to use. This question has been given little in the way of systematic attention because of the widespread belief that there are no grounds for choosing between aversive stimuli which are equally safe, convenient and, of course, noxious. However, recent research in behavioural biology as well as certain clinical results call this assumption into question. Instead this work supports the contrary view: that the quality of the aversive stimulus is a crucial determinant of the effectiveness of aversion therapy. Specifically, this research strongly suggests that an illness or "malaise" experience must occur in conjunction with the alcohol for the conditioning (of an aversion) to be successful. Specific suggestions for the conduct of hypnotic aversion therapy are made in light of this work.

**1976 Cedercrentz, C.; Lahteenmaki, R.; Tulikoura, J. (1976). Hypnotic treatment of headache and vertigo in skull injured patients. International Journal of Clinical and Experimental Hypnosis, 24, 195-201.**

Symptoms of headache and vertigo were treated using direct hypnotic suggestions of symptom relief in 155 consecutive skull injured patients. Posttraumatic headache and vertigo were completely relieved after an average observation period of 1 year 10 months in 50% and 58% of the patients, and partially relieved in 20% and 16% respectively. Most of the relief was achieved after about 4 weekly sessions and, particularly with the headaches, only if treatment began within a few weeks of the injury. Therapeutic outcome was correlated with depth of hypnosis achieved for both headache ( $r = .44$ ,  $p < .0001$ ) and vertigo ( $r = .47$ ,  $p < .0001$ ) symptoms. Patients who could not even achieve light hypnosis obtained no therapeutic improvement, but patients who experienced only light hypnosis were as clinically responsive as those achieving deep hypnosis.

**1953 Kroger, William S. (1953). Hypnotherapy in obstetrics and gynecology. Journal of Clinical and Experimental Hypnosis, 1 (2), 61-70.**

Author's Summary - "A high percentage of gynecologic complains [sic] are due to psychic factors. Therapeutic efforts, therefore, must be directed primarily toward the psychologic component. Until recently, the principal weapon of the dynamically

oriented physician was orthodox psychoanalysis. However, the increased interest for a relatively rapid approach has demonstrated the diagnostic and therapeutic value of hypnoanalysis. This development has been concomitant with the psychoanalyst's [sic] interest in 'brief psychotherapy' and narcosynthesis.

"In many functional gynecologic disorders, hypnoanalysis has supplanted the parent therapy even though this form of treatment utilizes the concepts of dynamic psychiatry.

"The relevant literature on the use of hypnotherapy in functional obstetrical and gynecological disorders has been reviewed.

"Significant areas for research have been pointed out.

"This review emphasizes that hypnosis *per se* is only of value in obtaining symptomatic relief. On the other hand, hypnoanalysis elicits the responsible dynamics behind the symptom, and is effective in reaching all aspects of the personality.

"Hypnoanalysis will be more applicable in obstetrics and gynecology when there is a wider acceptance of its techniques" (p. 68).

## Neuroimaging

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. *American Journal of Clinical Hypnosis*, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

2002

Raz, A.; Shapiro, T. (2002). Hypnosis and neuroscience: A cross talk between clinical and cognitive research. *Archives of General Psychiatry*, 59 (1), 85-90.

Despite its long use in clinical settings, the checkered reputation of hypnosis has dimmed its promise as a research instrument. Whereas cognitive neuroscience has scantily fostered hypnosis as a manipulation, neuroimaging techniques offer new opportunities to use hypnosis and posthypnotic suggestion as probes into brain mechanisms and, reciprocally, provide a means of studying hypnosis itself. We outline how the hypnotic state can serve as a way to tap neurocognitive questions and how cognitive assays can in turn shed new light on the neural bases of hypnosis. This cross talk should enhance research and clinical applications.

2000

Kosslyn, S. M.; Thompson, W. L.; Constantini-Ferrando, M. F.; Alpert, N. M.; Spiegel, D (2000). Hypnotic visual illusion alters color processing in the brain. American Journal of Psychiatry, *157* (8), 1279-1284.

This study was designed to determine whether hypnosis can modulate color perception. Such evidence would provide insight into the nature of hypnosis and its underlying mechanisms. Eight highly hypnotizable Ss (aged 20-35 yrs) were asked to see a color pattern in color, a similar gray-scale pattern in color, the color pattern as gray scale, and the gray-scale pattern as gray scale during positron emission tomography scanning by means of [<sup>18</sup>F]FDG. The classic color area in the fusiform or lingual region of the brain was first identified by analyzing the results when Ss were asked to perceive color as color vs when they were asked to perceive gray scale as gray scale. The results show that when Ss were hypnotized, color areas of the left and right hemispheres were activated when they were asked to perceive color, whether they were actually shown the color or the gray-scale stimulus. These brain regions had decreased activation when Ss were told to see gray scale, whether they were actually shown the color or gray-scale stimuli. These results were obtained only during hypnosis in the left hemisphere, whereas blood flow changes reflected instructions to perceive color vs gray scale in the right hemisphere, whether or not Ss had been hypnotized. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1993

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, *15*, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically

specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities

1987

Ulrich, P.; Meyer, H. J.; Diehl, B.; Meinig, G. (1987). Cerebral blood flow in autogenic training and hypnosis. Neurosurgery Review, 10, 305-307. (Abstracted in American Journal of Clinical Hypnosis, 1989)

In 12 healthy volunteers with at least an experience of 6 months in autogenic training (AT), the cerebral blood flow (CBF) was measured at rest, in AT, and in hypnosis (H). The results were correlated with individual test profiles. The cortical flow pattern at rest of our AT-trained volunteers did not show the hyperfrontality which is described in the literature. This may be interpreted as an effect of better and habitualized relaxation in long-trained AT practitioners. This flow pattern corresponds to the low grades of neuroticism and aggressivity found in the tests. Furthermore, an activation in central cortical areas and a deactivation in regions which are associated with acoustic and autonomous functions occur. Possible explanations for these phenomena as well as for the relatively low perfusion of the left hemisphere at rest and activation in AT are discussed. The global rise of CBF in Hypnosis may be an activation effect caused by resistance against the hypnotizer: the deeper the trance, the smaller the catalepsy of the right arm and in temporal cortical fields processing acoustic inputs.

1981

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, 138, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive <sup>133</sup>Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

Neurophysiology

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

2002

Raz, A.; Shapiro, T. (2002). Hypnosis and neuroscience: A cross talk between clinical and cognitive research. Archives of General Psychiatry, 59 (1), 85-90.

Despite its long use in clinical settings, the checkered reputation of hypnosis has dimmed its promise as a research instrument. Whereas cognitive neuroscience has scantily fostered hypnosis as a manipulation, neuroimaging techniques offer new opportunities to use hypnosis and posthypnotic suggestion as probes into brain mechanisms and, reciprocally, provide a means of studying hypnosis itself. We outline how the hypnotic state can serve as a way to tap neurocognitive questions and how cognitive assays can in turn shed new light on the neural bases of hypnosis. This cross talk should enhance research and clinical applications.

2000

Barabasz, Arreed (2000, August). EEG markers of hypnosis: The induction makes a difference. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

Rather than attempt to uncover some simplistic unidimensional EEG "signature" of the hypnotic state, this study obtained EEG Event Related Potentials (ERPs) in response to two conditions: suggestion only and an alert hypnotic induction plus the identical suggestion. The suggestion asked the ten participants to hallucinate having earplugs in their ears to attenuate a series of computer generated tone pips. Hypnotizability testing was completely separated in both time (6-9 months prior) and context from this research. Alert hypnosis (Barabasz, 1985; Barabasz & Barabasz, 1996) was used to preclude effects that might be wrought by relaxation. Only the hypnotizable participants showed statistically significant attenuation of their EEG ERPs in response to the hypnotic induction plus suggestion condition in contrast to the identical suggestion alone. An independent post-experimental inquiry revealed that the one highly hypnotizable participant who responded in an equivalent manner to both conditions spontaneously entered hypnosis in an effort to respond to the essence of the instructions. Consistent with previous research (Barabasz, Barabasz, Jensen, Calvin, Trevisan, & Warner, 1999; Barabasz &

Lonsdale, 1983; Spiegel, Cutcomb, Ren, & Pribram, 1985), the data reveal that when responses are time locked to events, robust physiological markers of the hypnotic state emerge that reflect alterations in consciousness corresponding to participants' subjective experiences of perceptual alteration. These effects were not produced by suggestion alone but only by hypnosis in hypnotizable participants. It would appear that hypnotic state induced responses go beyond those wrought by suggestion alone when efforts are made to establish sufficient hypnotic depth. However, it remains important to understand that less demanding effects can also be produced by social influence, context and personal abilities (Kirsch, Council, & Mobayed, 1987; Lynn, Rhue, & Weekes, 1990). Given the leptokertic distribution of hypnotizability in the general population, social influence may account for a number of the more easily produced responses seen particularly in non-clinical university participant research situations where samples are comprised primarily of those with moderate hypnotizability. [Abstract in *Psychological Hypnosis: A Bulletin of Division 30*, Vol. 10, No. 1, Winter-Spring 2001.]

1983; Spiegel, Cutcomb, Ren, & Pribram, 1985), the data reveal that when responses are time locked to events, robust physiological markers of the hypnotic state emerge that reflect alterations in consciousness corresponding to participants' subjective experiences of perceptual alteration. These effects were not produced by suggestion alone but only by hypnosis in hypnotizable participants. It would appear that hypnotic state induced responses go beyond those wrought by suggestion alone when efforts are made to establish sufficient hypnotic depth. However, it remains important to understand that less demanding effects can also be produced by social influence, context and personal abilities (Kirsch, Council, & Mobayed, 1987; Lynn, Rhue, & Weekes, 1990). Given the leptokertic distribution of hypnotizability in the general population, social influence may account for a number of the more easily produced responses seen particularly in non-clinical university participant research situations where samples are comprised primarily of those with moderate hypnotizability. [Abstract in *Psychological Hypnosis: A Bulletin of Division 30*, Vol. 10, No. 1, Winter-Spring 2001.]

Gruzelier, John (2000). Unwanted effects of hypnosis: A review of the evidence and its implications. *Contemporary Hypnosis*, 17 (4), 161-193.

Reviews the growing evidence of unwanted consequences of hypnosis in experimental, clinical, and entertainment settings. Adverse effects are common, may be physiological or psychological, and are mostly short-lived. The more serious consequences almost exclusively occur in clinical and entertainment applications and have included chronic psychopathology, seizure, stupor, spontaneous dissociative episodes, and the resurrection of memories of previous trauma. Associated phenomena may include physiological events and may be unconsciously mediated. Two cases of 1st episode schizophrenia, one following hypnotherapy and one following stage hypnosis, are described. Evidence of affinities between schizophrenia and hypnosis is revisited in the light of contemporary evidence of the neurophysiological mechanisms of hypnosis and schizophrenia, with implications

for screening vulnerable individuals. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Rossi, Ernest L. (2000). In search of a deep psychobiology of hypnosis: Visionary hypotheses for a new millennium. American Journal of Clinical Hypnosis, 42 (3/4), 178-207.

This search for the deep psychobiological foundations of hypnosis begins with a review of some of the paradoxes of historical hypnosis and the impasse of current theory. It is proposed that further progress requires a deeper investigation of how psychosocial cues can modulate the mechanisms of healing at the CNS, autonomic, neuroendocrine and cellular-genetic levels. The dynamics of hypnotic communication and healing from the cognitive-behavior level to the cellular-genetic are outlined in 4 stages: (1) information transduction between the experiences of consciousness and the limbic-hypothalamic-pituitary system; (2) the psychosomatic network of messenger molecules and their receptors; (3) the immediate early gene protein cascade; and (4) state dependent memory, learning and behavior. Neuroscience research is outlined for its contributions to a mathematical model of how a psychobiological approach to the therapeutic applications of hypnosis and the placebo response could facilitate neurogenesis in the human hippocampus and healing at the cellular-genetic-protein level throughout the body. A series of 10 hypotheses is proposed as a guide for theory and research in therapeutic hypnosis. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1999

Abela, Marcelle Bartolo (1999-2000). The neurophysiology of hypnosis: Hypnosis as a state of selective attention and disattention. [Symposium] Presented at 6th Internet World Congress of Biomedical Sciences - INABIS 2000, Castilla-La Mancha University, Spain.. (<http://www.uclm.es/inabis2000/posters/files/037/index.htm>)

While there is much useful information in this document, there are confusing passages and some with errors of fact. For example, I do not think most researchers in the area of hypnosis would state that \_The two main current theories of hypnosis are those of neo-dissociation and dissociated control,\_ nor would they agree that the Tellegen Absorption Scale is a test of hypnotizability. More significantly, several statements in the Conclusion section do not follow from material presented in preceding sections. For example, the author presents in the body of this paper no discussion of the relationship of ideomotor responses to treatment which might support her recommendation for them being used with low hypnotizable patients. Similarly, no evidence is offered to suggest the writer's conclusion that \_clinical extrapolation of the differences between highs and lows theoretically implicates a greater use of suggestive therapy for the latter group instead of analytical hypnotherapy, because since such therapy normally incorporates more permissive suggestions than in hypnoanalysis, lows would be better able to absorb such suggestions,terminating therapy much faster and more successfully.\_ In fact the

article is devoted primarily to neurophysiological aspects of hypnosis and has little to say about either hypnoanalysis or treatment effects and outcomes. - Editor

**Anderson, Kathryn (1999, November). A test of Barabasz' alert hypnosis on EEG Beta and Theta production for children with ADHD. [Paper] Presented at Annual Meeting of the Society for Clinical and Experimental Hypnosis, New Orleans, LA.**

This study tested the effects of Barabasz's Instant Alert Hypnosis (IAH), also known as Instantaneous Neuronal Activation Procedure (INAP, Barabasz and Barabasz, 1995) used as an adjunct to neurotherapy. The sixteen children who participated in this study met DSM - IV criteria for attention deficit hyperactivity disorder (AD/HD). Trials of neurotherapy alone were compared to neurotherapy combined with alert hypnosis on beta-theta ratios at five electrode sites (Fp1, Fp2, Fz, Cz and Pz). The results showed that EEG beta-theta ratio means were significantly higher (more than twice as large) in the trials of neurotherapy combined with alert hypnosis in contrast to neurotherapy alone. Beta was significantly enhanced while theta was inhibited. The clinical implications of these findings with regard to improved treatment efficacy and reduced time in treatment are discussed. [Abstract taken from SCEH "FOCUS", Winter 2001..]

**Barabasz, A.; Barabasz, M.; Jensen, S.; Calvin, S.; Trevisian, M.; Warner, D. (1999). Cortical event-related potentials show the structure of hypnotic suggestions is crucial. International Journal of Clinical and Experimental Hypnosis, 47 (1), 5-22.**

Electroencephalographic cortical event-related potentials (ERPs) are affected by information processing strategies and are particularly appropriate for the examination of hypnotic alterations in perception. The effects of positive obstructive and negative obliterating instructions on visual and auditory P300 ERPs were tested. Twenty participants, stringently selected for hypnotizability, were requested to perform identical tasks during waking and alert hypnotic conditions. High hypnotizables showed greater ERP amplitudes while experiencing negative hallucinations and lower ERP amplitudes while experiencing positive obstructive hallucinations, in contrast to low hypnotizables and their own waking imagination-only conditions. The data show that when participants are carefully selected for hypnotizability and responses are time locked to events, rather robust physiological markers of hypnosis emerge. These reflect alterations in consciousness that correspond to participants' subjective experiences of perceptual alteration. Accounting for suggestion type reveals remarkable consistency of findings among dozens of researchers.

In their Discussion the authors note that not all of the highly hypnotizable subjects demonstrated the changes predicted, consistent with Hilgard's (1992) observation that individual differences in response remain even among high hypnotizables. Post-experimental inquiry revealed the sources of (non-predicted) response for these two people. "One, showing only a moderate ERP amplitude attenuation in the obstructive condition, noted she pictured a cardboard box in front of the computer

monitor, but 'I pictured a rather small box that didn't block the entire screen!' Another showed an apparently contradictory response, a markedly diminished amplitude in the negative hallucination that called for deafness during the auditory stimuli. This participant reported the perception of complete obliteration of all sounds and, therefore, showed no surprise ERP effect. 'It was kind of scary when he (AB) said 'deaf' the second time. I couldn't hear anything at all. I was glad when he touched my shoulder and it was OK to hear again. I don't think I would do that again ... I mean do the hypnotic suggestion as much!'" (pp. 17-18).

Faymonville, M. E.; Meurisse, M.; Fissette, J. (1999). Hypnosédation: A valuable alternative to traditional anaesthetic techniques. Acta Chirurgica Belgica, 99 (4), 141-146.

Hypnosis has become routine practice in our plastic and endocrine surgery services. Revivication of pleasant life experiences has served as the hypnotic substratum in a series of over 1650 patients since 1992. In retrospective studies, followed by randomised prospective studies, we have confirmed the usefulness of hypnosédation (hypnosis in combination with conscious IV sedation) and local anaesthesia as a valuable alternative to traditional anaesthetic techniques. The credibility of hypnotic techniques and their acceptance by the scientific community will depend on independently-confirmed and reproducible criteria of assessing the hypnotic state. Based on the clinical success of this technique, we were interested in confirming this phenomenon in healthy volunteers. The revivication of pleasant life experiences thus served as the cornerstone of a basic research program developed to objectify the neurophysiological attributes of the hypnotic state. We compared hypnosis to normal alertness with similar thought content. In our experience, the activation profile obtained during the hypnotic state was completely different from simple re-memoration of the same subject matter during normal alertness. This represents an objective and independent criteria by which to assess the hypnotic state.

1998

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. Pain, 75 (1), 85-92.

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the

RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

Abstract from National Library of Medicine, PubMed

1997

Jasiukaitis, Paul; Nouriani, Bitá; Hugdahl, Kenneth; Spiegel, David (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere?. International Journal of Clinical and Experimental Hypnosis, 45 (2), 158-177.

Research and theory over the past couple decades have suggested that the right cerebral hemisphere might be the focus of brain activity during hypnosis. Recent evidence from electrodermal responding, visual event-related potentials, and Stroop interference, however, can make a case for a role of the left hemisphere in some hypnotic phenomena. Although hemispheric activation on hypnotic challenge may depend in large part on the kind of task the challenge might involve, several general aspects of hypnosis might be more appropriately seen as left-rather than right-hemisphere brain functions. Among these are concentrated attentional focus and the role of language in the establishment of hypnotic reality. A left-hemisphere theory of hypnosis is discussed in light of recent findings and theories about a left-hemisphere basis for synthetic or generational capabilities (Corballis, 1991) and a neuro-evolutionary model of a left-hemisphere dopaminergic activation system for the implementation of predetermined motor programs (Tucker & Williamson, 1984). -- Journal Abstract

1996

Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning

treatment with hypnosis. Evidence regarding efficacy of hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

1995

Bryant, Richard A.; Somerville, Ernest (1995). Hypnotic induction of an epileptic seizure: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 274-283.

This case study investigated the utility of hypnosis to precipitate a seizure in a patient with refractory epilepsy. The patient was twice administered a hypnotic induction and a suggestion to age regress to a day when he was distressed and suffered repeated seizures. The patient did not respond to the first hypnotic suggestion; however, an epileptic seizure was observed in the second hypnotic session. Videorecording and subdural electroencephalograph recording confirmed that he suffered an epileptic seizure. Postexperimental inquiry revealed that the patient used deliberate cognitive strategies to avoid seizure onset in the first session but adopted a more constructive cognitive style in the second session. Findings are discussed in terms of emotions, hypnosis, and cognitive style as mediating factors in the experimental precipitation of epileptic seizures.

1994

DeBenedittis, Giuseppe; Cigada, Mario; Bianchi, Anna; Signorini, Maria Gabriella; Cerutti, Sergio (1994). Autonomic changes during hypnosis: A heart rate variability power spectrum analysis as a marker of sympatho-vagal balance. International Journal of Clinical and Experimental Hypnosis, 42 (2), 140-152.

Spectral analysis of beat-to-beat variability in electrocardiography is a simple, noninvasive method to analyze sympatho-vagal interaction. The electrocardiogram is analyzed by means of an automatic, autoregressive modeling algorithm that provides a quantitative estimate of R-R interval variability by the computation of power spectral density. Two major peaks are recognizable in this spectrum: a low-frequency peak (LF, 0.2 Hz), related to the overall autonomic activity (ortho + parasympathetic) and a high-frequency peak (HF, 0.25 Hz), representative of the vagal activity. The LF/HF ratio is an index of the sympatho-vagal interaction. This technique was applied, using a computer-assisted electrocardiograph, to 10 healthy volunteers (6 high and 4 low hypnotizable subjects as determined by the Stanford Hypnotic Susceptibility Scale, Form C) in randomized awake and neutral hypnosis conditions. Preliminary results indicated that hypnosis affects heart rate variability, shifting the balance of the sympatho-vagal interaction toward an enhanced parasympathetic activity, concomitant with a reduction of the sympathetic tone. A

positive correlation between hypnotic susceptibility and autonomic responsiveness during hypnosis was also found, with high hypnotizable subjects showing a trend toward a greater increase of vagal efferent activity than did low hypnotizables. tone. A positive correlation between hypnotic susceptibility and autonomic responsiveness during hypnosis was also found, with high hypnotizable subjects showing a trend toward a greater increase of vagal efferent activity than did low hypnotizables.

1993

Hall, Howard; Minnes, Luke; Olness, Karen (1993). The psychophysiology of voluntary immunomodulation. International Journal of Neuroscience, 69, 221-234.

In twenty-two studies of intentional efforts of humans to change immune measures, only four monitored psychophysiological parameters. One study reported physiologic alterations associated with immune changes. In this current study we examined changes in pulse rate and peripheral temperature associated with intentional changes in neutrophil adherence. Subjects had blood, pulse and temperature recordings collected before and after either a rest condition (Group A), or a self-regulation exercise (Groups B and C) for two sessions. Group C had four prior training sessions before participating in the experimental sessions. This study found no association between psychophysiological alterations and neutrophil changes. the control group (A) demonstrated no significant neutrophil changes but showed physiologic alterations, whereas, the experimental group (C) that showed increases in neutrophil adherence demonstrated no significant physiologic changes. It was speculated that intentional changes on neutrophil adherence and the pattern of the psychophysiological measures were associated with and reflective of cognitive activity.

Lyskov, E.; Juutilainen, J.; Jousmaki, V.; Hanninen, O.; Medvedev, S.; Partanen, J. (1993). Influence of short-term exposure of magnetic field on the bioelectrical processes of the brain and performance. International Journal of Psychophysiology, 14, 227-231.

The influence of an extremely-low-frequency (ELF) magnetic field on the bioelectrical processes of brain and performance was studied by EEG spectral analysis, auditory-evoked potentials (AEP), reaction time (Roletaking) and target-deletion test (TDT). Fourteen volunteers were exposed for 15 min to an intermittent (1 s on/off) 45- Hz magnetic field at 1000 A/m (1.26 mT). Each person received one real and one sham exposure. Statistically significant increases in spectral power through alpha- and beta- bands, as well as in mean frequency of the EEG spectrum were observed after magnetic field exposure. Field-dependent changes of N100 were also revealed. No changes in the amplitudes or latencies of the earlier peaks were observed. No direct effects on Roletaking, nor on TDT performance were seen. However, practice effects on Roletaking (decrease of Roletaking in the course of the test-sessions) seemed to be interrupted by exposure to the magnetic field.

1992

Spiegel, David; King, R. (1992). Hypnotizability and CSF and HVA levels among psychiatric patients. Biological Psychiatry, 31, 95-98.

The authors found evidence that the ability to experience hypnosis as measured by the Hypnotic Induction Profile is associated with levels of the dopamine metabolite homovanillic acid (HVA) in lumbar cerebrospinal fluid (CSF). Dopaminergic synapses are widely distributed in the frontal cortex, and CSF HVA is correlated with dopamine turnover in the frontal cortex. Thus, dopamine activity, possibly involving the frontal lobes, appears to be involved in hypnotic concentration.

-pamine activity, possibly involving the frontal lobes, appears to be involved in hypnotic concentration.

Weinstein, Edwin J.; Au, Phillip K. (1991). Use of hypnosis before and during angioplasty. American Journal of Clinical Hypnosis, 34, 29-37

In this study, 16 patients matched with 16 controls were hypnotized prior to angioplasty. The hypnotized patients had a 25% increase in the time the cardiologist was able to keep the balloon inflated compared to the controls. Of the hypnotized patients, 13% required additional narcotic pain medication during the procedure as compared to 44% for the controls. Although we found no differences in rhythm, ischemia, blood pressure, or pulse between the two groups, the results of arterial catecholamine levels drawn at the start and at the end of the procedure were unexpected and seemed paradoxical. Norepinephrine levels were significantly higher in the hypnotized group (432 pg/ml, SE 51) than in the control group (281 pg/ml, SE 23) at the start of the procedure and fell more during the procedure than in control patients. Because catecholamines reportedly act as a barometer of neuroanxiety, further studies defining their role are needed.

While sedatives and tranquilizers may reduce anxiety on a coronary care unit, occasionally they result in confusion, agitation, and ataxia (Kornfeld, 1980). Hypnosis can be used in acute medical care settings (Deltito, 1984) and is beneficial in reducing pain, suffering, and anguish (Hilgard & Hilgard, 1975). There is some suggestion that hypnosis may help regulate heart rate and blood pressure (Hilgard & Morgan, 1975).

In this study, patients with even chart numbers were in the control group, while odd-numbered patients were in the hypnosis group. Patients who were deaf or senile were excluded. All patients received their usual medications before angioplasty, and both the hypnosis group and the control group received identical treatment other than the hypnosis intervention. However, only the hypnosis group was interviewed by the first author, on the night before angioplasty, and he was also present during the angiograph itself if necessary to help relax the hypnosis patients.

The hypnosis procedure was a modification of Barber's (1977) Rapid Induction Analgesia, and lasted about 1/2 hour. Patients were given a posthypnotic suggestion that they could achieve the same sense of relaxation the next morning during the angioplasty.

"If the patient had severe angina or had an undue amount of discomfort during the procedure, additional pain medication was given as was felt necessary by the cardiologist.

Two of 16 hypnotized and 7 of 16 control patients received pain medication. The difference is significant at  $p = .05$  (Chi Square)" (p. 34).

"In the hypnotized patients the total catecholamine levels (538 pg/ml, SE 60) and the levels of its major component, norepinephrine (432 pg/ml, SE 51), were significantly elevated above their corresponding control levels (361 pg/ml, SE 31 and 281 pg/ml, SE 23) at the start of the angioplasty procedure ( $p < .01$ ). These were unexpected findings. The epinephrine level in the hypnotized group was also higher than the corresponding level in the control group but did not reach a level of significance.

"At the end of the procedure, catecholamine levels had fallen in both groups, but the drop or [sic] total catecholamines in the hypnotized group of 124 pg/ml (SE 33) was greater than the corresponding drop of 37 pg/ml (SE 25) in the control group. This was significant at  $p < 0.025$ . Why the two groups handled catecholamines differently is not clear" (p. 33).

Generally it is hoped that relaxation will permit the cardiologist to keep a balloon inflated longer, not needing to end the procedure because of pain or a complication. The total time required for the procedure was 79 minutes for hypnotized patients and 86 minutes for controls. The inflation time was 353 seconds for hypnotized and 283 minutes for control patients. These differences (which are in the positive direction) did not achieve significance with statistical testing. However, considering the total procedure time, the balloon was inflated 25% longer in the hypnosis than in the control group ( $p = .10$ ).

In their Discussion, the authors note that the reduction in pain medication required by the hypnosis patients is concordant with less pain medication being required by burn patients who are treated with hypnosis (Schafer, 1975; Wakeman & Kaplan, 1978). They do not have an explanation for finding elevated catecholamines in the hypnotized patients. "Catecholamines reportedly act as a barometer of neuroanxiety (Goldstein, 1981; Zaloga, 1988). Turton, Deegan, and Coulshed had already shown in 1977 that prior to catheterization catecholamine levels were elevated and returned to control levels 3 days later. .... One would expect that if hypnosis does cause relaxation, then those patients who were hypnotized would have a lower arterial catecholamine level than their controls. This was not the case. ... It is known that prolonged stress depletes catecholamine stores (Zaloga, 1988), but it is hard to believe that a brief hospitalized stay would cause a difference in depletion between the two groups. There is no literature dealing with the effect of hypnosis on catecholamine levels" (p. 35).

Spiegel, David; Bierre, Pierre; Rootenberg, John (1989). Hypnotic alteration of somatosensory perception. American Journal of Psychiatry, 146, 749-754.

The effects of hypnotic alterations of perception on amplitude of somatosensory event-related potentials were studied in 10 highly hypnotizable (HH) Subjects and 10 Subjects with low hypnotizability. The HH Subjects showed significant decreases in amplitude of the P100 and P300 waveform components during a hypnotic

hallucination that blocked perception of the stimulus. When hypnosis was used to intensify attention to the stimulus, there was an increase in P100 amplitude. Findings are consistent with observations that HH individuals can reduce or eliminate pain by using purely cognitive methods such as hypnosis. Together with data from the visual system, these results suggest a neurophysiological basis for hypnotic sensory alteration.

Four conditions were presented in random order to each Subject. Normal Attention - subjects were instructed to button-press each time they felt the target stimulus. Passive Attention - subjects were instructed to attend to the stimuli but not button-press. Hypnotic Attention - subjects received a hypnotic induction (eye closure and arm levitation, which provided behavioral confirmation; then instructed to attend carefully to the stimuli, which they were told to experience as 'pleasant and interesting,' and button-press in response to targets. Hypnotic Obstructive Hallucination - hypnotic induction exercise was followed by the hypnotic suggestion of a local anesthetic, such as novocaine, spreading from fingers to hand to forearm on the stimulated limb; then instructed to make the limb cold, tingling, and numb; then told to button-press if they felt any of the target stimuli.

Experimenter was blind to hypnotizability scores.

Results were that the Highs showed significant decreases in P100 (45%) and P300 (38%) amplitudes during a hypnotic hallucination which blocked perception of the stimulus, but an increase (35%) in P100 amplitude when hypnosis was used to intensify attention to the stimulus.

The authors view this as cognitive flexibility akin to the clinical situation in which high hypnotizables reduce or completely eliminate pain. They consider this evidence (along with earlier findings on similar blocking of perception in the visual system) of a neurophysiological basis for hypnotic sensory alteration.

1987

Bongartz, Walter (1987, October). Influence of hypnosis on white blood cell count and urinary level of vanillyl mandelic acid. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

They hypothesized that hypnosis benefits to immunology are due to alterations in white blood cell counts (WBC). Found that (1) blood samples before and after hypnosis with relaxation scenes led to significant decrease in WBCs compared to watching film of Mesmer or doing mental arithmetic, and (2) Vanillyl Mandelic Acid also was reduced.

After physical exercise, video game, or reading, within 20', the WBCs return to pre-relaxation levels, i.e. they hadn't left the bloodstream. Key to understanding this result: only 50% of WBCs are in circulation, and others adhere to vessel walls; the experience of hypnotic relaxation leads to less sympathetic nervous activation and less epinephrine or hormonal response. WBCs also increased over a day period with mental arithmetic, but remained the same with hypnosis.

This research is only preliminary and exploratory

**1982**

**Sternbach, R.A. (1982). On strategies for identifying neurochemical correlates of hypnotic analgesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 30 (3), 251-256.**

**A test was made of the general hypothesis that central cholinergic mechanisms underlie hypnotic analgesia. Ss were given the cold pressor pain test under waking and 3 drug conditions. 6 Ss who scored very high on the tailored Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C - T) of E. R. Hilgard, Crawford, Bowers, and Kihlstrom (1979) were given atropine, propantheline, and placebo in double-blind and counterbalanced conditions, to determine if atropine would disrupt hypnotic analgesia. The study was replicated using Ss who scored lower on SHSS:C - T. The results showed only a nonsignificant tendency for atropine to interfere with hypnotic analgesia in the most hypnotizable group of Ss, and for both atropine and propantheline similarly to disrupt hypnotic analgesia for Ss in the less highly hypnotizable group. Alternative strategies are described for identifying the neurotransmitter(s) involved in the trance state.**

**1981**

**Wilson, John F. (1981). Behavioral preparation for surgery: Benefit or harm?. Journal of Behavioral Medicine, 4, 79-102.**

**Elective surgery patients were prepared for surgery with training in muscle relaxation or with information about sensations they would experience. Relaxation reduced hospital stay, pain, and medication for pain and increased strength, energy, and postoperative epinephrine levels. Information reduced hospital stay. Personality variables (denial, fear, Information reduced hospital stay. Personality variables (denial, fear, aggressiveness) were associated with recovery and influenced patients' responses to preparation. Less frightened patients benefitted more from relaxation than did very frightened patients. Nonaggressive patients reacted to information with decreased hospital stay along with increased pain, medication, and epinephrine. Aggressive patients responded to information with decreased hospital stay along with decreased pain, medication, and epinephrine. Patients using denial were not harmed by preparation. A catharsis/moderation model is proposed to explain how information benefits patients. An active coping model is proposed to explain the benefits of relaxation. This study suggests that behavioral preparation benefits even frightened, aggressive, or denying elective surgical patients.**

**1970**

**Sacerdote, Paul (1970). Theory and practice of pain control in malignancy and other protracted or recurring painful illnesses. International Journal of Clinical and Experimental Hypnosis, 18 (3), 160-180.**

Recent neuroanatomical and neurophysiological experimental data suggest absence or presence of pain and changes in pain intensity as expressions of the balance between sensory (peripheral) and central (centrifugal) inputs at synaptic stations. Psychological activities by contributing to the centrifugal input influence conduction, transduction, and perception of pain stimuli. Hypnotically induced analgesia and anesthesia are therefore acceptable as neurophysiological realities. Methods for hypnotic alterations of pain based upon these premises are described utilizing neurophysiological mechanisms, psychodynamic changes, establishment of new behavioral patterns, or changes in time-space concepts and percepts. Case presentations illustrate some of these multiple psychological and physiological approaches to pain control. (Spanish & German summaries) (28 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1964

Hammer, A. G.; Arkins, W. J. (1964). The role of photic stimulation in the induction of hypnotic trance. International Journal of Clinical and Experimental Hypnosis, 12, 81-87.

The relative effectiveness of the ordinary verbal method of trance induction is compared with 2 forms of induction utilizing mechanical photic stimulation, and with methods combining the personal and mechanical features. The criterion of trance adopted was the compulsive carrying out of a difficult suggestion. Results show that mechanical procedures alone are ineffective. On the other hand, the addition of a particular sort of photic driving probably improves trance induction, which suggests that induction is a complex matter involving both social interactions and relatively nonmeaningful impacts on the brain. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Karmanova, I. G. (1964). Fotogennaia katalepsiia [Photogenic catalepsy]. Moscow, USSR: Leningrad Izd. Naule. (Reviewed in American Journal of Clinical Hypnosis 1966, 3, 228)

The author analyses the phenomenon of photogenic catalepsy from the evolutionary phylogenetic approach, including the phenomenon as demonstrated in the cock, frog, guinea-pig and dog.

The following points of view are discussed: the physiological changes, electroencephalography and electromyography in animals, and clinical narcolepsy in man. (Review in AJCH.)

1961

Mishchenko, M. (1961). The hypnotic condition as a process of nervous excitation. In Proc. Third World Congress of Psychiatry, Montreal, Canada, I. (pp. 704-708). (Abstract in American Journal of Clinical Hypnosis 1964, 7, 101.)

Subjects were selected with certain predispositions for the hypnotic state and studied in the waking, hypnotic and experimental sleep states by motor conditioned

reflexes modified to a specific function of the frontal system. Excitable, active students of music and literature were found most excitable as subjects, subjects tending to be passive showed no hypnotic responses. Experimental sleep abolished the motor-conditioned reflexes, quite contrary to hypnotic findings. (M.H.E. abstract in AJCH).

1960

Roberts, Donald R. (1960). An electrophysiological theory of hypnosis. International Journal of Clinical and Experimental Hypnosis, 8, 43-55.

It is theorized that general hypnosis is brought about by an electrical blockage between the brain stem reticular formation and the specific-sensory, parasensory, and coordinate neuronal channels; the selective activity of brain rhythms of the delta frequency is proposed as a possible mechanism of inhibition. (50 ref.) From Psyc Abstracts 36:02:2II43R. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Neurosis

1999

Wilson, R. Reid (1999, August). Brief strategic treatment of panic disorder and OCD. [Paper] Presented at the annual meeting of the American Psychological Association, Boston, Massachusetts.

The symptoms, prevalence, and social/economic costs of Panic Disorder, Obsessive-Compulsive Disorder, and other anxiety disorders are reviewed. Cognitive-behavioral therapy (CBT) has demonstrated efficacy for these disorders. Eriksonian and strategic principles of therapy have a number of points of contact with CBT. Taking Panic Disorder and OCD as illustrative models, this paper demonstrates how Ericksonian methods can be fruitfully combined with CBT. Examples include paradoxical intervention, hypnosis and visual rehearsal, reframing, the fractional approach, and pattern disruption.

1997

Van Dyck, R.; Spinhoven, P. (1997). Depersonalization and derealization during panic and hypnosis in low and highly hypnotizable agoraphobics. International Journal of Clinical and Experimental Hypnosis, 45 (1), 41-54.

The primary aim of the present study was to investigate the association between spontaneous experiences of depersonalization or derealization (D-D) during panic states and hypnosis in low and highly hypnotizable phobic individuals. Secondly, the association among level of hypnotizability, capacity for imaginative involvement, and severity of phobic complaints was also assessed. Sixty-four patients with panic disorder with agoraphobia according to the DSM-III-R (American Psychiatric Association, 1987) criteria participated in the study. Proneness to experience D-D during hypnosis was positively related to hypnotizability, but only for agoraphobic

patients who had already experienced these perceptual distortions during panic episodes. Correlations of level of hypnotizability and capacity for imaginative involvement with severity of agoraphobic complaints were not significant. These findings suggest that hypnotizability may be a mediating variable between two different, although phenotypically similar, perceptual distortions experienced during panic states and hypnosis. Implications for both theory and clinical practice are discussed. -- Journal Abstract

1996

Wickramasekera, Ian; Price, Daniel C. (1996, November). Morbid obesity, absorption, neuroticism, and the high risk model of threat perception. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Tampa, FL.

We studied seventy morbidly obese patients, candidates for gastric exclusion surgery. We found that their mean absorption score was significantly lower and that their mean neuroticism score significantly higher than a matched control group. These results are consistent with predictions from the High Risk Model of Threat Perception (Wickramasekera, 1979, 1988). People high in neuroticism are hypothesized to be hypersensitive to threat at a behavioral and biological level, and therefore, at greater risk for stress related psychobiological disorders. People low in absorption are hypothesized to have poor perception of psychosocial sources of threat have a more restricted range of psychological restricted range of psychological methods of coping with threat. Therefore, they may be at greater risk during stress of not recognizing psychosocial sources of threat of unconsciously using substances to self-soothe and of perceiving medical surgical solutions to weight gain as more credible than psychosocial therapy programs. We found that low absorption and high neuroticism as predicted by the HRMTP were significantly more prevalent among the morbidly obese seeking surgical therapy than a matched community control group.

Wickramasekera, Ian (1994, October). On the coincidence of two orthogonal risk factors for psychophysiological regulation and dysregulation: implications for somatization. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

People low or high in hypnotizability are at risk. Our article in the upcoming issue of the Journal of Nervous and Mental Disease will present this information. High hypnotizable people have either somatic symptoms or psychological symptoms; lows show primarily somatic symptoms. We found that 38% of highs and 28% of lows show somatic symptoms. The lows won't usually be found in a Mental Health Center; they are staying in primary care medical services.

Hypnotic ability and insomnia.

Insomnia was defined by EEG in 3 sleep studies (latency to stage 1 onset of EEG), and patients were screened to omit those with pathophysiology. We measured hypnotizability, finding 50% high on Harvard Scale, 40% low, with a small percent in the middle. [Thus the distribution is bi-modal.]

Neuroticism and insomnia (Wickram, Ware & Saxon, 1992). Neuroticism is the "negative affect" variable. Most people high on negative affect are high hypnotizables. Charcot was right [about high hypnotizables being neurotic] but he didn't have a measure of neuroticism. We are measuring negative affect.

**PREDICTIONS.** Low hypnotizables will show only or mainly somatic symptoms and be found in primary medical care or surgical settings. Highs will show a mix of somatic and psychological and somatic symptoms.

Most lows wouldn't sit still for the Harvard Scale, so we used the Absorption scale. We gave the Absorption scale to non-organic chest pain patients. Most had low scores on Absorption, followed by those with moderate scores, and fewest were high on Absorption: 50% low, 36% moderate, 13% high.

Absorption scores in morbidly obese (350# or more) candidates for bypass surgery were: 55% are low on Absorption, 5% are high on Absorption.

People high on hypnotizability and on negative affectivity have greater risk for illness. See results of our research in *American Journal of Clinical Hypnosis*, a recent issue. These people are more psychophysiological reactive, in heart rate, electrodermal reactivity, etc.

Wickramasekera, Ian (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. *American Journal of Clinical Hypnosis*, 37, 22-33

The electrodermal response to cognitive threat of un hypnotized female patients with somatic symptoms and high on both hypnotic ability and neuroticism (H-H) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (M-L). On verbal report the H-H and the M-L groups did not differ, but they were significantly different on a measure of self-deception (L scale) or repression. The above findings are consistent with predictions from the High Risk Model of Threat Perception (HRMTP), which states that people in the H-H group are both chronically and acutely more reactive to threat than the people in the M-L group. This finding may have important theoretical, clinical, and financial implications for the diagnosis, therapy, and prevention of somatization disorders seen in primary medical care.

Wickramasekera, Ian (1993, August). Some psychophysiological and clinical implications of the coincidence of hypnotic ability and neuroticism during threat perception. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

The electrodermal response to cognitive threat (mental arithmetic) of un hypnotized female patients with somatic symptoms, high on hypnotic ability and high on neuroticism (high-high) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (moderate-low). On verbal report or a subjective units of distress scale (SUDs), the high-high and moderate-low groups did not differ, but they were significantly different on a measure of self-deception or repression. The above

findings are consistent with predictions from the High Risk Model of threat perception. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1993, Vol. 2, No. 3.)

Spiegel, David; Cardena, Etzel (1991). Disintegrated experience: The dissociative disorders revisited. Journal of Abnormal Psychology, 100 (3), 366-378.

Presents proposed changes to the dissociative disorders section of the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and reviews the concept of pathological and nonpathological dissociation, including empirical findings on the relations between trauma and dissociative phenomenology and between dissociation and hypnosis. The most important proposals include the creation of 2 new diagnostic entities, brief reactive dissociative disorder and transient dissociative disturbance, and the readoption of the criterion of amnesia for a multiple personality disorder diagnosis. Further work on dissociative processes will provide an important link between clinical and experimental approaches to human cognition, emotion, and personality.

Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

Ross, Colin A.; Fast, E.; Anderson, G.; Auty, A.; Todd, J. (1990). Somatic symptoms in multiple sclerosis and MPD. Dissociation, 3, 102-106.

Fifty subjects with multiple sclerosis (MS) were compared to 50 subjects with multiple personality disorder (MPD). MS patients endorsed an average of 3.0 somatic symptoms on structured interview, and MPD subjects an average of 14.5. Somatic symptoms characteristic of neurological illness were trouble walking, paralysis, and muscle weakness, while those characteristic of psychiatric illness were genitourinary and gastrointestinal symptoms.

1989

Spinhoven, Philip; Linssen, A. Corry (1989). Education and self-hypnosis in the management of low back pain: A component analysis. British Journal of Clinical Psychology, 28, 145-153.

Conducted a component analysis of a group program for chronic low back pain patients. 45 patients (aged 31-68 years) participated in the pain control course (PCC), consisting of education about pain and a training in self-hypnosis. A pain diary was used as a measure of pain intensity, up-time, and use of pain medication. Psychoneuroticism and depression were assessed using the Symptom Checklist-90 (SCL- 90) scores. No evidence was found for a differential efficacy of education or self-hypnosis on pain diary and SCL-90 scores. Subjects showed significant changes on all measures except reported pain intensity. It is suggested that the PCC is a noninvasive, inexpensive means of treatment that could be used to teach even more severely disabled low back pain patients to cope more adequately with their pain problem.

Wickramasekera, Ian (1989). Enabling the somatizing patient to exit the somatic closet: A high-risk model. Psychotherapy: Theory, Research and Practice, 26 (4), 530-544.

Problems in establishing a therapeutic alliance make somatizing patients poor candidates for psychotherapy. A logical analysis is presented of the conspiracy of silence between the somatizing patient, the medical doctor, and the health insurance industry regarding the psychosocial factors contributing to somatization. Alternatives are sought to repeated biomedical tests and therapies that are clinically unproductive and iatrogenic. Two psychophysiological pathways are proposed that are promising to reduce the distance between the medical doctors' and the psychologists' procedures. The new profile of illness has produced a paradigm shift with implications for an expansion of the definition of the word "physician".

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

From a review in British Journal of Experimental and Clinical Hypnosis, 7, 175-178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility.

In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

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**1987**

Baker, Elgan L.; Nash, Michael R. (1987). Applications of hypnosis in the treatment of anorexia nervosa. American Journal of Clinical Hypnosis, 29, 185-193.

Historic and current reports in the literature involving applications of hypnosis with anorectic patients are reviewed and integrated to explicate core aspects of hypnotic interventions in treating anorexia nervosa. A comprehensive hypnotherapeutic approach is delineated which emphasizes the use of hypnotic strategies to reduce tension, enhance self-control, support increased and realistic body awareness, alter distorted body image, and foster appropriate autonomy and individuation. Preliminary data are also reviewed which support the clinical efficacy of this approach.

**1986**

Wickramasakera, Ian (1986). A model of people at high risk to develop chronic stress-related somatic symptoms: Some predictions. Professional Psychology: Research and Practice, 17, 437-447.

Certain measurable high-risk factors that predispose people to develop functionally based somatic disorders are identified. These risk factors compose a multidimensional model that encompasses variables involved in the predisposition, the precipitation, and the buffering of stress-related symptoms. These high-risk factors are (a) high or low hypnotic ability, (b) habitual catastrophizing cognitions and pessimistic belief systems, (c) autonomic lability or neuroticism, (d) multiple major life changes or multiple minor hassles over a short period of time, and (e) a deficit in support systems or coping skills or both

Spiegel, David; Detrick, Douglas; Frischholz, Edward (1982). Hypnotizability and psychopathology. American Journal of Psychiatry, 139, 431-437.

Compared hypnotic responsivity of 115 chronically ill psychiatric patients (mean age 44.6 years) with that of 83 nonpatient volunteers (mean age 28.5 years). The Hypnotic Induction Profile was administered, and diagnoses were established for patients according to Research Diagnostic Criteria. Results show that all of the diagnosed Ss (those with thought disorder, affective disorder, generalized anxiety, and miscellaneous disorders) were significantly less hypnotizable than the nonpatient comparison group. This effect was unrelated to age or medication differences. Implications of the findings are discussed in relation to a new model of hypnotic responsivity that takes into account the moderating effects of severe psychopathology. 55 refs.

1981

Scignar, C. B. (1981). Rapid treatment of contamination phobia with hand-washing compulsion by flooding with hypnosis. American Journal of Clinical Hypnosis, 23, 252-257.

Two obsessive-compulsive patients with contamination phobias and hand-washing compulsions are presented. Psychoanalytic psychotherapy had resulted in little change. Behavior therapy techniques of thought-stopping, systematic desensitization, progressive muscle relaxation, cognitive restructuring and self-imposed response prevention were first used, resulting in some subjective improvement, but no change in the hand-washing rate. Hypnosis, emphasizing relaxation, positive suggestion and corrective information provided further temporary subjective improvement but little change in compulsive rituals. Hypnosis, combined with the behavioral technique of flooding, produced rapid improvement. The patients maintained improvement at seven years and two years. Flooding under hypnosis may afford obsessive-compulsive patients a rapid and economical therapeutic procedure.

Smyth, L. D. (1981). An experimental hypnotic approach to teaching the psychoanalytic theory of the neuroses: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29 (2), 100-106.

A procedure for training clinical graduate students in the psychoanalytic theory of the neuroses is presented. The procedure makes use of video tapes of experiments in which hypnotically implanted unconscious conflicts were used to drive a wide variety of psychopathology in the laboratory. In the procedure, the graduate students were asked to predict and rate Ss' psychopathology with foreknowledge of certain personality traits of Ss as well as foreknowledge of the nature of the conflicts. The training appeared to be an effective means of teaching them psychoanalytic theory, as well as helpful in enhancing their assessment skills

Throll, D. A. (1981). Transcendental meditation and progressive relaxation: Their psychological effects. Journal of Clinical Psychology, 37 (4), 776-781.

Administered the Eysenck Personality Inventory, the State-Trait-Anxiety Inventory, and two questionnaires on health and drug usage to 39 Ss before they learned Transcendental Meditation (TM) or Progressive Relaxation (PR). All Ss were tested immediately after they had learned either technique and then retested 5, 10, and 15 weeks later. There were no significant differences between groups for any of the psychological variables at pretest. However, at posttest the TM group displayed more significant and comprehensive results (decreases in Neuroticism/Stability, Extroversion/Introversion, and drug use) than did the PR group. Both groups demonstrated significant decreases in State and Trait Anxiety. The more pronounced results for meditators were explained primarily in terms of the greater amount of time that they spent on their technique, plus the differences between the two techniques themselves.

demonstrated significant decreases in State and Trait Anxiety. The more pronounced results for meditators were explained primarily in terms of the greater amount of time that they spent on their technique, plus the differences between the two techniques themselves

1979

De L. Horne, David J.; Baillie, Jennifer (1979). Imagery differences between anxious and depressed patients. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 55-61). Amsterdam: Elsevier/North-Holland Biomedical Press.

"In conclusion, the topic of this study is as yet a very new area of research. No other studies were found which specifically tested the difference between anxious and depressed people in imagery and hypnotic susceptibility. There were a number of limitations to the present study, which further studies could avoid. Larger samples could be used, and such variables as age, educational level and anxiety should be more carefully controlled. The type of depression, whether agitated or retarded, should be assessed, and level of arousal to the imagined scene measured more accurately, with for example, other physiological measures than the E.M.G. It would

be preferable to test depressed people while they are not on medication. Though the effects of antidepressant drugs on imagery were not actually documented, it would seem very likely that significant effects could exist on the ability to image; these obviously warrant investigation" (p. 61).

Kleinhauz, Moris; Dreyfuss, Daniel A.; Beran, Barbara; Goldberg, Tova; Azikri, David (1979). Some after-effects of stage hypnosis: A case study of psychopathological manifestations. International Journal of Clinical and Experimental Hypnosis, 27, 219-226.

Some deleterious effects of stage hypnosis are described through a case report. A middle-aged respected member of a kibbutz who became the subject of an evening's entertainment by a stage hypnotist suffered a posttraumatic neurosis. The stage hypnotist, unaware of her traumatic childhood during World War II when she and her sister were hidden by Gentiles, requested her to regress to that age. This reactivated a former successfully repressed trauma and acted as a precipitating factor to the development of a traumatic neurosis which was left untreated. She was self-referred for adequate psychiatric treatment 11 years later. This treatment successfully restored her to an adequate level of functioning.

1978

Acosta, Frank X.; Yamamoto, Joe; Wilcox, Stuart A. (1978). Application of electromyographic biofeedback to the relaxation training of schizophrenic, neurotic, and tension headache patients. Journal of Consulting and Clinical Psychology, 46 (2), 383-384.

This study examined the effects of electromyographic (EMG) biofeedback on tension reduction by schizophrenic, neurotic, and tension headache patients. Fourteen patients participated voluntarily in at least 10 weekly EMG biofeedback sessions at a public outpatient clinic. All had complained of chronic tension. Patients showed significant decreases in their muscle tension levels with successive biofeedback training sessions. No significant differences were found between the schizophrenic, neurotic, and tension headache groups. A further contribution was the finding that patients with diverse socioeconomic and educational levels benefitted similarly from EMG biofeedback training.

Lehrer, Paul M. (1978). Psychophysiological effects of progressive relaxation in anxiety neurotic patients and of progressive relaxation and alpha feedback in nonpatients. Journal of Consulting and Clinical Psychology, 46 (3), 389-404.

Gave 10 anxiety neurotic patients 4 sessions of individual instruction in progressive relaxation; 10 patients served as waiting list controls. 10 nonpatients were assigned to each of the same conditions, and an additional 10 nonpatients were given 4 sessions of alpha feedback. Nonpatients showed more psychophysiological habituation over sessions than patients in response to hearing 5 very loud tones and

to a reaction time task. Patients, however, showed greater physiological response to relaxation than did nonpatients. After relaxation, the autonomic responses of the patients resembled those of the nonpatients. The effects of relaxation were more pronounced in measures of physiological reactivity than in measures of physiological activity. Defensive reflexes yielded to orienting reflexes more readily in nonpatients than in patients. There was also a tendency for progressive relaxation to generalize to autonomic functions more than alpha feedback.

Nichols, Michael P.; Bierenbaum, Howard (1978). Success of cathartic therapy as a function of patient variables. Journal of Clinical Psychology, 34 (3), 726-8.

Treated sample of 42 patients with cathartic psychotherapy and evaluated differential effectiveness on types of patients. Patients without mental disorders experienced more emotional catharsis than all others, and those with obsessive compulsive personality disorders improved more than all others as a result of emotive treatment. Contrary to popular notions, neither women nor hysterics experienced more catharsis or improved more in cathartic therapy. Although women and hysterics may cry more easily in daily life, obsessives are apparently more able to maintain focus on unhappy experiences and are therefore able to express more emotion in cathartic therapy. Furthermore, it seems that cathartic treatment is beneficial by disrupting long-standing defenses against emotional experience, rather than by releasing stored-up affects.

Wickramasekera, Ian (1974). Heart rate feedback and the management of cardiac neurosis. Journal of Abnormal Psychology, 83 (5), 578-580.

This article describes the treatment of a chronic case of cardiac neurosis which had failed to respond to several prior medical and psychological interventions. Significant and durable symptomatic response appeared to be correlated with the application of a combination of procedures including heart rate feedback, patient-administered desensitization, and therapist-administered flooding

Schneck, Jerome M. (1966). Hypnoanalytic elucidation of a childhood germ phobia. International Journal of Clinical and Experimental Hypnosis, 14, 305-307.

**A PATIENT IN HYPNOANALYSIS WAS ABLE TO BECOME AWARE OF THE RELATIONSHIP BETWEEN HER CHILDHOOD GERM PHOBIA AND HER EARLIER**

Klemperer, Edith (1965). Past ego states emerging in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 132-144.

Patients with anxiety, conversion, or phobic reactions differ from those with obsessive-compulsive reactions in the type of visualization shown in hypnoanalytic regression or revivification. The former produce visualizations showing a well-rounded picture with logical progression of activity and few symbolic distortions.

The latter, however, produce visualizations lacking a logical progression of activity and showing a somewhat disorganized and poorly-rounded picture. Symbolic distortions are frequent, often recurring intermittently. Case studies are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Arluck, Edward Wiltcher (1964). Hypnoanalysis, a case study. New York: Random House.

Details transcripts (90 pages) and comments of a 28 session hypnoanalysis (Jungian) of a World War II soldier with traumatic war neurosis in a military setting shortly after the end of the war, for a conversion reaction with onset just prior to return to the States. Author cautions he found this amount of success in only about 15 of more than 70 individually treated cases. Emphasizes giving suggestions to dream about his condition/problem and utilizing dream interpretation. 53 references

Moss, C. Scott; Thompson, M. M.; Nolte, J. (1962). An additional study in hysteria: The case of Alice M.. International Journal of Clinical and Experimental Hypnosis, 10, 54-74. (Abstracted in Index Medicus, 62, 1425)

Detailed account of the psychotherapy of one female hysteric--a treatment failure--is the stimulant for discussion of the genetics and dynamics of this nosology. Hypnosis revealed the experimental basis for the symptoms and associated adjustment difficulties. The dynamics bear a remarkable resemblance to those advanced by Freud, though issue is taken with several psychoanalytic concepts. The discussion deals largely with the phenomenology of the female hysteric. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneau, W. D. (1961). Neuroticism, extroversion, drive, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 9, 195-214. (Abstracted in Psychological Abstracts, 62: 4 II 95F)

In the group studied, the body-sway scores of stable extraverts and neurotic introverts tended to be large, whereas they were smaller for stable introverts and neurotic extraverts. This result was explained in terms of a theoretical model in which the effective drive produced in a S by a test-situation is a function of both his neuroticism and his extraversion. The author believes that the theoretical model generates a number of predictions and suggestions which can serve to guide future experimental work in this field. From Psyc Abstracts 36:04:4II95F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960 Andreev, B. V. (1960). Sleep therapy in the neuroses. New York: Consultants Bureau. (Reviewed by Milton H. Erickson in American Journal of Clinical Hypnosis, 1962, 4, p. 203)

The book summarizes research on sleep therapy conducted at the Pavlov Clinic for Nervous Diseases, at the Pavlov Institute of the Academy of Sciences of the USSR. It

provides a history of sleep therapy, which M. H. Erickson states "is as old as antiquity," and details about the Russian research. Hypnosis and suggestion were two of many different procedures used to prolong sleep. 200-item bibliography

Lindner, Harold (1960). The shared neurosis: Hypnotist and subject. International Journal of Clinical and Experimental Hypnosis, 8, 61-70. (Abstracted in Psychological Abstracts, 62: 2 II 61L)

Psychoanalytic appraisal of the psychology of the hypnotist. Both hypnotist and subject share in a neurotic "hypnotic phantasy," i.e., a magical satisfaction of emotional needs. The author posits that widespread subliminal recognition of the neurotic character of the hypnotic relationship has contributed to its lack of professional acceptance. From Psyc Abstracts 36:02:2II61L. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1955

Ament, Phillip (1955). A psychosomatic approach to the use of anesthesia for a hysterical dental patient: A case history. Journal of Clinical and Experimental Hypnosis, 3, 120-123. (Abstracted in Psychological Abstracts 56: 1280)

Author describes a case highly resistant both to anesthesia and dentistry. Although very responsive to hypnosis, she continued moaning and moving from side to side (later determined to be her way of preventing dental work even though anesthetized). Ultimately a combination of hypnosis and multiple anesthetics was needed, including nembutal, sodium pentothal, nitrous oxide and novocain. In the author's experience, most other patients require only hypnosis or hypnosis plus novocaine

Bowers, Margaretta; Brecher, Sylvia (1955). The emergence of multiple personalities in the course of hypnotic investigation. Journal of Clinical and Experimental Hypnosis, 3 (4), 188-199.

"Summary. This paper is a preliminary report presenting only that portion of the material on one case depicting the actual process in which the multiple personality structure was uncovered. Due to space limitations only the more manifest dynamic material which was involved in the emergence of the personalities (and equally we feel, in their submergence) is reported. For the same reasons only a brief indication of the Rorschach and other psychological material is presented. The paper poses a number of problems which require further study and elaboration.

"Since the patient's history gave no indication of fugue states or periods of amnesia, the possibility of the induction of multiple personalities by the hypnosis itself is considered and a careful noting of what occurred in the hypnotic sessions is made. In the authors' opinion the multiple personality structure preceded the beginning of hypnotic work.

"The significance of an underlying multiple personality structure in a severely obsessive compulsive personality suggests that the obsessive-compulsive defense

binds the underlying multiple personalities so that we have a conscious personality resulting that is conflicted, rigid, and cold as opposed to the hysterical dissociation in which the several personalities take turns in living out their roles.

living out their roles.

"The use of dissociation to repress unacceptable drives and behavior in a repeated effort to develop, through new identifications, a successful adaptation to a changing and conflicted environment, as well as to permit expression of forbidden impulses is indicated. The result of such repeated dissociation was the severe impoverishment of the self.

"The Rorschach finding that one of the personalities was schizophrenic suggests that further study of this material may be of value in the understanding of the development of schizophrenia.

"The question of the emotional and physiological state at the actual moment of change-over from one personality might well lead to further understanding of the process of dissociation which appears to have correlations with the hypnotic state.

"The correlation in this case of extensive age regression studies with the co-existing multiple personality structure should prove a rich field for the study of personality development" (pp. 198-199).

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-words in an association word test" (p. 139). Freud's predictions were only partially supported.

Erickson, Milton H. (1954). The development of an acute limited obsessional hysterical state in a normal hypnotic subject. Journal of Clinical and Experimental Hypnosis, 2, 27-41.

The 25 year old female graduate student in psychology had often been used in hypnosis experiments and as a demonstration subject, and had witnessed induction of hypnotic deafness, blindness, and color-blindness though she had not been given those suggestions herself. Scientific curiosity appeared to be the motivation for volunteering to experience hypnotic blindness, but she was skeptical about her ability to experience it. The author gave a series of "exceedingly tedious" suggestions to develop somnambulism (passively responsive and receptive) followed by suggestions leading gradually to development of "blindness" with the intention of concealing it from the hypnotist, with attendant strong and mixed emotions.

The initial attempts failed because the subject ostensibly was deceiving herself into thinking she had developed hypnotic blindness, but the author also was of the opinion that she was seeking to meet unconscious personality needs. The author then covertly changed the goal of the experiment "to develop in the subject an acute hysterical obsessional compulsive mental state which would be accompanied by hypnotic blindness and which would parallel or resemble the obsessive compulsive hysterical mental disturbances encountered in psychiatric practice" (p. 32). The author developed a monologue of suggestions based in part on the utterances of hospitalized obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc. obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc.

Schneck, Jerome M. (1954). An experimental study of hypnotically induced auditory hallucinations. Journal of Clinical and Experimental Hypnosis, 2, 163-170.

"Summary. An experimental study of hypnotically induced auditory hallucinations was incorporated into therapeutic contact with a patient at a time when an exploratory phase of treatment process seemed appropriate. The study was divided roughly into ten parts, nine of which involved attempts to induce hallucinations on an auditory level following an initial control procedure involving 'imagined' conversation. Choice of persons to be hallucinated was made at times by the therapist and at times this was left for spontaneous development by the patient. Some of the episodes involved marked emotional participation by the patient. Others were less intense. 'Imagined' conversations were distinct from hallucinated comments. Her own voice when hallucinated emanated from within herself. Other hallucinated voices had external origins. Some were far away. Her aunt's voice was in the same room. Spatial and temporal elements were divorced from their conventional relationships and distorted in keeping with psychodynamic needs. The patient was able to discuss her experiences and evaluate certain descriptive and dynamic qualities. Certain parts of the total experience served as controls in the evaluation of other parts. The beginning of hallucinatory behavior did not set a pattern for continuous similar activity. Responsive behavior varied from time to time. A hallucinatory episode might be followed by an 'imagined' conversation, although instructions remained the same. Deceased persons were hallucinated on an auditory level. This type of episode with her mother had considerable emotional impact. Her aunt died twenty years ago. Her husband was not hallucinated. Responses involving her daughter showed greater complexity.

"Further studies are in order in connection with the neuropsychological and neurophysiological elements in such hypnotic hallucinatory activity. Such elements as they play a role in visual imagery as described here and in visual hallucinations are also to be examined further. Aside from extensions of the type of investigation

presented here, inroads may be made into an understanding of spontaneous hallucinatory activity among psychotic patients through the utilization of hypnotic exploratory methods. This would have to be preceded by more extensive studies of hypnosis in relation to psychotic patients than have been attempted thus far. The procedure discussed here and many potential ramifications makes possible a wide variety of investigations which can be planned for the future" (pp. 169-170).

#### Nonvolition/automatism

1995

Comey, Gail; Kirsch, Irving (1995, November). Intentional and spontaneous imagery in hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

Students were given one of two versions of the Carleton University Responsiveness to Suggestion Scale (CURSS): a) the original version, which contains instructions to intentionally imagine goal-directed fantasies, and b) a modified version, in which instructions for suggestion-related imagery was deleted. Participants were asked to report their goal-directed fantasies and to indicate whether these occurred spontaneously or were generated intentionally. They were also asked whether they had tried intentionally to generate the suggested experience and to indicate whether they had believed that the suggested states of affairs were real (e.g., whether they thought a hallucinated cat really existed). The deletion of instructions for goal-related imagery significantly increased responsiveness to CURSS suggestions. Spontaneous goal-directed imagery was significantly correlated with behavioral response, but intentional imagery was not. Most successful responders tried to generate suggested experiences intentionally, indicated that they could have resisted challenge suggestions if they really wanted to, and reported believing in the reality of suggested ideomotor and challenge experiences, but not of cognitive suggestions. Voluntary attempts to generate suggested experiences were correlated with subjective responding.

Green, J. P.; Lynn, Steven J. (1995, August). Dissociation, hypnotic amnesia and automatic writing: Is there an association?. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

This study examined whether differences in self-reported dissociative experiences (DES, Bernstein & Putnam, 1986) and past performance on hypnotic amnesia (HGSHS: A, Shor & Orne, 1962) influence the frequency of passing an automatic writing suggestion. Participants (N = 112) were divided into high hypnotizable ('real') and simulating groups. Results from a log linear analysis indicated that automatic writing was independent of both dissociation status and past performance on an ostensibly dissociative hypnotic suggestion (i.e., amnesia). Simulators were more than six times as likely to pass the automatic writing suggestion than reals. Findings were discussed in light of other research regarding the relation between

the DES and hypnotizability. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX. Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

Woody, Erik Z. (1995, November). Trying, not trying, and trying not to try. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**In the "classic suggestion effect" the behavior of a hypnotized person following a suggestion is experienced as nonvoluntary. So alterations of experience are important to understand. We can think of it as a misattribution: which cues lead subjects to misattribute their behavior, etc.**

**A different view is to see it as how information is processed (neodissociation theory). There are two views of dissociation to consider: 1. Behavior is voluntary, but that voluntariness is blocked from awareness. (The S is trying but doesn't know it consciously.) This is a barrier model of dissociation. The S lacks information about self agency. Bowers calls it a theory of dissociated experience. 2. Underlying control of behavior is altered (not so governed by executive control) and the subject is correct when they say they are not trying. Bowers called this a theory of dissociated control.**

**A persistent problem is that these two theories of dissociation are incomplete sketches. But cognitive neuroscientists and experimental psychopathologists have recently become interested also, rapidly developing and independently developing the same two theories.**

**Bowers and I stated that the theory presented by Norman (Norman?) and Shallice is similar to dissociative control theory. When a response is habitual, a lower system called contention scheduling can do it; if response is more complex, a higher control supervisory system involving unique information like goals is available, modulating the lower control system. Volition and how it is experienced depends on the nature of the supervisory system. When it is not [or when it is?] modulating or monitoring the contention scheduling process, one experiences will.**

**Thus, hypnosis is in the grey zone where the supervisory system monitors without modulation of contention scheduling--a wide realm. Also, for high hypnotizables hypnosis may weaken the higher level control system associated with the subjective experience of will; this dissociates lower levels of control from higher levels of control. The lower levels cannot be modulated as well at will. This indicates changes of frontal functions.**

**In psychopathology, Chris Frit argues that schizophrenia can be thought of as disorders of volition: 1. Spontaneous self initiated willed actions are generated by a different route to action from unwilled actions. In schizophrenia there is impoverishment of self initiated action. The patient also shows perseverated action. In contrast, when directly instructed the patient can perform complex tasks. This is close to the dissociated control model of hypnosis. Laboratory procedures for studying perseverative acts in schizophrenia can be applied to hypnosis. (However the theory doesn't explain the positive symptoms of schizophrenia.) 2. There is an internal monitor that keeps track of the self initiated aspects of actions (e.g. inner speech), which schizophrenics lack. Likewise delusions of control, due to a failure to track the self initiated aspect of these actions, resemble the dissociated experience aspect of hypnosis.**

**The Classic Suggestion Effect is a mild delusion of control. This is very different from the social psychological view. Nisbett & Wilson say people do not introspect about the sources of their behavior. In their view, believing that alien forces are**

controlling you is due to failure of a mechanism. It is an interesting alternative to social psychological misattribution models to explain the nonvoluntary experience. Functional brain imaging of normal subjects indicates that willed actions involve different areas of brain than nonvoluntary actions. Current thinking is that what differentiates schizophrenics from normals is in how their separate brain regions interact with each other. (This view is consistent with the research of Crawford and others on brain areas involved in hypnosis.) 3. There is a unifying mechanism of meta-representation or second order representations ("mentalizing") which are distinct from normal representations of reality. Consider the example of the suggestion to hallucinate a fly on the Harvard Form A Group Scale. The hypnotist wants me to believe that a fly is buzzing around me. If the second order representation is not there, only the first order representation is there: "a fly is buzzing around me." This is in Frit's theory's term a dementalized experience. The "dementalized experience" is a bit like Sarbin's believed in imagining. Low hypnotizables are plagued with meta-representation ("trying not to try"). Frit's work even suggests some parts of neodissociation theory may be a better representation of schizophrenia than of hypnosis.

1994

Lynn, Steven Jay (1994, October). Toward an integrative theory of hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

This is a re-evaluation of neodissociation and cognitive models of hypnosis, and an attempt to be integrative. This paper focuses more on ideomotor behaviors but we will extend the model to other hypnotic behaviors in the future.

Automaticity of behavior in hypnosis can be accounted for without using a concept of divided consciousness or weakened consciousness. Parapraxes (doing one behavior while intending another) are not instances of decreased control of behavior, but relate to where attention is drawn. This requires a different use of the hierarchy concept from Hilgard's model (which in turn comes from Hull's concept of habit hierarchy).

Here hierarchy is a concept drawn from Miller, Galanter, & Pribram: acts are comprised of molecular units, that are comprised of even more molecular units. Behavior only needs to be processed at an executive level when unusual events occur. But one or more hierarchies may be set into motion at the same time. Dissociation is not an infrequent event. Behavior is controlled by subroutines rather than by an executive control structure; subroutines operate in parallel rather than in a hierarchy. Parapraxes are due to an overlap between two subfunctions.

Parapraxes are different from ideomotor responses, where we pay close attention and involuntariness is reported not just post facto but as part of the experience.

Malinoski, Peter; Aronoff, Jodi; Lynn, Steven J.; Moretsky, Michael (1994, August). Hypnosis and early memories. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

We studied autobiographical memory in the college population, as manifested in the therapy situation, as a way of investigating an individual difference variable. Most people do not have recall before age 3 or 4 (and probably infantile amnesia begins before age 2).

Administered Autobiographical Memory Scale (AMS), and later in context of a hypnosis scale. 247 students were in phase 1, conducted as two separate experiments so that Ss wouldn't link the AMS to measures used in the second study.

First study was presented as a study of personal memories. Asked Ss to distinguish first five birthdays, circumstances around loss of first tooth, first day of high school. Also, they were asked about their earliest memory events, rated according to 3 scales (detail, vividness, accuracy of recall). Authors summed Ss' responses on these 3 ratings for the 8 item scale.

Part II. Administered various scales: Life Experiences, Fantasy Proneness, Wilson & Barber's scale, Imagery Control Scale, Global Psychopathology, 25 item scale of physical and sexual abuse, Brier's list of symptoms of abuse, and DES (Dissociative Experiences Scale). Imbedded were 12 items to test carelessness in responding (e.g. "I have never said Hello to anyone who wore eyeglasses.")

**RESULTS.** Phase 1. Two people indicated they had memories dating to before their first birthday; an additional 5% of Ss gave memories between 12-24 months. This would probably be impossible. Another 14.4% described events between 24-36 months; 37.4% said their earliest memory was at age 3. Mean age for earliest memory was 3.4 years (which agrees with other surveys.) Only 1 subject stated his earliest memory was as late as the tenth year of life.

High intercorrelation was obtained, ranging .79 to .89, between ratings on any of the memory event ratings (as detailed, vivid, or accurate). There was a negative correlation of these ratings with age of recall. Ss who report more detail, vividness, and competence, were also likely to report earlier first memories.

Authors divided Ss into three groups based on age of first memory: 12 with first memory earlier than first year; those whose first memory was between 1-7 years; and those with a later first memory. The earlier memory group were more fantasy prone; and rated their memories as more reliable, vivid. This suggests there are persons who report memories that are covered by infantile amnesia, report them with greater detail, and are more fantasy prone than those who report memory events beginning later in life. This is consistent with Wilson & Barber's finding that fantasy prone people have vivid recall of early childhood events.

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None of the memory reports correlated with psychopathology or dissociation. Dissociation (DES) was correlated with abuse indicators, however. Compared top and lowest 10% and middle range on DES on their memory scores and found no relationship. There was no support for the idea that report of early life events in

dissociative people is compromised. Failure to recall early memories shouldn't suggest that people are dissociative (which some therapists tend to do).

All three memory measures were associated with Harvard Scale scores. The AMS was administered at the same time as the Harvard. Objective responding on the Harvard correlated with detail, vividness, and accuracy of recall. Also, involuntariness of response correlated with all 3 measures of the AMS. Finally, subjective involvement correlated with all three measures of AMS. At least when hypnosis is measured first, and explicit connection is suggested, there is a connection. Further research is needed to see if the relationship holds when measured in independent contexts. This may explain why High Hypnotizables are more prone to pseudo memories and leading questions. They may come to confuse them with historical reality.

The results suggest caution for early memory reports. They may be vulnerable to confusing fantasy and reality, as well as to biasing effects.

Tellegen, Auke (1994, October). Comments on Symposium "Hypnosis Reconsidered". [Comment/Discussion] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco, , as part of Symposium titled: Hypnosis reconsidered.

I agree that the topography of issues has become more complicated. I would want to look at the distinction between "special process" theories and other views. I still think there is some non-trivial element of difference between the two groups; but it's not one well defined group vs another, with people now distributed across a continuum and to some degree moving around. At the poles of these theoretical positions are real differences (e.g. in favorite hypotheses, research methods). But there has been some closing of the gap between these two poles.

Historically, rapprochement in psychological theories has been the result of hard nosed behaviorism going soft and cognitive in the last 15 years. The behavioral paradigm is the ancestor of the social cognitive view within hypnosis research. You can see the evolution in Ted Barber, and eventually it was carried forward by Spanos. Today all major views of hypnosis have become systems models, requiring flow diagrams. We are comparing more parsimonious (social cognitive) with more surplus meaning positions. Parsimony is a good way to advance knowledge, making a theory more complex only when you have to. The major social psychological positions are widely shared; many are close to common sense. The question is, are they sufficient to the data? The behavioral approach recognizes individual differences but doesn't weight them heavily; it may treat individual differences as a curve fitting issue, or may treat them as training outcome. Associated with the behavioral approach is a tendency not to explore fully individual differences from a naturalistic perspective. The difference in research approaches between the two poles is loosely aligned with Cronbach's correlational vs experimental approaches to psychology.

The role of individual differences in hypnotizability however may be structural, in which case different flow diagrams may be needed, depending on trait levels, on the

eliciting circumstances, etc. Thus we might need different flow diagrams for different levels of hypnotizability.

The role of imagination remains unexplicated across theoretical positions. Everyone since the Franklin committee thinks imagination is important in hypnosis; it is urgent to explore it. Even the most constructivist perspective on perception doesn't equate perception with imagination.

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The role of imagination remains unexplicated across theoretical positions. Everyone since the Franklin committee thinks imagination is important in hypnosis; it is urgent to explore it. Even the most constructivist perspective on perception doesn't equate perception with imagination.

We now must turn the flow diagrams into neurobehavioral models, like Helen Crawford is attempting to do.

**COMMENTS FROM THE AUDIENCE:**

**Kenneth Bowers:** The people flowing out from the neodissociation camp are going in different directions. I think that ideas are directly activated, Helen Crawford and John Kihlstrom would think it involves more effort on the part of the hypnotized Subject. Irving Kirsch agrees that at some level the words have to be processed, but doesn't imply great effort. There is some kind of preattentive processing in hypnosis, the kind of processing which allows you to turn when you hear your name, in normal circumstances. Does it still make sense to talk about the field of hypnosis research or theory in terms of the two camps? I fear a return to the situation when the term "two camps" was justified.

**Woody, Erik Z. (1994, October).** Cognitive-processing models of hypnotic dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Spanos contended that social psychology is an appropriate ground for hypnosis, and his work highlights the value of not taking things at face value (e.g. feelings of nonvolition).

I did this research with Ken Bowers. It addresses the question, does non-volition occupy a small role in hypnosis, or are hypnotic responses performed intentionally despite the hypnotized person's feeling of non-volition.

We did not rely on the research Subject's verbal report. When one exerts intentional effort to suppress a thought, the thought gets stronger. For example, when people try to comply with instruction not to think about white bears, they think about them repeatedly (Waitner's research).

Hypnosis suggestions are for amnesia (inability to remember), not intentional forgetting.

**STUDY ONE.** We used Waitner type instructions vs hypnosis in high and low hypnotizability Ss, to examine the role of intention in response. We used thinking

about one's favorite automobile instead of a white bear as the task stimulus. Subjects were not to think about it for 2 minutes, but to press a button whenever a thought about the automobile surfaced. There was another waking trial with suggestions; then hypnosis and re-testing.

Ss were undergraduates screened on Harvard Scale for hypnotizability and the Waterloo Stanford Group form. High hypnotizables scored 8 or more on both scales, lows scored 4 or less on both.

The variables recorded were total number of button presses, and average length of time per press. Analysis was by a 3 way mixed model ANOVA: high low, induction condition, and suggestion condition (blank mind vs. amnesia)

#### **RESULTS.**

**Mean Number of Button Pushes Over Trials Group Waking Hypnosis**

blank amnesia      mind High 6.9 2.9 1.8 .6 Low 5.2 4.7 4.3 3.7

mind mind High 6.9 2.9 1.8 .6 Low 5.2 4.7 4.3 3.7

**1993**

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, 102, 29-38.

High-hypnotizable subjects were found superior to low-hypnotizable subjects in degree of pain reduction produced by hypnotic analgesia and by a stress-inoculation (cognitive-therapy) procedure. But, stress inoculation and not hypnotic analgesia impaired performance on a cognitively demanding task that competed with pain reduction for cognitive resources. This outcome implies that hypnotic analgesia occurs with little or no cognitive effort to reduce pain, challenging the social psychological theory of hypnotic response, at least in high-hypnotizable individuals. The findings are also incompatible with the concept of dissociated experience wherein the pain and cognitive efforts to reduce it are separated from consciousness by an amnesia-like barrier. But the results do support the concept of dissociated control, which proposes that suggestions for hypnotic analgesia directly activate pain reduction and thereby avert the need for cognitive strategies to reduce pain.

Spanos, Nicholas P.; Burnley, M. C.; Cross, P. A. (1993). Response expectancies and interpretations as determinants of hypnotic responding. Journal of Personality and Social Psychology, 65, 1237-1242.

Subjects rated the extent to which they expected to respond to each of the suggestions on a hypnotizability scale both before and after the administration of the preliminary hypnotic-induction procedure. After the induction, subjects also rated the extent to which they planned to respond actively and passively to each suggestion. Contrary to strong versions of response-expectancy theory, the extent to which subjects planned to adopt an active interpretation predicted behavioral and subjective indexes of hypnotizability even after controlling for the effects of postinduction expectations. In addition, an active interpretation significantly predicted response to suggestion for which subjects held weak and uncertain

expectations. The relationship between expectation and hypnotizability was found to be fan-shaped rather than linear. Implications are discussed.

Woody, Erik Z. (1993, October). Factors, facets, and fiddle-faddle. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

The classic suggestion effect implies involuntary behavior. A theory by Norman & Tim Shallice (published in a book on cognitive neuropsychology by Shallice) explains the classic suggestion effect in terms of underlying control processes.

There are 2 complementary systems: 1. contention scheduling (routine acts that don't require conscious control, activating schemas through environmental events and other schemas) for well learned habitual tasks. 2. supervisory attentional system - nonroutine actions in centralized processes, accessing unique information, operating only indirectly by modulating lower level control system, biasing their selection of schemas by system #1.

These two systems permit the sense of behavior being automatic or willed. The theory can be used to explain hypnotic nonvolition. For highs, hypnosis may partly disable System #2, dissociating lower levels of control and resulting in genuine changes in behavior because System #1 would be more enabled, triggered directly by co-active schemas and environmental stimuli. This increased dependence on a lower level of control would not rule out a wide range of behavior. It's mainly novel or very complex behaviors that would diminish, plus exercise of will.

The model also illuminates our understanding of behavioral rigidity and the tendency for thought/action to be triggered by [suggestions?]. Spontaneous voluntary behavior would be diminished. (See for example Orne's studies of the effect of apparent power outage during an experiment, in which high hypnotizable Ss did not move or leave the room but sat passively, whereas low hypnotizable simulating Ss simply got up and left.)

Also a weaker "supervisor" would lead to disinhibition of inappropriate or peculiar associations or behavior. In labs one sees few such triggers, although Hilgard observed drug flashbacks. The phenomena of hypnosis sequelae appear like a disinhibition of experiences.

Hypnotic analgesia follows this model too, an automatic and controlled processing of perceptual input.

Amnesia that follows hypnosis can be explained by this theory. Shallice has a model of how memory is affected: memory is a higher control system, enabling the handling of non-routine situations. Confronted by a nonroutine memory problem, the supervisory system formulates a model of what [the information] should look like, pulls out memories, and compares the model. If hypnosis interferes with the supervisor function it should interfere with memory (the description and verification phases) leading to [hypnotic amnesia?]. [With hypnosis one would predict]: 1. Poor access to memories requiring description (not overlearned material). Recall should demonstrate good cued memory but poor free recall. [It has been observed that] hypnotic amnesia selectively impairs free recall rather than recognition recall. 2. Hypnotized Ss should show poorer verification (the ability to

discriminate irrelevant from correct associations). Many studies have shown this, with impoverished verification (e.g. the "discovery" of elaborate previous lives).

A dissociated control theory of hypnosis is thus possible, emphasizing a loss of control of supervisory system processes. It would implicate changes in frontal lobe processing. The essence of hypnosis, according to this approach, is the bypassing of executive control, and the frontal lobe is viewed as a center of executive control.

There are several ways that hypnosis suggests inhibition of frontal lobe functioning: 1. impoverishment of self initiated behavior 2. other-directedness 3. frontal amnesia (unable to distinguish true memories from irrelevant memories; prone to confabulation, especially when probed with false information) 4. poorer in temporal or sequential organization in memory.

How do we proceed to make this theoretical approach useful? We should do more neuropsychological studies, as Helen Crawford does. They emphasize the inhibition of frontal lobe functions.

Testable hypotheses arise: 1. Hypnotizable Ss should show the same kind of problem solving problems as frontal lobe patients. 2. Memory of hypnotized Ss should be like patients with frontal amnesia.

1992 Dixon, Michael; Laurence, Jean-Roch (1992). Two hundred years of hypnosis research: Questions resolved? Questions unanswered!. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 34-66). New York: Guilford Press.

These notes summarize only that part of the chapter concerning nonvoluntary behavior (pp 38-39; 58-61).

The concept of 'nonvolition' has been and continues to be an important issue in hypnosis research. The concept pertains to the "subjective report that the hypnotic suggestion is enacted without the subject's conscious and willful participation" (p. 38). When hypnosis was attributed to a magnetic fluid, in the days of Mesmer, the issue did not arise (because of course a person would not have control over something that happened to them physically). However, when hypnosis came to be considered a psychological phenomenon, the issue of how a behavior could be the result of motivated action and yet not perceived as being under conscious influence became important. In 1819 Faria wrote that the nonvolition paradox is due to the hypnotized subject's tendency to misattribute the source or reason for one's behaviors; he noted that successful suggestions depended upon the subject falsely attributing to the hypnotist the power to influence them. From that point forward, circular reasoning was used to state that one is hypnotized if one experiences their behavior as nonvolitional, and nonvolitional behavior signifies that a person is hypnotized.

"The observation of the seemingly complete automaticity of response in the highly hypnotizable subject led Liebeault in his 1866 book (followed later on by Bernheim and Liegeois) to describe these subjects as 'puppets' in the hands of the hypnotist. This was a quite unfortunate statement, since it would lead to one of the fiercest legal debates surrounding the use of hypnosis in the last 20 years of the 19th century (Laurence & Perry, 1988). ...

"The most prominent author (if not the only one) who attempted to tackle this difficult question was Pierre Janet, who would make the investigation of automatism the basis of his theory of hypnosis, rather than suggestion or suggestibility. This theoretical orientation is best exemplified by his concept of desagrégation psychologique seen in some psychopathologies, or the carrying out of a posthypnotic suggestion in the normal individual (Janet, 1889; see also Ellenberger, 1970; Perry & Laurence, 1984; Prevost, 1973). Nonetheless, until the end of the 19th century, and for a good part of the 20th century, these reports of nonvolition were thought to be the end result of some neurological changes happening during hypnosis--an idea that has not been substantiated by contemporary research." (pp 38-39)

Reports of nonvolition are explained as due to dissociation by Hilgard, or as the results of misattributing the origins of behaviors and experiences by Spanos and by Lynn. Neodissociationists like Hilgard regard misattribution to be a cognitive alteration, mainly an internal triggering mechanism, while social psychologists like Spanos and Lynn regard the misattribution to be the results of situational demands and therefore an external triggering mechanism.

"Regardless of one's preferred metaphor, the issue of nonvolitional reports remains at the core of an integrated view of hypnosis and hypnotizability. The question remains as follows: By which mechanisms does this occur, and how can we predict a priori who will report involuntariness and under what circumstances? Whereas dissociationists have emphasized general cognitive mechanisms and de-emphasized situational factors, social- psychological theorists have emphasized situational variables and de-emphasized individual differences. Given the limitations of both approaches, emphasis will have to be placed not on their continued separation but on their integration, as more and more investigations demonstrate that they clearly interact with each other (see, e.g., Nadon, Laurence, & Perry, 1991)." (p. 60)

"At the height of the confrontation between the two French schools, hypnosis found its way into the legal arena. Following a series of criminal cases in which hypnosis had been allegedly involved, the two schools once again found themselves on opposite sides of the fence. For La Salpêtrière, only those who had a propensity toward criminality (and hystericals were prime candidates) could be the victims of hypnosis. For the Nancy school, in highly responsive individuals suggestions could lead to criminal behavior. Unfortunately for the Nancy school, it soon became evident that the concept of suggestion was not sufficient in explaining the questions raised by the courts, and Bernheim was forced to recognize that in cases where suggestions had played a role, other dispositional and situational factors were probably more important in the genesis of the reprehensible behaviors. His espousing a too extreme position meant that the baby was thrown out with the bathwater. History may indicate that the same fate is now awaiting contemporary theoretical positions that adopt an extreme stance vis-a-vis the phenomenon of hypnosis" (p. 61).

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1992

Hargadon, Robin M.; Bowers, Kenneth S. (1992, October). High hypnotizables and hypnotic analgesia: An examination of underlying mechanisms. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

Bowers' dissociated control adaptation of Hilgard's neodissociation theory of hypnosis posits that higher control systems are not used if lower systems are activated.

Imagery may be less important for achieving hypnotic effects. It also may contribute differently than previously thought, an uncorrelated factor. If imaginal involvement and imagery is integral to the production of analgesia using hypnosis, one would get results different than if not integral.

Research: 65 Ss rated as high on two hypnotizability tests participated.

Session 1:

Procedure entailed finger pressure pain: baseline, followed by 2 hypnosis treatment trials. Ss were not informed of the second trial before they did the first.

Standard suggestions: imagery congruent with the suggestion (hand like block of wood, protected by a glove)

Imageless condition: your hand will remain comfortably nonresponsive to the pressure; you will not allow other things to come into your mind.

Outcome Measures

Analogue scale for pain 0-10

Nonvoluntary experience rated 0-4

Session 2:

Administered Tellegen Scale, Woody & Oakman Scale, Marks Vividness of Imagery, Bowers' Effortless Experiencing, and Duality of Experience during age regression.

**RESULTS.**

No difference was found between the standard and imageless conditions in amount of pain reduced. So in high hypnotizables, use of imagery or not doesn't matter for

controlling pain. Some Ss had a clear preference however, for one or the other method (even counter to their own expectations).

Feelings of nonvolition did not differ as a function of imagery use.

Multiple regression showed effects of hypnotizability and effortless experiencing. Ss who have an effortless experiencing of imagery benefit from using it to reduce pain; those who find it more effortful do better without imagery when attempting to reduce pain.

Contrary to last year's results reported by Bowers, high imagery was related to duality of experiencing in age regression.

Dissociated control theory is consistent with the results but not necessarily demonstrated. It is important to discriminate between imagery as a mediator rather than as a co-occurrence. This research suggests, as did Zamansky's work on counter suggestions, that imagery is not as critical for hypnotic response as we previously thought.

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Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude

Kunzendorf, Robert; Carrabino, Carlene; Capone, Daniel (1992-93). 'Safe' fantasy: The self-conscious boundary between wishing and willing. Imagination, Cognition and Personality, 12, 177-188.

This experiment tested the hypothesis that a fantasy will impel people to 'act out' only if they fail to distinguish the fantasy from the anticipated reality. In the experiment, one task obtained a baseline measure of how long subjects could resist

eating popcorn, then measured how long subjects could resist popcorn while fantasizing its taste. Another task instructed subjects to merge three circular images with three circular percepts of equal vividness, then presented subjects unexpectedly with only two of the three circular percepts. Some subjects thought that there were three circular percepts during the merger, and for these subjects, the length of resistance to popcorn was significantly shorter during the popcorn fantasy. But for subjects who self-consciously differentiated the two real circles from the three merging images, the normal 'boundary' between wishful fantasy and willful eating was intact.

This research investigated whether people can fantasize without acting out. The authors place the study in the context of theories proposed by Freud and William James. Kunzendorf's source monitoring theory of self-consciousness suggests that "self-consciousness that one is imaging is the phenomenal consequence of neurally monitoring the central source of one's imaged sensations, and self-consciousness that one is perceiving is the subjective quality of neurally monitoring the peripheral source of one's perceived sensations" (p. 178).

The ability to carry out source monitoring varies. Those who have difficulty monitoring whether they are imaging or perceiving may also have trouble distinguishing wishful fantasy from anticipatory imagery, and therefore they might act on it.

This research "identified subjects with poor source monitoring--nondiscerners of reality--and investigated the effect of fantasy on their impulse control" (p. 179).

#### **METHODS.**

Subjects sat in front of a computer monitor for all tests; they completed Eysenck's seventh impulsivity questionnaire for measures of impulsivity, venturesomeness, and empathy, Marks' Vividness of Visual Imagery Questionnaire (VVIQ).

The study used a test in which subjects maintained in mental imagery a red, green, and yellow filled circle that had been on screen, with eyes closed; were instructed to open eyes and merge their 3 imaginary circles with the 3 on the screen (but when they opened eyes only 2 were there), and they were then asked questions about how many circles they saw when they opened their eyes.

Then they were given a taste of popcorn, told to resist eating any more (but could press a key to receive a little if they couldn't resist), and then were told to resist by imagining that they were eating popcorn.

#### **RESULTS.**

Those who discerned the two real circles while imaging a third circle of equal vividness (the Discerners), could resist eating popcorn for 137 sec in the baseline condition and 132 sec in the fantasy condition. Those who could not discern two real circles while imagining a third (Nondiscerners) could resist eating popcorn for 127 sec in the baseline treatment but only 95 sec in the fantasy treatment.

Discerners could identify the missing circle as the red one, whereas nondiscerners could not do so with any certainty; there was no effect of "image vividness".

**"Vivid imagers" whose imagery matched real yellow circles of greater illuminance, exhibited more vivid imagery on the VVIQ as well.**

**In their Discussion, the authors suggest that "fantasy impels people to 'act out' only if they fail to distinguish fantasized sensations from perceived sensations. ... [the theory] is applicable to sexual fantasy and aggressive fantasy as well. This theory--Kunzendorf's 'source monitoring' theory of self-consciousness--implies that fantasies of the sensory consequences of a behavior should not lead to the behavior, so long as the fantasies are self-consciously known to be imaginal and are not expected to be perceptual... But for people who cannot self-consciously distinguish between wishful images of pure fantasy and anticipatory images of perceptual reality, between wishing and willing, fantasies of gastronomical, sexual, or aggressive sensations are implicitly unsafe.**

**"Indeed, as Baars notes, 'the issue of voluntary control is at the very core of human psychopathology' [31, p. 254]. But recently, Baars' and others' theories of volition have emphasized the computer-metaphoric distinction between conscious 'willful' behavior and unconscious 'automatic' action [31, 39-40], and have neglected James' distinction between conscious willing and conscious wishing. Decades ago, when pre-computational theorists like Janet used the term 'automatism' to describe psychopathological behavior, they meant that an abnormally behaving patient was \_consciously 'possessed' by a fantasy\_--a wishful image, a hypnotic suggestion, or a fantasized personality [41]. In reemphasizing the phenomena of wishing, willing, and possession by fantasies, the present article redefines the latter phenomenon as possession by 'unmonitored' fantasies, which are distinguishable from anticipatory images impelling action" (pp. 184-185).**

**Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.**

**These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.**

**Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.**

**"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the**

suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

Oakman, Jonathan M.; Woody, Erik Z. (1992, October). Automaticity, the Stroop effect, and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

Builds on the first Dixon study of Stroop effect and hypnotizability, which presented stimuli too fast and also the probabilities of congruent/noncongruent stimuli were varied. Highs had more interference in all conditions, seeming to process with language more. It cast doubt on the use of strategies by highs. Measurement of hypnotizability outside the situation cast doubt on expectancy (social psychology influence) theories.

Automaticity refers to responses that seem effortless, fast, and require little attention. They propose that this characterizes hypnosis. Highly automatic behavior cannot be suppressed. Reading is automatic; color naming is not. The greater the automaticity factor, the more the Stroop effect. Automaticity relates to automatic movement in hypnosis.

Previous research on Stroop used visual tasks, while hypnosis is largely auditory. So we used identification of volume of a word presented over a speaker, plus the regular (visual) Stroop task.

The words "loud" or "soft" were presented as loud or soft in volume. Lows = 4 or lower; highs = 8 or more on Canadian test of hypnotizability, the Waterloo Group Form C.

[In the Visual Stroop?] Reaction Time was greater for incongruent than congruent stimuli for highs (almost statistically significant) but not lows. It is an 8 ms difference for highs.

The Auditory Stroop is very different for both groups; however highs did not show more difference in reaction time than lows.

Auditory and Visual Stroop tasks did not correlate. Waterloo hypnotizability correlated: .28 with Visual Stroop, .11 with Auditory Stroop.

Logan's theory about automaticity seems appropriate: automatization is a shift from using a strategy to relying on memory; inhibition of the automatic response is based on using a strategy instead of relying on memory. Lows may be very able to inhibit automatic processing when necessary; they are the interesting exceptions to the rule, because the Stroop has been a reliable finding in psychological research for years.

**Perry, Campbell (1992). Theorizing about hypnosis in either/or terms. International Journal of Clinical and Experimental Hypnosis, 40, 238-252.**

The present paper addresses 3 issues raised by Coe (1992). First, it maintains that the "altered state" issue of the 1960s remains buried in current dichotomous classifications of hypnosis theories as involving either "special processes" or the social- psychological position. Given the current diversity of the field, it appears imprudent to classify theorizing in either/or terms; additionally, despite a history of using the term "altered state" in a circular way, it is not an inherently circular formulation. It can be used descriptively simply to point to the observation that some individuals in hypnosis report subjective alterations. A second issue broached concerns the metaphorical status of the term "hypnosis"; it is accepted as a misleading metaphor inherited from 19th century investigators such as Braid, Faria, Puysegur, and Liebeault. Provided that it is recognized that this metaphor refers to a "domain" (E. G. Hilgard, 1973) of characteristically elicited behaviors, no problem ensues in retaining this metaphor derived from nocturnal sleep. A subsequent discussion of current conceptualizations of hypnosis indicates considerable agreement among investigators; there is much consensus that hypnosis is an individual differences phenomenon, in which imagination may, in some individuals, become so intense and so vivid, as to take on "reality value," to the extent that a hypnotized person may have difficulty in distinguishing fantasy from reality. The S abilities of imagery/imagination, absorption, dissociation, and automaticity (which may be proved to be an index of dissociation) are proposed as being the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.

the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.

**Price, Simani M.; Crawford, Helen J.; Plantier, Mary E.; Jones, Elizabeth P. (1992, October). Sustained attention, selective attention, and automaticity: Relationships to**

**hypnotic responsiveness.** [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

There are four dimensions of attention: 1. focused & sustained attention 2. selective attention 3. divided or dual attention 4. ambient attention (the ability to attend to one thing but have floating attention also)

Ss had Harvard and Group Stanford scales of hypnotizability, to divide them into low, medium, and high groups. They were recruited for a study of attentional correlates with no mention of hypnosis, in order to reduce expectancy effects.

In this study, 57 Ss had two 45 second trials on the Stroop test; the higher scores mean less Stroop-type interference.

We studied the effects of distraction on ability to do mental arithmetic. (There were to ignore a word in the sum column.) Then Ss were tested for implicit memory of the words.

Necker Cube task was administered (to replicate Crawford & Wallace): four trials, 60 sec. each

Absorption Scale

Crawford & Gumbles scale

## **RESULTS.**

There were no differences on most of the tests for high, medium, and low groups. Hypnotizability correlated with extremely focused attentional ability as measured by the DAPI Extremely Focused Attention factor, and the Tellegen Absorption Scale. Moderately Focused Attention loaded on DAPI Moderate Focus. Necker Cube and Implicit Memory (for words) loaded on the Dual Ambient Attention factor.

Somerville, Wayne R.; Jupp, James J. (1992). Experimental evaluation of a brief 'ideodynamic' hypnotherapy applied to phobias. Contemporary Hypnosis, 9, 85-96.

This study used a test-retest design to investigate the effectiveness of a brief 'ideodynamic' hypnotherapy which notionally located and reformulated memories in the treatment of simple phobia disorder. Subjects were 19 phobics randomly assigned to treatment (n = 10) and waiting control groups (n = 9). Rapid, significant, and sustained relief from phobic fear and avoidance was reported by 50% of treatment subjects. A number of symptoms and therapy process variables were correlated with treatment outcome. These included a negative association with hypnotizability and a positive association with hypnotic depth estimates. The ramifications of these and other associations are discussed and it is concluded that the 'ideodynamic approach' investigated may have contributed a therapeutic effect beyond the operation of treatment non-specific factors.

Treatment consisted of: 1. Hypnotic induction. 2. Establishment of ideomotor signals described to clients as a means of communicating with the 'inner unconscious mind'. 3. Beyond the first therapy session, a review of work done in previous sessions. 4. Gaining signaled permission from clients to work on their problem and for the 'inner mind' to review relevant memories. 5. Location of the

'earliest critical event' by the 'inner mind'. 6. Review of the located memory by the 'inner mind'. 7. Establishing age at the occurrence of the 'critical' event. 8. Ideomotor signaling indicating suitability of a visual imagoic processing of the event.

If visual processing was chosen, the dissociated viewing procedure (step 9A) was used next, otherwise the ego-state procedure (step 9B) was employed.

The authors describe each treatment step in detail. Each subject received at least two sessions of therapy, or a maximum of three sessions if signaling indicated the presence of further unresolved memories after two sessions.

They present a case illustrating that the approach is possible with minimally hypnotizable subjects, in the apparent absence of imagoic experience, 'desensitization', catharsis, unpleasant affect, talking through or 'insight'.

"There was a positive correlation between changes in phobic fear and capacity for mental imagery which suggests that this may be one relevant variable in predicting response to memory reformulating therapy.

"There was a negative correlation between changes in fear and hypnotic responsiveness. So, successful therapeutic outcome was obviously not limited to highly hypnotizable subjects. Hypnotizability was assessed in a careful and standardized manner but testing was conducted 10 weeks following therapy. This meant that subjects had a substantial experience in hypnotherapy at assessment. Furthermore, at the time of assessment subjects were aware of the outcome of therapy and of the kinds of memories located during therapy. It has been suggested that an association between level of hypnotizedness achieved during treatment and outcome rather than an association between degree of hypnotizability possible during therapy and outcome, taps an hypnotic effect (Spiegel & Spiegel, 1978).

"All therapy sessions were of equal duration and, as the inductions were standardized, all subjects had an approximately equal opportunity to engage in memory reformulation. However, there were individual differences in the number of memories located and a strong significant association was found between reduced fear and the number of these critical memories that were dealt with. This result suggests that the therapeutic effect may have derived either from factors specific to the therapy cycle or from differing levels of motivation among subjects to undertake the necessary 'work'.

"Maximum discomfort experienced during session two of treatment was negatively correlated with relief from phobic fears. This relationship may again reflect the influence of unresolved problematic memories on subjects who had not achieved relief by that time. It is clearly consistent with relief not being associated with painful abreaction.

"The therapy permitted a pervading privacy through the options of non-imaginative processing of recalled material (which was used by a substantial minority of subjects) and conscious withholding of the content of memories from the therapist (which was employed to a large extent by all subjects). Their reports indicated that this 'privacy' was seen as attractive by both successfully and unsuccessfully treated subjects. Taken with other results mentioned above these process findings suggest that the treatment studied stood up quite well against other

brief but highly stressful exposure treatments for phobia currently in use (e.g. Ost, 1989).

"Further research needs to address the complex question as to what are the necessary and sufficient features of this procedure in producing therapeutic change. Unsolicited comments by subjects about their experience during treatment suggested that some of them were surprised by the 'involuntary' nature of their ideomotor signaling while others said that signaling was under their voluntary control. Some expressed surprise at the nature of the memories that came to them 'suddenly' during therapy. Some memories were of traumatic childhood experiences that were unexpected and considered to have 'nothing to do with my phobia'" (pp 93-94).

Bowers, Kenneth S. (1991). Dissociation in hypnosis and multiple personality disorder. International Journal of Clinical and Experimental Hypnosis, 39, 155-176.

The first part of this paper examines the concept of dissociation in the context of hypnosis. In particular, the neodissociative and social psychological models of hypnosis are compared. It is argued that the social psychological model, in describing hypnotic enactments as purposeful, does not adequately distinguish between behavior that is enacted "on purpose" and behavior that serves or achieves a purpose. 2 recent dissertations (Hughes, 1988; Miller, 1986) from the University of Waterloo are summarized, each of which supports the neodissociative view that hypnotic behavior can be purposeful (in the sense that the suggested state of affairs is achieved) and nonvolitional (in the sense that the suggested state of affairs is not achieved by high level executive initiative and ongoing effort). The second part of the paper employs a neodissociative view of hypnosis to help understand the current epidemic of multiple personality disorder (MPD). In particular, it is argued that many symptoms of MPD are implicitly suggested effects--particularly prone to occur in persons who have a lifelong tendency to use dissociative type defenses. The present author believes that this account is easier to sustain conceptually and empirically than the current view, which states that a secondary (tertiary, etc.) personality accounts for the striking phenomenological discontinuities experienced by MPD patients.

As an example of the fact that behavior that serves a purpose is not always performed on purpose, the author cites not falling out of bed while sleeping, and waking up in response to signals from the bladder to go to the bathroom. Lower levels of control can be dissociated from executive initiative and/or monitoring. "Since the experience of volition is closely tied to executive initiative and effort, suggested behaviors that bypass such initiative and effort are typically experienced as nonvolitional" (p. 157). Dissociated control occurs under waking conditions also, as when one dials a very familiar phone number rather than the one that they intended to dial. In this case, the behavior that is enacted is not what one consciously intended.

Miller's dissertation, also published as Miller & Bowers, 1986, is described on p. 158 ff. Without hypnosis, cold pressor pain (cold water immersion) reduced accuracy of performance on a multiple choice vocabulary test 35%. Both hypnotic analgesia and

cognitive pain management strategies were equally effective in reducing pain of cold pressor test (and both interventions were more effective for high than for low hypnotizable Ss). However, the cognitive strategy group showed an additional drop of 30% in vocabulary performance from pre- to posttreatment cold water immersion (despite successfully reducing their pain). In the hypnosis condition, lows showed only a slight additional decrease (8%) while highs showed a slight (10%) increase in their vocabulary performance from pre- to posttreatment immersion. Thus, the effect of hypnosis in pain control "does not depend on S's utilization of high-level cognitive strategies. Rather, hypnotic analgesia seems to involve the dissociated control of pain--that is, control which is relatively free of the need for high- level, executive initiative and effort. ... Because hypnotic analgesia minimizes the degree of executive initiative and ongoing effort required to reduce pain, however, it seems inappropriate to view such reductions as something achieved on purpose" (p. 161).

Hughes' dissertation is described on p. 162 and ff. Instead of performance decrement on a cognitive task like vocabulary testing, she used increased heart rate as an index of cognitive effort. If heart rate increases when Ss successfully use hypnotic imagery, that would confirm the social psychological view that "suggested effects are achieved by this kind of ongoing allocation of high-level cognitive force or work" (p. 162).

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Highs and lows were hypnotized and administered three trials of neutral and three trials of fearful imagery in counterbalanced order. Each imagery trial lasted 1 minute, after which Ss rated vividness of imagery, effort required, and amount of fear experienced.

Average imagery vividness was higher in highs than lows, for both neutral and fear imagery. For lows the correlation between heart rate increases and ratings of cognitive effort were .54 (neutral imagery) and .49 (fear imagery). For highs, the correlations were -.05 (neutral) and -.52 (fear). Thus, "for low but not high hypnotizable Ss, we find the predicted positive relationship between a cardiac indicator of cognitive effort and the ratings of cognitive effort involved in producing neutral imagery" (p. 163).

"First, for low hypnotizables engaged in fear imagery, ratings of effort are correlated .66 with ratings of fear. In other words, the more low hypnotizable Ss work to produce a fearful image, the more frightening the image is. Second, for high hypnotizables engaged in fear imagery, the correlation between ratings of fear and effort is minus .68-- indicating that the less effort highs report in producing fear imagery, the more frightened they become. Finally, for high hypnotizables, the correlation between ratings of fear and heart rate increase is .59, indicating that the more fear high hypnotizable Ss experience when engaged in fear imagery, the more their heart rate increases (the comparable figure for low hypnotizables is .16)" (p. 164).

The authors discuss why the pattern of correlations is different for people high and low in measured hypnotizability, and summarize the implications of both Miller's and Hughes' research. Both investigations indicate that, at least for high

hypnotizable people, less initiative and effort are required to effect a response to hypnotic suggestion than one would expect. They show how behavior can be both purposeful and nonvolitional (in the sense of not exhibiting conscious intention and strategic efforts). By noting that the sense of nonvolition that accompanies a response to suggestion is an actual alteration in executive control, they provide a model for dissociative psychopathology such as MPD. For although executive control is dissociated, these experiments do not suggest that there is a second executive system or 'personality' that is responsible for the behavior.

Patients diagnosed with MPD have very high measured hypnotizability (Bliss, 1984). In fact, they seem to engage in self hypnosis, withdrawing into a trance or a dissociated state (Bliss, 1984). The authors quote Wilson & Barber (1983) as indicating that highly hypnotized, fantasy-prone normal individuals may become so absorbed in a character being imagined that they lose awareness of their own identity.

The authors offer a neodissociative account of MPD: "People prone to MPD are very high in hypnotic ability and are, therefore, vulnerable to the suggestive impact of ideas, imaginings, and fantasies; what is more, they are high in hypnotic ability because they have learned to use dissociative defenses as a way of dealing with inescapable threat-- such as physical and sexual abuse (Kluft, 1987). ... Fantasied alternatives to reality (including a fantasied alter ego ... ) can become increasingly complex and differentiated. Gradually, these fantasied alternatives begin to activate subsystems of control more or less directly--that is, with minimal involvement of executive level initiative and control. Such 'dissociated control' of behavior does not necessarily eliminate consciousness of it, though one's actions are apt to be experienced as increasingly ego-alien. If and when the activating fantasies and resulting behaviors become sufficiently threatening, however, they can also be repressed into an unconscious (i.e., amnesic) status, thus further separating high-level executive and monitoring functions from the dissociated, ego-alien aspects of oneself. The fully realized result of this process is an individual who is subject to profound discontinuities in his or her sense of self. ... The experience of behaving in an outwardly uncharacteristic manner requires only that subsystems of control are more or less directly activated by ideas and fantasies in a manner that effectively bypasses executive initiative and control" (pp. 168-169).

923, Bowers, 1992 NOTES: Tart allegedly taught ESP skills based on reinforcement, using a machine that projected display and gave feedback immediately, so the subjects could learn to anticipate the picture better. But the picture presented next was time-linked to the S's response (so S could learn it).

1987 Behavioral and Brain Sciences review, with 2 target articles, makes one doubt strength of findings. ESP research doesn't distinguish between description of an observation and its proposed cause.

MPD shares with ESP a tendency to predispose toward a certain explanation. Feeling like one has a separate personality leads to finding evidence for one. But an MPD account is wrong-headed because the diagnosis misconstrues a notion of personality, which is a developmental concept (a pattern of thought, feeling, and behavior). Mischel's (1968) account of human functioning competed with trait theory, so "personality" concept became extraneous.

Defining personality in terms of one's experiences or beliefs about oneself has led to further problems, encouraged by the descriptive approach of DSM III (which depends on patient reports). Drew Weston distinguished between the self and self representation. One can't argue that a computer programmed to describe itself is the same as its descriptions.

Personality can't be reduced to person's beliefs about themselves. A secondary personality cannot be reduced to bizarre experiences a person believes are due to a second personality. Clinicians do not accept as valid the beliefs of a paranoid schizophrenic; or of an anxious neurotic. With multiple personality disorder (MPD) the patient becomes the expert and the clinician the student.

William Smith's 1986 SCEH paper: case study of patient who was convinced her problems were due to unresolved problems from a previous life. He didn't challenge her system but still worked with her successfully, communicating respect without validating her belief.

Advocates of MPDs think the observation that it is associated with high hypnotizability indicates great dissociation; critics think the association indicates great suggestibility. There is a historical parallel: Mesmer probably didn't suggest seizure-like episodes, but implicit suggestions for seizures were probably partially responsible. Mistaken attribution permitted Mesmer to see this as validation of his theory of animal magnetism.

Clinicians are not the only ones to "suggest" MPD syndrome. High profile cases are in the media. We should also remember Orne's 1959 research showing that students who received false information a week earlier in lecture on hypnosis showed the behavior when they were hypnotized.

Janet's disaggregation (dissociation) theory said hysterics and hypnotized people responded to ideas dissociated from the main stream of consciousness. So his contemporaries thought that spontaneous amnesia was a defining feature of hypnosis; yet it is not thought to be so in our era. The idea may have circulated in Janet's time, by popular culture.

MPDs are always highly suggestible so can respond to circulating accounts in the media, and every account that reaches the media can influence these people.

We could abandon the diagnosis of MPD in favor of Spiegel's "disorder of self integration." It is less provocative, does not imply any clinical benefit in the benefits of seeking out more personalities. This might reduce the incidence of this disorder, or likelihood that a suggestible person would develop the disorder iatrogenically.

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1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

**"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).**

**"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).**

**The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'**

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**Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co**

**Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.**

**The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.**

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209).

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Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action.

The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a 'distributed society of specialists that is equipped with a working memory, called a global workspace, whose contents can be broadcast to the system as a whole (p. 42)'" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We

now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

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Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. Contemporary Hypnosis, 8, 129-140.

The literature relating to whether hypnosis can be used to compel people to perform acts that are dangerous, immoral or criminal is reviewed, some evidence over the past 200 years being discussed. Relevant real-life instances are cited as well as the laboratory studies of the twentieth century. Detailed criticisms of the latter are made, and it is shown that although no really conclusive findings have emerged, such research has strongly implied that hypnosis does not increase compliance. Four past criminal trials concerned with alleged rape and sexual assault are cited. It is concluded that whilst hypnosis may be one among a number of techniques used in

sexual seduction, it is not reasonable to claim that rape has ever been effected by means of hypnosis alone.

Lynn, Steven Jay; Weekes, J. R.; Neufeld, U.; Ziuney, O.; Brentar, J.; Weiss, F. (1991). Interpersonal climate and hypnotizability level: Effects of hypnotic performance, rapport, and archaic involvement. Journal of Personality and Social Psychology, 60, 737-743.

Designed to extend research by McConkey and Sheehan, they tested 24 hypnotizable and 21 unhypnotizable Ss in high interpersonal/high rapport (including education about misconceptions about hypnosis, eye contact, and friendly self-disclosure) and low interpersonal/low rapport testing contexts. Overall, hypnotizable Ss were more responsive to hypnosis, rated the hypnotist more positively, and experienced greater involuntariness and archaic involvement than unhypnotizable subjects. However, results provide support for the hypothesis that low hypnotizable Ss are particularly sensitive to variations of the hypnotist's interpersonal behavior. Only low hypnotizable Ss' objective and subjective hypnotic performance on the SHSS, Form C, was enhanced by hypnotist behavior designed to optimize rapport. Hypnotizable Ss' behavior was stable across testing contexts.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates

with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he

and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Pekala, Ronald J. (1991). Hypnotic types: Evidence from a cluster analysis of phenomenal experience. Contemporary Hypnosis, 8, 95-104.

The phenomenological experiences of very-low and very-high, and low, medium and high susceptible individuals were cluster analyzed, attempting to determine if individuals of differing levels of hypnotic susceptibility report experiencing different types of phenomenological experience during hypnosis. Phenomenological experience was assessed by means of a self-report questionnaire called the Phenomenology of Consciousness Inventory (PCI); it allows for quantification of 12 dimensions of phenomenological experience. K-means cluster analysis yielded two relatively distinct clusters of individuals for both low/very-low and high/very-high susceptible individuals. These results suggest at least two types of very-low/low and very-high/high susceptible individuals as determined by their reported experiences during hypnosis.

The author notes that Sheehan and McConkey (1982) found three types of highs: concentrative, independent, and constructive. Spanos, Lush & Gwynn, 1989, found two groups of lows--one capable of learning hypnotic skills and the other less so.

In this study the author did two cluster analyses: (1) Harvard lows (0-1) and highs (11-12), and (2) all subjects divided into lows, mediums and highs, with cluster analyses performed separately for these three groups.

In the first analysis, there were two groups of very low hypnotizable subjects distinguished on the basis of altered state of awareness and rationality; and two very high groups, distinguished on the basis of imagery and positive affect.

One group of very lows reported "little alteration in altered state and altered experience and almost complete volitional control, self-awareness, rationality and memory" (p. 98)

and were called 'classic very lows' because they were like refractory subjects in their self reports. The other group of very lows reported "moderate alterations in altered state and altered experience, and major decrements in volitional control, self-awareness, rationality and memory" (p. 98) and were called 'pseudo very lows' because their reports were a little like medium or high hypnotizables.

One group of very high hypnotizables had "great alterations in state of consciousness and moderate altered experiences; a loss of control, self awareness, rationality and memory; and little vivid imagery" (p. 98) and were called 'classic very highs' because their reported experience was like that of somnambules. The other type of highs were called 'fantasy very highs' because they had "moderate alteration in consciousness and experience, a great deal of vivid imagery, moderate positive affect, and only mild-to-moderate losses in rationality and memory" (p. 100).

When low, medium, and high susceptible subjects' PCIs had separate cluster analyses, the lows had three clusters: classic, dialoging, and pseudo lows. The dialoging group was between the other two in their experiencing yet reported a

great deal of internal dialogue. Among the highs, the same two clusters appeared as for the very highs.

Among the mediums there were two groups: high mediums who reported a significant drop in volitional control, self-awareness, rationality, memory, and internal dialogue, and an alteration in state of awareness; and low mediums who had milder changes.

Comparing results to Sheehan and McConkey (1982), the classic highs may correspond to their concentrative type and the fantasy highs to their independent type, because the latter generated imagery without a request to do so.

Regarding the pseudo-lows, "it is intriguing that there appear to be some individuals who make little response on the behaviorally oriented Harvard Scale, and yet report some phenomenological alterations. Are they individuals for whom hypnosis may be somewhat more effective even though they are not that hypnotizable (as measured by the 'direct' Harvard Scale) or could they be Spanos's (Spanos et al., 1989) 'trainable' low susceptibles?" (p. 102).

Wagstaff, Graham F. (1991). Hypnosis and harmful and antisocial acts: Some theoretical and empirical issues. Contemporary Hypnosis, 8, 141-146.

The author analyses paper in same issue of this journal: Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. He presents a critique from the point of view of "state" theorists, and concludes: "Where does this leave us? The area seems to be a potential minefield for any unsuspecting dissociationist. Personally, I think that both parsimony, and what empirical evidence there is, point to a non-state approach to this issue. However, despite the inevitable uncertainties and differences of opinion, there is perhaps a very obvious and important lesson to be gained by all from studies in this area. It has been fashionable to write off experimental studies on this topic on the grounds that subjects in these studies generally perceive the situation as 'safe'; this is not only the case in hypnosis research but also in general social-psychological work on obedience (see, for example, Orne & Holland, 1968; Mixon, 1974). Some have questioned this assumption that subjects only obey the experimenter when they perceive the situation to be safe (see Barber, 1969; Milgram, 1974), but what often goes unnoticed is the significance of this assumption in itself. If labeling a situation as 'hypnosis', or even just an 'experiment', can make subjects think that any apparently harmful act they are requested to perform is safe, think of the implications; here, in itself, is a potentially powerful, even lethal, mechanism by which people in hypnotic contexts may be induced to perform harmful and antisocial acts. They perform them because, given the context, they think it is safe to do so! In the study of Orne and Evans the venomous snake the subjects were instructed to grasp was placed behind an 'invisible' glass screen, and the acid they were instructed to throw at the experimenter had been, allegedly unknown to them, replaced by a harmless liquid; one wonders, however, if writers would be so dismissive if the liquid that Orne and Evans' subjects threw at the experimenter had actually burned him, or the snake that they picked up had actually killed them" (pp. 144-45).

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1990

Bartis, Scott P.; Zamansky, Harold S. (1990). Cognitive strategies in hypnosis: Toward resolving the hypnotic conflict. International Journal of Clinical and Experimental Hypnosis, 38, 168-182.

Two experiments were carried out to assess the relative contributions of dissociation and absorption as cognitive strategies employed by high and low hypnotizability Ss in responding successfully to hypnotic suggestions. Of special interest was the manner in which Ss deal with conflicting information typically inherent in hypnotic suggestions. In the first experiment, Ss rated their attentional focus and the involuntariness of their experience after responding to a number of hypnotic suggestions administered in the usual manner. In the second experiment, the level of conflict was varied by instructing some Ss to imagine a circumstance that was congruent and other Ss to imagine a circumstance that was incongruent with the suggested behavioral response. The results of the 2 experiments were consistent in suggesting that, depending upon the nature of the hypnotic suggestion, high hypnotizability Ss are able to employ dissociation or absorption in order to respond successfully. Low hypnotizability Ss, on the other hand, seem to be relatively ineffective dissociators. When the structure of the hypnotic suggestion precludes the use of absorption, the performance of low hypnotizables deteriorates.

Coe, William C. (1990). Are the Conclusions Valid? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 237-239.

The authors confounded variables, e.g. hypnotic susceptibility and monetary incentive (in Study IV), and Study IV was different from the other 3 studies, so that any differences/similarities between these studies can't be attributed to susceptibility level, degree of incentive, or interaction between them.

A simulator design would clarify why 50% of Ss in Study IV did not resist and lost \$100; also, postexperimental interviews focusing on Ss' reasons for resisting or not resisting would be helpful. Did nonresisters actually believe that they would receive \$100 for resisting?

The Subject population was not homogeneous in occupation, and students are financially poorer than others--which would affect incentive strength. Were those who resisted the ones who could use the money the most?

Small sample sizes obviating statistical tests is a problem. Coe nevertheless evaluates 4 variables in terms of the 'power' of their effects on hypnosis: 1. Susceptibility level. Studies I, II, and III all show correlations between hypnotizability and compliance with resistance, suggesting that high hypnotizables are not as susceptible to resistance manipulation; however across studies, highs in one study seem to comply at the same rate as lows in another study, and as many as 50% of high hypnotizables in the strong incentive (\$100) study were able to resist suggestions. 2. View of the Hypnotist. Coe states that -gestions. 2. View of the Hypnotist. Coe states that one can't evaluate the question with the data given. One would need an experimental condition that would also create a negative view of the hypnotist, as all samples tended to view the hypnotist positively. 3. View of Resistance Instructor. Again, one would need a research design that separates the effects of hypnotic susceptibility from effects of Ss' views of the resistance instructor. "Nevertheless, Study IV suggests that for high susceptibles the view of the resistance instructor has little effect. Three resisters viewed him as positive, whereas the other three viewed him as negative; further, nearly all of the nonresisters viewed him as neutral" (p. 238). 4. Degree of Incentive. This too was confounded with susceptibility level, as "the higher value was only offered to the very high susceptibles in study IV. Half of them took it, half did not" (pp. 238-239). Coe also remarks that "the expectational effects on subjects of being in an experiment have not been addressed adequately. It is possible that the experimental paradigm as currently presented is incapable of providing an unambiguous answer to the question of coercion. In naturalistic settings subjects may react quite differently than they do when they know they are participating in an experiment" (p. 239).

Dixon, Mike; Brunet, Alain; Laurence, Jean-Roch (1990). Hypnotizability and automaticity: Toward a parallel distributed processing model of hypnotic responding. Journal of Abnormal Psychology, 99, 336-343.

Tested a hypothesis from parallel distributed processing theory that highly hypnotizable Subjects have greater connection strengths along verbal pathways and would show greater Stroop effects than low hypnotizability Subjects. Using the paradigm from J. Cheesman and P. M. Merikle (see PA, Vol 76:3722) which varied cue visibility and probability, automatic and strategic effects on Stroop performance were assessed. Compared with 9 low and 9 moderately hypnotizable Subjects, 9 highly hypnotizable ones showed significantly greater Stroop effects for both visible- and degraded-word trials. No strategic differences emerged for the 3 hypnotizability groups. These findings support the contention that highly hypnotizable persons have stronger verbal connection strengths than their moderately and low susceptible counterparts, and they may account for highly hypnotizable persons' propensity to disregard personal attributions and label their responses in hypnosis as being involuntary.

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates

This chapter is a reprint of an article published in the *American Journal of Clinical Hypnosis* in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects. *American Journal of Clinical Hypnosis*, 32 (4), 225-236.

Five experimental approaches to the resolution of the century-old Bernheim/Janet dispute and the issue of involuntariness or coercion (the classical suggestion effect) are presented. Four experiments are reported that follow one of the approaches: attempts to induce hypnotic subjects to resist suggestions made in trance. The design is one in which a "resistance instructor" proposes a reward for the resisting subject. Tentative inferences from the results are that the classical suggestion effect is found with a small number of subjects; for a larger number of subjects there is no classical suggestion effect, and for many subjects the outcome is equivocal. Relational factors in the hypnotic dyad influence responsiveness in the subject, the effect being least for those whose susceptibility is high.

Study I. Used a \$5 bribe, two suggestions, and Ss resisted average of 1.2 suggestions. 9 Ss resisted both, 5 resisted neither, and 6 (30% of Ss) resisted one test suggestion. Resistance appeared to be related to impression of the resistance instructor, suggesting that "neither the monetary bribe nor hypnotic responsiveness was as important to the resistance/compliance dimension as relational factors" (p. 228).

Study II. Used only one suggestion, obtained quantitative ratings of the two instructors, and offered \$10 to resist one suggestion. 19/40 Ss (48%) resisted. The authors wondered whether the difference in impressions of hypnotist and resistance instructor might be due to very limited contact with the latter.

Study III. Ss were greeted by the resistance instructor, who accompanied Ss to the experimental room, discussed the information under 'Establishing Rapport Prior to the Initial Induction' in the SHSS:A and a condensed version of the introduction to the Eye Closure item (10 minutes). Then he left, the hypnotist entered and administered the same 9-item SHSS:A that had been employed in Studies I and II. The resistance instructor then entered and offered \$10 if the S could successfully resist the hypnotist's suggestion on the second try [of an item just passed successfully]. The hypnotist re-entered, repeated SHSS:A instructions for the

selected item, brought S out of hypnosis, and then a different experimenter did a structured interview--to give impressions of the hypnotist and the resistance instructor on an Adjective Rating Form (ARF), to estimate depth of their trance on 0-8 scale before and after contact by the resistance instructor. Then S was paid if he/she had resisted. The resisters obtained a mean on the SHSS:A of 4.8 compared to 7.9 for the nonresisters, significant t-test for the difference (p<.01).

**Table 1 A Comparison of Interview Ratings of Hypnotists and Resistance Instructors in Two Studies**

**Hypnotist\* Resistance Instructors\*\* Study N Pos Neutral Neg Pos Neutral Neg II 39 69% 31% 0% 5% 72% 23% III 30 63% 20% 17% 43% 27% 30%**

**Chi square (2) = 7.71, p <.05 \*\* Chi square (2) = 24.3, p <.001 [N.B. Figures were rounded to nearest whole number by JH.]**

**The correlation between hypnotizability on the SHSS and Resistance may be found in Table 2, along with the percentage of nonresisters in each of the four studies.**

**Table 2**

**Correlation SHSS Percent Study N R-NR/SHSS Mean Nonresisters I 20 -.37\* 7.1 40 II 40 -.44 6.2 52 III 30 -.54 5.8 33 IV 12 -- 8.8 50**

**6.2 52 III 30 -.54 5.8 33 IV 12 -- 8.8 50**

**\* Not significant**

**In Table 1 it may be seen that perceptions of the hypnotist and the resistance instructor changed from Study II to Study III. "In summary, the manipulation of time spent in the second experiment increased the proportion of resisters and dramatically improved the impression of the resistance instructor. Nevertheless, the evidence suggests that the hypnotist continued to be perceived positively and, according to our best measure, was still perceived more positively than the resistance instructor" (p. 232).**

**Because they suspected that the impressions of the experimenters might be confounded by hypnotic susceptibility, and \$10 might not be enough reward for behavior shaping, the experimenters designed Study IV. Study IV used 12 high hypnotizables (scoring 11 or 12 on Harvard Scale; with a group mean of 8.8 on a 9-item version of the SHSS:A). The same procedure as in Study II was carried out, except that four experimenters other than the authors were the hypnotists and resistance instructors; each experimenter worked with three subjects. The incentive was \$100 to resist.**

**The results of this procedure were that six Subjects resisted and six complied; each group scored 8.8 on the SHSS:A 9-item scale; resisters had 5.7 mean and nonresisters 5.1 mean depth (nonsignificant).**

**Resisters and compliers were exactly alike in their perceptions of the hypnotist, but appeared different in perception of the resistance instructor (and the N was too small to test statistically).**

**Table 3**

**Rated Impression of Hypnotist (%)**

**Resisters Nonresisters Overall Study Pos Neut Neg Pos Neut Neg Pos Neut Neg II 68 32 0 76 24 0 73 28 0 III 55 25 20 80 10 10 63 20 17 IV 83 17 0 83 17 0 83 17 0**

**Table 4**

**Rated Impression of Resistance Instructor (%)**

**Resisters Nonresisters Overall Study Pos Neut Neg Pos Neut Neg Pos Neut Neg II 11  
79 11 0 67 33 5 73 23 III 45 30 25 40 20 40 43 27 30 IV 50 0 50 17 83 0 33 42 25**

**Table 5**

**Adjective Rating Form Means\* Study Resisters Nonresisters Overall Resisters  
Nonresisters Overall II 46 38 42 65 74 68 III 54 40 50 61 63 62 IV 41 54 48 50 65 57**

**\*Lower score is more favorable.**

**Summary of the Four Studies:**

**The data in Tables 2-5 reflect a critical finding. "There was a sharp drop in the number of Ss who did not resist, or it may be clearer to put it as a sharp increase in the number of resisters. The change is nearly 40%.**

**"However, when only responsive subjects were used as in Study IV, the percentage of nonresisters is much the same as it was in Study II" (p. 233). The authors conclude that "relational factors are more important in hypnotic behavior among less responsive subjects" (p. 233).**

**"The data contrasting resisters and nonresisters are somewhat confusing. There were more positive and negative impressions among subjects who resisted and more neutral impressions and no negative impressions among the nonresisters," (pp. 233-234) though the number of cases involved is quite small. Using the ratings, the nonresisters had a more favorable impression of the hypnotist than did the resisters, which is in accord with the interviewers' ratings.**

**"A striking finding is that nonresister Ss in Study IV had a less favorable impression of both hypnotist and resistance instructor ... a clear reversal from Study III for the hypnotist, not quite so clear for the resistance instructor" (p.234).**

**so clear for the resistance instructor" (p.234).**

**Levitt, Baker, & Fish draw the following inferences: "1. Hypnotic influence is truly coercive for a very small number of what Register & Kihlstrom (1986) have called the 'hypnotic virtuoso,' the most responsive individuals; for them, the classical suggestion effect is a reality; 2. Hypnotic influence, though perhaps not truly coercive, is manifestly strong for a somewhat larger group of highly responsive individuals; the classical suggestion effect may exist for them; 3. For many individuals who behave in accordance with hypnotic suggestions, the classical suggestion effect does not exist; 4. Relational factors in the hypnotic dyad influence hypnotic responsiveness. The influence is strongest among individuals of low-to-moderate hypnotic responsiveness; 5. The more positive the impression of the hypnotist, the greater will be his influence on the hypnotized individual; 6. A subject's impression of a hypnotist will tend to be favorable even though the sole interaction between the two is the induction of the trance; 7. Preliminary efforts to build rapport with the subject will tend to improve the already positive impression created by the hypnotist" (pp. 234-235).**

**Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects: A rejoinder to invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 246-249.**

"We cannot see how Lynn can allege that in three of the studies there was no relationship between resistance-nonresistance and perception of the hypnotist. The appropriate correlation coefficients are reported in Studies II and III.

"Coe's point about the confounding of incentive and susceptibility might be valid if we had no prior knowledge of the relationship between resistance and susceptibility. But we already knew that the most susceptible Ss were likely to be the nonresisters. In Study IV, we abandoned susceptibility as an independent variable and made it a sample descriptor. ... [However] we resonate to Coe's suggestion of simulators" (p. 247).

"In our first three studies, we reported no relationship between occupation and resistance, an admittedly crude but unobtrusive approach to the question of whether the most financially needy subjects were the resisters. We usually compared the students in the sample with the employed subjects. We did not report this lack of relationship in Study IV in which only three subjects were students. Two resisted, one did not.

We must accept responsibility for provoking Coe's question about the credibility of the financial incentive in Study IV, by poor reporting. In a postexperimental inquiry, one subject (a resister) was mildly suspicious of the offer. All other Ss found the resistance instructor credible" (pp. 247-248).

"Our own more recent research suggests that offering undergraduate students additional points toward the final class grade can yield more resisters than the money incentive in Study IV (Levitt, Baker, Hacker, Klion, Krause, Lytle, & Vanderwater- Piercy, 1990 in press)" (p. 248).

"We have suggested that the hypnotic phenomenon is apparently experienced differently among subjects, and the critical factors are thus also likely to vary from subject to subject. We would be quite willing to accept Bernheim's estimate that 17% are incapable of resisting hypnotic suggestions, as cited by Weitzenhoffer.

We agree with Spiegel that the issue of the coercive potential of hypnosis is 'not really settled by mean differences across groups.' Measures of central tendency are apt to obscure the minority of Ss who may experience coercion in experiments with designs different from ours" (p. 248).

[The study referred to above is Levitt, E. E., Baker, E. L., Hacker, T., Klion, R., Krause, A. A., Lytle, R., & Vanderwater-Piercy, J. (1990 in press). Compliance and resistance in the hypnotic state: the effect of a social or an academic countermotivation. In R. van Dyck, P. Spinhoven, . J. W. van der Does, Y. R. van Rood, & W. De Moor (Eds.), *Hypnosis: Current theory, research, and practice.* Amsterdam: Free University Press.]

Lynn, Steven Jay (1990). Is hypnotic influence coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. *American Journal of Clinical Hypnosis*, 32 (4), 239-241.

Unlike Levitt, Baker, & Fish (1990), Lynn, Rhue, & Weekes (Psychological Review, 1990 in press) concluded that nonvoluntary behaviors in hypnosis are similar to

other spontaneous social behaviors (like conversational response to social stimuli). "Hypnotized subjects, like nonhypnotized subjects, act in terms of their aims, according to their point of view, and in relation to their interpretation of appropriate behavior and feelings" (p. 239).

"Research shows that hypnotizable subjects resist and even oppose suggestions as a function of their expectancies and perceptions about appropriate hypnotic behavior (Lynn, Nash, Rhue, Frauman, & Sweeney, 1984; Lynn, Snodgrass, Rhue, & Hardaway, 1987; Lynn, Weekes, Snodgrass, Abrams, Weiss, & Rhue, 1986; Spanos, Cobb, & Gorassini, 1985). In one study (Spanos et al., 1985), when subjects were informed that deeply hypnotized subjects were capable of becoming involved in suggestions and simultaneously resisting them, subjects resisted 95% of the suggestions. When subjects were told that deeply hypnotized subjects were incapable of resisting suggestions, they passed the majority of suggestions. Thus, knowledge about what constitutes appropriate hypnotic role behavior is a reliable determinant of resistance, apparently more reliable than the monetary lures used by Levitt et al." (P. 240).

These studies by Levitt et al. only used behavioral measures of resistance and hypnotizability, and Ss' perceptions of the resistance instructor and hypnotist. "The ratings of global perceptions are, however, no substitute for measures of subjects' perception of the \_relationship\_. ... The failure to measure important variables relevant to the central dimensions of concern--coercion, compliance, involuntariness, and relational factors--precludes meaningful interpretation of the nonresisters' motivation and behavior" (p. 240).

As Orne (1959) has suggested, we should not attribute behavior in the hypnosis context to something unique to hypnosis (such as coercive influence), because other kinds of social context also constrain behavior, e.g. psychotherapy and psychology experiments, with coercive features. Therefore, it seems important in the future to compare the responses of hypnotized subjects with those of subjects in waking-imagination and hypnosis-simulating conditions. In addition to looking at their behavior, it is important to examine their own perceptions of their actions, given the complexity of the social situation entailed in hypnosis.

"Finally, there are statistical grounds to be wary of the authors' conclusions. They assert that 'relational factors in the hypnotic dyad influence hypnotic responsiveness,' yet in three of the studies (I, II, and IV), subjects' ratings of the hypnotist failed to discriminate whether they resisted or responded to the suggestion" (p. 241). Even where Study III was compared with Study II, the difference in the percentage of Ss who resisted failed to reach statistical significance. "In fact, across all studies, differences in overall resistance rates were not documented by statistical tests--despite procedural variations and differing monetary incentives. So contrary to authors' assertion, relational factors \_in the hypnotic dyad\_ generally had little bearing on resistance behavior. If anything, ratings of the resistance instructor had greater weight" (p. 241).

Pekala, Ronald J.; Forbes, Elizabeth J. (1990, Spring). Subjective effects of several stress management strategies: With reference to attention. Behavioural Medicine, 39-43.

This study assessed variations in reported attentional experience associated with several stress management techniques (hypnosis, progressive relaxation, deep abdominal breathing) and baseline (eyes closed) as a function of hypnotic susceptibility. Three hundred nursing students experienced the stress management conditions and afterward completed a self-report inventory, the Dimensions of Attention Questionnaire (DAQ), in reference to each condition. The DAQ quantifies 12 aspects of attentional experience in a reliable and valid manner. The results demonstrated that progressive relaxation, hypnosis, and deep abdominal breathing are characterized by differences in reported attentional experience that are further moderated by an individual's hypnotic susceptibility. The clinical implications of these results are discussed.

"Significant main effects were found for conditions for perspicacity, absorption, and control, with progressive relaxation associated with increased perspicacity and absorption, but with decreased control vis-a-vis hypnosis.

"Significant main effects for groups were found for perspicacity, locus, direction of attention, absorption, control, and vigilance. ... [Post-hoc comparisons] revealed that high susceptibles (vis-a-vis low susceptibles) reported increased perspicacity, absorption, a more inward-focused attention, more feelings of being out of their bodies, and decreased control and vigilance. High-mediums were also different from lows (in the same direction) for all of the above comparisons except for direction of attention. Low-mediums, along with lows, were different from highs for absorption and control.

"Significant interactions between conditions and groups were found for absorption, control, and vigilance. Whereas low susceptibles reported significantly increased absorption but significantly decreased control and vigilance during progressive relaxation than during hypnosis, high susceptibles reported no significant differences between relaxation and hypnosis for absorption, control, or vigilance" (p. 41).

The authors describe the differences found for deep abdominal breathing on p. 41.

"The interaction effects suggest that the experience of hypnosis and progressive relaxation are moderated by a person's hypnotic susceptibility--low susceptibles experience significantly greater absorption, but decreased control and vigilance during progressive relaxation than during hypnosis, although there are no such differences for high susceptibles. This suggests that progressive relaxation may be a 'better' procedure than hypnosis to use with low susceptibles, at least if one wants to increase absorption and decrease vigilance and control" (p. 42).

The authors also note that "deep abdominal breathing is associated with increased 'calmness of mind,' in reference to a baseline condition, as demonstrated by increased attentional detachment and equanimity, and decreased vigilance and density (the 'amount' of thoughts going through one's mind)" (p. 42).

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

"A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

Spiegel, David (1990). Theoretical and empirical resistance to hypnotic compliance. Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 243-245.

Does hypnosis bypass the will, facilitate coercion? The hardest thing for trauma victims to do is to admit helplessness. Furthermore, it is interesting that these same dissociative phenomena seem to be elicited by traumatic experience, the stark imposition of involuntariness (Stutman & Bliss, 1985; Spiegel, Hunt, & Dondershine, 1988). What, then, are we to make of experiments that purport to show that hypnotizable and hypnotized individuals comply with hypnotic instructions irrationally? At some level this challenges our comfortable belief that we always act in our enlightened self-interest, unaffected by unwanted influence. If that can happen even once, our pride of self-ownership is reduced.

Taken as a whole, the studies show that high hypnotizables comply with hypnotic instructions, even in the face of resistance instructions, whereas low hypnotizables are less likely to, especially when conditions foster a relatively less negative view of the resistance instructor. As the authors note, subjects always viewed the hypnotist more positively than the resistance instructor, which in itself suggests the

nonrational influence intrinsic to hypnosis. Free will is not abrogated, it is simply not exercised. The Ss are fundamentally choosing whether or not to comply. Half of the highs in Study IV resisted the hypnotic instruction. However, hypnotized individuals tend to narrow the focus of attention, thereby reducing their ability to consider alternatives such as the resistance instruction.

William James (1890) believed that all ideas were invitations to action. Why, then, do we not act on every idea we have, he pondered on a snowy morning while lying in bed. He observed that he would try to get himself to arise by picturing himself doing so. "Why, then, am I still in bed?" He realized that he was editing the primary idea, reflecting on how cold it was, how long it would take to light a fire, and how much time he had until his classes. In a state characterized by a narrowing of the focus of attention, we are less likely to edit the primary idea, and therefore more likely to act. In the experiments presented, the resistance instructor attempts to act as an external editor on the primary hypnotic instruction. Those capable of focusing attention sufficiently disattend to the editing and comply. These studies show that, thankfully, hypnosis is less than automatic submission to instruction but, interestingly, more than simple conscious response to new information.

**Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100**

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to- easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions. Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

**Weitzenhoffer, Andre M. (1990). Are induced automatisms necessarily coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 245-246.**

"For the sake of maintaining historical accuracy, I would like first to remark that the ability of hypnotized Ss to resist suggestions was probably never a central issue in the Nancy-Salpetriere controversy. The main quarrel was about other fundamental matters (Crocq, 1900; Barrucand, 1967). It also needs to be said that

Pierre Janet should not be seen as representing the Salpetriere in the above controversy. Very little of his extensive writings reflect the ideas of Charcot with whom he was associated for only 4 years (1889- 1893) (Barrucand, 1967; Ellenberger, 1970). Lastly, let it be noted that the association of automatism with hypnotic behavior antedates Bernheim. Despine wrote about it at length as early as 1868, and Charcot (1882) clearly stated before Bernheim that automatic responses to suggestions were characteristic of induced somnambulism. This was at least one view they shared.

Referring to the material quoted from my 1978 paper, the authors assert Bernheim's definition of automatism implies a subject responding to a suggestion *qua* suggestion is "unable to resist" it. But all the definition says is that the will does not directly enter into the production of automatisms. It does not say the will cannot effectively intrude at some point or other. This definition, quoted out of context, was part of a more extensive discussion of *what the nature* of an automatism was for Bernheim. The discussion also went into details regarding *the conditions* under which Bernheim understood automatisms can occur and hold sway. In this greater context, Bernheim (1888a, 1888b) viewed the occurrence of automatisms as normally subject to control by the ego processes responsible for volitional activities. He saw the degree to which a person's behavior can be controlled by automatisms initiated by suggestions to be a function of the extent to which certain ego processes become inactive, ineffective, or cooperatively permit the automatisms to occur. Bernheim recognized that both cognitive and relational factors played an important part in the latter case. Bernheim (1888a, 1888b) also stated that data he had collected showed subjects *could* resist suggestions to varying degrees, with only 17%, who made up the class of somnambules, being *totally incapable* of resisting" (pp. 245-246).

"Stating the matter more concretely, I doubt many people would speak of an individual having been 'coerced' into producing a knee-jerk reflex under appropriate stimulation. Should the situation be any different in the case of other reflexes and, more particularly, the reflex ideodynamic action presumed to underlay suggested acts (Weitzenhoffer 1978, 1989)? I do not think so. It seems to me that what the authors have really and directly examined in their article is the extent to which the classical suggestion effect can be countered by conscious, voluntary control" (p. 246).

1989

Baker, Elgan L.; Levitt, Eugene E. (1989). The hypnotic relationship: An investigation of compliance and resistance. International Journal of Clinical and Experimental Hypnosis, 37, 145-153.

The purpose of this investigation was to assess the ability of hypnotic Ss to voluntarily resist a neutral suggestion when a monetary reward was offered for resistance. 19 of 40 Ss (47.5%) successfully resisted after money was offered by the "resistance instructor." The correlation between resistance/compliance and

hypnotizability was  $-.44$  (high hypnotizables were more likely to comply). Ss' impressions of the hypnotist tended to be positive; impressions of the resistance instructor tended to be neutral. There was a tendency for nonresistors to have a more positive view of the hypnotist but it is not as marked as was found in an earlier study (Levitt & Baker, 1983).

Twelve (75%) of the high hypnotizables did not resist; two (16.7%) of the low hypnotizable Ss did not resist.

In their discussion, they state that "these data support the conclusion that hypnotizability or talent accounts for a significant portion of the variance in determining compliance with suggestions during trance. ... [Further], this research may be conceptualized as examining the contributions of a trait variable (hypnotizability) as compared with a variety of situational or state variables (motivation, social perception, environmental contingencies) in determining compliance and suggestibility. Inherent in this model of research is the assumption that many observed hypnotic phenomena (such as suggestibility) are interactive in nature, representing the outcome of the interplay between trait and state variables and between historically determined and contemporary forces. Such a perspective is consistent with the emerging view of trance behavior and experience and validly parallels the phenomenology of experimental and clinical hypnosis which describe both consistency and variability in hypnotic responsiveness for a specific subject or patient across varying conditions and time" (p. 151).

-temporary forces. Such a perspective is consistent with the emerging view of trance behavior and experience and validly parallels the phenomenology of experimental and clinical hypnosis which describe both consistency and variability in hypnotic responsiveness for a specific subject or patient across varying conditions and time" (p. 151).

"This study also serves to clarify the important role of positive social perception and a positive sense of alliance with the hypnotist as a correlate of compliance with suggestion. It is clear that Ss who complied despite inducements to resist reported a more positive perception of the hypnotist and a more gratifying sense of relatedness with him than did their counterparts who resisted in response to financial inducement. These data do not indicate whether the positive perceptions contributed to compliance, as transference theories of trance involvement would predict, or whether they were consolidated after the fact due to other variables such as management of potential cognitive dissonance. It does seem reasonable to conclude, however, that the relationship is influential in the process of suggestibility and compliance" (p. 151).

Lynn, Steven J.; Rhue, Judith W.; Weekes, John R. (1989). Hypnosis and experienced nonvolition: A social-cognitive integrative model. In Spanos, N.P.; Chaves, J.F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 78-109). Buffalo, NY: Prometheus.

The authors present a model to account for the subjective experience of nonvolition. The model rests on four observations: (1) nonvoluntary responses "have all of the

properties of behavior that is typically defined as voluntary" (p. 108); (2) "hypnotizable subjects can resist suggestions when resistance is defined as consistent with the role of a 'good' hypnotized subject" (p. 108); (3) "Hypnotic behaviors are neither reflexive/automatic ... nor manifestations of innate stimulus-response connections" (p. 108); (4) "Hypnotic performances consume attentional resources ... in a manner comparable to nonhypnotic performances" (p. 108). They continue, "At the same time, many of the cognitive operations and affective reactions that accompany hypnotic responding are not readily accessible to consciousness" (pp. 108-109).

Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 35, 48-58.

Regional cerebral blood flow (rCBF) was measured by means of the 133-Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. Imagination, Cognition and Personality, 9 (4), 303-320.

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low, low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

**Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.**

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

**Ronnestad, Michael Helge (1989). Hypnosis and autonomy: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 37, 154-168.**

The study focused on autonomy as a moderator variable in the prediction of subjectively reported hypnotic depth. Ss in the experimental part of the study were 56 undergraduate psychology and education majors classified as either high or low in autonomy. Ss who were equated on capacity for absorption were individually administered 1 of 3 hypnotic inductions: an authoritarian induction, a permissive hetero- induction, or a self-hypnosis induction. The study had a double-blind design. The data suggest that situational manipulation has greater impact on low than on high autonomy Ss. Individual-difference variables such as absorption, have greater impact on hypnotic depth for high than for low autonomy Ss. The data indicate that the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. A factor-analytic inquiry of absorption confirmed the importance of affective/regressive capacity for hypnotic functioning for high autonomy Ss. The study supported the alternate-path perspective of hypnosis.

There is very little research on autonomy and hypnosis. The authors cite studies showing only a modest relationship between hypnotizability and locus of control.

In this study, 176 students were assigned to the high autonomy group if they were in the upper 1/3 of two of 3 autonomy scales (Rotter's Locus of Control Scale, the Inner- Directedness Subscale of the Shostrom Personal Orientation Inventory, and the Autonomy subscale of Jackson's Personality Research Form) and not in the lower 1/3 of the third scale. Ss were designated as low autonomy if the obverse obtained. This procedure yielded 27 high and 29 low autonomy Ss.

Ss were hypnotized with one of three inductions: authoritarian with many motor items (Barber Suggestibility Scale), permissive with mostly imagery (Barber & Wilson's Creative Imagination Scale), or guided self-hypnosis with mostly imagery

(taken from Fromm et al, 1981). After hypnosis, Ss rated their own hypnotic depth on a 1-10 scale, and their perception of E or the procedure as authoritarian and directive. Ss' attitude, expectations, motivation, and experienced effortlessness were measured. E rated Ss for pre-hypnosis rapport and post-hypnosis rapport.

The results indicated that there was no difference in hypnotizability level between high and low autonomy Ss. The correlation between effortlessness of experience and hypnotic depth was high for low autonomy Ss (.51) but not significant for high autonomy Ss (.12). In general the two groups were very similar in terms of mean scores on most variables. The differences appeared in the correlations between self-reported hypnotic depth and the other variables. For low autonomy Ss correlations were not significant between depth and pre-hypnotic variables (rapport-pre, absorption, expectation) but for highs the same correlations were significant (rapport-pre .47, absorption .54, expectation .48).

But for post-hypnosis variables, low autonomy Ss had significant correlations between depth and the two variables measured from post-hypnosis interviews (perceived authoritarian/directiveness .40, effortlessness .51) and the highs did not have significant correlations. The multiple correlation between these variables and depth was  $R = .28$  for low autonomy Ss (with no contribution from rapport-pre) and  $R = .72$  for high autonomy Ss, with absorption contributing most. The more they perceived the induction as authoritarian or directive, the greater depth reported by low autonomy Ss. Although low and high absorption Ss did not differ on the Absorption Scale, absorption predicted hypnotic depth better for the highs.

The author divided the Absorption Scale into four rational factors: Affective/Regressive, Perceptual/Cognitive, Dissociative, and Mystical. Low and high autonomy Ss scored at approximately the same level on these categories, but correlations between these categories and depth for low and high autonomy Ss were somewhat different. (See Table.)

#### Correlations between Categories of Absorption and Hypnotic Depth for Low and High Autonomy Ss

Absorption	Low Autonomy	High Autonomy	All Ss	Category	r	r	r
Affective/Regressive	.14	.56**	.33**	Perceptual/Cognitive	.25	.33*	.29*
Dissociative	.32*	.57**	.47**	"Mystical"	.07	.16	.11

In their discussion, the authors note that one might assume that high autonomy Ss would be less affected by variations in hypnosis procedures than low autonomy Ss. The differences found in depth scores for these two groups were supportive of this expectation. "Fluctuations in subjectively reported depth scores for low autonomy Ss only, clearly suggest autonomy to be a moderator variable" (p. 163).

Moreover, the results indicate "that high autonomy Ss in comparison to low autonomy Ss are more likely to express their inner dispositions, such as absorption and expectation, in the hypnotic setting. High autonomy Ss may be more reflective of and attuned to individual predisposing characteristics and less influenced by situational demands. ... the hypnotic behavior of high autonomy Ss is more likely to be self- congruent and less likely to be demand-congruent. Low autonomy Ss, however, are more likely to be demand congruent and less likely to be self-congruent. The latter finding was suggested both by the significant F ratio for low autonomy Ss across treatments, and also by the stronger relationship found for this

group between depth and how authoritarian/directive they perceived the procedure to be" (p. 163).

[Paradoxically, among low autonomy Ss an authoritarian approach yields less depth but greater suggestibility (higher hypnotizability scores).] "The tendency for low autonomy Ss to have a higher behavioral score on the authoritarian procedure is consistent with Tellegen's (1979) assumption that there are two pervasive dimensions in current hypnotizability measures--a compliance dimension and a true hypnotic responsiveness dimension. According to Tellegen, motor items may be more saturated with compliance, while cognitive items may be more saturated with true hypnotic responsiveness. The BSS has a motor emphasis, and the higher behavioral scores for the low autonomy group of Ss may be interpreted as an expression of compliance.

"In addition to the inner-directedness and self-congruence hypothesis of why autonomy may be a moderator variable, another possible explanation is related to accuracy of self-perception. The intercorrelational and multiple regression data showed repeatedly that a stronger relationship existed between prehypnotic variables and hypnotic depth for high autonomy than for low autonomy Ss. The relational capacity, as tapped by the rapport-pre variable, absorption, which may be conceptualized as a personality trait; and expectation, a cognitive variable, were all related to depth for high autonomy Ss. For low autonomy Ss, none of these variables were individually related to depth. Differences in Ss' accuracy of self-reporting may explain this. According to ego-psychology theory, highly individuated Ss, with clear self-other differentiation and congruence in self-perception, are better able to make accurate statements about themselves. The self-assessments of Ss with low differentiation capability may be less accurate and possibly more affected by demand characteristics and response set. In other words, their self-assessments have more error. The generally lower correlations for the low autonomy Ss may reflect this" (p. 164).

"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

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"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

Schuyler, Bradley A.; Coe, William C. (1989). More on volitional experiences and breaching posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 37, 320-331.

Highly responsive hypnotic subjects, who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia, were compared with each other on four physiological measures (heart rate, electrodermal response, respiration rate, muscle tension) during posthypnotic recall. Two contextual conditions were employed: One was meant to create pressure to breach posthypnotic amnesia (lie detector instructions); the other, a relax condition, served as a control. The recall data confirmed earlier findings of Howard and Coe and showed that voluntary subjects under the lie detector condition recalled more than the other three samples that did not differ from each other. However, using another measure of voluntariness showed that both voluntary and involuntary subjects breached under lie detector conditions. Electrodermal response supported the subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis.

The authors suggest that subjects observe themselves not remembering (i.e. not reporting memories) and conclude that they therefore could not remember. Such subjects, they say, are deceiving themselves in so far as they could remember if they were to direct their attention to salient cues

1988

Bowers, Patricia G.; Laurence, Jean-Roch; Hart, David (1988). The experience of hypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 36, 336-349.

The experience of nonvolition in response to hypnotic suggestions was investigated for 126 Ss. 2 different scales, a new scale providing discrete options for response and a previously used volition rating scale, gave Ss an opportunity to describe some of their subjective experiences after completion of a 12-item adaptation for group administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Ratings of depth of hypnosis were also obtained. Ss had been previously administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Distribution of descriptions of experience for passed and failed items were obtained. Total scores on subjective indices were found to be highly correlated with the behavioral score on the Waterloo-Stanford Scale of Hypnotic Susceptibility: Group C. Items differed, however, in the degree to which responses seem to occur effortlessly. Some suggestions have a substantial number of passed responses lacking the "classic suggestion effect," but only 7% of Ss have more than 2 such responses.

Earlier research on the subjective perception of voluntary enactment of suggestions found from 20% (K. Bowers, 1981; P. Bowers, 1982) to 55% (Spanos, Radtke, Hodgins, Stam, & Bertrand, 1983) of hypnotic responses were described as voluntary in nature. Methodological differences could account for the range in probability levels, and rating scales used did not provide for absence of behavioral response to a particular suggestion.

This research investigated three issues: "1. Using a choice format to describe experiences during hypnosis, what is the distribution of the different descriptions used to index the construct of nonvolition? When S gives a mid-point rating on a volition rating scale, to what experiences does he/she refer? 2. How do two aspects of subjective experience: nonvolitional experience descriptions and hypnotic depth reports, covary with behavioral passing and failing of items and with levels of hypnotizability? 3. How frequently does S pass an item behaviorally but indicate either that he/she did not experience the response or that he/she purposefully enacted it? On what items is this a more or less frequent occurrence? Are there just a few people who pass items in this fashion or is it a common observation?" (p. 339).

The Ss were seen in small groups. Immediately after hypnosis they scored their own hypnotizability scales. Then they were asked to rate their subjective response to each suggestion: - how much they had experienced the suggestion (1-5) - how involuntary their response had been (1-5) (These two items comprised the Voluntary

Rating Scale (VRS) used by K. Bowers, 1981, and P. Bowers, 1982.) - how deeply hypnotized they had felt (1-10, Perry & Laurence format, 1980) - Choice Scale (example from the hand magnetism item below) "Choice Scale of Nonvolitional Experience:

1980) - Choice Scale (example from the hand magnetism item below) "Choice Scale of Nonvolitional Experience:

Listed below are various ways people experience the hands together item. Please check the description(s) that most closely describe your experiences: (1) My hands did not move together at all. (2) I purposefully directed the movement of my hands most of the time. (3) I found I directed the movement of my hands and then later they continued to move together with no effort on my part. (4) I found my hands moving together without my helping them. (5) During this experience, the feelings of purposefully moving my hands were completely mixed with feelings that they were moving on their own. None of the above" (p. 340).

Considering both the passed and failed items, and after excluding the 'None of the above' category, "37% of items [on the W-SGSHS:C] were not experienced, 12% were enacted purposefully, 14% were experienced as intertwined volition and nonvolition, 17% were experienced as beginning purposefully but becoming nonvolitional, and 20% 'happen by themselves'" (p. 341). See Table 2, taken from the article.

Thus of those failing an item, 60% reported that they did not experience the suggestion, while almost 26% reported some level of subjectively experienced nonvolition.

This research demonstrated that the Choice Scale is an improvement over the Voluntary Rating Scale, which has an ambiguous midpoint of '3' between voluntary and nonvoluntary extremes (on a 5-point scale). Almost half of the ambiguous '3' responses on the VRS were associated with a more meaningful response on the Choice Scale, indicating that the response started off voluntarily but then continued 'on its own.' Another third of the Ss indicated that there was an intertwining of volition and nonvolition.

The Choice Scale (transformed into an ordinal scale) was correlated with the VRS and hypnotizability and depth estimate scales. The correlations were "consistently high, suggesting that typically one reports feeling more deeply hypnotized when many suggestions are performed and passed, and more deeply hypnotized Ss report feeling that suggestions occur more 'by themselves' than do less hypnotizable Ss" (p. 342).

The authors note the complex relationship between behavioral and subjective experience. High hypnotizables report experience of nonvolition even with some failed items, and rate themselves as deeply hypnotized even when failing items. This is not true for low hypnotizables, whose self-rated depth varies directly with passing or failing items.

Mismatches were defined as passing an item behaviorally but reporting either that it was not experienced (Choice 1) or purposefully enacted (Choice 2). 93% of Ss had less than 3 mismatches; of the 8 Ss exhibiting 3 or more mismatches, 3 were medium-low hypnotizables, 4 were medium-highs, and 1 was highly hypnotizable.

When one corrects their total hypnotizability score for the mismatch, people remain close to their original score however.

Some items had many more mismatches than others (See Table 6). The 'classic suggestion effect' reflected in a low percentage of mismatches (3-9%) was found for five items; three items had a moderate level of mismatches (16-22%); but four suggestions had mismatches on 34-41% of the passed responses. Item difficulty could not account for whether the classic suggestion effect occurred: two very difficult items were at opposite ends of the spectrum--positive music hallucination had the fewest and negative visual hallucination the most frequent mismatches. "One might speculate that the nature of one's ordinary imaging during the day makes some hallucinations well practiced and easier to produce, while others are rarely practiced and seem to require cognitive effort to reconstruct. ... Thus, instead of a mismatch representing 'faked' responses, it may at times represent S's report of a hallucination's seeming real while simultaneously requiring effort. Ideomotor suggestions have few mismatches. If they feel 'real,' it is by virtue of their seeming to occur without effort or volition" (pp. 346-347).

Table 6 Item % Mismatch Hand Lowering 2.9 Hands Together 4.8 Arm Rigidity 5.6 Music Hallucination 7.7 Dream 8.7 Arm Immobilization 15.5 Amnesia 21.6 Age Regression 21.8 Taste Hallucination 33.8 Negative Hallucination 34.6 Mosquito 38.1 Post-hypnotic Suggestion 40.8

Since highly hypnotizable people experience nonvoluntariness even when they fail items, tested hypnotizability must reflect more than simply passing test items on suggestion. "Research focusing exclusively on the nonvolitional aspect of hypnotic experience may be somewhat 'off the mark,' at least for some types of suggestions. Reports of nonvolition may be tracking the experience of effortless responding which may be just one aspect of a complex hypnotic response to cognitive suggestions. ... It may be that studies using free reports from Ss responsive to hallucination suggestions would be necessary prior to devising an appropriate 'choice' scale for these items. The work of Sheehan and McConkey (1982) provides a solid basis for such a task. The Choice Scale in the present study was derived from an understanding of the 'classic suggestion effect,' the concept of which is closely tied to ideomotor suggestions. This concept may or may not prove to be of central relevance to hypnotic hallucinations or more generally to cognitively demanding suggestions" (p. 347).

-sponses, it may at times represent S's report of a hallucination's seeming real while simultaneously requiring effort. Ideomotor suggestions have few mismatches. If they feel 'real,' it is by virtue of their seeming to occur without effort or volition" (pp. 346-347).

Table 6 Item % Mismatch Hand Lowering 2.9 Hands Together 4.8 Arm Rigidity 5.6 Music Hallucination 7.7 Dream 8.7 Arm Immobilization 15.5 Amnesia 21.6 Age Regression 21.8 Taste Hallucination 33.8 Negative Hallucination 34.6 Mosquito 38.1 Post-hypnotic Suggestion 40.8

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Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.

The phenomenological effects associated with a baseline condition of eyes- closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

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Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed. Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning);

attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables,

, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

Lynn, Steven Jay; Weekes, John R.; Matyi, Cindy L.; Neufeld, Victor (1988). Direct versus indirect suggestions, archaic involvement, and hypnotic experience. Journal of Abnormal Psychology, 97 (3), 296-301.

This study examined the effects of direct (Harvard Group Scale of Hypnotic Susceptibility; Shore & Orne, 1962) versus indirect (Alman-Wexler Indirect Hypnotic Susceptibility Scales; Pratt, Wood, & Alman, 1984) suggestions on archaic involvement (Nash & Spinler, in press) with the hypnotists, objective responding, and subjective involvement and involuntariness ratings, when the scales were administered in all possible combinations (direct/indirect, N = 61; indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect suggestions reported a greater emotional bond with the hypnotist and increased fear of negative appraisal than subjects who received direct suggestions. Repeated testing resulted in response decrements on measures of objective responding, subjective involvement, and involuntariness that were paralleled by diminished involvement with the hypnotist. The most stable relation between scales was evident when scales were defined as direct hypnosis across both sessions. Although direct and indirect suggestions produced comparable effects in the first session, in the second session, direct suggestions fostered greater subjective involvement and feelings of involuntariness.

1987

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rappport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

1986

Cole, Ronald William (1986, February). Posthypnotic suggestion and the production of creative imagination imagery (Dissertation, Mississippi State University). Dissertation Abstracts International, 47 (8), 2953-A.

"This investigation assessed the effect of posthypnotic suggestions in facilitating creativity in persons highly susceptible to hypnosis. Fifty college-age subjects from educational psychology and psychology classes at Mississippi State University who scored 9 or above on the Harvard Group Scale of Hypnotic Susceptibility were used. Groups of 10 subjects were randomly assigned to one of five conditions: a) hypnosis/creative learning set instructions b) relaxation/creativity learning set instructions c) hypnosis only d) relaxation only e) posttest only "Subjects in the hypnosis/creative learning set instructions group received 25 min. of hypnosis and creativity instruction. The relaxation/creative learning set instructions group received 25 min. of relaxation and creativity instructions. The hypnosis-only group received 25 min. of hypnosis and then completed mazes. The relaxation-only group received 25 min. of relaxation and then completed mazes. And lastly, the control group received the posttest only. All groups were given the Torrance Test of Creative Thinking (TTCT), Verbal and Figural Forms A, 1 week after receiving their treatment conditions. The results indicated that the combination of hypnosis and creativity instructions produced significantly higher mean scores on the Verbal Form A -- fluency, flexibility, and originality subtests, and Figural Form A elaboration subtest, and lend support to the contention that posthypnotic suggestions can increase creativity (as measured by the TTCT) in high susceptible subjects. The components of both hypnosis and creativity instruction had to be present to increase creative performance. There was a tendency for relaxation combined with creativity instructions to show decreases in creativity scores. "The hypnotic state was seen as necessary for the unconscious acceptance of creativity instructions (low volitional control), while the relaxed state produced conscious contamination of suggestions for creativity (high volitional control). It was postulated that it was the difference in volitional control which produced the positive responses to posthypnotic suggestions to be more creative in the group receiving hypnosis and creativity instructions" (p. 2953).

1986

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or

not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction,

Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral

hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027)

Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic indices as dependent variables. These analyses were performed on the original sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

Register, Patricia A.; Kihlstrom, John F. (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34, 84-97.

Measures of hypnotizability based on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) correlate only moderately with those based on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Ss (N = 148) scoring in the high range (10-12) on HGSHS:A were classified according to whether they scored in the "virtuoso" range (11-12) or not on a subsequent administration of SHSS:C. Significant group differences were found on items comprising the cognitive distortion subscale of HGSHS:A, whether assessed in terms of overt behavior or subjective impressions of success. The 2 groups also differed on global self-ratings of hypnotic depth and on those subscales of Field's Inventory Scale of Hypnotic Depth concerned with subjective feelings of loss of control, automaticity, transcendence of

normal functioning, and fluctuating depth. Assessments of hypnotizability are enhanced when investigators consider subjective involvement as well as behavioral measures of hypnotic response. This is particularly important when the more dissociative aspects of hypnosis are under scrutiny.

The correlation between Harvard Group and Stanford Scale scores is usually about  $r = .60$  (Bentler & Roberts, 1963; Coe, 1964; Evans & Schmeidler, 1966). This is much lower than one would expect ( $r = .82$ ), based on the tests' individual reliabilities (Evans & Schmeidler, 1966).

The authors developed a Table to show the cross-classification of Ss in terms of Harvard and SHSS:C. Only a minority (33%) of Ss scoring in the highest range of HGSHS:A also scored in the highest range on the SHSS:C (or 50% if cutting points are different).

The Absorption scale correlated  $r = .38$  ( $p < .001$ ) with the Harvard Scale, which fell to  $r = .31$  ( $p < .01$ ) when corrected for expansion of range. The correlation between Absorption and SHSS:C was  $.35$  ( $p < .001$ ).

The issue of predicting Stanford 'virtuosos' from Harvard 'virtuosos' was addressed. HGSHS:A predictor variables were used to determine which items determined whether or not one of the HGSHS:A 'virtuosos' (the 20% who scored 11-12) would also be a SHSS:C 'virtuoso.' It was found that 70% of the SHSS:C virtuosos, but only 53% of the nonvirtuosos, had reversible posthypnotic amnesia on the HGSHS:A. None of the ideomotor or challenge subscale items demonstrated this ability to predict group association. Although the 'virtuosos' differed from the 'nonvirtuosos' in self reported depth, none of the coding categories associated with the depth variable differentiated the groups; also, judges could not predict who would be a Stanford 'virtuoso' based on subjects' descriptions of depth following the Harvard scale administration.

The Experimenters also could not predict who among the Harvard 'virtuosos' would be classified as a Stanford 'virtuoso' based on either their Absorption Scale score or previous experience with hypnosis.

It was found that subjects' subjective experience of the suggestions for hallucinations, amnesia, and posthypnotic behavior (all considered to be cognitive alterations) were the most highly correlated with the subsequent total SHSS:C score. On the Field scale, which measures subjective experience, the most predictive items had to do with feelings of automaticity and loss of control (referred to as nonvoluntary behavior in other literature). Predicting SHSS:C score by 5 items (Harvard behavioral score, Harvard subjective score, Field total score, Tellegen Absorption total score, and self reported depth rating),  $r = .44$ . "The 5-element regression, employing only total scores, explained 17% ... of the variance of SHSS:C; thus, the feelings of subjective success accounted for the vast proportion (79%) of the explainable variance. For the 16 element regression, employing subscales derived from factor analysis of HGSHS:A and Inventory Scale of Hypnotic Depth, the cognitive subscale was dominant, accounting for 65.5% of explainable variance" (p. 92).

A discriminant function analysis employing the same five total score variables correctly classified 63.3% of the virtuosos.

In their Discussion, the authors suggest that investigators use subjective response as well as behavioral response when identifying hypnotic talent (virtuosos) for research. Particularly, the subjective experience of success seems to be important. Little is known, to date, about the determinants of that sense of success with hypnotic suggestions. "In part, they may relate to the 'classic suggestion effect' (K. S. Bowers, 1981; P. G. Bowers, 1982; Weitzenhoffer, 1974): the quasi-automatic, compulsory, involuntary quality which distinguishes hypnotic response from compliance with simple social requests. If so, then a direct assessment of perceived involuntariness might enhance the predictive validity of HGSHS:A even more. This is especially true for the perceptual-cognitive alterations which relate to Ss' capacity for dissociation" (p. 94).

The authors further recommend, "In those situations where HGSHS:A must stand alone for economic reasons, however, and especially where HGSHS:A is employed as a convenient preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

Schacter, Daniel L. (1986). Amnesia and crime: How much do we really know?. American Psychologist, 41, 286-295.

Claims of amnesia occur frequently after the commission of violent crimes and can have a significant bearing on the outcome of criminal trials. This article considers the relation between amnesia and crime within the broader context of research on memory and amnesia and provides a critical evaluation of current knowledge concerning the issue. Particular attention is paid to the problem of distinguishing between genuine and simulated claims of amnesia. It is suggested that reliable data concerning the nature of amnesic episodes that occur after the commission of a crime are sparse, and that there is as yet little evidence that genuine and simulated amnesia can be distinguished in criminal cases. The results of several laboratory studies are summarized that indicate that feeling-of-knowing ratings distinguished between genuine and simulated amnesia under conditions in which psychologists and psychiatrists did not.

Stam, Henderikus J.; McGrath, Patricia A.; Brooke, Ralph I.; Cosier, Frances (1986). Hypnotizability and the treatment of chronic facial pain. International Journal of Clinical and Experimental Hypnosis, 34, 182-191.

The Carleton University Responsiveness to Suggestion Scale (CURSS) of Spanos, Radtke, Hodgins, Bertrand and Stam and Spanos, Radtke, Hodgins, Stam, and Bertrand (1983) was individually administered to a sample of 61 facial pain patients. The mean scores on the 3 CURSS suggestibility dimensions were higher than those of the college student norms. As in previous studies using the CURSS, however, objective scores were smaller when experienced involuntariness was taken into

account. Observer scores of overt responses were highly related to self-scores of overt responses. The CURSS also proved a good predictor of reductions in clinical pain following a psychologically based treatment program.

The CURSS has 7 items: 2 ideomotor (arm-levitation, arms moving apart); 2 motor-challenge (arm rigidity, arm immobility); and 3 cognitive (auditory hallucination, visual hallucination, amnesia). The CURSS yields 3 suggestibility scores: O = Objective (number of suggestions to which S made appropriate overt response; 0-7 range) S = Subjective (the degree to which S reports experiencing the subjective events called for; 0-21 range) O-I = Objective-Involuntariness (number of suggestions that were passed objectively and that were rated as involuntary to either a moderate or great degree; 0-7 range) VC = Voluntary Cooperation; items that are passed objectively and are primarily experienced as voluntary occurrences

They tested 61 patients in facial pain clinic, mean age 26 years, who were diagnosed with temporo-mandibular pain and dysfunction syndrome (TMPDS). This syndrome includes pain, limitations in mandibular movements, and sounds during condylar movements. 41 of the patients completed a cognitive behavioral pain treatment program (results reported elsewhere, in Stam, H. J., McGrath, P. A., & Brooke, R. I. The effects of a cognitive-behavioral treatment program on temporo-mandibular pain and dysfunction syndrome. *Psychosom. Med.*, 1984, 46, 534-545).

Patients rated degree they expected to be hypnotized on a visual analog scale. Expectations for becoming hypnotized were not significantly correlated with any of the dimensions, except for the CURSS:O observer-scored dimension ( $r = .29$ ). Age was also related to the CURSS:O observer-scored dimension ( $r = -.25$ ) as well as to the CURSS:S dimension ( $r = -.28$ ).

Several measures of treatment outcome were employed--change scores of weekly self ratings, and post-treatment ratings by the dental surgeon (worse, same, improved, alleviated).

"Whereas the CURSS:V-C dimension is not at all related to any of the outcome measures, the objective, subjective, and objective-involuntariness measures are highly and significantly correlated with the reduction in patients' peak pain scores and the posttreatment pain ratings. The correlations between measures of hypnotizability and pain reductions are not significant for the control group, though these are based on small sample size. Table 3 also indicates a lack of relationship between measures of hypnotizability and the weekly pain ratings. Stam et al. (1984a) point out that it may have been due to the relative instability of the global weekly ratings of pain versus the daily ratings obtained from the home logs that were used to calculate the peak pain scores" (p. 187).

Table 3 Correlation Coefficients between Dimensions of the CURSS and Reductions in Pain

Susceptibility Dimension Pain Reduction O S O-I V-C Measures

Pre-post .60\*\*(36) .51\*\*(19) .44\*(-.21) .18(.42) Peak Pre-post .19 -.01 .15 .07  
Weekly rated Posttreatment .54\*\*(-.05) .58\*\*(.26) .58\*\*(.01) -.02(.37) Surgeon's  
rating

Note: Correlations in parentheses are for the Waiting List Control group (N = 14; N = 10 for Peak Pain); all others are for combined treatment groups, N = 27.

\*p<.05 \*\*p<.01

In their Discussion, the authors note that this research is in accord with other studies that indicate that "objective responding and the experience of those responses involuntarily are not necessarily equivalent. ... Ss in both the laboratory and the clinic are almost twice as likely to pass suggestions when assessed overtly than by the combined objective-involuntariness criterion. ... [and] objective scores alone confound responses experienced as voluntary with those experienced as involuntary" (pp. 188-189). They report that earlier studies from their laboratory indicated that "only CURSS suggestibility dimensions, and not the VC dimension, correlated significantly with absorption and Field's (1965) Inventory Scale of Hypnotic Depth. ... [and] correlations between hypnotizability and reductions in pain were not due to compliance factors but were related to each of the other three ways of assessing hypnotizability" (p. 189).

"The objective, subjective, and objective-involuntariness dimensions were all significantly correlated with the reductions in peak pain and posttreatment ratings for the treatment groups but not for the control groups. These results replicate the laboratory demonstrations that hypnotizability is correlated with suggested analgesia regardless of the presence or absence of a hypnotic induction procedure (E. R. Hilgard & J. R. Hilgard, 1975; Spanos, Radtke-Bodorik, Ferguson, & Jones, 1979; Stam & Spanos, 1980). There is some evidence, however, that this depends on the hypnotic induction procedure being defined as a component of the analgesia testing situation (Spanos, Kennedy, & Gwynn, 1984).

"Despite the differential predictions between CURSS dimensions and pain reductions, there were no increases in the predictions of pain reductions when objective scores were corrected for involuntariness or when using subjective scores. (This was apparent for the combined treatment groups as well as for each group examined separately.) The reasons for this are not obvious and await further research" (p. 189).

The authors conclude from their research that the general practice of self-scoring hypnotizability scales that is used in laboratory research appears to be equally reliable in a clinical situation.

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1985

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects reported their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

Neufeld, Victor; Lynn, Steven Jay; Jacquith, Leah; Weekes, John (1985, November). Fantasy style, imagination, and hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Authors discuss three fantasy styles: 1. Positive constructive daydreaming 2. Guilt / fear of failure 3. Poor attentional control. Fantasy style has been related to many personality variables, usually based on questionnaires.

They examined subjects in hypnosis and waking states using hypnotic dreams, Short Imaginal Processes Inventory, Tellegen Absorption, Betts QMI Imagery Vividness, Hypnosis (HGSHS and suggested dream) involvement, Wilson and Barber ICI, Nonvoluntary experience, Fantasy Proneness, Content of fantasies.

137 student volunteers participated in the study. 82 had HGSHS-A and hypnotic dream, and gave involuntariness ratings. Ss self-rated pleasant and unpleasant for hypnotic dreams. Experimenter rated dream for 1) positive emotion, 2) negative emotion, and 3) anxiety. Correlations were significant for female Ss, but not for male Ss.

#### **RESULTS.**

Fantasy-style, at least of negative affect, was consistent for waking and hypnotic states. Positive constructive fantasy correlated to HGSHS but the other two fantasy styles did not. [Other results reported are not included in this brief summary.]

Schlesinger, Jay Lawrence (1985). Hypnotizability in relation to success in learning biofeedback training: Attentional involvement (Dissertation, Adelphi University). Dissertation Abstracts International, 45 (n8-B), 2701. (Order No. DA 8424937)

"This study investigated the role of attentional focus in the relationship between hypnotizability and success in learning two types of biofeedback training. 40 female college students, aged 18-25, were measured for hypnotic responsiveness, and given one session of EMG biofeedback and one session of temperature biofeedback. For the biofeedback training, 20 Ss received written instructions designed to establish a passive, non-volitional attentional focus on the feedback signal, and 20 received written instructions intended to establish an active, volitional attentional focus on the feedback signal.

"It was hypothesized that level of hypnotizability would be positively related to success in learning EMG and temperature biofeedback training for the Ss given passive, non-volitional attentional instructions, while level of hypnotizability would be negatively related to success in learning biofeedback training for the Ss given active, volitional attentional instructions. It was also hypothesized that higher hypnotizables would perform better with temperature biofeedback than with EMG

biofeedback, and that lower hypnotizables would perform better with EMG biofeedback than with temperature biofeedback.

"The hypotheses were not supported, nor was any overall relationship between level of hypnotizability and success in learning biofeedback demonstrated. There was support to suggest that an active, volitional attentional focus on the biofeedback signal was most adequately maintained by the 20 Ss given the active volitional instructions. Clinical implications of these findings and directions for future research were discussed" (p. 2701).

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Stone, Jennifer A.; Lundy, Richard M. (1985). Behavioral compliance with direct and indirect body movement suggestions. Journal of Abnormal Psychology, 94 (3), 256-263.

Investigated the effectiveness of 2 types of suggestions in eliciting body movement by presenting 96 high-, medium-, and low-susceptible undergraduates, in hypnotic or nonhypnotic conditions, with either of 2 series of body movement suggestions. The indirect suggestions were designed to represent the approach of M. H. Erickson (see PA, vol 60:11116 and 12262) and resulted in greater compliance in the hypnotic condition. Direct suggestions resulted in greater compliance in the nonhypnotic condition. Susceptibility to hypnosis was related to compliance in the hypnosis condition, but no interactions were found between susceptibility and type of suggestion. Sense of volition in responding was unrelated to the major findings. Discussion of the results includes a call for the accurate reporting of the wording of hypnotic suggestions in future research.

1984

Crabtree, Adam (1984, October/1986). Explanations of dissociation in the first half of the twentieth century. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 85-108). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

In 1907 Morton Prince, Editor of Journal of Abnormal Psychology, introduced a symposium by listing 6 meanings of subconscious: 1. that portion of our field of consciousness which is outside the focus of attention 2. (Janet's idea) - split off ideas which may be isolated sensations like the lost tactile sensation of anesthesia, or maybe aggregated into groups or systems. The author quotes Janet as stating that "they form a consciousness coexisting with the primary consciousness and thereby a doubling of consciousness results" (p. 87). The primary consciousness is usually dominant, but sometimes is reduced under exceptional conditions (e.g. automatic writing). 3. the subconscious self or hidden self -- a part of every human, not just seen in psychopathology; this is a personalized entity; every mind has a double, with the unconscious self having powerful effects on feelings, thoughts, and reactions of the conscious self 4. extends #3 to include not only ideas that remain active below

surface but also those which are inactive -- forgotten or out of mind 5. Frederic Myers' concept of the 'subliminal self' which had 3 functions:

- a) inferior - seen in processes of dissociation
- b) superior - seen in works of genius, arising from 'subliminal rush' of information, feelings, and thoughts which lie below consciousness
- c) mythopoeic - the unconscious tendency to create fantasies 6. physiological meaning, e.g. William Carpenter's 'unconscious cerebration' in which unconscious phenomena are interpreted in terms of pure neural processes unaccompanied by mental activity.

Prince suggested some redefinitions to clarify unconscious and subconscious. He would replace Janet's subconscious with co-conscious and reserve unconscious for physiological processes that lack the attributes of consciousness. Prince noted that co-conscious ideas have been called unconscious (e.g. by Freud) but said that is confusing and to be avoided.

"Coconscious ideas include states we are not aware of because they are not the focus of our attention, and also pathologically split-off and independently active ideas or systems of ideas, such as occur in hysteria and reach their most striking form in co-conscious personalities and automatic writing.

"Prince prefers the term coconscious to Janet's subconscious for two reasons. First, because it expresses the simultaneous coactivity of a second consciousness. And second, because the coactive ideas or idea systems may not be outside the awareness of the personal consciousness at all. They may be recognized by the personal consciousness as a distinct consciousness existing alongside it.

"Thus, through his redefinition of terms, Prince makes simultaneous activity of two or more systems of consciousness in one individual the key element in dissociation. He thereby moves the issue of amnesia or lack of awareness by one system of another into the background, making it a secondary, nonessential element. Prince was one of the few to provide a theoretical framework for dissociation in which any combination of interawareness among the coconscious systems was possible" (p. 91). Two researchers at the turn of the century came to opposite conclusions about the nature of the Subconscious Self that every human has. Morris Sidis saw it as "a brutelike consciousness with a tendency toward personalization. Frederic Myers held that it included those functions and much more, being the source of all that is human, including the highest intuitive powers" p. 96.

Bernard Hart, in 1910, did an analysis of Janet and Freud. Janet's work is essentially descriptive: "he is always talking about a consciousness which manifests itself in a way we can \_perceive\_, whether by listening to it talk, reading its written communications, or watching its movements" (p. 97). However Janet's spatial model of dissociation cannot explain the presence of the same material (e.g. memories) in two or more dissociated systems. According to Hart, Freud offered the conceptualization that Janet lacked, in his idea of the Unconscious .

Freud's Unconscious is not in competition with Janet's subconscious. "Janet's subconscious is the arena of dissociated phenomena which manifest in observable form as elements coactive with the personal self. Freud's unconscious is a

conceptual, nonobservable construction put forward to explain certain facts of human experience. In this way Hart equates the unconscious with the atomic theory in physics or the theory of heredity in biology" p. 99. But Hart also thought Freud's theory did not do justice to dissociative phenomena. Not only do psychoanalysts show little interest in double personality or multiple personality, they also neglected dissociation on the phenomenal level.

In 1915 Freud denied the existence of a second consciousness and wrote, "there is no choice for us but to assert that mental processes are in themselves unconscious, and to liken the perception of them by means of consciousness to the perception of the external world by means of the sense organs" (p. 101). Janet claimed that Freud had simply taken over his own system and given it a new terminology, and in 1924 Freud wrote an angry rebuttal. For him, "dissociated systems are simply separate groups of mental but unconscious elements. As our consciousness turns now to one group, now to another, as a searchlight shines now on one object and now on another, the dissociated groups manifest in conscious life. ... There exists no doubling of consciousness" p. 102.

Jung's ideas were closer to those of Janet, and like Janet he made dissociation a key concept in his theory. The complex is unconscious, has an archetypal core clothed in personal experience, is like a self-contained psyche within the big psyche, sometimes called a fragmentary personality dwelling inside us. Dissociation for him meant being cut off from the Ego, which is the center of an individual's field of consciousness. "Dissociated or autonomous complexes are those which have no direct association with the ego" (p. 103). If complexes are charged with enough energy they will become manifest--as a neurotic symptom, as projected into idea of a god or demon, or perhaps as an alternate personality. Therefore Jungian treatment aims at assimilating dissociated complexes into the ego.

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Crouse, Eric; Kurtz, Richard (1984). Enhancing hypnotic susceptibility: The efficacy of four training procedures. American Journal of Clinical Hypnosis, 27, 122-136.

In this study, we have compared the effects on hypnotic susceptibility of several components of training procedures based on a social learning model, which have been reported to be successful in enhancing hypnotic susceptibility. These included: 1) attitude-conception of hypnosis information, 2) involvement instructions, 3) goal-directed fantasy instructions, and 4) practice vs. no practice in responding to hypnotic suggestions. A 3 x 2 x 2 repeated measures factorial design was used for the experiment with 60 female volunteers serving as subjects in the study. Contrary to expectations, no differential treatment effects were obtained on either objective or subjective measures of hypnotizability. Furthermore, it was questionable whether or

not any of the three information-based components even produced gains in hypnotic susceptibility. None produced clinically significant gains. They also were not found to alter either the subjects' attitudes or their use of hypnosis-related skills. Similarly, practice was found to be ineffective in enhancing responsiveness to suggestions. Taken as a whole, the results of this study suggest that the gains in hypnotic susceptibility reported for social learning-type training procedures may be due to causes other than those posited by social learning theory.

Diamond (1977) posited 3 core components to modification procedures: attitudinal and set factors, cognitive strategy factors, and optimal learning factors (specific ways subjects are taught the internal responses).

"The present study was undertaken to more fully clarify the extent to which each of the critical components hypothesized by Diamond contributes to increasing susceptibility. It was predicted that subjects receiving attitude-conception of hypnosis information and subjects receiving involvement instructions would show a significantly greater gain in hypnotizability than Ss receiving goal-directed fantasy instructions. Secondly, it was predicted that a significantly greater gain in subjects' hypnotizability would result from an opportunity to practice responding to hypnotic suggestions when coupled with involvement instructions than when accompanied by goal-directed fantasy instructions or attitude-conception of hypnosis information" (p. 125).

A revised SHSS:C was used; it deleted words that explicitly suggested goal directed fantasies (GDF's) on several items: hand lowering, moving hands apart, taste hallucinations, arm rigidity, arm immobilization. Experimenters used audiotaped presentation. Subjects in 3 of 6 experimental groups were also given opportunity to practice 30 minutes on 3 occasions spaced no more than one week apart. They were given 2 practice trials on each of 5 hypnotic suggestions taken from several different scales.

"While differential treatment effects were not found, there was a general facilitation of hypnotic responsiveness for all Ss across treatment conditions on both objective and subjective hypnotizability measures. The mean change in the objective hypnotizability score for all subjects was  $+ .68$ ,  $...p < .001$ ; was  $+ .68$ ,  $...p < .001$ ; the corresponding mean change in the subjective hypnotizability scores was  $+ 3.11$   $... p < .001$ . Although statistically significant, neither of the shifts appear to indicate clinically significant shifts in hypnotic responsiveness" (p. 129). The changes in the positive direction in hypnotizability were not correlated with hypnotizability. Subjects appear to change in their conceptualization of hypnosis, in the direction of it being more a self-induced phenomenon ( $p < .001$ ).

In their Discussion, the authors write, "Taken as a whole, results of this study challenge assumptions which have been made about how training procedures based on a social learning model affect gains in hypnotic susceptibility" (p. 131). Each experimental manipulation was intended to influence a mediating variable, and that apparently did not happen. Teaching subjects to use GDFs on a few items did not generalize so that subjects would generate GDFs on novel items. The results suggest

"caution against assuming that social learning base training procedures are effective in altering subjects' attitudes and/or their use of skills thought to mediate hypnotic responsiveness" (p. 133). Nevertheless, the correlational data support previous studies that relate hypnotizability to the mediating factors under investigation.

Continuing their Discussion, the authors write, "Clearly, more attention should be paid in future studies to assessing changes in mediating variables produced by such training procedures. This is particularly important in terms of subjects' use of GDF's and their use of cognitive strategies to increase the extent of their involvement in the hypnotic experience. It is significant that in this study neither involvement instructions nor GDF instructions were found to alter subjects' use of cognitive strategies. Changes in these skill-related factors need to be demonstrated if social learning based training procedures are to be proven effective in altering subjects' hypnotic abilities rather than simply in raising subjects to their optimal level of responsiveness.

"One explanation which has been offered for the reported success of such training procedures is that they work by changing subjects' attitudes, motivation and/or expectations of hypnosis while leaving any aptitudinal component to hypnosis unaltered (Perry, 1977). From this point of view the gains in susceptibility reported for such procedures result from subjects moving closer to their optimal or 'plateau' level of responsiveness rather than from real changes in subjects' hypnotic abilities" (p. 134).

Alternatively, it is possible that the increases observed following training programs have something to do with the hypnotist-subject relationship. For example, increases in hypnotizability are more modest when the training is given in written instructions than when it is given in person by a hypnotist.

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post- Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative

Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness,

Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

**Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.**

**In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.**

**Spanos, Nicholas P.; Tkachyk, M.; Bertrand, L. D.; Weekes, J. R. (1984). The dissipation hypothesis of amnesia: More disconfirming evidence. Psychological Reports, 55, 191-196.**

**Hypnotic subjects were administered a suggestion to forget a previously overlearned word list. Before cancellation of the suggestion they were challenged twice to try and recall the words. Subjects in one group received a second challenge immediately after response to the first. Those in the second group were given a 15-min. delay before their second challenge. Subjects in both groups showed less amnesia after the second challenge than after the first, but the length of delay between challenges had no effect on amnesia scores. These findings are inconsistent with the hypothesis that hypnotic amnesia involves an involuntary blockage of memory that decays spontaneously with time.**

**Zamansky, Harold S.; Bartis, Scott P. (1984). Hypnosis as dissociation: Methodological considerations and preliminary findings. American Journal of Clinical Hypnosis, 26, 246-251.**

**Three criteria are proposed to be met by any experience labeled as "dissociation." A preliminary experiment is described that illustrates one way in which two of these criteria may be operationalized, and that assesses the relationship between successful performance on the two criteria and hypnotic susceptibility. The results are viewed as consistent with Hilgard's (1977) hypothesis that hypnotic susceptibility and the ability to dissociate are positively related.**

**The authors propose that for dissociation to be present: "1) The individual must be engaged in two or more cognitive processes concurrently. 2) These processes must occur simultaneously, i.e., without recourse to alternation between them. 3) One of these processes must be perceived (by the subject) to occur below the level of**

conscious awareness, i.e., must seem to be autonomous or nonvolitional" (p. 247). In this study they focus on the first two criteria, as well as the relationship between ability to perform two cognitive tasks simultaneously and Subjects' hypnotizability. The authors used a dichotic listening task, with Ss instructed to listen to both auditory inputs at once. One input was a short story that was to be followed with 12 multiple choice questions. The other ear received 3 tones every 2 seconds (the higher tone 60% of the time, lower tone 40% of the time) and S was to press a button in response to the low tones. Speed of presentation of tones was intended to reduce the opportunity for alternating back and forth between tasks.

of tones was intended to reduce the opportunity for alternating back and forth between tasks.

Of 28 volunteer students, 22 passed criteria for accuracy on both tasks when performed singly: 10 high hypnotizables (Harvard Group Scale of Hypnotic Susceptibility; HGSHS > 8); 10 medium hypnotizables (HGSHS 5-8); and 2 low hypnotizables who were dropped from the data analysis. They were considered 'dissociators' if they met the criterion of passing 9 or more items of the story and simultaneously having fewer than 15% errors on the tones, on two separate trials with two different stories.

"Of the 20 subjects, four scored above criterion on both test trials and were classed as dissociators; these four also scored as highly hypnotizable on the HGSHS. Accordingly, 40% of the highly hypnotizable subjects met our criteria, while not one of the moderately hypnotizable subjects reached this level of performance" (p. 249).

In their Discussion, the authors wrote, "The results demonstrated that highly hypnotizability Ss are significantly better able to attend to two inputs simultaneously than are moderately hypnotizability Ss. These results provide preliminary empirical evidence that dissociative ability, assessed independently of hypnosis, may be an important factor underlying hypnotic behavior" (p. 249).

The authors speculated about why only 40% of the highly hypnotizable people performed successfully, suggesting that it may be because they had misclassified Ss with the HGSHS which may be less demanding than other scales, or that "while dissociation represents an important cognitive factor in hypnosis, the Harvard measures mostly ideomotor performance" (p. 250). They suggest using a hypnotizability scale that uses more cognitive items to select highly hypnotizable Subjects who would demonstrate a high degree of dissociative ability. The other possibility that they mention is that dissociation may be only one of several alternate paths to hypnosis, citing Hilgard (1965).

The Experimenters added two control groups, one given the stories without the competing tones, the other given identical questions but without actually hearing the stories. The first group answered a mean of 9.7 and 8.6 questions correctly; the second control group answered a mean of 2.9 and 3.8 questions correctly

1983

Levitt, Eugene E.; Baker, Elgan L. (1983). The hypnotic relationship--another look at coercion, compliance and resistance: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 125-131.

The purpose of the present investigation was to assess the ability of hypnotic Ss to voluntarily resist neutral suggestions on a monetary reward incentive. The results were ambiguous; Ss resisted with a mean of 1.2 of 2 suggestions each. Postexperimental interviews disclosed that all Ss felt that the instructions to resist were asking them to be disloyal to the hypnotist or to betray him. Ability to resist was positively correlated with Ss' impressions of the "resistance instructor" and tended to be negatively correlated with the impression of the hypnotist. These findings are interpreted to suggest support for an interactional conception of the hypnotic state.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W.; Frauman, David; Stanley, Scott (1983). Hypnosis and the experience of nonvolition. International Journal of Clinical and Experimental Hypnosis, 31 (4), 293-308.

Consistent with theoretical perspectives on hypnosis and the experience of nonvolition (e.g., Arnold, 1946; Hilgard, 1977, 1979; Spanos, 1981, 1982), hypnotic Ss, when faced with a conflict between experiencing motoric suggestions and inhibiting movements, resolved the conflict by following the hypnotist's suggestions. Imagining and simulating Ss, by and large, showed no movements. Hypnotic Ss' reports of their experience reflected more conflict, sensations, imaginative involvement, and involuntariness than simulating Ss. Arnold's (1946) theory was not supported in that imagining Ss reported feeling as absorbed and involved in imaginings as hypnotic Ss but resisted responding to suggestions. The findings were more compatible with theoretical accounts which emphasize dissociation (Hilgard, 1977, 1979) and the importance of the experimental context in determining the experience of nonvolition (Spanos, 1981).

McConkey, Kevin M. (1983). Behaviour, experience, and effort in hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 11, 73-81

Subjects were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A, and were afterwards asked to rate the degree to which they experienced the items; subjects also scored their behavioural performance on the items. Data were analyzed to explore the relationships among behaviour, experience, and effort. Findings indicated a significant positive relationship between behaviour and experience on all of the HGSHS:A items, a significant negative relationship between behaviour and effort on the ideomotor items, and a significant positive relationship between behaviour and effort on the cognitive items. A similar pattern was observed between experience and effort. Also, subjects of varying HGSHS:A responsivity differed in terms of overall experience of the scale but not in terms of the overall amount of effort that they expended. Implications of the data are discussed in terms of the factors influencing subjects' experiential response and behavioural performance as well as the attributions that they make concerning effort during hypnosis.

1982

**Bowers, Patricia G. (1982). The classic suggestion effect: Relationships with scales of hypnotizability, effortless experiencing, and imagery vividness. International Journal of Clinical and Experimental Hypnosis, 30 (3), 270-279.**

**How well the Stanford Hypnotic Susceptibility Scales assess what Weitzenhoffer (1978) terms the "classic suggestion effect" is addressed by developing an index of nonvolitional behavior (N-VB) for a group form of the Stanford Hypnotic Susceptibility Scale, Form C of Weitzenhoffer and Hilgard (1962) given to 43 Ss. The N- VB index, reflecting the classic suggestion effect's dual criteria of both behavioral responsiveness to suggestion and nonvolition ratings, was correlated highly with the traditional scoring of the group SHSS:C and moderately with the Harvard Group Scale of Hypnotic Susceptibility, Form A. Effortless experiencing of imagination and imagery vividness relate similarly to traditional and N-VB scores of hypnotizability. In addition, the relationship between involuntary ratings and passing and failing an item of the group SHSS:C was examined for each of the 10 items. There was a significant relationship for 7 of the items.**

**Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)**

**"Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and showed that voluntary and involuntary Ss did not differ in response to the contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).**

**Spiegel, David; Tryon, Warren W.; Frischholz, Edward J.; Spiegel, Herbert (1982). Hilgard's illusion. Archives of General Psychiatry, 39 (8), 972-4.**

**Examines E. R. Hilgard's (see PA, Vol 68:11932) critique of the hypothesis that eye roll (ER) is related to hypnotizability, clarifying the nature of the data relevant to the ER hypothesis. The authors contend that there are a number of factual errors in Hilgard's article: his (1) explanation of the procedure used in determining the Hypnotic Induction Profile (HIP) grades, (2) characterization of the HIP as a single-item test, and (3) his contention that the levitation score is the sole determinant of manifest hypnotic response. (9 ref.)**

1981

Bowers, Kenneth (1981). Has the sun set on the Stanford Scales?. American Journal of Clinical Hypnosis, 24, 79-88.

There have been recent expression of concern regarding the adequacy of the Stanford Scales of Hypnotic Susceptibility. Concern about the Scales' utility involve the fact that they do not explicitly assess the experience of nonvolition that is classically associated with the concept of suggestion. Concern about the Scales' validity suggest that the individual differences they assess are not clinically relevant. A review of the available literature shows that neither of these concerns stands up to inspection, and that the Stanford Scales have a crucial role to play in both laboratory and clinical contexts

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

-lusive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

1980

Hilgard, Ernest R. (1980, October). Hypnotic modification of sensitivity and control. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Chicago.

The author presents a factor analysis of several scales in the hypnosis domain: HGSHS:A, Wilson-Barber CIS, Stanford Hypnotic Susceptibility Scale Form C, Questionnaire on Mental Imagery (Sheehan's modification of Betts) and the Tellegen- Atkinson Absorption Scale. Scales were broken down into components first. He didn't report all of the factors, but shows how these tests fall on a graph defined by Factor 1 (Amnesia/Cognitive) and Factor 4 (Absorption/Imagery). "Capacity for fantasy and amnesia are so different that hypnosis probably includes both."

Hilgard concludes that he doesn't like a state theory for hypnosis or the idea of "trance" because it is unidimensional. He prefers "dissociation" because we think of it as a continuum. Even Highs differ one from another in the nature of their responses. Altered- state-of-consciousness theories don't readily explain partial dissociation (e.g. persistence of a suggestion such as arm rigidity after hypnosis is terminated; or hysterical paralysis).

Weitzenhoffer, Andre M. (1980). Hypnotic susceptibility revisited. American Journal of Clinical Hypnosis, 22, 130-146.

The concept and measurement of hypnotic susceptibility are re-examined in their relation to hypnotizability, hypnotic depth and suggestibility. The Stanford Scales and similar instruments are found to have failed to take into account essential features defining traditional hypnosis and suggestibility and to have created confusion in the scientific inquiry into hypnotism. Other available measures have not been particularly successful, but some bear further attention. Recent claims that hypnotizability can be trained have failed to distinguish between hypnotizability proper and accessory processes, leaving some question about what is actually being trained. Possible future directions of work on susceptibility are considered. Attempts to distinguish between 'clinical' and 'laboratory' hypnotizability are examined and found to have been premature and loosely based on facts.

'clinical' and 'laboratory' hypnotizability are examined and found to have been premature and loosely based on facts.

1978

Bowers, Patricia G. (1978). Hypnotizability, creativity and the role of effortless experiencing. International Journal of Clinical and Experimental Hypnosis, 26, 184-202.

Creative people and highly hypnotizable people describe their experience of finding creative solutions or responding to hypnotic suggestions as "effortless." It is suggested that receptiveness to subconscious work accounts for the experience of effortlessness in both tasks. An experiment using 32 high and low hypnotizable men and women was designed to explore the hypothesis that the aptitude for such

effortless experiencing accounts for the relationship found between creativity and hypnotizability.

Analyses of variance indicate highly significant effects of level of hypnotizability on composite scores reflecting effortless experiencing of several tasks and creativity. Intercorrelations of these indices are about .60. As predicted, effortless experiencing accounts for much of the relationship between high versus low hypnotizability and composite creativity. The role of imagery vividness and of absorption in both hypnotizability and creativity were also explored.

1977 Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

1976

Erickson, Milton H.; Rossi, Ernest L. (1976). Two level communication and microdynamics of trance and suggestion. American Journal of Clinical Hypnosis, 18, 153-171.

The authors provide the transcript and commentaries of an hypnotic induction and an effort to achieve automatic writing. An unusual blend of Erickson's approaches to two level communication, dissociation, voice dynamics and indirect suggestion are made explicit in the commentaries. The junior author offers a 'context theory of two level communication' that conceptualizes Erickson's clinical approaches in terms consonant with Jenkins' (1974) recent contextual approach to verbal associations and memory. A summary of the microdynamics of Erickson's approach to trance induction and suggestion is outlined together with a utilization theory of hypnotic suggestion.

Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it! American Psychologist, 29, 785-795.

Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, 18, 254-262.

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than

subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

**1974**

Weitzenhoffer, Andre M. (1974). When is an 'instruction' an 'instruction?'. International Journal of Clinical and Experimental Hypnosis, 22 (3), 258-269.

In the course of validating with 100 undergraduate Ss the concept of a "classical suggestion-effect" (i.e., the existence of a class of nonvoluntary behaviors elicited by communications intended to serve as traditional "suggestions"), evidence was incidentally obtained showing that many "instructions" given to presumably hypnotized Ss also function like "suggestions." In these circumstances it is not possible to state a priori that a verbal communication will function as an "instruction" rather than as a "suggestion." Such a statement can be made with certainty only a posteriori, on the basis of the nature of the resulting behavior. The implications of this finding for research and for the clinical uses of hypnotic suggestion are discussed. (German, French & Spanish summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1972**

Weitzenhoffer, Andre M. (1972). The postural sway test: A historical note. International Journal of Clinical and Experimental Hypnosis, 17-24.

Presents historical evidence disputing that the postural or body sway test of hypnotic susceptibility was originated by C. L. Hull. Excerpts from French scientific literature between 1887 and 1914 are cited indicating that the French physician Lucien Moutin should receive credit as the originator. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1969**

Garmize, L. M.; Marcuse, F. L. (1969). Some parameters of body sway. International Journal of Clinical and Experimental Hypnosis, 17, 189-194.

Investigated the effects of 4 variables on body sway with 160 undergraduates. A 4-dimensional analysis of variance was performed on the body sway scores obtained. None of the main effects were significant. 1 of the interactions was significant, but might have been due to chance. Results are consistent with those of past researchers. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)  
(PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1968**

Dittborn, Julio M. (1968). A brief nonthreatening procedure for the evaluation of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 16, 53-60.

DESCRIBES A TECHNIQUE FOR THE SELECTION OF SS POTENTIALLY HIGH IN HYPNOTIZABILITY WITHOUT INFORMING THEM THAT HYPNOSIS IS BEING INDUCED. IT INVOLVES AN OBJECTIVE BEHAVIORAL OUTPUT (SLEEP WRITING) AS WELL AS CLINICAL SIGNS THAT CAN BE USED TO EVALUATE HYPNOTIZABILITY. IT HAS THE ADVANTAGE OF BEING ABLE TO BE ADMINISTERED BY INDIVIDUALS OTHERWISE UNTRAINED IN HYPNOTIC TECHNIQUES. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J.; Schmeidler, D. (1966). Relationship between the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale: Form C. International Journal of Clinical and Experimental Hypnosis, 14, 333-343.

3 SUBGROUPS OF 20 SS WITH HIGH, MEDIUM, OR LOW SCORES ON A SLIGHTLY MODIFIED, TAPE-RECORDED VERSION OF THE HARVARD GROUP SCALE OF HYPNOTIC SUSCEPTIBILITY, FORM A (HGSHS:A) WERE LATER ADMINISTERED THE STANFORD HYPNOTIC SUSCEPTIBILITY SCALE, FORM C (SHSS:C). THE 2 SCALES CORRELATED .59, WHICH IS LOWER THAN WOULD BE PREDICTED BY SCALE RELIABILITIES. THIS, TOGETHER WITH OTHER DATA BASED ON ITEM CHARACTERISTICS, INDICATES THAT THE 2 SCALES ARE NOT EQUIVALENT, BUT IN PART MEASURE DIFFERENT ASPECTS OF HYPNOTIC PERFORMANCE. SCORES ON HGSHS:A FOR LOW SS ARE PREDICTIVE OF SHSS:C SCORES, BUT THE STABILITY OF PERFORMANCE BETWEEN HGSHS:A AND SHSS:C IS NOT AS MARKED FOR MEDIUM AND HIGH SS ON HGSHS:A. THIS IS PARTLY A RESULT OF THE FAILURE OF PASSIVE MOTOR (PRIMARY) SUGGESTIBILITY TO DISCRIMINATE BETWEEN LEVELS OF SUSCEPTIBILITY, ALTHOUGH CHALLENGE ITEMS DO. THE 2 CLUSTERS OF ITEMS CORRELATE .23 AND .43 IN HGSHS:A AND SHSS:C, RESPECTIVELY. THE PASSIVE SUGGESTIBILITY ITEMS DETRACT FROM THE VALIDITY OF THE 2 SCALES. (SPANISH + FRENCH SUMMARIES) (20 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Field, Peter B. (1965). An inventory scale of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 13, 238-249. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 86)

An inventory of 300 items describing subjective experiences during hypnosis was administered to 102 students after they had wakened from hypnosis. The 38 items that correlated best with a standard measure of hypnotic susceptibility are proposed as an inventory measure of hypnotic depth. Items dealing with absorption and

unawareness, automaticity and compulsion, and discontinuity from normal experience correlated best with the criterion, while items dealing with conscious motivation to enter hypnosis, feelings of surface compliance with suggestions, and unusual bodily sensations showed generally weaker relationships to the hypnotizability criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Webb, Robert A.; Nesmith, C. C. (1964). A normative study of suggestibility in a mental patient population. International Journal of Clinical and Experimental Hypnosis, 12 (3), 181-183.

The postural sway technique was used to make suggestibility measurements on a total of 490 Ss of which 279 were hospitalized psychiatric patients. The remaining Ss were "normal" college students. The "normal" Ss were significantly more suggestible than the psychiatric group. Within the psychiatric group, the psychotics, nonpsychotics, and organics differed significantly, with the nonpsychotics being least suggestible, the psychotics most suggestible, and the organics intermediate. The hospital group was further reduced into diagnostic subcategories and postural sway parameters were shown. The sample distributions were essentially normal although the sample drawn from a psychiatric population showed positive skewness. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, 11, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

LeCron, Leslie M. (1963). Uncovering early memories by ideomotor responses to questioning. International Journal of Clinical and Experimental Hypnosis, 11, 137-142.

The author argues for the veridicality of birth and prenatal memories elicited by hypnosis, and in any event states they are therapeutically useful fantasies. He also advocates use of ideomotor signalling as a means of access to unconscious material. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Crasilneck, Harold B.; Hall, James A. (1962). The use of hypnosis with unconscious patients. International Journal of Clinical and Experimental Hypnosis, 10 (3), 141-144.

8 of 10 patients dying of cancer were found to continue a simple motor response to a hypnotic command, even though they revealed no other evidence of interaction with the environment and were considered unconscious by their physicians. Certain theoretical considerations are mentioned. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Cheek, David B. (1961). Value of ideomotor sex-determination technique of LeCron for uncovering subconscious fear in obstetric patients. International Journal of Clinical and Experimental Hypnosis, 9, 249-259.

(Author's Summary) "Unrecognized subconscious fears can be uncovered while using ideomotor questioning with a Chevreul pendulum or with finger signals. The technique described by LeCron for evaluating knowledge regarding the sex of an unborn child is a most helpful way of approaching subconscious fears. The frightened patient refuses to indicate knowledge of the sex of her unborn child. Uncovered fears can be resolved by appealing to conscious-level understanding with adroit questioning" (p. 258).

Das, J. P. (1961). Body-sway suggestibility and mental deficiency. International Journal of Clinical and Experimental Hypnosis, 13-15.

50 mental defectives were subjected to the body-sway test of suggestibility. Contrary to expectations the defectives did not differ from each other when taken according to grades of deficiency, nor do they differ, as a group, from normal (college) controls. From Psyc Abstracts 36:02:2JI13D. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1957

Weitzenhoffer, Andre M. (1957). Posthypnotic behavior and the recall of the hypnotic suggestion. Journal of Clinical and Experimental Hypnosis, 5 (2), 41-58.

1. Posthypnotic phenomena may be spontaneous or suggested in origin. Although no single mechanism appears to exist which will account for all of the spontaneous manifestations, their explanations are relatively straightforward. On the other hand, suggested posthypnotic phenomena are not so readily dealt with.

2. ... It seems likely that a relation exists between posthypnotic suggestions and waking instructions of the everyday variety; however, lack of basic information regarding the retention and activation of the latter has made this line of approach unproductive to date. Nor is it possible to talk of posthypnotic phenomena as learned if one regards the posthypnotic signal as stimulus and the suggested act as response. The definition of learning excludes this case because of the presence of hypnosis at the time the response is acquired. In addition, the acquisition and evocation of the posthypnotic effect does not follow any standard paradigm for learning.

3. If, however, one views the posthypnotic suggestion as a whole as being the stimulus, and the act of subjectively, if not objectively, giving reality to the content of the suggestion as the response, then suggested posthypnotic phenomena can be fitted within the framework of modern learning theory. They appear to arise through some form of classical conditioning, abstract conditioning being the most likely form at present. Seen in these terms, posthypnotic suggestions function through the same mechanisms as any other hypnotic suggestion, being merely a special instance of a deferred suggestion. It must be emphasized that posthypnotic phenomena are learned in the sense only that they are brought into being through the use of previously acquired response tendencies. The learning process has usually reached completion by the time the hypnotic subject is capable of giving good posthypnotic responses.

4. The posthypnotic signal holds a unique position in posthypnotic phenomena which allows it to acquire unique and distinctive features with respect to the elicitation of the suggested behavior, among which is the capacity to cause reintegration.

5. The spontaneous [sic] trance said to accompany the initiation of any posthypnotic act appears to be a natural outcome of the learning process involved in the acquisition of posthypnotic behavior. There is a reinstatement of the original trance state because the posthypnotic trance is the result of associations taking place between the stimulus-suggestion and the symptoms of the initial hypnosis, these symptoms acting as responses.

6. Acquisition and retention of the contents of the suggested posthypnotic act may need to be differentiated from the acquisition and retention by the posthypnotic signal of the capacity to initiate the posthypnotic act. In the light of this observation, experimental data showing that posthypnotic suggestions are forgotten just like any other instructions may hold true only for the memory of the content. The capacity to initiate posthypnotic action, although subject to the same laws of forgetting may be far more enduring because of certain features of the learning process which underlie it" (pp. 55-56).

1956

Dittborn, Julio M. (1956). Toward a semeiology of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (1), 30-36.

"19 subjects were chosen among two hundred that in the year the experiment took place (1954) were to be 20 years old. 11 of these subjects qualified themselves as good swayers, whereas the 8 others were considered somehow refractory to the postural swaying test.

"All 19 went under a standard hypnotic induction: the operator employed the same words in all cases, and requested from all the execution of the same acts.

"Several involuntary signs of standard induction are described, which reveal that the subject has attained a convenient degree of muscular relaxation after appropriate suggestions.

"Fatigue is apparently an important source of spontaneous amnesia in good swayers.

"In the analyzed cases no involuntary sign has been detected, that could reveal us whether the inducted subject will or not present spontaneous post-hypnotic amnesia" (p. 36).

Includes standardized tests of depth.

1954

LeCron, Leslie M. (1954). A hypnotic technique for uncovering unconscious material. Journal of Clinical and Experimental Hypnosis, 2, 76-79. (Abstracted in Psychological Abstracts, 54: 7497)

"Summary. A technique is given whereby unconscious material and information may be learned under hypnosis through automatic movements of the fingers, or of Chevreul's pendulum. The movements are controlled by the unconscious mind of the patient. Questions are asked which can be answered either 'yes' or 'no.' With most people the movements of the pendulum can even be elicited in the waking state. Essentially, the method is a variation of automatic writing with movements substituted for writing. A brief case history is given wherein knowledge was gained in this way as to the causes for severe menstrual pains" (p. 79).

1953

Marcuse, F. L. (1953). Anti-social behavior and hypnosis. Journal of Clinical and Experimental Hypnosis, 1, 18-20.

"The problem of whether an individual under hypnosis can be caused to commit an act contrary to his or her moral code must be paraphrased to ask whether an individual under hypnosis can be caused to commit an act which is socially and objectively reprehensible. When the question is so phrased and suitable technique is used, it is the writer's opinion that the answer is yes" (p. 20).

Nursing

1987

Patterson, David R.; Questad, Kent A.; Boltwood, Michael D. (1987). Hypnotherapy as a treatment for pain in patients with burns: Research and clinical considerations. Journal of Burn Care and Rehabilitation, 8 (3), 263-268.

Hypnotherapy has increasingly been included in the management of burn patients, particularly in the area of acute pain. To better understand such issues as (1) overall efficacy of hypnotherapy to alleviate acute burn pain, (2) instances in which hypnotherapy is contraindicated, (3) interaction of hypnotherapy with medication, (4) standard induction techniques to use with various age groups, (5) role of nursing and other staff in facilitating hypnotic effects, and (6) future methodological directions, they examined the clinical and methodological merits of recent studies of hypnoanalgesia. A literature search found 17 studies in which hypnotherapy was applied to the management of burns. The literature generally supports the efficacy of this approach to reduce burn pain; however, little else can be concluded from

these studies. Several recent studies have applied hypnotherapy to aspects of burn care other than pain using excellent experimental designs. It is suggested that future studies of acute pain management follow suit.

1971 Aiken, Linda H.; Henrichs, Theodore F. (1971). Systematic relaxation as a nursing intervention technique with open heart surgery patients. Nursing Research, 20, 212-217.

Psychiatric problems frequently occur after open heart surgery, usually from day 2 to day 7 postoperatively. Symptoms include impairment of consciousness, disorientation, sensory disturbances like visual and auditory hallucination, and sometimes delusions and paranoid behavior. Authors defined a postoperative adverse reaction as "when the patient experienced impairment of consciousness with motor restlessness, disordered thinking, sensory disturbances, visual and/or auditory illusions or hallucinations, and paranoid ideation. All of these symptoms do not usually occur together and an additional definition was given for a minor reaction which occurred if only one of the above symptoms was present for 12 hours or less" (p. 214).

The population from which samples were drawn consisted of adult male patients admitted to a university medical center for open heart surgery. The experimental group (N = 15) consisted of all patients admitted from September 1969 through June 1970 (omitting two who were not willing to participate). Controls were 15 adult males admitted for open heart surgery in the prior year.

A relaxation and systematic desensitization technique was used for the experimental group, each patient being given a tape recorder with a 15-minute tape of the exercise "to use whenever he wanted to relax" (p. 214) but at the least four times a day.

Outcome

**2002**

Montgomery, Guy H.; David, Daniel; Winkel, Gary; Silverstein, Jeffrey H.; Bovbjerg, Dana H. (2002). The effectiveness of adjunctive hypnosis with surgical patients: A meta-analysis. Anesthesia and Analgesia, 94, 1639-1645.

Hypnosis is a nonpharmacologic means for managing adverse surgical side effects. Typically, reviews of the hypnosis literature have been narrative in nature, focused on specific outcome domains (e.g., patients' self-reported pain), and rarely address the impact of different modes of the hypnosis administration. Therefore, it is important to take a quantitative approach to assessing the beneficial impact of adjunctive hypnosis for surgical patients, as well as to examine whether the beneficial impact of hypnosis goes beyond patients' pain and method of the administration. We conducted meta-analyses of published controlled studies (n = 20) that used hypnosis with surgical patients to determine: 1) overall, whether hypnosis has a significant beneficial impact, 2) whether there are outcomes for which hypnosis is relatively more effective, and 3) whether the method of hypnotic induction (live versus audiotape) affects hypnosis efficacy. Our

results revealed a significant effect size ( $D = 1.20$ ), indicating that surgical patients in hypnosis treatment groups had better outcomes than 89% of patients in control groups. No significant differences were found between clinical outcome categories or between methods of the induction of hypnosis. These results support the position that hypnosis is an effective adjunctive procedure for a wide variety of surgical patients.

**IMPLICATIONS:** A meta-analytical review of studies using hypnosis with surgical patients was performed to determine the effectiveness of the procedure. The results indicated that patients in hypnosis treatment groups had better clinical outcomes than 89% of patients in control groups. These data strongly support the use of hypnosis with surgical patients. [National Library of Medicine Abstract]

## 2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. [American Journal of Clinical Hypnosis, 43 \(1\), 17-40.](#) (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies;

(3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

-cing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

Green, Joseph P.; Lynn, Steven Jay (2000, August). [Hypnosis and suggestion-based approaches to smoking cessation: An examination of the evidence.](#) [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

This article reviews 59 studies of hypnosis and smoking cessation from the point of view of whether the research provides support for hypnosis as an empirically supported treatment (Chambless and Hollon, 1998). Whereas hypnotic procedures generally yield higher rates of abstinence relative to wait list and no treatment conditions, hypnotic

interventions are generally comparable to a variety of nonhypnotic treatments. The evidence for whether hypnosis yields outcomes superior to placebos is mixed. In short, hypnosis can not be considered to be a specific and efficacious treatment for smoking cessation. Furthermore, in many cases, it is impossible to rule out cognitive/behavioral and educational interventions as the source of positive treatment gains associated with hypnotic treatments. Hypnosis can not, as yet, be regarded as a well-established treatment for smoking cessation. Nevertheless, it seems justified to classify hypnosis as a "possibly efficacious" treatment for smoking cessation. - Abstract taken from Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30. Fall, 2000.

Horton-Hausknecht J.; Mitzdorf U.; Melchart D. (2000). The effect of hypnosis therapy on the symptoms and disease activity in rheumatoid arthritis . Psychology and Health, 14 (6), 1089-1104..

from: [http://www.imp-muenchen.de/The\\_effect\\_of\\_hypnos.698.1.html](http://www.imp-muenchen.de/The_effect_of_hypnos.698.1.html)

In this study we aimed to assess the effectiveness of clinical hypnosis on the symptoms and disease activity of rheumatoid arthritis (RA). 66 RA patients participated in a controlled group design. 26 patients learnt the hypnosis intervention, 20 patients were in a relaxation control group, and 20 patients were in a waiting-list control group. During hypnosis , patients developed individual visual imagery aimed at reducing the autoimmune activity underlying the RA and at reducing the symptoms of joint pain, swelling, and stiffness. Subjective assessments of symptom severity and body and joint function, using standardized questionnaires and visual analogue scales, were obtained. Objective measures of disease activity via multiple blood samples during the therapy period and at the two follow-ups were also taken. These measurements were of erythrocyte sedimentation rate, C-reactive protein, hemoglobin, and leukocyte total numbers. Results indicate that the hypnosis therapy produced more significant improvements in both the subjective and objective measurements, above relaxation and medication. Improvements were also found to be of clinical significance and became even more significant when patients practiced the hypnosis regularly during the follow-up periods.

Lang, E. V.; Benotsch, E. G.; Fick, L. J.; Lutgendorf, S.; Berbaum, M. L.; Berbaum, K. S.; Logan, H.; Spiegel, D. (2000, Apr 29). Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial. Lancet, 355 (9214), 1486-90.

BACKGROUND: Non-pharmacological behavioural adjuncts have been suggested as efficient safe means in reducing discomfort and adverse effects during medical procedures. We tested this assumption for patients undergoing percutaneous vascular and renal procedures in a prospective, randomised, single-centre study.

METHODS: 241 patients were randomised to receive intraoperatively standard care (n=79), structured attention (n=80), or self-hypnotic relaxation (n=82). All had access to patient-controlled intravenous analgesia with fentanyl and midazolam. Patients rated their pain and anxiety on 0-10 scales before, every 15 min during and after the procedures.

FINDINGS: Pain increased linearly with procedure time in the standard group (slope 0.09 in pain score/15 min,  $p < 0.0001$ ), and the attention group (slope 0.04/15 min;  $p = 0.0425$ ), but remained flat in the hypnosis group. Anxiety decreased over time in all

three groups with slopes of -0.04 (standard), -0.07 (attention), and -0.11 (hypnosis). Drug use in the standard group (1.9 units) was significantly higher than in the attention and hypnosis groups (0.8 and 0.9 units, respectively). One hypnosis patient became haemodynamically unstable compared with ten attention patients ( $p=0.0041$ ), and 12 standard patients ( $p=0.0009$ ). Procedure times were significantly shorter in the hypnosis group (61 min) than in the standard group (78 min,  $p=0.0016$ ) with procedure duration of the attention group in between (67 min).

INTERPRETATION: Structured attention and self-hypnotic relaxation proved beneficial during invasive medical procedures. Hypnosis had more pronounced effects on pain and anxiety reduction, and is superior, in that it also improves haemodynamic stability.

Abstract from National Library of Medicine, PubMed

### 1999

Mauer, Magaly H.; Burnett, Kent F.; Ouellette, Elizabeth Anne; Ironson, Gail H.; Dandes, Herbert M. (1999). Medical hypnosis and orthopedic hand surgery: Pain perception, postoperative recovery, and therapeutic comfort. International Journal of Clinical and Experimental Hypnosis, 47 (2), 144-161.

Orthopedic hand-surgery patients experience severe pain postoperatively, yet they must engage in painful exercises and wound care shortly after surgery; poor patient involvement may result in loss of function and disfigurement. This study tested a hypnosis intervention designed to reduce pain perception, enhance postsurgical recovery, and facilitate rehabilitation. Using a quasi-experimental research design, 60 hand-surgery patients received either usual treatment or usual treatment plus hypnosis. After controlling for gender, race, and pretreatment scores, the hypnosis group showed significant decreases in measures of perceived pain intensity (PPI), perceived pain affect (PPA), and state anxiety. In addition, physician's ratings of progress were significantly higher for experimental subjects than for controls, and the experimental group had significantly fewer medical complications. These results suggest that a brief hypnosis intervention may reduce orthopedic hand-surgery patients' postsurgical PPI, PPA, and anxiety; decrease comorbidity; and enhance postsurgical recovery and rehabilitation. However, true experimental research designs with other types of controls must be employed to determine more fully the contribution of hypnosis to improved outcome.

### 1998

Felt, Barbara T.; Hall, Howard; Olness, Karen; Schmidt, Wendy; Kohen, Daniel; Berman, Brad D.; Broffman, Gregg; Coury, Daniel; French, Gina; Dattner, Alan; Young, Martin H. (1998). Wart regression in children: Comparison of relaxation-imagery to topical treatment and equal time interventions. American Journal of Clinical Hypnosis, 41 (2), 130-137.

Relaxation mental imagery (RMI), standard topical treatment (Top Tx), and equal time-control interventions were compared on measures of wart regression in sixty one, 6-12-year-old children. Subjects chose one common ("index") wart and attended 4 visits over 8 weeks. At each visit, total and "index" extremity wart number were counted and a photo

was taken of the "index wart" for later measurement. On average, total wart number decreased by 10% and "index wart" area decreased by 20% with no significant group differences during the first eight weeks. Phone follow [sic] was conducted 6 to 18 months from study entry. At phone follow up, there was a trend for more RMI and Top Tx subjects to report complete wart resolution ( $p = 0.07$ ) with a majority of RMI children reporting use of RMI or no specific treatment pursuit. We conclude there was no significant short-term benefit for RMI in this randomized controlled trial of wart regression in children. However, longer term benefits for RMI and Top Tx groups are suggested.

## 1997

Faymonville, M. E.; Mambourg, P. H.; Joris, J.; Vrijens, B.; Fissette, J.; Albert, A.; Lamy, M. (1997). Psychological approaches during conscious sedation. Hypnosis versus stress reducing strategies: A prospective randomized study. *Pain*, *73* (3), 361-367.

Stress reducing strategies are useful in patients undergoing surgery. Hypnosis is also known to alleviate acute and chronic pain. We therefore compared the effectiveness of these two psychological approaches for reducing perioperative discomfort during conscious sedation for plastic surgery. Sixty patients scheduled for elective plastic surgery under local anesthesia and intravenous sedation (midazolam and alfentanil upon request) were included in the study after providing informed consent. They were randomly allocated to either stress reducing strategies (control: CONT) or hypnosis (HYP) during the entire surgical procedure. Both techniques were performed by the same anesthesiologist (MEF). Patient behavior was noted during surgery by a psychologist, the patient noted anxiety, pain, perceived control before, during and after surgery, and postoperative nausea and vomiting (PONV). Patient satisfaction and surgical conditions were also recorded. Peri- and postoperative anxiety and pain were significantly lower in the HYP group. This reduction in anxiety and pain were achieved despite a significant reduction in intraoperative requirements for midazolam and alfentanil in the HYP group (alfentanil:  $8.7 \pm 0.9$  microg kg<sup>(-1)</sup>/h<sup>(-1)</sup> vs.  $19.4 \pm 2$  microg kg<sup>(-1)</sup>/h<sup>(-1)</sup>,  $P < 0.001$ ; midazolam:  $0.04 \pm 0.003$  mg kg<sup>(-1)</sup>/h<sup>(-1)</sup> vs.  $0.09 \pm 0.01$  mg kg<sup>(-1)</sup>/h<sup>(-1)</sup>,  $P < 0.001$ ). Patients in the HYP group reported an impression of more intraoperative control than those in the CONT group ( $P < 0.01$ ). PONV were significantly reduced in the HYP group (6.5% vs. 30.8%,  $P < 0.001$ ). Surgical conditions were better in the HYP group. Less signs of patient discomfort and pain were observed by the psychologist in the HYP group ( $P < 0.001$ ). Vital signs were significantly more stable in the HYP group. Patient satisfaction score was significantly higher in the HYP group ( $P < 0.004$ ). This study suggests that hypnosis provides better perioperative pain and anxiety relief, allows for significant reductions in alfentanil and midazolam requirements, and improves patient satisfaction and surgical conditions as compared with conventional stress reducing strategies support in patients receiving conscious sedation for plastic surgery.

Abstract from National Library of Medicine, PubMed

-tient satisfaction and surgical conditions as compared with conventional stress reducing strategies support in patients receiving conscious sedation for plastic surgery.

Abstract from National Library of Medicine, PubMed

Schoenberger, Nancy E.; Kirsch, Irving; Gearan, Paul; Montgomery, Guy; Pastyrnak, Steven L. (1997). Hypnotic enhancement of a cognitive behavioral treatment for public speaking anxiety. Behavior Therapy, 28, 127-140.

The effectiveness of a multidimensional cognitive behavioral treatment for public speaking anxiety was compared with that of the same treatment supplemented by hypnosis. The hypnotic treatment included all components of the cognitive behavioral treatment. It differed from the nonhypnotic treatment only in that relaxation training was presented as a hypnotic induction, automatic thoughts were referred to as self-suggestions, and explicit hypnotic suggestions for improvement were added. Participants in both treatment conditions improved more than those in a wait-list control group. Moreover, labeling the treatment "hypnotic" appeared to enhance treatment effectiveness. The hypnotic treatment generated expectancies for greater change among participants than did the nonhypnotic treatment, and these expectancies were correlated with treatment outcome. Implications for the use of hypnosis in treatment are discussed.

## 1996

Kirsch, Irving (1996). Hypnotic enhancement of cognitive-behavioral weight loss treatments--Another meta-reanalysis. Journal of Consulting and Clinical Psychology, 64 (3), 517-519.

In a 3rd meta-analysis of the effect of adding hypnosis to cognitive-behavioral treatments for weight reduction, additional data were obtained from authors of 2 studies, and computational inaccuracies in both previous meta-analyses were corrected. Averaged across posttreatment and follow-up assessment periods, the mean weight loss was 6.00 lbs. (2.72 kg) without hypnosis and 11.83 lbs. (5.37 kg) with hypnosis. The mean effect size of this difference was 0.66 SD. At the last assessment period, the mean weight loss was 6.03 lbs. (2.74 kg) without hypnosis and 14.88 lbs. (6.75 kg) with hypnosis. The effect size for this difference was 0.98 SD. Correlational analyses indicated that the benefits of hypnosis increased substantially over time ( $r=.74$ ).

Sapp, Marty (1996). Three treatments for reducing the worry and emotionality components of test anxiety with undergraduate and graduate college students: Cognitive-behavioral hypnosis, relaxation therapy, and support counseling. Journal of College Student Development, 37 (1), 79-87.

The effects of cognitive-behavioral hypnosis, relaxation therapy, and supportive counseling in reducing the worry and emotionality components of test anxiety among undergraduate and graduate students were examined. Relaxation therapy was more effective with graduate students undergraduate responded more to supportive counseling. Similarly, cognitive-behavioral hypnosis and relaxation therapy were both more effective in reducing the worry and emotionality components of test anxiety and in improving grade point averages than was supportive counseling

Nash, Michael R. (1995, November). [What we don't know](#). [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

In the past few years the quality of psychotherapy research has improved, supporting the position that therapy works. Hypnosis outcome research to date is conceptually and methodologically substandard.

APA's Division 12 published a list of 25 treatments considered well established in efficacy or probably effective. Hypnosis was not on the list, and wasn't mentioned as not on the list!

The criteria for "well established or probably effective therapies" are: At least two good group design studies, conducted by different investigators, demonstrating efficacy in one or more of the following ways:

Superior to pill or psychological placebo or to another treatment.

Equivalent to an already established treatment in studies with adequate statistical power (about 30 per group; cf Kazdin & Bass, 1989) or a large series of single case design studies demonstrating efficacy. Such single case studies must have used good experimental designs and compared the intervention to another treatment as in above.

Further criteria: --Studies must be conducted with treatment manuals. --Characteristics of the client samples must be clearly specified.

David Orlinsky has a useful model, in which hypnosis would be classified as a therapeutic operation, a process variable that could be examined in relationship to outcome. But this approach will not meet the above criteria. We must move ahead to establish the usefulness of hypnosis for a finite number of clinical problems. However doing so would go against the long-standing policy of considering hypnosis not a therapy in itself, but simply adjunctive to another therapy.

APA's list includes broad therapies, and we should not try to validate "hypnosis treatment for depression" or "hypnosis treatment for marital problems." But many of the therapies on the APA list of therapies with demonstrated efficacy are very prescribed, e.g. behavior therapy for headache and for irritable bowel syndrome.

Some may say that we cannot demonstrate efficacy for hypnosis because during hypnotherapy we use other things like advice, emotional support, etc. That's also true for behavior therapy approaches. Why apologize that we use non-hypnosis procedures in addition to hypnosis?

We need to show interventions work, not necessarily why they work. There doesn't have to be a "model of treatment" as there is a behavioral model of treatment, a psychoanalytic model of treatment, etc. We can nevertheless demonstrate efficacy.

We should conceptualize some of our work in terms of hypnotic treatment modules, a brief hypnotic treatment for some specific disorder (and call them that-- hypnotic treatment modules).

## 1994

Rapkin, David; Holroyd, Jean (1994, February). Letter to the Editor (Cost-benefits of presurgery hypnosis) [Letter]. [Society for Clinical and Experimental Hypnosis Newsletter, 35 \(1\), 8.](#)

"In her presidential address to the annual meeting of SCEH this autumn, Dr. Karen Olness made a plea for more investigation of cost-benefits in clinical research. To further that end, we would like to share some data that were not published when our article, "Guided Imagery, Hypnosis and Recovery from Head and Neck Cancer Surgery: An Exploratory Study," was published in IJCEH (1991). The data were withdrawn from the article because a reviewer had difficulty believing the cost figures, but it is just such important cost benefits that really ought to be publicized.

difficulty believing the cost figures, but it is just such important cost benefits that really ought to be publicized.

"In our research, 15 head and neck cancer surgery patients volunteered for hypnosis prior to surgery; they were compared with 21 patients who received usual care (no hypnosis) on medical outcome measures. Postoperative hospital stay was 8.7 days for the hypnosis group and 13.9 days for the usual care group ( $p < .05$ ). The average savings for the intervention group was \$6,725. While this difference fell short of statistical significance on the Wilcoxon test ( $Z = -1.5402$ ,  $p < .10$ ), it is rather striking on its face. The range actually was \$7849 to \$27,782 for Intervention Group patients and \$9,390 to \$53,627 for Usual Care group patients.

"In 1990 a semi-private room at UCLA Center for the Health Sciences cost \$405 to \$529 per day, depending on quality; standard ICU care (one nurse for two patients) was \$1236 per day, and more intensive care (one nurse for one patient) was \$2471/day. Head and neck surgery patients may remain in the ICU, driving up costs, solely because they have not learned to suction their own tracheostomies, usually a motivational factor that might be affected by hypnosis. UCLA is a tertiary care hospital in a high-cost area (and is therefore reimbursed at higher rates than many other hospitals), and costs may be driven up by the many additional procedures required for long-stay patients. Therefore the cost savings could not be expected to be as great where expected length of stay is brief, ICU use is limited, and community costs are lower" (p. 8).

Ter Kuile, Moniek M.; Spinhoven, Philip; Linssen, A. Corry G.; Zitman, Frans G.; et al. (1994). Autogenic training and cognitive self-hypnosis for the treatment of recurrent headaches in three different subject groups. *Pain*, 58 (3), 331-340.

The aims of this study were to (a) investigate the efficacy of autogenic training (AT) and cognitive self-hypnosis training (CSH) for the treatment of chronic headaches in comparison with a waiting-list control (WLC) condition, (b) investigate the influence of subject recruitment on treatment outcome and (c) explore whether the level of hypnotizability is related to therapy outcome. Three different subjects groups (group 1, patients ( $n = 58$ ) who were referred by a neurological outpatient clinic; group 2, members ( $n = 48$ ) of the community who responded to an advertisement in a newspaper; and group 3, students ( $n = 40$ ) who responded to an advertisement in a university newspaper) were allocated at random to a therapy or WLC condition. During treatment, there was a significant reduction in the Headache Index scores of the subjects in contrast with the controls. At post-treatment and follow-up almost no significant differences were observed between the 2 treatment conditions or the 3 referral sources regarding the Headache Index, psychological distress (SCL-90) scores and medication use. Follow-up

measurements indicated that therapeutic improvement was maintained. In both treatment conditions, the high-hypnotizable subjects achieved a greater reduction in headache pain at post-treatment and follow-up than did the low-hypnotizable subjects. It is concluded that a relatively simple and highly structured relaxation technique for the treatment of chronic headache subjects may be preferable to more complex cognitive hypnotherapeutic procedures, irrespective of the source of recruitment. The level of hypnotic susceptibility seems to be a subject characteristic which is associated with a more favourable outcome in subjects treated with AT or CSH.

### 1993

Banerjee, Sanjay; Srivastav, Anita; Palan, Bhupendra M. (1993). Hypnosis and self-hypnosis in the management of nocturnal enuresis: A comparative study with imipramine therapy. [American Journal of Clinical Hypnosis](#), 36, 113-119.

Various therapeutic modalities have been used for treating enuresis due to the lack of a single identifiable cause. We carried out a comparative study of imipramine and direct hypnotic suggestions with imagery used for the management of functional nocturnal enuresis. Enuretic children, ranging in age from 5 to 16 years, underwent 3 months of therapy with imipramine (N = 25) or hypnosis (N = 25). After termination of the active treatment, the hypnosis group continued practicing self-hypnosis daily during the follow-up period of another 6 months. Of the patients treated with imipramine, 76% had a positive response (all dry beds); for patients treated with hypnotic strategies, 72% responded positively. At the 9-month follow-up, 68% of patients in the hypnosis group maintained a positive response, whereas only 24% of the imipramine group did. Hypnosis and self-hypnosis strategies were found to be less effective in younger children (5-7 years old) compared to imipramine treatment. The treatment response was not related to the hypnotic responsivity of the patient in either group

Barber, Joseph (1993). The clinical role of responsivity tests: A master class commentary. [International Journal of Clinical and Experimental Hypnosis](#), 41 (3), 165-168.

"What is the proper role of hypnotic responsivity tests in the clinical context? If a patient demonstrates a low score, should the clinician proceed to use hypnosis? To what extent should the patient's level of hypnotic responsivity guide the clinical use of hypnosis? If the initial hypnotic response is minimal, should the clinician proceed with the use of hypnosis?" (p. 165) These are the questions that guide this discussion.

What is the proper role of hypnotic responsivity tests in the clinical context? If a patient demonstrates a low score, should the clinician proceed to use hypnosis? To what extent should the patient's level of hypnotic responsivity guide the clinical use of hypnosis? If the initial hypnotic response is minimal, should the clinician proceed with the use of hypnosis? This often-asked question does not have a single, simple answer. This very complex issue is addressed more fully elsewhere (Barber, 1992). Let me approach this more limited discussion by suggesting three important points.

1. The single administration of a test of hypnotic responsiveness does not provide a valid and reliable indication of a patient's responsiveness.
2. A responsivity score is only an estimate of probable responsiveness.
3. Clinical efficacy depends on a variety of hypnotic and nonhypnotic factors, and not solely on responsiveness.

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

Olness, Karen N. (1993, October). Hypnosis, research, and public affairs. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Bill Moyers' TV show on public television, *Healing and the Mind*, was seen by 15 million when first shown, and the book became a Book of the Month selection. Consumer Reports published *Mind-Body Medicine*. A TV program, *Heart of Healing*, sponsored by Noetic Sciences, will be shown; their teaching guides refer to the Society for Clinical and Experimental Hypnosis (SCEH).

The federal government's NIH Office of Alternative Medicine (OAM) now has grants providing up to \$30,000; in first year they received 800 letters of intent, ultimately 500 applications. In Nursing Research they also have sponsored research with OAM. OAM and the Cancer Institute are evaluating studies on using visual imagery with cancer patients. July of this year there was a 3-day working conference, with 80 scientists--1/2 of them from NIH--; David Spiegel and Karen Olness were there. Forty draft RIA's will be coming out. She will give us a draft of the RIA's.

Fetzer Institute of Michigan has been involved, with Robert Lehman--new director--who vows to make it the leading institute for research on the mind. They funded the NIH Conference, but don't give direct research support to investigators.

Marketing information on science and clinical medicine is not an interest for me, but Fetzer's marketing effort has resulted in research support that previously we would not have had. We do not have enough research on the value (cost vs benefits) of hypnotherapy.

Jacknow & Associates looked at nausea in children; hypnotized patients had less nausea than the control group. Syrjala's study (*Pain*, 1992) and this one did not have a cost benefit component.

A medical student and I learned that even HMOs don't know the average costs for various treatments for migraine headaches. There are only 3 controlled studies on child migraine that compare drugs to placebos! 5-7% of children in U.S. have migraines; 18% of men and 22% of women also have migraines.

We need more studies of how hypnotic ability can be modified, to increase beneficial outcomes.

We are forming a pediatric multi-site group to study Tourette's Syndrome and warts. A Wart Sensor is being developed to measure what is going away and in what order; by Case Western Reserve.

There should be increased funds available in the next 5-7 years. The magazine Scientific American, Sept 24 1993, predicts more support for the behavioral sciences

It's time to explain the mechanisms of what happens in hypnosis.

Patterson, David R. (1993, October). [Managing burn pain through hypnosis](#). [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Since 1955 there were 13 published reports on managing burn pain through hypnosis, with generally positive results; but almost all were anecdotal, with a lack of standardized measures. Time, location, and duration of the hypnotic interventions were not specified, cost-effectiveness was hard to detect, and medications used were not reported.

Publications don't even report the type of hypnotic intervention used.

Hypnosis is indicated for procedural pain more than for during resting periods. Going through dressing changes is typically more painful than the burn itself. Opioid medications don't control all the pain. In our research we use J. Barber's Rapid Induction Analgesia, which entails suggestions for: 1. Slow breathing 2. Going down 20 steps 3. Confusion and amnesia 4. Anchoring post-hypnotic suggestions 5. Touching cue for reinstating the hypnosis 6. Relaxing scenario (Patterson added this to the Barber script) 7. Returning up the steps

This intervention is good because it's replicable, and it's easy to train students to use it.

The hypnosis is done the morning before the dressing change.

Instructions for nurses are: 1. Read the card 2. Have patient lie down comfortably, etc. 3. Provide post hypnotic cue (usually a touch on the shoulder)

In the first study we used patients refractory to opioids, and also used a historical control group. This was published in the American Journal of Clinical Hypnosis. Our subsequent study was published in the Journal of Consulting and Clinical Psychology (1992). We stabilized administration of opioids; then patients had hypnosis or anxiolytics or were in the control condition. There was significant reduction in pain for hypnosis.

Patterson et al (current study). Compared Benzodiazapines to hypnosis using four groups: Hypnosis plus Lorazepam Hypnosis and placebo Lorazepam Hypnosis attention control and Lorazepam Placebo hypnosis and placebo pills

Analgesia stabilized on 2 days. There was not an effect, no significant drop in pain scores for either hypnosis or Lorazepam. Perhaps we didn't get a significant drop in pain ratings because in this study we were taking all patients who applied and their initial pain ratings were not as high as in the other study. We have found no relationship or pain reduction with hypnotizability either.

Why did we not get the positive results found previously for hypnosis? There are several possibilities. There is always a trend toward a drop in pain ratings over time. People generally bottom out with a rating of 3 or 4, and it looks like a floor effect. Also, the efficacy of hypnosis may be partly contingent on baseline pain level, and motivation to cooperate with the intervention.

Could there be the same relation to baseline for benzodiazepines?

We have noted that improved application of opioids early on means pain is lower. Marks & Sacher, *Annals of Internal Medicine*, 1973, indicate physicians under-prescribe opiates. Also Melzack in the *Scientific American* states this.

We feel that we should not push hypnotherapy so much that we feed in to opioidphobia. Hypnosis is a useful adjunct to opiates. We believe that you should stabilize the patient with opioids, and if they are not responding well, then use hypnosis.

In future research we want to find out which patients do best with hypnosis.

In future research we want to find out which patients do best with hypnosis.

Saperstein, Guy; Montgomery, Guy; Kirsch, Irving (1993, August). [Cognitive-behavioral hypnotherapy: A meta-analysis.](#) [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Meta-analysis was used to compare the effectiveness of cognitive-behavior therapy (CBT) to that of cognitive-behavior therapy with hypnosis (CBHT). A review of the literature revealed 18 studies in which 20 hypnotic treatments were compared to similar non-hypnotic treatments and in which sufficient data were presented for the calculation of effect sizes. Effect sizes were weighted for sample size and then averaged. This resulted in a mean effect size of 1.37 standard deviation units, indicating that the average client receiving cognitive-behavioral hypnotherapy is better off than 90 percent of clients who receive the same treatment in a nonhypnotic context. Substantial variance in effect sizes was found, indicating the presence of a moderator variable. Further analyses indicated that this variance was limited to treatments in which obesity was the presenting problem. The mean effect size for the addition of hypnosis to treatments of obesity was larger ( $M = 1.98$ ) and more variable (variance = 4.10) than that for the addition of hypnosis to treatments for other presenting problems ( $M = .52$ ; variance = .06). Also, studies of clinical samples yielded larger effects ( $M = 1.72$ ) than analogue studies with college student samples ( $M = .07$ ). The effect of hypnosis was independent of whether relaxation training was included in the nonhypnotic treatment or whether the hypnotic treatment included suggestions that were not included in the nonhypnotic treatment. Consistent with response expectancy theory, these data indicate that the substantial positive effect obtained was due to labeling the treatment 'hypnosis,' rather than to any substantive change in clinical procedure. (ABSTRACT from *Bulletin of Division 30, Psychological Hypnosis*, Fall 1993, Vol. 2, No. 3.)

**1992**

Hollander, Ellen L.; Baw, Saul D. (1992, October). [Improving outcomes in sex therapy through the use of hypnotic methods.](#) [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

This is a report on the Cornell University Medical College Human Sexuality Program and Behavior Therapy Program. Cognitive-behavioral treatment is the principal approach in sex therapy these days (in contrast to insight treatment before 1954).

The authors find hypnosis to be useful in cases that were previously thought to be treatment refractory. Insensuality, inability to be absorbed, seems at the root of these problems. Hypnosis is useful for diagnosis and for developing task relevant immersion.

Three types of disorders: Desire phase Excitement phase Orgasm phase

Each phase has specific obstacles that can be elicited with a detailed interview: 1. Desire: anti-fantasy or the person focuses on unpleasant images 2. Excitement: performance anxiety or rumination about sexual potency (especially in men) 3. Orgasm: spectating or self-observation

Basic treatment strategy is to promote maintenance of absorption while dealing with the material that had been eliciting anxiety. In past we traditionally assumed absorption was present. Often this isn't the case. It can be addressed with hypnotic methods.

Conceptualized as a skill, hypnosis can improve the patient's ability to shift from peripheral to focal awareness.

Reports in the literature address sexual dysfunction as one unitary phenomenon, using direct suggestions, anxiety/stress reduction techniques, metaphorical suggestions, ego strengthening devices, hypnoanalytic procedures to uncover the unconscious determinants of dysfunction.

devices, hypnoanalytic procedures to uncover the unconscious determinants of dysfunction.

Kirsch, Irving (1992, August). [Cognitive-behavioral hypnotherapy.](#) [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

The use of hypnosis to augment cognitive behavior therapy was described. Hypnotic inductions establish a context in which the effects of therapeutic interventions can be potentiated for clients with positive attitudes and expectancies toward it. Hypnosis can also provide a disinhibiting context for both clients and therapists, allowing them to behave in ways that are therapeutic, but that might seem awkward in other contexts. A meta-analysis of outcome studies in which the effects of a cognitive-behavioral treatment were compared to the effects of the same treatments supplemented by hypnosis resulted in a mean effect size of 0.87 standard deviations, indicating the average client receiving cognitive-behavioral hypnotherapy is better off at the end of it than more than 80 percent of clients who receive the same treatment in a nonhypnotic context. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Patterson, David R.; Everett, John J.; Burns, G. Leonard; Marvin, Janet A. (1992). [Hypnosis for the treatment of burn pain.](#) *Journal of Consulting and Clinical Psychology*, *60*, 713-717.

The clinical utility of hypnosis for controlling pain during burn wound debridement was investigated. Thirty hospitalized burn patients and their nurses submitted visual analog scales (VAS) for pain during 2 consecutive daily wound debridements. On the 1st day, patients and nurses submitted baseline VAS ratings. Before the next day's wound debridement, Subjects received hypnosis, attention and information, or no treatment. Only hypnotized Subjects reported significant pain reductions relative to pretreatment baseline. This result was corroborated by nurse VAS ratings. Findings indicate that hypnosis is a viable adjunct treatment for burn pain. Theoretical and practical implications and future research directions are discussed.

The treatment of burn patients involves a number of very painful procedures, including frequent removal of necrotic tissue, application of antiseptics, and bandaging. "Dressing changes often present pain so severe that the maximum dosages of opioids, even when supplemented by anxiolytics or inhalants, are often inadequate (Everett et al., 1990; Perry et al., 1981)" (p. 713). Previous research on the use of hypnosis with burn pain patients demonstrates many of the limitations found in the literature on clinical hypnosis and pain: nonrandomization of samples, nonstandardized hypnotic inductions, unreliable pain measures, inadequate control groups, unreported levels of analgesias used.

The present research controls for experimenter/therapist attention as well as 'expectancy' of both patient and hospital staff. (Both patients and their nurses were blind to group assignment.)

Patients who rated their most recent dressing change as 5 or greater (on a 1-10 scale) were invited to participate and then were randomly assigned to one of three groups: hypnosis, attention/information (pseudo hypnosis), or no treatment control. Interventions began within three days of admission to the acute burn care unit (though some had previously been on an intensive care unit). The patients were continued on opioid medication during the two days of the study, and an attempt was made to keep medication dosage constant. On Day 1 the patients received opioid medication before the dressing change, and on Day 2 they received the same medication plus their assigned treatment.

Hypnosis - Induction was administered by psychologist in patient's room before the dressing change. It was based on Barber's Rapid Induction Analgesia, modified specifically for burn wound debridement as described by Patterson, Questad, and deLateur (1989), and required 25 minutes

Attention and information (pseudo hypnosis) - The psychologist told patients they would get hypnosis, then spent 25 minutes with them, during which time the psychologist took a history of the accident and their emotional response; educated them about burn pain; encouraged them to differentiate sensations felt during dressing changes from signals of harm or danger; and informed them that their "sensation" indicated the presence of viable tissue and was a sign of healing. Toward the end of the session, patients were told "we have found that it is useful to close your eyes, count to 20, and imagine yourself in a relaxing place prior to dressing change" and were given 30 seconds to practice the "hypnosis." They were told after that brief practice session that the nurse would prompt them to begin hypnosis before their next dressing change by giving them some instructions and touch them on the shoulder.

No-treatment control condition - Patients received only the opioid medication.

"A standard set of instructions for dressing changes was given to the nurse for each S in the hypnosis and attention and information groups ... (a) having the subject sit comfortably in the tank (or lie on the table), (b) instructing the S to picture the staircase and count from 1 to 20, (c) touching the subject on the shoulder four times during wound care, and (d) telling the subject to let the area being worked on 'become relaxed and numb'" (p. 714).

No treatment control condition - Subjects received only opioid medication for both Day 1 and Day 2 dressing changes.

A Visual Analog Scale (VAS) for rating pain was used by both the patients and the nurses, within three hours of the dressing change.

-tive hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids).

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours.

Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

Discussion: The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

plus their assigned treatment.

Hypnosis - Induction was administered by psychologist in patient's room before the dressing change. It was based on Barber's Rapid Induction Analgesia, modified specifically for burn wound debridement as described by Patterson, Questad, and deLateur (1989), and required 25 minutes

Attention and information (pseudo hypnosis) - The psychologist told patients they would get hypnosis, then spent 25 minutes with them, during which time the psychologist took a history of the accident and their emotional response; educated them about burn pain; encouraged them to differentiate sensations felt during dressing changes from signals of harm or danger; and informed them that their "sensation" indicated the presence of viable tissue and was a sign of healing. Toward the end of the session, patients were told "we have found that it is useful to close your eyes, count to 20, and imagine yourself in a relaxing place prior to dressing change" and were given 30 seconds to practice the "hypnosis." They were told after that brief practice session that the nurse would prompt them to begin hypnosis before their next dressing change by giving them some instructions and touch them on the shoulder.

No-treatment control condition - Patients received only the opioid medication.

"A standard set of instructions for dressing changes was given to the nurse for each S in the hypnosis and attention and information groups ... (a) having the subject sit

comfortably in the tank (or lie on the table), (b) instructing the S to picture the staircase and count from 1 to 20, (c) touching the subject on the shoulder four times during wound care, and (d) telling the subject to let the area being worked on 'become relaxed and numb'" (p. 714).

No treatment control condition - Subjects received only opioid medication for both Day 1 and Day 2 dressing changes.

A Visual Analog Scale (VAS) for rating pain was used by both the patients and the nurses, within three hours of the dressing change.

Of 87 patients who met the inclusion criteria (for age, psychiatric and language status, and length of hospital stay) only 30 were in the final group. (31 had pain rating scores below 5; 13 declined to participate; 5 were in other investigations; 5 were not able to participate because of hypnotherapist unavailability; and 3 who began the study did not complete it. Those in the final subject group averaged 34.1 years old; mean total burn surface area was 16%.

No subjects in the placebo group questioned whether they had actually been hypnotized. Nevertheless, Experimenters did a manipulation check to determine whether the pseudo hypnosis group thought they were hypnotized. Subjects rated on a scale of 1-5 the extent to which they believed the hypnotic intervention was 'effective'; means were 4.0 for hypnosis and 3.4 for placebo, a non-significant difference.

Pain medication was converted to morphine equivalents (MD) and was equivalent across the three groups.

"The hypnosis group reported a significant reduction in pain from pre- to posttreatment, whereas the attention and information and the no-treatment control groups did not change significantly ... In addition, the hypnosis group had a significantly lower posttreatment pain rating than both the attention and information and the no-treatment control groups, which did not differ significantly" (p. 715).

"Nurses' ratings of subjects in the hypnosis group showed a significant reduction in pain from pretreatment to posttreatment, whereas there were no significant pain reductions for the attention and information and the no-treatment control groups ... The three posttreatment means did not differ significantly ... [and] correlations between patient baseline and posttreatment pain ratings and those submitted by nurses were  $r(27) = .16$ ,  $p = .423$ , for baseline ratings and  $r(27) = .29$ ,  $p = .127$ , for posttreatment ratings" (p. 716).

In their Discussion, the authors note that patients' reports evidenced more treatment effect than that of nurses. Also, they observed that the treatment effects might have been stronger if they had not been following a research protocol very strictly. "We might also mention that hypnotized subjects reported lower pain scores in spite of problems that they may have had in remembering the actual amount of pain they experienced. There is an increasing body of evidence suggesting that subjects have difficulty remembering clinical pain (Carlsson, 1983). Considering these factors, we feel that the treatment effect was a robust one" (p. 716).

The low correlation between nurses' ratings and patients' ratings is consistent with earlier reports that nurses are often unable to assess patients' pain accurately (Choiniere et al., 1990; Iafrafi, 1986; Walkenstein, 1982). The authors discuss why this might be, giving references. "Yet in this study, nurses [blind to group assignment] still reported a significant pain reduction for the hypnosis group" (p. 716).

"Our findings were consistent with theoretical approaches that argue that hypnotized subjects undergo an altered state--or at least a different form of cognitive processing--as opposed to a placebo effect" (p. 716).

"The question of whether hypnosis is superior to opioid pain medication, or can be used in its stead, was never addressed in this study. All subjects received opioids throughout hospitalization, including the study period. Our bias is that opioid drugs are the primary treatment of choice for burn pain. Attempting to replace opioids with hypnosis for the purpose of satisfying the hypnotist's curiosity or convictions, while occasionally successful, may often result in unnecessary patient suffering" (p. 716).

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Spanos, Nicholas P.; Simulates, Ann; de Faye, Barbara; Mondoux, Thomas J.; Gabora, Natalie J. (1992-93). A comparison of hypnotic and nonhypnotic treatments for smoking. [Imagination, Cognition and Personality, 12, 23-43.](#)

Three experiments administered variants of Spiegel's (1970) smoking cessation procedure to smokers in hypnotic and nonhypnotic treatments. Follow-up periods were from twelve to twenty-four weeks depending on the experiment. Complete abstinence was an infrequent outcome in all three experiments. Greater-than-control reductions in smoking for treated subjects were obtained in two of the experiments but, in both cases treatment and control subjects failed to differ significantly before the end of the follow-up period. Hypnotic and nonhypnotic treatments produced equivalent smoking reductions in all

studies, and neither hypnotizability nor questionnaire assessments of motivation to quit correlated significantly with treatment outcome. Implications are discussed.

When the experimenters compared number of treatments they simply compared two sessions of Spiegel's one-session treatment with four sessions of it. The authors make the point that perhaps they should vary the four sessions.

"In all three of the present experiments the abstinence rates associated with the Spiegel treatment were very low. Our abstinence rates were similar to those reported in one earlier study [4 - Perry et al.], but substantially lower than those reported in three other studies [2, 22, 25]. The reasons for these discrepancies between studies remains unclear, but experiment 3 suggests that these discrepancies cannot be accounted for simply in terms of whether the subjects were drawn from a university or nonuniversity population, and experiment 2 suggests that the discrepancies are unrelated to the number of treatment sessions administered to subjects.

"The finding that hypnotic and nonhypnotic subjects in all three experiments attained equivalent reductions in smoking is consistent with other comparison studies in this area which indicate that hypnotic treatments are no more effective than various nonhypnotic procedures at inducing reductions in smoking [22, 25, 30]. More generally, these findings are consistent with comparison studies on a wide variety of clinical disorders (headache pain, warts, phobias, obesity) which indicate that hypnotic treatments are no more effective than nonhypnotic ones at producing therapeutic change (see [3] for a review).

"The failure to find significant correlations between smoking reduction and hypnotizability among treated subjects is also consistent with the findings of most studies in this area [3], but the reasons why significant correlations between these variables are found in some studies and not others remains unclear. Spanos [3] suggested that significant correlations between these variables are particularly likely when hypnotizability testing is integrated into the treatment protocol. Under these circumstances subjects are likely to form strong expectations about treatment success on the basis of their self-observed responses to the hypnotizability scale. Such expectations may, in turn, influence subjects' motivations to comply with the treatment regimen, the self-statements they make concerning their likelihood of quitting, etc. In all of the present experiments hypnotizability was assessed at the end of the follow-up period and, therefore, could not influence subjects' expectations of treatment success" (pp. 40-41).

## 1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. *Anesthesiology*, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy,

vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

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The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a

great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching--i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

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Evans, Frederick J. (1991). *Hypnotizability: Individual differences in dissociation and the flexible control of psychological processes*. In Lynn, Steven J.; Rhue, Judith W. (Ed.), [Theories of hypnosis: Current models and perspectives](#) (pp. 144-170). New York: Guilford Press.

"In summary, some of our recent data suggest that there are a number of interacting reliable correlates of hypnotizability ... . None relate to suggestibility in the traditional sense. ... Hypnotizability is related to the ability to process cognitive information during sleep, to the physiological ease of falling asleep, and to a dimension of subjective sleep characteristics we have labeled the 'control of sleep' (involving ... the ability to fall asleep easily and readily at will, and the tendency to take naps). Additional data have suggested that the concept of absorption can be meaningfully divided into subfactors that reflect the volitional control over the absorption process that correlates with hypnotizability in both normal and patient populations. ... (C)ontrolled absorption correlates significantly with

hypnotizability in both normal and patient populations--a result that might be predicted from the concept of multiple pathways as correlates of hypnotizability (J. R. Hilgard, 1970). ... Finally, both the control-of-sleep dimension and hypnotizability relate to the reductions of symptoms and psychopathology even when psychiatric patients are not treated with hypnotic techniques" (pp. 164-165).

Haanen, Huub C.M.; Hoenderdos, Henk T.W.; Van Romunde, Leo K.J.; Hop, Win C.J.; Malle, Constant; Terwiel, Jack P.; Hekster, Gideon B. (1991). Controlled trial of hypnotherapy in the treatment of refractory fibromyalgia. Journal of Rheumatology, 18 (1), 72-75.

In a controlled study, 40 patients with refractory fibromyalgia were randomly allocated to treatment with either hypnotherapy or physical therapy for 12 weeks with followup at 24 weeks. Compared with the patients in the physical therapy group, the patients in the hypnotherapy group showed a significantly better outcome with respect to their pain experience, fatigue on awakening, sleep pattern and global assessment at 12 and 24 weeks, but this was not reflected in an improvement of the total myalgic score measured by a dolorimeter. At baseline most patients in both groups had strong feelings of somatic and psychic discomfort as measured by the Hopkins Symptom Checklist. These feelings showed a significant decrease in patients treated by hypnotherapy compared with physical therapy, but they remained abnormally strong in many cases. We conclude hypnotherapy may be useful in relieving symptoms in patients with refractory fibromyalgia.

The patients in this study were 38 women and 2 men, ages 30-65, who had had fibromyalgia for an average of 8.5 years (range 1.5 - 40 years). Of these, 25 were on sick leave or incapacitated, and 6 were unemployed. Patients were randomly assigned to hypnotherapy, or to training in muscle relaxation plus massage (designated "physical therapy"). They were withdrawn from analgesics, except for paracetamol (like Tylenol), at the beginning of this program. Hypnotizability was not measured. Hypnosis treatment consisted of an

Hypnosis treatment consisted of an arm levitation induction, imagery deepening techniques, ego strengthening suggestions, and suggestions for control of muscle pain, relaxation, and improved sleep. Patients received eight one-hour sessions in decreasing frequency over three months; after Session 3 they were given a 30-minute audiotape to assist in daily self hypnosis. Seventeen patients completed hypnotherapy but three were dissatisfied and withdrew after 3 sessions.

Patients did self ratings on (1) duration of morning stiffness, (2) muscle pain, (3) fatigue on awakening, (4) sleep disturbance, and (5) global assessment, the last four using visual analog scales (VAS). Patient assessment at 12 and 24 weeks was the primary outcome measure, since fibromyalgia is diagnosed principally from patient's self described symptoms.

Independent observers did not know to which group the patient belonged. The physician's evaluation included (1) dolorimeter measures of point tenderness (for a Total Myalgic Score, TMS), (2) presence of tender points at 30 points, with 5 control points, (3) overall pain rating with visual analogue scale.

The Hopkins Symptom Checklist (HCL-90) also was used to evaluate outcome.

Using analysis of variance techniques and correcting for initial values, the study found significantly more favorable values in the hypnosis group than in the physical therapy group for muscle pain, fatigue on awakening, sleep disturbance, patient's overall assessment, and HCL total score. However, differences were not significant for morning stiffness, physician's overall assessment, or T.S. There were no differences between Weeks 12 and 24 for both groups; therefore the mean value for weeks 12 and 24 for each patient were used to calculate percentage change relative to baseline.

The reduction in pain medication used by the hypnosis group was quite remarkable.

"Median (range) analgesic drug use at the initiation of the study (mostly paracetamol) was in the hypnotherapy group 3.0 (0-42) tablets/week and in the physical therapy group 4.5 (0-21)/week. At Week 12 this was 1.0 (0-21) tablet/week for the hypnotherapy group and 7.0 (0-34) tablets/week for the physical therapy group. At the end of the study, 10 of 12 patients in hypnotherapy group and 3 of 12 patients in the physical therapy group had reduced their paracetamol use (Fisher exact test:  $p = 0.006$ )" (pp. 73-74).

Although it was observed that the total number of tender points decreased (regardless of treatment group), the Total Myalgic Score assigned by the physician had not changed either at week 12 or at week 24. In fact, even the control points were tender in 44% of the patients; most patients showed some pain response to a control point in one or two sessions of the three. "Only 12 of 40 patients had consistently nontender control points, 4 in hypnotherapy group and 8 in the physical therapy group. ... No relation was found between the initial HCL total score and the changes in the other variables studied" (p. 74).

Figures taken from Table 2, showing percent change as compared to baseline:

Physical Therapy (%)	Hypnotherapy (%)	Morning stiffness (minutes)	0.0	-25.0	
Muscle pain (VAS)	-6.8	-10.2**	Fatigue on awakening (VAS)	-0.3	-16.7**
Sleep disturbance (VAS)	-1.0	-23.1**	Overall assessment patient	-8.4	-33.2**

physician	+5.7	-3.2	T.S. (kg/3 cm <sup>2</sup> )	-11.1	-2.4	HCL total score	-0.9	-13.0**
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In their Discussion, the authors write, "In this controlled therapeutic trial in patients with refractory fibromyalgia hypnotherapy was more successful than physical therapy in improving complaints. The assessment of fatigue on awakening, sleep disturbance, muscle pain, the patient's overall assessment and the total score of the HCL showed a significant decrease in the hypnotherapy group at the end of the hypnotherapy at 12 weeks. This decrease persisted for 3 months after finishing the hypnotherapy. The variables studied in the physical therapy group had not changed significantly at 12 and 24 weeks.

"However, the patients in the hypnotherapy group improved only subjectively. This improvement was not seen via more objective variables (T.S. and number of tender points), in accordance with others [Carette et al., 1986]. This suggests that coping with the disease may be positively influenced by hypnotherapy though the underlying disorder is still present.

"Correction of the sleeping disturbance by hypnotherapy was the most consistent finding and possibly played an important role in the subjective improvement of fibromyalgia" (p. 74).

The authors noted that the HCL yielded scores in the pathological range during the baseline period. "Thus, in our study, patients with long-standing fibromyalgia often showed pathological feelings of discomfort. In the hypnotherapy group the total score of the HCL decreased significantly suggesting that the physical disturbance may be secondary to long-standing fibromyalgia. It is worth noting that only 3 of the 57 questions on the HCL-90 concern fibromyalgia" (p. 74).

The authors express the opinion that their data do not support a distinction between fibromyalgia and psychogenic rheumatism [Simms, Goldenberg, Felson, & Mason, 1988; Campbell, Clark, & Tindall, 1983] based on pain reported at control points. "Most patients in our study had variable tender control points. The finding of tender control points in fibromyalgia is consistent with others [Wolfe, Smythe, Yunus, et al., 1990; Scudds, Rollman, Harth, & McCain, 1987]. Also we found a positive correlation between the number of tender points and the presence of tender control points. Therefore, it seems more likely that there is a fairly large overlap between fibromyalgia and psychogenic rheumatism (tender all over)" (p. 75).

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Holroyd, Jean (1991). The uncertain relationship between hypnotizability and smoking treatment outcome. International Journal of Clinical and Experimental Hypnosis, 39, 93-102.

Literature on the relationship between hypnotizability and smoking treatment outcome was reviewed. 91 private patients treated for smoking with hypnotherapy participated in an investigation designed to correct problems in some of the earlier research. 43% quit smoking by the end of treatment but only 16% abstained at least 6 months. Neither immediate quitting nor continued abstinence correlated with hypnotizability. Other variables hypothesized to predict smoking cessation also were not correlated with outcome: number of treatment sessions, need to smoke, motivation to quit, and gender. The low abstention rate may have impeded verification of a relationship between hypnotizability and treatment outcome.

In the Discussion, the author notes that the low overall abstention rate works against finding the predicted relationships, as did restricted range on the hypnotizability measure. "Secondly, the present research design in effect tested the potency of hypnosis (hypnotizable patients) against nonhypnotic treatment (nonhypnotizable control patients) in a research design recommended by Orne (1977). Intensive nonhypnotic involvement with the nonhypnotizable individuals over several sessions may have worked against finding differences between low and high hypnotizables" (p. 99).

"Patients generally did not complete the recommended four sessions ... and they generally were non-adherent to recommended follow-up telephone contact. The observed relationship between initial quitting and number of treatment sessions may exist because people who are responding to treatment to treatment stay in treatment longer, or because more treatment sessions provide a more potent intervention, or both" (p. 99). "Treatment contracts between patients and therapist increased the number of sessions that patients completed but did not increase their abstinence rate" (p. 100).

Millis, P. M.; Rooimans, W.; Spierings, E. L.; Hoogduin, C. A. (1991). Treatment of chronic tension-type headache with hypnotherapy: A single-blind controlled study. Headache, 31, 686-689.

Compared effectiveness of a special hypnotherapy technique with chronic tension headache with a waitlist control group. There were significant reductions ( $p < .05$ ) in number of headache days, hours, and intensity. Improvement was confirmed by subjective evaluation and questionnaire data showing a significant anxiety scores ( $p < .01$ ).

Miller, Mary Frances; Barabasz, Arreed F.; Barabasz, Marianne (1991). Effects of active alert and relaxation hypnotic inductions on cold pressor pain. Journal of Abnormal Psychology, 100 (2), 223-226.

Contrasted relaxation and active alert hypnotic inductions with or without a specific suggestion for cold pressor pain analgesia. Groups of high ( $n = 38$ ) and low ( $n = 27$ )

hypnotizability subjects were tested; hypnotizability had been determined from results of the Stanford Hypnotic Susceptibility Scale, Form C. Cold pressor pain data were obtained after counterbalanced exposure to relaxation and active alert inductions. Highly hypnotizable subjects demonstrated lower pain scores than did low hypnotizability ones. Pain reports did not differ between induction conditions. Highly hypnotizable subjects given an analgesic suggestion showed lower pain scores than did those exposed only to hypnosis. The findings, conceptualized within E. R. Hilgard's (1977a) neodissociation theory, show that relaxation is not necessary for hypnotic analgesia.

The relaxation induction was the SHSS, Form B. The active alert induction used the same instructions except suggestions for alertness, invigoration, and freshness were substituted for drowsiness and relaxation. During the active alert induction, the subjects rode a bicycle ergometer at a constant load of 1-3 kg and a constant rate of 1-2 rotations per s (Banyai & Hilgard, 1976).

Primavera, J. P.; Patterson, S. (1991). A tape-recorded test of hypnotic susceptibility for screening headache patients: A feasibility study of the Harvard Group Scale of Hypnotic Susceptibility, Form A. Headache, 31, 619-621.

In 9 chronic, daily headache patients, compared with 10 control subjects, results did not suggest a correlation between hypnotic susceptibility and reduction of headache pain.

Rapkin, David A.; Straubing, Marsha; Holroyd, Jean (1991). Guided imagery, hypnosis and recovery from head and neck cancer surgery. International Journal of Clinical and Experimental Hypnosis, 39, 215-226.

The value of a brief, preoperative hypnosis experience was explored with a sample of 36 head and neck cancer surgery patients. 15 patients volunteered for the experimental hypnosis intervention. 21 patients who received usual care (no hypnosis) were followed through their hospital charts and were used as a comparison group. Hypnotic intervention and usual care groups were comparable in terms of relevant demographic variables. Postoperative hospitalizations for the hypnotic intervention group were significantly shorter than for the usual care group. Within the hypnotic intervention group, hypnotizability was negatively correlated with surgical complications and there was a trend toward a negative correlation between hypnotizability and blood loss during surgery. Findings suggest that imagery-hypnosis may be prophylactic, benefitting patients by reducing the probability of postoperative complications and thereby keeping hospital stay within the expected range. Recommendations are presented for a controlled, randomized, clinical trial with a sufficiently large sample to provide the opportunity for statistical analysis with appropriate power.

Actual stay in hospital, post-surgery, was 8.7 days (SD = 3.7) for the Hypnosis group and 13.9 days (SD = 9.7) for the Usual Care group; the range was 3-17 days for the Hypnosis group and 5-42 days for the usual care group.

The hypnosis script included an indirect, permissive induction; positive suggestions for relaxation and healing imagery; images of calm situations that would lead to expectation for healing (e.g. a 'healing pool'); suggestions for patients to develop their own images of

pleasurable, comforting situations. The only direct suggestions were for minimal blood loss during surgery, modeled after those given in the waking situation by Bennett, Benson, and Kuiken (1986).

As measured by the Stanford Hypnotic Clinical Scale, there were five highly hypnotizable patients (scores 4-5), six mediums (scores 2-3), and four lows (scores 0-1). "Hypnotizability correlated negatively with complications ( $r = -.54$ ,  $p < .04$ , two-tailed test). There was a trend toward a negative correlation with length-of-stay ( $r = -.37$ ,  $p < .18$ , two-tailed test) and estimated blood loss ( $r = -.40$ ,  $p < .15$ , two-tailed test). Note that these correlations represent moderate to large effects, and the significance levels are due in part to low power associated with a small N (Cohen, 1988). The means for blood lost during surgery for the three hypnotizability groups were: highs = 904 cc, mediums = 1465 cc, and lows = 2056 cc" (p. 222).

Data on cost could not be published in this article but later was published in a letter to the Editor of the Newsletter of the Society of Clinical and Experimental Hypnosis (February 1994, Vol. 35, No. 1, p.8). "The average savings for the intervention group was \$6,725. While this difference fell short of statistical significance on the Wilcoxon test ( $Z = -1.5402$ ,  $p < .10$ ), it is rather striking on its face. The range actually was \$7849 to \$27,782 for Intervention Group patients and \$9,390 to \$53,627 for Usual Care group patients. "In 1990 a semi-private room at UCLA Center for the Health Sciences cost \$405 to \$529 per day, depending on quality; standard ICU care (one nurse for two patients) was \$1236 per day, and more intensive care (one nurse for one patient) was \$2471/day. Head and neck surgery patients may remain in the ICU, driving up costs, solely because they have not learned to suction their own tracheostomies, usually a motivational factor that might be affected by hypnosis. UCLA is a tertiary care hospital in a high-cost area (and is therefore reimbursed at higher rates than many other hospitals), and costs may be driven up by the many additional procedures required for long-stay patients. Therefore the cost savings could not be expected to be as great where expected length of stay is brief, ICU use is limited, and community costs are lower" (p. 8).

Schwarz, Shirley P.; Blanchard, Edward B. (1991). Evaluation of a psychological treatment for inflammatory bowel disease. [\*Behaviour Research and Therapy\*, 29 \(2\), 167-177.](#)

Compared the effectiveness of a multicomponent behavioral treatment package, which included inflammatory bowel disease (IBD) education, progressive muscle relaxation, thermal biofeedback, and training in use of cognitive coping strategies, with the effectiveness of symptom-monitoring as a control condition. The treatment group consisted of 11 IBD patients (aged 25-62 yrs); 8 of 10 persons (aged 25-71 yrs) in the control group completed treatment. At posttreatment, the treatment group showed fewer reductions in symptoms (5) than the symptom-monitoring controls (8). However, treated Ss perceived themselves as coping better with IBD and as feeling less IBD-related stress. It is hypothesized that the differences in treatment responses may be related to differences between Ss with ulcerative colitis and Ss with Crohn's disease.

## 1990

Fromm, Erika; Kahn, Stephen (1990). [\*Self-hypnosis: The Chicago paradigm\*](#). New York: Guilford Press.

In addition to extensive research on self hypnosis, this book refers to a number of clinical investigations that involved self hypnosis with patients, as at least part of the treatment protocol: 1. J. R. Hilgard & LeBaron (1984) 34 patients, ages 4-1, with cancer pain 2. Spinhoven (1989) headache control; low back pain 3. Wakeman (1988) 50 patients with third degree burns (helping half of them to return to work in high temperature environments) 4. Katz, Kellerman, & Ellenberg - 36 children with acute lymphoblastic leukemia who needed to undergo bone marrow aspirations 5. Spiegel & Bloom (1983) - 54 women with metastasized carcinoma of the breast 6. Wark (1988) improving reading comprehension - 7 students 7. Aronson (1986) adolescent psychiatric inpatients 8. Swirsky-Sacchetti & Margolis (1986) severe hemophiliacs, reducing Factor VIII (the coagulant deficiency of hemophilia A) 9. Kohen, Olness, Colwell, & Heimel (1984) - 505 pediatric patients with a variety of problems (enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic examinations) 10. Anderson, Basker, & Dalton (1975) - migraine patients 11. Hammond, Watkins-Bartch, Grant, & McGhee (1988) compared self-directed and tape-assisted self-hypnosis in 48 Ss  
Plus many papers with single cases or just a few cases.

Prior, A.; Colgan, S. M.; Whorwell, P. J. (1990). Changes in rectal sensitivity after hypnotherapy in patients with irritable bowel syndrome. [Gut, 31](#), 896-898.

Fifteen patients with irritable bowel syndrome were studied to assess the effect of hypnotherapy on anorectal physiology. In comparison with a control group who received no hypnotherapy, significant changes in rectal sensitivity were found in patients with diarrhoea-predominant irritable bowel syndrome both after a course of hypnotherapy and during a session of hypnosis ( $p < .05$ ). Although patient numbers were small, a trend towards normalization of rectal sensitivity was also observed in patients with constipation-predominant syndrome. No changes in rectal compliance or distension-induced motor activity occurred in either subgroup nor were any changes in somatic pain thresholds observed. The results suggest that symptomatic improvement in irritable bowel syndrome after hypnotherapy may in part be due to changes in visceral sensitivity. This research involved 15 patients diagnosed with irritable bowel syndrome (IBS), which was defined as abdominal pain with abdominal distension and 'an altered bowel habit'--10 had diarrhea mostly and 5 had constipation mostly. Patients with this disease usually have an exaggerated colon sensitivity to many different stimuli, as well as lower threshold to a balloon inflated in the bowel for diagnostic purposes.

The patients were treated with ten sessions of hypnosis, 30 minutes each, over a three month period. Dependent variables included self ratings of abdominal pain, abdominal distention, and 'bowel habit disturbance.' Each of the three variables received a score of 0-10; the total score therefore could range from 0-30.

Other ratings were obtained using the inflation of a rectal balloon as stimulus. "After a basal period of at least 15 minutes the rectal balloon was serially inflated with air at intervals of 1 min in 20 ml increments up to 100 ml and then in 50 ml increments up to the sensation of discomfort. The study was repeated after a rest period of 15 minutes. After hypnotherapy the S was restudied first in the waking state and then, after 15 min, following induction of hypnosis" During this procedure they measured balloon volume,

rectal compliance (a function of volume and pressure), and presence or absence of repetitive rectal contractions.

In order to learn whether the analgesia being experienced in the rectal or bowel area transferred to other areas, patients experienced cold water immersion induced pain on one hand, for a measure of time until discomfort was felt (pain threshold, essentially).

The control group of 15 patients diagnosed with IBS received the same measures of balloon volume, rectal compliance, and presence or absence of repetitive rectal contractions.

The total symptom score (which might have ranged 0-30) dropped from 23.5 to 9.6, and 13 of the 15 patients rated their symptoms as much improved. The two Ss who did not experience improvement also did not return for the assessment using the balloon.

Therefore, the physiological assessment included only 13 Subjects, the ones who rated themselves as 'improved.'

"In patients with diarrhoea-predominant irritable bowel syndrome a decreased rectal sensitivity occurred after hypnotherapy which was significant for the sensations of gas and urgency. This was most pronounced in patients who could initially tolerate only small rectal balloon volumes (Fig 1). During hypnosis the results for rectal sensitivity in the diarrhoea-predominant group were similar to those noted after the course of hypnotherapy but were of a greater magnitude, reaching significance for all sensations (Fig 2).

"In the constipation-predominant Subjects there was a tendency for rectal sensitivity to move towards normal values both after the course of hypnotherapy and during hypnosis. Patient numbers in this subgroup were small, however, and the changes were not significant (Figs 1 and 2). Rectal compliance and distension induced motor activity were unaffected by hypnotherapy in both the diarrhoea and constipation- predominant patients" (p. 897).

It was noted that of patients who had manifested depression and/or anxiety (8 of 13), most showed psychological improvement--3 of them to a great degree--but there was no correlation between psychological improvement and the degree that visceral sensitivity was diminished. Also, the ten sessions of hypnotherapy did not affect length of time subjects could tolerate hand immersion in cold water.

"In the control group of 15 patients with the irritable bowel syndrome who did not receive hypnotherapy no changes in rectal sensory or motor parameters occurred when manometry was repeated on the same day or on a second study day nine to 12 weeks later (Table II)" (p. 897).

In their Discussion, the authors remark that "hypnotherapy seemed to produce a trend towards normalization of visceral sensitivity (Figs 1 and 2). This was most pronounced in the patients with diarrhoea-predominant irritable bowel syndrome who initially had particularly low sensation thresholds" (p. 898).

They continue, "The pathophysiological abnormalities which lead to the symptoms of the irritable bowel syndrome remain unclear. The increased visceral sensitivity found in the large [7-9] and small intestine [18, 19] in some patients with the irritable bowel syndrome may contribute to their perception of pain. In addition, an increase in rectal sensitivity might also contribute to the symptoms of urgency and frequency of defecation seen in many patients with diarrhoea-predominant irritable bowel syndrome. ... Hypnotherapy

also induces an improvement in well being by increasing coping capacities, and may therefore decrease perceived stress" (p. 898).

"The present study suggests therefore that hypnotherapy might operate by a variety of mechanisms in patients with the irritable bowel syndrome. In those with visceral hypersensitivity it seems to alter the perception of rectal sensation, although the mechanism by which this is achieved is unknown. Modification at a cortical level or more locally along afferent pathways are possibilities. This does not, however, explain the symptomatic improvement in all subjects and hypnotherapy is probably also acting in a non-specific psychotherapeutic sense" (p. 898).

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Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. [Behaviour Research and Therapy](#), 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

### **1989**

Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. [American Journal of Clinical Hypnosis](#), 31, 173-180.

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego-strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

Patterson, David R.; Questad, Kent A.; deLateur, B. J. (1989). Hypnotherapy as an adjunct to narcotic analgesia for the treatment of pain for burn debridement. [American Journal of Clinical Hypnosis](#), 31, 156-163

This paper presents a hypnotherapeutic intervention for controlling pain in severely burned patients while they go through dressing changes and wound debridement. The technique is based on Barber's (1977) Rapid Induction Analgesia (RIA) and involves hypnotizing patients in their rooms and having their nurses provide posthypnotic cues for analgesia during wound cleaning. Five subjects who underwent hypnotherapy showed reductions on their pain rating scores (Visual Analogue Scale) relative to their own baselines and to the pain curves of a historical control group (N = 8) matched for initial pain rating scores. Although the lack of randomized assignment to experimental and control groups limited the validity of the results, the findings provide encouraging preliminary evidence that RIA offers an efficient and effective method for controlling severe pain from burns.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. [Lancet](#), 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Stanton, Harry E. (1989). Hypnosis and rational-emotive therapy--a de-stressing combination: A brief communication. [International Journal of Clinical and Experimental Hypnosis](#), 37 (2), 95-99.

It has been suggested that teacher stress might be reduced through cognitive restructuring which is aimed at improving the rationality of their thinking. To test this hypothesis, 40 high school teachers were paired on their level of reasonable thinking, operationalized in terms of scores on the Teacher Idea Inventory (Bernard, Joyce, & Rosewarne, 1983), and allocated at random to one of 2 groups. They also completed the Face Valid Stress Test. The experimental group participated in 4 weekly treatment sessions involving a hypnotic induction and suggestions derived from key elements of Rational-Emotive Therapy. These focused on the reduction of what Ellis (Ellis & Grieger, 1977), the originator of this treatment, calls "irrational thinking." The control group spent the same amount of time discussing stress reduction methods. Both the Face Valid Stress Test and the Teacher Idea Inventory were re-administered at the end of this period and again 12 months after conclusion of the experiment. Results indicated that both the experimental and control groups significantly reduced their levels of irrational thinking and stress, although the former's improvement was more marked, particularly at the 12-month follow-up.

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Stanton, Harry E. (1989). Hypnotic relaxation and the reduction of sleep onset insomnia. [International Journal of Psychosomatics](#), 36, 64-68.

A hypnotic relaxation technique was compared to stimulus control and placebo conditions as a means of reducing sleep onset latency (SOL). Forty-five subjects were matched on their baseline SOL as measured through sleep diaries. They were randomly assigned to one of the three groups and experienced four weekly sessions of 30- minutes' duration, with demand effects being controlled through the use of counter- demand instructions. Data generated by the study suggested that the particular hypnotic relaxation treatment used was effective in helping Ss sleep more quickly. Neither stimulus control nor placebo groups recorded similar improvement.

Zane, Nolan W. S. (1989). Change mechanisms in placebo procedures: Effects of suggestion, social demand, and contingent success on improvement in treatment. [Journal of Counseling Psychology](#), 36, 234-243.

Investigated the treatment effects of three social influence variables frequently implicated in psychotherapy placebos. Socially anxious male Subjects participated in an experimental treatment for reducing dating anxiety. Subjects were either given or not given specific suggestions for decreasing social anxiety, placed in conditions of high or low social demand, and received feedback indicating either high or moderate success on

the therapy task. Results support the importance of social influence variables in therapeutic change. Contingent success had its greatest impact on personal attributes; suggestion affected skill behaviors; and social demand effects were found in the self-evaluation of heterosocial performance. Various social influences appear to mediate change differently and do not exert the generic effects commonly assumed to be characteristic of therapy placebos. Implications for outcome research are discussed.

## 1988

Boeke, S.; Bonke, B.; Bouwhuis-Hoogerwerf, M. L.; Bovill, J. G.; Zwaveling, A. (1988). Effects of sounds presented during general anaesthesia on postoperative course. British Journal of Anaesthesia, 60, 697-702.

In a double-blind, randomized study, patients undergoing cholecystectomy were administered one of four different sounds during general anaesthesia: positive suggestions, nonsense suggestions, seaside sounds or sounds from the operating theatre. The effect of these sounds on the postoperative course was examined to assess intraoperative auditory registration. No differences were found between the four groups in postoperative variables.

Postoperative course was evaluated by 5 variables: pain, nausea and vomiting, evaluation by nursing staff, subjective well-being, and duration of postoperative hospital stay. From the chart they used amount of postoperative analgesia, volume of nasogastric suction or drainage and fluid lost through vomiting over 6 days post-operatively; duration of postoperative hospital stay was registered after discharge. See p. 699 for details, including wording of questions. They cite their own earlier study that got positive results, and explain the difference as possibly due to use of only male voices on tapes, lack of difference in the sounds on tapes in this study, insensitivity of outcome measures (patients stayed longer in first study than in this one), and sample too small in this study (106).

Boeke et al. (1988) report that this double-blind, randomized study of positive suggestions, noise or sounds from the operating theatre presented to 3 groups of patients undergoing cholecystectomy during general anaesthesia had positive results for older patients. patients > 55 years who received positive suggestions had a significantly shorter postoperative hospital stay than the other patients in this age category.

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse

pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Neufeld, V.; Lynn, Steven Jay (1988). A single-session group self-hypnosis smoking cessation treatment: A brief communication. [International Journal of Clinical and Experimental Hypnosis](#), 36 (2), 75-79.

This study was designed to assess the efficacy of a manual-based, single-session group of self-hypnosis intervention. At 3 months follow-up, 25.92% of the total number of participants (14 male, 13 females) reported continuous abstinence, and at 6 months, 18.52% of the participants reported continuous abstinence. Reported social support and motivation to quit were both associated with successful outcome. Comparison of the current data with other findings reported by the American Lung Association (Davis, Faust, & Ordentlich, 1984) suggests that treatment effects may not be solely attributable to the use of a maintenance manual, education, and attention. Limitations of the research associated with issues of experimental control, generalizability of the findings, and outcome measures are discussed.

Spinhoven, Philip (1988). Similarities and dissimilarities in hypnotic and nonhypnotic procedures for headache control: A review. [American Journal of Clinical Hypnosis](#), 30 (3), 183-194.

Similarities and differences between hypnosis and similar psychological procedures in the treatment of headache are reviewed. A brief outline of various hypnotic and nonhypnotic interventions for headache reduction shows that none of these procedures has consistently proved to produce superior results. Possible common denominators such as control of physiological processes, placebo factors, and the alteration of cognitive factors are discussed. The positive relationship between hypnotic susceptibility and hypnotic pain reduction indicates that the value of hypnosis seems to be less a matter of therapeutic procedure per se than of which context activates a patient's hypnotic potential for pain reduction.

The author summarizes literature on biofeedback and relaxation: "(a) biofeedback with home practice of relaxation is, at least in some cases, effective in reducing migraine and tension headache; (b) relaxation training alone has also produced some success in reducing migraine and tension headaches; and (c) there is not sufficient evidence that biofeedback in the treatment of these pain problems yields results superior to relaxation training" (p. 184). Hypnotherapy for headache is not reviewed in detail, but he provides a table showing various controlled studies and their results. "With the exception of the methodologically problematic study of Anderson, Basker, and Dalton (1975), no differences in effect are found between hypnosis and biofeedback (Andreychuck & Skriver, 1975; Schlutter, Golden, & Blume, 1980; Friedman & Taub, 1984) and hypnosis

and relaxation (Friedman & Taub, 1984; Spinhoven, Van Dyck, Zitman, & Linnsen, 1985)" (p. 184). He notes that there are no studies that directly compare hypnosis and nonhypnotic relaxation interventions for headache.

"In all the studies in which hypnotizability was related to outcome, irrespective of patient selection method of measurement, and hypnotic procedure used, a significant positive relationship between hypnotizability and therapy results was found in more than 350 patients (Andreychuck & Skriver, 1975; Cedercreutz, Lahteenmaki, & Tulikoura, 1976; Cedercreutz, 1978; Friedman & Taub, 1984; Spinhoven et al., 1985). If we consider the level of hypnotizability rather than the details of the hypnotic procedure, it seems that headache patients who are highly hypnotizable benefit more from hypnosis in the reduction of headache.

"However, little reliable information is available concerning the underlying dimensions of hypnotic susceptibility relevant for pain reduction. In the neodissociation theory of Hilgard it is suggested that highly hypnotizable patients register pain covertly outside conscious awareness (Hilgard, 1977, 1979). In the social learning model of Spanos and his coworkers (Spanos, Radtke-Bodorik, Ferguson, & Jones, 1979; Spanos, Kennedy, & Gwynn, 1984), it is assumed that high susceptibles show a relatively greater preference for focusing attention on internal thoughts and images as a way of attenuating pain than low susceptibles.

"A recent experimental study of Miller and Bowers (1986), which directly compared hypnotic analgesia, cognitive-behavior therapy, and cognitive-behavior therapy defined as hypnosis in high and low susceptibles, suggests that pain reduction achieved by highly hypnotizable subjects during hypnosis is not mediated by the deliberate use of cognitive strategies (such as imaginative inattention). Cognitive strategy use resulted in pain reduction only during behavior therapy. Clinical studies about the experiential aspects of high and low susceptible headache patients during hypnosis, biofeedback, relaxation training, and cognitive-behavior therapy are urgently needed. If process research in a clinical setting validates that hypnotic analgesia involves the activation of a subsystem of pain control temporarily dissociated from conscious executive control, a therapy component specific for hypnosis will have been identified" (pp. 189-190).

### **1987**

[Wagstaff, Graham F. \(1988\). Comments on the 1987 Home Office Draft Circular. A response to the comments of Gibson, Haward, and Orne. \[Comment/Discussion\] .](#)

"Conclusions. Perhaps the most prudent recommendation to be made is that of Gibson to outlaw the forensic use of hypnotic procedures. However, at the same time, Haward could be right in arguing that such a recommendation would in practice result in the baby being thrown out with the bathwater" (p. 48). Author goes on to suggest that the police request the advice of professional hypnosis organizations so that memory enhancement procedures would be applied with "strict safeguards."

### **1986**

[Rogers, Malcolm; Reich, Peter \(1986\). Psychological intervention with surgical patients: Evaluation outcome. Advances in Psychosomatic Medicine, 15, 23-50.](#)

The Notes are a direct quotation of the authors' Conclusions. "There is well documented evidence that psychological and behavioral preparation prior to surgery can effect post-operative recovery. In almost all instances, except when patients are characterized by avoidance or denial defenses predominantly, the outcome results have been positive. The effect of interventions have been most consistently positive in reducing length of hospitalization and post-operative pain, but a variety of other improvements in affect and physiologic stability have been shown. As others such as Auerbach have pointed out [76], in all but a handful of studies different intervention approaches have been combined, making it impossible to sort out the specific effects of information, psychotherapeutic relationship, relaxation training, or suggestion given either with or without hypnosis. Indeed it is not only likely that each has had an effect, but there may also be synergistic effects.

"More recent investigations have begun to include measurements of personality differences between patients so that the nature of the intervention can be more specific and appropriate to the individual's coping style.

"The reduction in length of hospitalization alone (clearly shown to result from pre-operative psychologic preparation) argues forcefully on a cost benefit basis for the inclusions of careful pre-operative preparation. The reduction in pain is also of major importance, and may well reduce future avoidance behavior or post-traumatic disorders, although these latter potential outcomes have not been investigated. It should be kept in mind that there are also a number of studies which have failed to demonstrate the efficacy of psychological intervention on these outcome measures. Moreover, it is extremely difficult in studies of this nature to control adequately for the subtle effects on behavior of experimenter and subject expectation.

"A few points can be made about future strategies in this field. The evidence accumulated to date suggests that all patients undergoing surgery or certain difficult procedures be given the option of pre-operative psychological preparation. The preparation should emphasize what the patient will experience and when, and how to cope with it, i.e., how to move, or breathe, or relax. Rapidly evolving audiovisual capabilities and hospital televisions connected by cable to health education channels will routinely offer such preparation in the future. Patients could choose or not choose to watch (thereby protecting mechanisms of denial).

"Finally, future studies should focus on outcome measures uniquely important to a particular operation and also on longer term rehabilitation outcome measures. An example of the former might be post-operative sexual functioning after prostatectomy. A study by Zokar et al. [77] has shown that the likelihood of this post-operative function is correlated with not only the level of pre-operative anxiety and general 'life satisfaction', but also whether the patient received a pre-operative explanation of what to expect from the surgery" (pp. 45-46).

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

Swirsky-Sacchetti, Thomas; Margolis, Clorinda G. (1986). The effects of a comprehensive self-hypnosis training program on the use of factor VIII in severe hemophilia. International Journal of Clinical and Experimental Hypnosis, 34, 71-83.

Hemophilia, the bleeder's disease, is characterized by internal bleeding episodes which have been associated anecdotally with psychological stress. The focus of the present investigation was to study the potential utility of a comprehensive self- hypnosis training program to decrease stress and to assess the amount of clotting factor used for bleeding by those individuals trained in self-hypnosis compared to a control group. 30 severe hemophiliacs on home therapy were randomly assigned to a treatment or to a waiting list control group. The treatment group received a comprehensive 6-week training program including support, education, deep relaxation, and self-hypnosis. Over the 18-week follow-up, the treatment group significantly reduced the amount of factor concentrate used to control bleeding in comparison to controls. The treatment group also significantly reduced general distress level as measured by a symptom checklist. The training was extremely cost effective, and the results support the efficacy of this comprehensive training program to augment the medical management of severe hemophiliacs on a home therapy regimen.

The authors begin with a discussion of the importance of being able to reduce the amount of blood factor concentrate required by hemophiliacs, including the problems of obtaining uncontaminated blood in an era of HTLV-III and LAV contamination and the fact that some patients with Hemophilia A have developed antibodies to Factor VIII (so-called inhibitor patients). When an inhibitor patient hemorrhages, it is potentially life-threatening. Earlier controlled clinical research by LaBaw (1975) indicated that hypnosis might be useful for decreasing blood usage. The current study builds upon that research and adds further control procedures.

The hypotheses of this study were: "(a) hemophiliacs who received the comprehensive training program including self- hypnosis along with education, support, and relaxation for stress management would significantly reduce the amount of factor concentrate used to control spontaneous bleeding in comparison to randomly assigned waiting list controls; (b) the general distress level, as measured by the SCL-90 (Derogatis, 1977), would significantly decrease for the treatment group from pretraining to follow-up; and (c)

hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. C. Orne (1962) would show a positive correlation with the treatment effect" (p. 74).

Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. C. Orne (1962) would show a positive correlation with the treatment effect" (p. 74).

The Subjects were patients of a hematologically severe status (less than 1% clotting factor present in the blood); ages 11-50, mean age 30; normally distributed on socioeconomic variables; and prescreened to rule out serious psychological dysfunction. The treatment and control groups did not differ in SES or pretest bleeding severity. Control Ss were informed that they would receive the same training after the initial follow-up period. Three Ss were lost from the treatment group because they did not complete the 6 weekly self-hypnosis training sessions, and three from the control group due to geographic move or decision to obtain treatment elsewhere.

Patients recorded their factor usage on log sheets, and their reports were checked with distribution records kept at the clinic. (Factor received during hospital stays was not included. Also 3 "inhibitor" patients--2 treatment, 1 control--were removed from some analyses because they must infuse Factor IX at a level that far exceeds the amount appropriate for body were an inhibitor not present.)

The Ss, in groups of 3-4 people, were educated about the effects of stress on bleeding, physiological signals of overstress, and then trained as a group in self hypnosis. Each training session began with a group hypnosis induction followed by various suggestions and imagery. They were given a cassette tape with suggestions for decreased bleeding, ego-strengthening, relaxation, and sensations of floating. In addition to listening to the tape at least once each day, they were taught rapid (1-2 minute) inductions to combat stress, and were to develop their own self-hypnosis procedure.

In terms of results, 9 of 11 (82%) treatment Ss and 4 of 10 (40%) control Ss decreased in blood factor usage ( $p < .05$ ). There was a great deal of variability between Subjects. While the treatment group demonstrated an overall decrease in factor usage, the control group actually had an overall increase in usage. The authors speculate that possibly a change in season caused the increase, because several Ss reported that a change in season ordinarily caused an increase due to their arthritic joints. Also, a change to warmer weather might have led to increased physical activity. General distress, measured by General Severity Index of the SCL-90, was reduced significantly for the treatment group. (Results of SCL-90 aren't reported for control group.)

The third hypothesis was not supported. In fact, the correlation between HGSHS:A and treatment effect was in the opposite direction from what was expected ( $- .25$ , n.s.).

However, "there was a significant correlation ( $\rho = .56$ ,  $p < .025$ ) between Ss' self-reported trance usage and change scores, indicating that those Ss who practiced self-hypnosis more were more likely to have decreased factor usage. There was also a trend ( $\rho = .44$ ,  $p < .10$ ) between treatment Ss' change scores and their initial distress levels (GSI), suggesting that those Ss who were initially more distressed tended to profit more from treatment" (pp. 78-79).

In their Discussion, the authors suggest that the fact that the treatment effect of decreased factor usage was consistent throughout the follow-up period suggests that reduced usage was not due to a placebo effect. They note that placebo responses are usually brief, and situation-specific (Frank, 1976). They see the need for further research to clarify which component(s) of the treatment program are effective (self-hypnosis, relaxation, education, social support), and to extend the length of follow-up period. Since hypnotizability did not correlate with outcome, the results might be due to some other component. Since outcome did correlate with amount of self hypnosis practice, motivation may be an important determiner of effect.

Decreased stress was not only reported by Ss but also reflected in changes on the test scores (SCL-90). Also, several Ss spontaneously used the self hypnosis for school and occupational performance, and to relieve headaches. In terms of financial benefits, "the one patient who had the most significant decrease in factor usage noted an average monthly savings of \$850. For the entire treatment group (including those few Ss whose factor usage increased), the training resulted in savings of \$1240 per month over the follow-up period" (p. 81).

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## 1985

Jeffrey, Timothy B.; Jeffrey, Louise K.; Greuling, Jacquelin W.; Gentry, William R. (1985). Evaluation of a brief group treatment package including hypnotic induction for maintenance of smoking cessation: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33 (2), 95-98.

Hypnotic, cognitive, and behavioral interventions were used in a 5-session treatment program to assist 35 Ss with maintenance of smoking cessation. 63% of the treated Ss discontinued smoking, and 31% maintained abstinence for 3 months ( $p < .005$ ). These results include 13 dropouts, all of whom were smoking at 3 months follow-up. No S in the waiting-list-control group quit smoking. The results demonstrate that a brief, group treatment program, including hypnotic techniques, can be effective for smoking cessation.

## 1984

Funch, Donna P.; Gale, Elliot N. (1984). Biofeedback and relaxation therapy for chronic temporomandibular joint pain: Predicting successful outcomes. Journal of Consulting and Clinical Psychology, 52 (6), 928-935.

Fifty-seven patients with chronic temporomandibular joint (TMJ) pain were randomly assigned to receive either relaxation or biofeedback therapy. Therapy efficacy was assessed (immediate posttreatment and 2-year follow-up), and pretherapy factors (demographic, clinical, personality) were used to predict successful outcomes for each therapy group. Although there were no significant differences in outcomes,

characteristics of patients with successful outcomes were not similar for the two therapies. Successful patients in the relaxation condition tended to be younger, had experienced TMJ pain for a shorter period of time, and had reported problems with other psychophysiological disorders. Successful patients in the biofeedback group tended to be older, married, had experienced TMJ pain for a longer period of time, and had not received prior equilibration treatment. Only two of these factors, equilibration and presence of other disorders, were related to both short- and long-term outcomes, suggesting that they may be particularly useful as predictors of outcome. These findings do suggest that knowledge of pretherapy factors, particularly clinical, may allow for more optimal assignment to therapy conditions.

Manganiello, Aaron J. (1984). A comparative study of hypnotherapy and psychotherapy in the treatment of methadone addicts. *American Journal of Clinical Hypnosis*, 26, 273-279.

This study sought to examine the effects of hypnotherapy on the ability of methadone-maintained patients to reduce and/or eliminate their drug-taking behavior. Seventy adult volunteers at a methadone maintenance program were randomly assigned to experimental and control groups. The experimental group received hypnotherapy for 6 months in addition to the psychotherapy offered as standard clinic treatment. The control group received only psychotherapy. After treatment a 6-month follow-up was conducted by interviews. Groups were compared to determine significant differences in the number of successful withdrawals, the mean change in methadone dose level, incidence of illicit drug use, and degree of discomfort. Significant differences were found on all measures. The experimental group had significantly less discomfort and illicit drug use, and a significantly greater number of withdrawals. At six-month follow-up, 94% of the Ss in the experimental group who had achieved withdrawal remained narcotic-free. determine significant differences in the number of successful withdrawals, the mean change in methadone dose level, incidence of illicit drug use, and degree of discomfort. Significant differences were found on all measures. The experimental group had significantly less discomfort and illicit drug use, and a significantly greater number of withdrawals. At six-month follow-up, 94% of the Ss in the experimental group who had achieved withdrawal remained narcotic-free.

Murphy, Joseph K.; Fuller, A. Kenneth (1984). Hypnosis and biofeedback as adjunctive therapy in blepharospasm: A case report. *American Journal of Clinical Hypnosis*, 27, 31-37.

The efficacy of ophthalmologic, hypnotic, and biofeedback treatment procedures in a case of blepharospasm was evaluated. Manual eye rubbing and eye opening served as dependent measures which were assessed by the patient during treatment and a three month follow-up. Results indicated that ophthalmologic treatment had a limited effect. In contrast, brief hypnosis had a dramatic but short-lived effect and biofeedback had a moderate but sustained effect. Results are discussed in terms of the efficacy of psychological intervention, the limitations of the report, and the need for future research.

Whorwell, P. J.; Prior, Alison; Faragher, E. B. (1984, December 1). Controlled trial of hypnotherapy in the treatment of severe refractory irritable-bowel syndrome. Lancet, 1232-1234.

30 patients with severe refractory irritable-bowel syndrome were randomly allocated to treatment with either hypnotherapy or psychotherapy and placebo. The psychotherapy patients showed a small but significant improvement in abdominal pain, abdominal distension, and general well-being but not in bowel habit. The hypnotherapy patients showed a dramatic improvement in all features, the difference between the two groups being highly significant. In the hypnotherapy group no relapses were recorded during the 3-month follow-up period, and no substitution symptoms were observed.

### **1983**

Classen, Wilhelm; Feingold, Ernest; Netter, Petra (1983). Influence of sensory suggestibility on treatment outcome in headache patients. Neuropsychobiology, 10, 44-47.

In 45 headache patients the relationship between sensory suggestibility and three measures of treatment effect-ratings on (1) intensity of headaches; (2) efficacy of drugs, and (3) physician's competence - was investigated in a double-blind long-term crossover study. Subjects scoring high on sensory suggestibility clearly showed more relief of headaches upon the analgesic as well as upon the placebo. The physician's competence was rated higher by high-suggestible patients, whereas ratings on drug efficacy were low in all patients. The seemingly controversial behavior of high-suggestible patients was interpreted as a call for continuation of the physician's efforts in spite of the relief the patients already achieved.

Flatt, Jennifer R. (1983). What makes therapy work? Thoughts provoked by a case study. Australian Journal of Clinical and Experimental Hypnosis, 11 (2), 63-72.

The case described is offered as illustrating the doubt common to introspective therapists: what did cure the patient? "Francesca's" presenting problem and the object of the short-term psychological intervention described here, was a

-chological intervention described here, was a fairly circumscribed set of fears related to enclosed spaces. The therapeutic approach adopted was primarily hypnobehavioural, with hypnotically-assisted systematic desensitization and "in vivo" exposure being the main components of the planned programme. However, at the client's suggestion, one hypnotic session with content planned by the therapist as age regression produced rather dramatic and unexpected results claimed by the patient to effect complete cure.

The therapist suggested that "her mind would take her back to a time that was important in understanding her fears and that she would be able to stay calm and relaxed while this past event was revealed to her" (p. 69). She subsequently imagined being in a cave, peaceful and calm. "On being roused from hypnosis, Francesca eagerly described her

cave image. She was enthusiastic about the significance of this experience, claiming that it was evidence that in a \_previous life\_ she had died from being locked into a cave as some sort of punishment and that this experience made her fear of enclosed places rational and comprehensible to her" (p. 69).

## 1981

Frankel, Fred H. (1981). Reporting hypnosis in the medical context: A brief communication. [International Journal of Clinical and Experimental Hypnosis, 29 \(1\), 10-14.](#)

Data relating to hypnosis in medicine fall into 3 categories: studies of efficacy, surveys, and reports of rare cases. Studies of the comparative efficacy of hypnosis pose special problems; surveys focused on the possible association between hypnotic responsivity and the nature of a clinical situation or its treatment are encouraged; and the presentation of unique or rare cases is considered.

Goldstein, Y. (1981). The effect of demonstrating to a subject that she is in a hypnotic trance as a variable in hypnotic interventions with obese women. [International Journal of Clinical and Experimental Hypnosis, 29 \(1\), 15-23.](#)

In order to investigate the question of whether or not Ss experiencing a phenomenon during trance which would be very unlikely to occur outside of trance improves the efficacy of hypnotic treatment for obesity, a S pool of obese women was divided into 3 groups: a non-hypnotic behavior modification group, a hypnosis group without any special phenomenon structured into it, and a hypnosis group with such a phenomenon (hand levitation). Weight-loss data were collected 4 weeks and 6 months after the start of treatment. All treatments resulted in at least moderate weight loss. Statistically significant differences were found between the hypnosis-with-hand-levitation treatment effect and the other treatment effects. Possible reasons for the treatment effects and the differences obtained are discussed.

Gruenewald, Doris (1981). Failures in hypnotherapy. [International Journal of Clinical and Experimental Hypnosis, 29 \(4\), 345-350.](#)

Failures in hypnotherapy are discussed in the context of considerations applying to treatment in general. Emphasis is given to the principle that hypnotherapy must be structured according to patients' personality and needs. When treatment fails, therapists should examine carefully what may have led to an unsatisfactory outcome.

Wilson, John F. (1981). Behavioral preparation for surgery: Benefit or harm?. [Journal of Behavioral Medicine, 4, 79-102.](#)

Elective surgery patients were prepared for surgery with training in muscle relaxation or with information about sensations they would experience. Relaxation reduced hospital stay, pain, and medication for pain and increased strength, energy, and postoperative

epinephrine levels. Information reduced hospital stay. Personality variables (denial, fear, aggressiveness) were associated with recovery and influenced patients' responses to preparation. Less frightened patients benefitted more from relaxation than did very frightened patients. Nonaggressive patients reacted to information with decreased hospital stay along with increased pain, medication, and epinephrine. Aggressive patients responded to information with decreased hospital stay along with decreased pain, medication, and epinephrine. Patients using denial were not harmed by preparation. A catharsis/moderation model is proposed to explain how information benefits patients. An active coping model is proposed to explain the benefits of relaxation. This study suggests that behavioral preparation benefits even frightened, aggressive, or denying elective surgical patients.

## **1980**

Bornstein, Philip H.; Devine, David A. (1980). Covert modeling-hypnosis in the treatment of obesity. [Psychotherapy: Theory, Research and Practice, 17 \(3\), 272-276.](#)

Investigated the efficacy of a covert modeling/hypnosis treatment package in the control of obesity. 48 overweight female volunteers (who had been administered the Harvard Group Scale of Hypnotic Susceptibility, Eating Patterns Questionnaire, and Rotter's Internal-External Locus of Control Scale) were randomly assigned to 1 of the following groups: (a) covert modeling/hypnosis, (b) covert modeling, (c) no-model scene control, and (d) minimal treatment (where Ss received a shortened version of the covert modeling/hypnosis procedure following an 8-wk no-treatment period.) Results indicate a significant effect for weight loss from pretreatment to follow-up across all groups combined. Proportion weight loss measures indicated significantly greater weight loss only for the covert modeling/hypnosis group as compared to the no-model controls. Implications for combining behavior therapy and hypnotic techniques are discussed. (30 ref).

## **1980**

Deyoub, P. L.; Wilkie, R. (1980). Suggestion with and without hypnotic induction in a weight reduction program. [International Journal of Clinical and Experimental Hypnosis, 28 \(4\), 333-340.](#)

Identical suggestions for the control of obesity were administered to a group receiving hypnotic induction and a group receiving task-motivational instructions. A no-treatment control group was also included. The only significant finding was greater weight loss by Ss in the task-motivational group than Ss in the control group. Much of the difference was attributed to weight gain of Ss in the control group. Within groups, highly suggestible Ss lost more weight in the hypnotic group, while suggestibility was unrelated to weight loss in the task-motivational group. The possibility that task-motivational and hypnotic Ss approached treatment with different mental sets and expectations was discussed. The role of hypnotizability in the hypnotic treatment of obesity was discussed.

Subjects approached treatment with different mental sets and expectations was discussed. The role of hypnotizability in the hypnotic treatment of obesity was discussed.

Lundy, Richard M.; Heide, Frederick J.; Wadlington, W. L. (1980). Hypnotic responsiveness as a predictor of outcome in meditation. International Journal of Clinical and Experimental Hypnosis, 28 (4), 358-366.

TM reportedly diminishes Trait Anxiety (not State Anxiety). Spielberger's Anxiety Scale was administered. Non-analytical attention is increased in TM. Spanos, et al. found a relationship between sustained attention in a meditation task and hypnotizability. Both load on the same factor.

Used Control and Experimental groups pretested on a scale of hypnotizability (Harvard Scale?): Lows = 1-4; Mediums = 5-7; Highs = 8-12.

Subjects were given instructions for modified TM, including a lecture on physiological benefits. "Let the sound 'OM' repeat itself; let that sound pass through and return to the mantra." Subjects logged practice on their 20 minute meditation twice a day, for 7 days. They were given pre- and posthypnotic tests of State and Trait anxiety.

**RESULTS.** Meditators decreased Trait anxiety but not State anxiety. But anxiety was reduced more for high hypnotizables than for other levels. There was greater change in anxiety for High hypnotizables who practiced meditation. No difference in pre- and posthypnotic test on Harvard, confirming Spanos, et al.

**CONCLUSIONS.** This provides more evidence that the skill of hypnotizability has more utility than we had thought, in therapy. Spanos, et al. also found that improvement in meditation was correlated with hypnotizability (in terms of number of intrusions) and Benson, Frankel, et al., found Lows benefit less in blood pressure change with either meditation or hypnosis

## 1979

Frankel, Fred H.; Apfel, R. J.; Kelly, S. F.; Benson, H.; Quinn, T.; Newmark, J.; Malmaud, R. (1979). The use of hypnotizability scales in the clinic: A review after six years. International Journal of Clinical and Experimental Hypnosis, 27 (2), 63-73.

This is a review of the use, after 6 years, of the Stanford Hypnotic Susceptibility Scale, Forms A and B (Weitzenhoffer & E. R. Hilgard, 1959); the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962); the Hypnotic Induction Profile (Spiegel & Bridger, 1970); and the Stanford Hypnotic Clinical Scale (Morgan & J. R. Hilgard, 1975) in the clinical situation. The great majority of over 300 patients found their experience with the scale to be a positive one, despite the authors' initial hesitancy about exposing them to the probability of failure on at least some of the items. The standardized scales were administered as specific tests, not as part of therapy.

The data on responsiveness has not only contributed to clinical strategy in individual cases, but has also added to our understanding of hypnosis, of psychopathology, and of therapeutic outcome.

Horowitz, Mardi J. (1979). States of mind: Analysis of change in psychotherapy. New York NY: Plenum Medical Book Company. (Also published in London, England)

Provides a configurational analysis approach to describe problems, resources, and processes of change in psychotherapy. Uses psychoanalytic (ego psychology) model "that emphasizes information processing and the structural aspects of self and object representations" (p. ix). The book provides methods for evaluating treatment outcome using increasingly precise ways of observing clinical material. As an example of how the author writes about states of mind, consider that "One could subject Hamlet to a description of his recurrent states of ambivalence, paralysis of action, deadly decisiveness, and pretense of gaiety or of madness; one could describe his various self-images and core models of role relationship, and explain his changes in state by the ways in which he processed information. Similarly, in a psycho-history one could plot the states, images, and information-processing styles of a person whose decisions interacted with important events" (pp. x-xi).

Pederson, Linda L.; Scrimgeour, William G.; Lefcoe, Neville M. (1979). Variables of hypnosis which are related to success in a smoking withdrawal program. [International Journal of Clinical and Experimental Hypnosis](#), 27 (1), 14-20.

65 habitual smokers were randomly assigned to one of 4 groups: live-hypnosis plus counseling, videotape-hypnosis plus counseling, relaxation-hypnosis plus counseling, and counseling alone. The content and mode of presentation of the hypnosis session varied among the first 3 groups. At 6 months posttreatment, the live-hypnosis plus counseling group contained significantly more abstainers than the other 3 groups. The importance of the specific content of the hypnosis session and the presence of the hypnotherapist for the effectiveness of the procedure is discussed.

Perry, Campbell; Gelfand, Robert; Marcovitch, Phillip (1979). The relevance of hypnotic susceptibility in the clinical context. [Journal of Abnormal Psychology](#), 88 (5), 592-603.

Despite experimental evidence that hypnotic susceptibility is a relatively stable characteristic of the individual, and one that is very difficult to modify, clinical investigators tend to see susceptibility as irrelevant to therapeutic outcome. Such investigators view motivational and interpersonal variables as more essential to the therapeutic change. The evidence for the clinical relevance of hypnotizability is sparse and contradictory. Most existing studies stem from medical hypnosis and indicate that susceptibility plays an important role in the successful treatment of such conditions as clinical pain, warts, and asthma. Two studies are reported that seek to pursue a contrary finding reported by Perry and Mullen, who found that susceptibility was unrelated to the successful treatment of a socially learned behavior (cigarette smoking). Both studies confirmed the earlier finding of a lack of relation. In Study 1, however, stepwise multiple regression analysis located three inventory items concerning the motivation of cigarette smokers. The combination of items was found to predict outcome for 67.39% of 46 clients treated either by hypnosis or by rapid smoking. The finding was replicated in Study 2, which utilized a combined hypnosis - rapid smoking technique and employed a different therapist. The outcome for 9 of the 13 quitters and 37 of the 62 nonquitters

across the two studies could be predicted by the three motivational questionnaire variables.

### **1978**

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard (1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. [Psychotherapy and Psychosomatics, 30, 229-242.](#)

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating questionnaires. The meditational and self- hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

### **1978**

Frankel, Fred H. (1978). Scales measuring hypnotic responsivity: A clinical perspective. [American Journal of Clinical Hypnosis, 21, 208-218.](#)

Differences in the experiences of clinicians and laboratory investigators regarding the distribution of hypnotizability are addressed. The use of various rating scales in the clinical context is reviewed, and the importance of the scales in defining the difference, conceptually, between hypnosis and other procedures capable of achieving similar results is emphasized. The use of the scales in determining the treatment strategy is compared

with the customary practice of the experienced clinician, and with the importance of the characteristics of the total clinical situation. An illustrative case report is included.

Kaplan, Jerold Z.; Wakeman, John (1978). An experimental study of hypnosis in painful burns. [American Journal of Clinical Hypnosis, 21, 3-12.](#)

The present study examines the usefulness of hypnosis in the control of acute pain in thermal and electrically burned patients as an adjunctive analgesic during the routine care of burn wounds. It was hypothesized that the use of hypnosis would lead to significant reductions in the amount of drugs needed as compared to patients using medication only. Anxiety and discomfort associated with daily tanking, debridement, and dressing changes were expected to be reduced because of the introduction of hypnotic procedures. The experimental study also examined the variables of age and percent of burns. Two studies were conducted including patients with 0-20% total body burns and 31-60% burns. A variety of hypnotic techniques were used. Both studies revealed significantly lower percentages of medication used ( $p < .01$ ) by the hypnotic groups than control groups. The 7-18-year-old patients used significantly less medication ( $p < .05$ ) than the adult groups. The implications of the findings, and usefulness of hypnosis and ego strengthening techniques for improvement of self-confidence and improved body image were considered.

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. [Journal of Consulting and Clinical Psychology, 46 \(5\), 879-886.](#)

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

**1977**

Albornoz-Ruiz, Jose M. (1977). Suggestibility as a factor in medical treatment. [Maryland State Medical Journal, 26, 66-68.](#)

This paper presents the view that a physician must be aware of the great influence, direct and indirect, s/he has with the patient as a result of their relationship. "Here it should be remembered that the power of a suggestion, without the benefit of formalized hypnosis, is directly related to the intensity and nature of the emotional bond between the patient and the doctor, often colored by a marked transferential unconscious component, where the doctor stands 'in loco parentis' vis-a-vis the patient, regardless of the age, education or intellectual sophistication of the latter.

Whatever the nature of the perception that is eventually presented by the patient as a symptom or identified by the doctor as a sign of illness, such perception will be elaborated upon by the patient's fancy, in lonely reveries where he defines for himself causes, nature and possible course of his disorder, not always in keeping with those established by the doctor as he exposes the same set of phenomena to his learned medical judgment" (p. 68).

Barkley, R. A.; Hastings, J. E.; Jackson, T. L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. [International Journal of Clinical and Experimental Hypnosis, 25 \(1\), 7-17.](#)

29 Ss were assigned to one of 3 treatment conditions and treated for their cigarette smoking over a 2-week period. These conditions were: group rapid smoking, group hypnosis, and an attention-placebo control group. All treatments produced significant reductions in average daily smoking rates during the treatment phase but all Ss returned to near baseline levels of smoking by the 6-week follow-up. The rapid smoking and hypnosis groups did not differ from the control group in smoking rates at treatment termination or at the 6-week follow-up. They also did not differ from the control group in the number of Ss abstaining from smoking by treatment termination but did differ at follow-up. Eventually, at the 9-month follow-up, only Ss from the group rapid smoking condition had significantly more abstainers than the control group. The results suggested that rapid smoking can work as effectively in group procedures as previous individualized approaches had demonstrated. Group hypnosis, while less effective than some previous individualized approaches had indicated, was nevertheless only marginally less effective than the group rapid smoking procedure. The use of abstinence rates as opposed to average rates of smoking was strongly recommended as the best measure of treatment effectiveness for future research in this area.

Stern, John A.; Brown, M.; Ulett, George A.; Sletten, Ivan (1977). A comparison of hypnosis, acupuncture, morphine, Valium, aspirin, and placebo in the management of experimentally induced pain. [Annals of the New York Academy of Sciences, 296, 175-193.](#)

"What general conclusions can we come to on the basis of these investigations? We conclude that hypnosis and suggestions of analgesia, morphine, and acupuncture stimulation (of LI 4, 14, and 15 on the arm exposed to painful stimulation) are effective in reducing experimentally induced pain. This is true for both a cold pressor pain-induction procedure and an ischemic pain-induction procedure. Hypnotic suggestibility does not account for the effectiveness of acupuncture stimulation, though good hypnotic Ss show better protection against pain with hypnotic suggestion and morphine.

"Good hypnotic Ss experience more pain than is true for Poor hypnotic Ss when exposed to the same pain-induction procedure. The effect is more marked for the cold-pressor than the ischemic pain procedure. Good hypnotic Ss are more responsive -- i.e., show greater reduction in pain perception -- to drugs and intervention procedures that produce significant subjective sensations (morphine and diazepam) than is true of Poor hypnotic Ss. This is not true for aspirin and placebo. Last, but not least, Ss low in hypnotic susceptibility tend to perceive painful stimuli as more painful when under the influence of diazepam as compared to the nondrug condition" (p. 192).

**1976**

Moore, Mary E.; Berk, Stephen N. (1976). Acupuncture for chronic shoulder pain: An experimental study with attention to the role of placebo and hypnotic susceptibility. *Annals of Internal Medicine*, 84 (4), 381-384.

One half of 42 Ss treated for painful shoulders received classic acupuncture, and one half received a placebo in which the needles did not penetrate the skin. Half of each of these groups was treated in a positive setting to encourage the subject, and half in a negative setting designed to keep encouragement at a minimum. All patients were independently rated for susceptibility to hypnosis. Although range of motion did not improve, the majority of patients reported significant improvement in shoulder discomfort to a blind evaluator after treatment; placebo and acupuncture groups did not differ in this respect, however. The positive and negative settings did not affect treatment outcome. In all groups, those who were not rated as highly susceptible to hypnosis tended to fail to achieve the highest levels of relief, but such differences were not statistically significant.

There were 42 subjects, and they were tested with the Spiegel Hypnotic Induction Profile. "Both acupuncture and placebo proved to be effective in relieving shoulder discomfort. 69% of the total group made lower assessments of discomfort on the post-treatment rating than on the pretreatment rating" (p. 382).

"Acupuncture was not more effective than placebo in relieving discomfort, however. The average percentage of improvement among those who had acupuncture was not, statistically, significantly different from those who had placebo. Indeed, what little difference there was actually was in the opposite direction, the placebo group improving on the average somewhat more than the acupuncture group" (pp. 382-383).

"In the negative setting, however, where the subject was required to suffer in silence, acupuncture seemed to be less effective than the placebo in relieving discomfort" (p. 383).

"Although the subjects perceived that the treatment relieved their shoulder discomfort, there was no objective evidence of improvement in the shoulder as measured by change in the range of motion scores before and after treatment" (p. 383).

(The placebo was needle pricked against the skin at true site, then rapidly and lightly tapped against the surface of the skin without penetration.)

"Those who were not susceptible to hypnosis failed to experience as much relief from discomfort as those who were" (p. 383).

"The fact that acupuncture was not more successful in relieving shoulder discomfort than a sham procedure suggests that its much publicized success may be merely a powerful placebo effect" (p. 383).

Katz, Kao, Spiegel et al (1974) also found that low hypnotizables did not benefit much in terms of pain relief with acupuncture.

## 1975

Andreychuk, Theodore; Skriver, Christian (1975). Hypnosis and biofeedback in the treatment of migraine headache. [International Journal of Clinical and Experimental Hypnosis](#), 23 (3), 172-183.

A study was made to explore the effects of subject hypnotizability in response to 3 treatment procedures applied to 33 migraine headache sufferers. These treatment procedures included biofeedback training for hand-warming, biofeedback training for alpha enhancement and training for self-hypnosis. The Hypnotic Induction Profile (HIP) of Spiegel & Bridger (1970) was given to each S to determine degree of hypnotizability and the MMPI was administered to all Ss. All 3 treatment groups showed significant reductions in headache rates and there were no significant differences between groups. Cutting across treatment groups, high hypnotizable Ss (N - 15) showed significant reductions in headache rates when compared with low hypnotizable Ss (N - 13). There was no correlation between HIP scores and the hysteria scale of the MMPI.

This research investigated the relationship between hypnotizability and treatment outcome.

Collison, David R. (1975). Which asthmatic- patients should be treated by hypnotherapy?. [Medical Journal of Australia](#), 1 (25), 776-781.

Retrospective analysis of 121 asthmatic patients who were treated by hypnotherapy. Subjects were first broken down into one of three possible groups: "light," "medium," or "deep," according to the depth of trance typically achieved. Hypnoidal states were included in the light trance group and somnambulistic state in the deep trance. All sessions concentrated on suggesting physical and mental relaxation since we know this is one of the causes of the appearance of the "asthma attack." The actual wording varied however, and this involved discussion under hypnosis, of the main personalities of the environment, fears, failures, aims, hopes and frustrations. Post-hypnotic suggestions of

continued relaxation and ability to cope with the various situations of life were given in all the cases. Auto-hypnosis was taught to enable the patient to reinforce the above suggestions and to remain in or selectively achieve a relaxed state. Results were classified into four different categories: "excellent," "good," "poor," and "nil." It was found that those patients who experienced a "high" trance depth were more likely to show excellent improvement than those who were measured as "medium" or "low" trance subjects.

Mullen, G.; Perry, C. (1975). The effects of hypnotic susceptibility on reducing smoking behavior treated by a hypnotic technique. [Journal of Clinical Psychology, 31, 498-505.](#)

In order to examine the relationship between hypnotizability and treatment outcome in which hypnosis is used, 54 people ages 19-47 who undertook to stop smoking were studied. Although it is logical that there should be a relationship, clinical anecdotal material published by people who used hypnosis (Freud, Weitzenhoffer, Lazarus, Sheehan, Orne) suggests that may not be the case. Hypnotic susceptibility was evaluated with a clinical procedure developed by Orne and O'Connell (the DRP). Patients were taught self hypnosis using a brief procedure developed by Herbert Spiegel. Baseline smoking rate and three-month follow-up with postcards mailed every week were employed as measures. Success in the treatment program was defined as a 50% reduction in smoking behavior. After 3 months, 7 people were abstinent, 10 had reduced smoking to criterion level (50%), 16 people had discontinued the investigation, and 21 did not change. Considering only the 15 most and 15 least hypnotizable, 12 of the 15 high susceptibles had reduced smoking by at least 50%, as compared to 5 of the 15 of the low susceptibles. (chi square = 4.88, df = 1,  $p < .05$ ).

Samko, Michael R.; Schoenfeld, Lawrence S. (1975). Hypnotic susceptibility and the Lamaze childbirth experience. [American Journal of Obstetrics and Gynecology, 121, 631-6.](#)

This study explored the relationship between childbirth training and hypnotic susceptibility. A multiple linear regression analysis was performed on the various medical and attitudinal variables related to the subjects' Lamaze childbirth experience and these were tested against hypnotic susceptibility. The results of the analysis indicate that hypnotic susceptibility is not significantly related to Lamaze training, nor is it significantly related to the type of childbirth experience that a Lamaze trained woman has.

Subjects used in this experiment (N = 55) were women who had received Lamaze training within the last two years, and had delivered only one child. The HIP was administered to find a score of hypnotizability and the women were given two questionnaires. The first of the questionnaires sought demographic and medical information, the second was an attitude questionnaire about her childbirth. A third questionnaire was given to the attending physician. "The correlations between hypnotic susceptibility and the physician's rating of how successful he felt the subject's use of the Lamaze technique ( $r = 0.12$ ) and the physician's rating of how helpful he found the mother's use of the Lamaze technique was to delivery ( $r = 0.17$ ) were both nonsignificant" p. 634).

### **1973**

McReynolds, William T.; Barnes, Allan R.; Brooks, Samuel; Rehgagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

### **1970**

Maher-Loughnan, G. P. (1970). Hypnosis and auto-hypnosis for the treatment of asthma. International Journal of Clinical and Experimental Hypnosis, 18 (1), 1-14.

Conducted 2 controlled studies into the use of hypnosis in 252 asthma patients. Several different control procedures were used. Methods and results were summarized, and the same conclusion was reached: That hypnosis supplemented by autohypnosis was significantly more effective than control procedures. An outline is given of details of treatment methods. A current analysis of Ss involving up to 6 yr. of follow-up, is presented to provide a working guide to the regime in regular practice. To be fully effective hypnosis should be employed before steroids are started. Steroid-dependent asthma is rarely totally relieved by hypnotherapy. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

### **1969**

Rock, Nicholas; Shipley, Thomas; Campbell, Colin (1969). Hypnosis with untrained, nonvolunteer patients in labor. International Journal of Clinical and Experimental Hypnosis, 17, 25-36.

20 nonvolunteer, untrained Ss were individually hypnotized during active labor and compared with 18 controls selected by the same criteria and receiving the same obstetrical treatment. Hypnotized Ss required less medication and obtained greater relief of pain than the controls. The time involved in induction of hypnosis was only 20 min., and the total time added by hypnotic procedures was only 45 min. longer than the regular care of the control group. It was concluded that hypnosis can be used easily on nonvolunteer, untrained patients in active labor, even in a noisy environment, without any serious sequelae. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

### **1968**

Faw, Volney; Sellers, David J.; Wilcox, Warren W. (1968). Psychopathological effects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 26-37.

The probability that hypnotic induction produces psychopathological effects has not been experimentally determined. The present study hypothesizes various negative effects following hypnosis such as increased signs of personality disturbances, increased need for medical attention, greater tendencies toward suicide, and negative effects among the more maladjusted persons of the population sample. 107 college students were assigned at random to experimental and control groups. The experimental group was hypnotized 3 times in successive weeks. A comparison between control and experimental groups in respect to pre- and post-MMPI score differences plus a follow-up with the college counseling center and infirmary for a 90-day period following induction led to the rejection of the hypotheses. A comparison of measures yielded some significant differences in favor of the experimental group. It is concluded that there are nondetrimental effects when hypnosis is used with a normal college population.

### 1964

Leckie, F. H. (1964). Hypnotherapy in gynecological disorders. [International Journal of Clinical and Experimental Hypnosis](#), 12 (3), 121-146.

The attitude and position of a gynecologist employing hypnotherapy in clinical practice is emphasized. Particular consideration is given to dysmenorrhea (25 cases), dyspareunia (30 cases), vaginismus (15 cases), frigidity (12 cases), and anxiety states encountered in gynecological practice (26 cases). An indication is given of the general method and of the specific pattern of treatment, which initially is directed to symptom removal by direct suggestion. When this method proves ineffective, special techniques are employed to carry out therapy at a deeper level. Details of clinical data of all cases are presented together with evaluation of the percentage of success achieved. Results have proved encouraging. Several illustrative cases are described.

### 1962

Kolouch, Fred T. (1962). Role of suggestion in surgical convalescence. [Archives of Surgery](#), 85, 144-155.

The author is a surgeon who has offered hypnosis to many patients in his practice. His inductions were usually rapid (30 seconds to 10 minutes), stressing optimistic expectations. The procedure is described as follows: "Suggestion is then utilized in a purposeful manner to communicate a reality image of the entire surgical procedure to the patient. A frank but optimistic discussion of morbidity and mortality is made. An estimate of the pain to be experienced is offered with the emphasis that this can be controlled in part and it will be temporary. The patients are told that they may use opiates or sedatives if they feel a need for chemical pain relief. Any subconscious fears of surgery are investigated using ideomotor questioning. These are ventilated by the patient and put in the proper perspective in relationship to the realities of the forthcoming surgical procedure. If the patient is capable, he is taught glove anesthesia of the hand and given a posthypnotic suggestion for the transference of this to his operative site. He is asked to visualize himself at the conclusion of his convalescence, free of his pathology, alive and well and rehabilitated to normal productivity. It is emphasized to him that by judicious application of his subconscious thoughts to relaxation, pain control, normal

respiratory, gastrointestinal, and urinary functions, he may rapidly accomplish his own preconceived notion of his convalescence.

"He is given a posthypnotic suggestion that he will never respond to hypnosis without his consent. ...

"A posthypnotic suggestion is given to establish a simple signal as a trance inducer for future hypnosis or to enable him to use autohypnosis.

"The patient who is to have a general anesthetic is given the suggestion that while asleep he will not listen to any conversation in the operating room except that which is directed toward him by name.

"In the patients undergoing minor outpatient surgery, hypnosis is frequently induced in the operating room during the scrub time.

"Patients undergoing general or regional anesthesia are frequently placed in a trance before the anesthetic period. ...

"During the surgery care is taken to keep discussion at a level unrelated to the surgical procedure. ...

"At the conclusion, consistent with an honest appraisal of the situation, optimistic, purposeful suggestions are offered the patient while he is still asleep or in hypnosis" (p. 305).

The author evaluated the outcome for 100 surgical patients who had received this procedure, using subjective measures (confidence, well-being, freedom from fear and anxiety) and two objective measures (needs for postoperative pain-relieving drugs, and postoperative hospitalization). Seventy-five patients aged 6-80 had 81 different procedures (breast biopsies, tenorrhaphies, orchiopexies, herniorrhaphies, thyroidectomies, a radical neck dissection, radical mastectomies, cholecystectomies, gastrectomies, rectal surgery, etc.); the remaining 25 patients had minor outpatient procedures under local or hypnoanesthesia.

The author compared the dosage of medications needed by patients he judged to have benefitted from hypnosis and those who didn't benefit. He did the same analysis for length of stay. Based on his own observations, he judged that 75% of the hospitalized patients and nearly all of the OPD patients benefitted and experienced a simplified convalescence. Laparotomy patients required more medications than the other patients. The author compared the hospitalized patients who received hypnotic suggestion to a similar group who were not subjected to such suggestion, on needs for opiates and postoperative hospitalization. There was a reduction in drug needs in most categories of cases, but equal needs in the biliary cases.

in the biliary cases. Patients subjected to thyroidectomy or herniorrhaphy left the hospital sooner if they had been given hypnosis, but the patients undergoing biliary and gastric surgery still required the usual hospital care.

Herniorrhaphy patients benefitted in terms of catheterization: only was catheterized in the hypnosis group compared to 7 in the nonhypnosis group. The author attributed this outcome to a combination of suggestion and local anesthesia. Postoperative complications were rare in the patients utilizing hypnosis.

The economic advantages of suggestion are illustrated in a comparison of the costs of hospitalization of the series of patients undergoing herniorrhaphy and thyroidectomy with and without hypnosis: average cost of thyroidectomy with hypnosis used effectively (\$196) and without hypnosis (\$311); of herniorrhaphies with hypnosis used effectively (\$125) and without hypnosis (\$181). N.B. These costs are presumably from the time period of approximately 1959-60, inasmuch as the paper was read at the Annual Session of the Western Surgical Association on December 1, 1961.

"Probably the most pleasure for the surgeon results from the observation of the responses of children to suggestion in hypnosis. A degree of cooperation and freedom from fear is exhibited that is nearly unbelievable. With hypnosis in children one may utilize local anesthesia in situations which previously required general anesthetics" (p. 310).

## 1962

Weitzenhoffer, Andre M. (1962). The significance of hypnotic depth in therapy. [International Journal of Clinical and Experimental Hypnosis, 10 \(2\), 75-78.](#)

It is a common assumption that hypnosis has a quality of degree. While clinicians often state that success is unrelated to depth, the author maintains that depth determines the techniques one can successfully use in hypnotherapy. At the same time he believes that hypnotic behavior is multidimensional and that the major determinant of hypnotherapeutic success is the therapist's ability to establish a meaningful interpersonal relationship. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## 1961

Pearson, R. E. (1961). Response to suggestion given under general anesthesia. [American Journal of Clinical Hypnosis, 4, 106-114](#)

Employed a double-blind design with placebo control. Audio tapes containing therapeutic suggestions were played to 43 experimental patients during anesthesia. The main theme of the suggestions was that the patient would cope better and recover faster if he could become relaxed. Placebo tapes (music or blank tapes) were played to the 38 control patients. Only E, who had no contact with the patients, knew which tape was played to a given patient. Three postoperative variables were studied: (a) number of doses of narcotics in the first 5 postoperative days; (b) a numerical rating by the surgeon of the postoperative course; and (c) number of postoperative days until release. Although no significant differences were found between the suggestion group and placebo group on need for narcotics or rated course of recovery, patients receiving suggestions were discharged an average of 2.42 days sooner ( $p < .05$ ).

## 1955

Hart, Hornell (1955). Measuring some results of autohypnosis. [Journal of Clinical and Experimental Hypnosis, 3 \(4\), 229-242.](#)

The author developed self ratings for mood (euphoria-dysphoria) and alertness-fatigue, which were administered to college students in neutral conditions and after self-hypnosis conditions. The self hypnosis, or "auto-conditioning" usually involved deep relaxation

self suggestions followed by other suggestions. The suggestions involved using the word 'you' to be able to re-instate the autoconditioning more and more effectively; suggestions for attitude change (e.g. that 'No matter what comes, we will grapple with it courageously'); and euphoria auto-suggestions (e.g. that 'you will come out of this deep relaxation, feeling rested, alert, cheerful and courageous').

In both single session experiments, as with a class of nurses who experienced an 8 minute auto-conditioning procedure, and in experiments extending over time, depression decreased. He noted that "for various reasons, the students who participated in autoconditioning experiments between February and May, 1955, were in many respects less successful than some of the previous experimental groups had been" (p. 235).

Increased alertness and diminished fatigue was also observed.

Many students chose to give themselves suggestions to correct the habit of procrastination. Two-thirds of the participants reported complete success, up to the level specified, and only one of 43 experiments on correcting procrastination was a "flat failure."

## **P RESEARCH**

### **PAIN MANAGEMENT**

**2002**

**GOW, MICHAEL (2002). Treating dental needle phobia using hypnosis. [Paper] Presented at IFDAS/SAAD 10th International Dental Congress on Modern Pain Control, Edinburgh, June 2003, also at BSMDH (Scot) meeting December 2003.**

**"This case illustrates the effectiveness of short-term hypnosis treatment for a dental needle phobia. What is significant is the dental history of the patient and the longstanding effect of her dental phobias and how quickly hypnosis was able to remove this problem.**

**Aim: To manage dental needle phobia using hypnosis integrated into an anxiety management treatment plan."**

**Case History: Female, 48, had traumatic and painful experience at the dentist when 5, developed phobia of dental injections and treatment. Has had a dozen General Anaesthetics for dental treatment. Experiences psychosomatic pain prior to treatment.**

**Methods: Medical, dental and phobia history explored. Pre-treatment questionnaire assessed dental anxiety, reasons for anxiety, and ascertained management options. Post-treatment questionnaire assessed changes in dental anxiety and attitudes.**

**Anxiety management techniques: Needle Desensitisation, Relaxation, and Hypnosis (Regression, Progressive Muscular Relaxation, Glove Anaesthesia, Future Rehearsal etc.).**

**Results: Pre-treatment questionnaire revealed high level anxiety (26 out of high of 30 modified Corah score; and high anticipation of future pain during dental treatment (10 out of high of 10 on a Visual Analogue Scale. Post-treatment**

questionnaire revealed low level anxiety (12/30) and low anticipation of future pain (4/10).

**Conclusion:** Hypnosis was an effective adjunct to anxiety management in this case, demonstrating how a non pharmacological approach can find long term solutions by addressing the causes of the anxiety. Previous pharmacological approach had only addressed the symptoms of the immediate anxiety. Successful completion of prescribed dental treatment plan and changes in patient's attitudes highlight positive outcome

**Gravitz, M.A. (2002). Hypnosis in the conquest of pain. Hypnos: Swedish Journal of Hypnosis in Psychotherapy and Psychosomatic Medicine, 29, 19-28..**

Hypnosis has long been utilized for the management of pain and as surgical anesthesia. This article discusses early applications in various countries. Despite cynicism and disapproval by some, hypnosis has proven to be beneficial in numerous cases

**2000**

**Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

**Horton-Hausknecht J.; Mitzdorf U.; Melchart D. (2000). The effect of hypnosis therapy on the symptoms and disease activity in rheumatoid arthritis . Psychology and Health, 14 (6), 1089-1104..**

from: [http://www.imp-muenchen.de/The\\_effect\\_of\\_hypnos.698.1.html](http://www.imp-muenchen.de/The_effect_of_hypnos.698.1.html)

In this study we aimed to assess the effectiveness of clinical hypnosis on the symptoms and disease activity of rheumatoid arthritis (RA). 66 RA patients participated in a controlled group design. 26 patients learnt the hypnosis intervention, 20 patients were in a relaxation control group, and 20 patients were in a waiting-list control group. During hypnosis, patients developed individual visual imagery aimed at reducing the autoimmune activity underlying the RA and at reducing the symptoms of joint pain, swelling, and stiffness. Subjective assessments of symptom severity and body and joint function, using standardized questionnaires and visual analogue scales, were obtained. Objective measures of disease activity via multiple blood samples during the therapy period and at the two follow-ups were also taken. These measurements were of erythrocyte sedimentation rate, C-reactive protein, hemoglobin, and leukocyte total numbers. Results indicate that the hypnosis therapy produced more significant improvements in both the subjective and objective measurements, above relaxation and medication. Improvements were also found to be of clinical significance and became even more significant when patients practiced the hypnosis regularly during the follow-up periods.

Willmarth, Eric K. (2000, August). Modification of experienced pain with hypnotically induced positive mood. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

This study investigated the relationship between chronic pain and depressed mood within the context of Associative Network Theory and the High Risk Model of Threat Perception. A bi-directional relationship was hypothesized and tested by comparing pain ratings before and after the hypnotic induction of positive mood by suggestion of positive memories. These results were compared to the pain ratings of two control groups: participants who received hypnotic suggestion for relaxation only and participants who received non-hypnotic suggestion for relaxation and enhanced mood. Participants were 96 patients of a hospital-based Pain Management Center. Following assessment of hypnotic ability using the Harvard Group Scale of Hypnotic Susceptibility: Form A, and the Subjective Experiences Scale, participants recorded levels of depressed mood, sensory pain, affective pain, global pain and self control of pain before and after listening to an audio-taped treatment session. Results show that the induction of a positive mood did influence a decrease in self-reports of pain. In addition, the level of the participants' hypnotic ability was also found to be a significant factor, suggesting that screening for predisposing factors, such as hypnotic ability, and the clinical use of hypnosis for mood enhancement are warranted in a chronic pain population. - Abstract taken from Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30, Fall 2000.

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warranted in a chronic pain population. - Abstract taken from *Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30, Fall 2000.*

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

Lioffi, Christina; Hatira, Popi (1999). Clinical hypnosis versus cognitive behavioural training for pain management with pediatric patients undergoing bone marrow aspirations. International Journal of Clinical and Experimental Hypnosis, 47 (2), 104-116.

A randomized controlled trial was conducted to compare the efficacy of clinical hypnosis versus cognitive behavioral (CB) coping skills training in alleviating the pain and distress of 30 pediatric cancer patients (age 5 to 15 years) undergoing bone marrow aspirations. Patients were randomized to one of three groups: hypnosis, a package of CB coping skills, and no intervention. Patients who received either hypnosis or CB reported less pain and pain-related anxiety than did control patients and less pain and anxiety than at their own baseline. Hypnosis and CB were similarly effective in the relief of pain. Results also indicated that children reported more anxiety and exhibited more behavioral distress in the CB group than in the hypnosis group. It is concluded that hypnosis and CB coping skills are effective in preparing pediatric oncology patients for bone marrow aspiration

**1998**

Alden, Phyllis; Heap, Michael (1998). Hypnotic pain control: Some theoretical and practical issues. International Journal of Clinical and Experimental Hypnosis, 46 (1), 62-76.

Pain management programs assist patients to use their behavioral and cognitive skills for the purpose of rendering their experience of pain as more tolerable in some way. Hypnotic procedures may be included in this perspective. Thus, hypnosis may be best conceived as a set of skills to be deployed by the individual rather than as a state. The authors contend that such an emphasis is more compatible with the approaches of some pain management practitioners who have been generally slow to acknowledge the value of hypnosis and to incorporate hypnosis in their range of treatment skills. In this article, the authors present a minimal and atheoretical definition of hypnosis, and they list the basic properties of hypnosis that may be used in the treatment of pain. For a number of reasons, it is suggested that

undertaking hypnosis as though the individual were indeed being placed into a special trance state may in some cases promote an effective outcome. However, it should be acknowledged that there may be instances when the relevant skills may be more effectively engaged at the expense of a strict special trance state by targeting the specific skills that are to be used for therapeutic benefit.

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Crawford, Helen J.; Knebel, Timothy; Kaplan, Lyla; Vendemia, Jennifer M. C.; Xie, Min; Jamison, Scott; Pribram, Karl H. (1998). Hypnotic analgesia: 1. Somatosensory event-related potential changes to noxious stimuli and 2. Transfer learning to reduce chronic low back pain. International Journal of Clinical and Experimental Hypnosis, 46 (1), 92-132.

Fifteen adults with chronic low back pain (M = 4 years), age 18 to 43 years (M = 29 years), participated. All but one were moderately to highly hypnotizable (M = 7.87; modified 11-point Stanford Hypnotic Susceptibility Scale, Form C [Weitzenhoffer & Hilgard, 1962]), and significantly reduced pain perception following hypnotic analgesia instructions during cold-pressor pain training. In Part 1, somatosensory event-related potential correlates of noxious electrical stimulation were evaluated during attend and hypnotic analgesia (HA) conditions at anterior frontal (Fp1, Fp2), midfrontal (Fe, F4), central (C3, C4), and parietal (P3, P4) regions. During HA, hypothesized inhibitory processing was evidenced by enhanced N140 in the anterior frontal region and by a prestimulus positive-ongoing contingent cortical potential at Fp1 only. During HA, decreased spatiotemporal perception was evidenced by reduced amplitudes of P200 (bilateral midfrontal and central, and left parietal) and P300 (right midfrontal and central). HA led to highly significant mean reductions in perceived sensory pain and distress. HA is an active process that requires inhibitory effort, dissociated from conscious awareness, where the anterior frontal cortex participates in a topographically specific inhibitory feedback circuit that cooperates in the allocation of thalamocortical activities. In Part 2, the authors document the development of self-efficacy through the successful transfer by participants of newly learned skills of experimental pain reduction to reduction of their own chronic pain. Over three experimental sessions, participants reported chronic pain reduction, increased psychological well-being, and increased sleep quality. The development of "neurosignatures of pain" can influence subsequent pain experiences (Coderre, Katz, Vaccarino, & Malzack, 1993; Melzack, 1993) and may be expanded in size and easily reactivated (Flor & Birbaumer, 1994; Melzack, 1991, 1993). Therefore, hypnosis and other psychological interventions need to be introduced early as adjuncts in medical treatments for onset pain before the development of chronic pain.

The authors suggest that "the anterior frontal region deals with the active allocation of attention and disattention, whereas spatiotemporal aspects of the somatosensory perceptions involve the posterior cortical systems" (p. 113) They acknowledge that "other inhibitory pain systems are actively interacting with the frontal attentional system, including the limbic and thalamic systems" and mention evidence that the inhibitory processing "may extend as far as spinal cord antinociceptive mechanisms as evidenced by reductions in brief latency (Hagbarth & Finer, 1963) and R-III amplitude (Kiernan, Dane, Phillips, & Price, 1995) of spinal reflexes" (p. 113). Both pain perception and strategies of pain control may involve the anterior cingulate cortex (Kropotov et al. 1997), which has many connections with anterior frontal cortex "and is thought to be an area that organizes responses to noxious stimuli" (p. 113).

For the chronic low back pain Ss there were reductions in reported low back pain during the experimental sessions, and significant improvements in psychological well-being and sleep quality across the three sessions. "The importance of developing self-efficacy through learning to control experimental pain and the understanding of one's own attentional and disattentional abilities was demonstrated as being a significant intervention in the modulation and control of chronic pain" (p. 123).

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm,

accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

Weisenberg, Matisyohu (1998). Cognitive aspects of pain and pain control. International Journal of Clinical and Experimental Hypnosis, 46 (1), 44-61.

The cognitive and cognitive-behavioral approaches have been shown to be very effective in controlling pain and its sequelae both in the laboratory and in the clinical setting. As used in most research and treatment, cognitive approaches are concerned with the way the person perceives, interprets, and relates to his or her pain rather than with the elimination of the pain per se. This article reviews some of the origins of cognitive theory and pain theory, as well as examples of the techniques used and the research support for the approach. Special emphasis is given to self-efficacy, perceived control, and stress inoculation therapy. There is also discussion of some of the limitations of the cognitive approach. The overall conclusion is that the cognitive approach is a powerful and effective one for pain control despite its limitations.

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1997

Dinges, David F.; Whitehouse, Wayne G.; Orne, Emily Carota; Bloom, Peter B.; Carlin, Michele M.; Bauer, Nancy K.; Gillen, Kelly A.; Shapiro, Barbara S.; Ohene-Frempong, Kwaku; Dampier, Carlton; Orne, Martin T. (1997). Self-hypnosis training as an adjunctive treatment in the management of pain associated with sickle cell disease. International Journal of Clinical and Experimental Hypnosis, 45 (4), 417-432.

A cohort of patients with sickle cell disease, consisting of children, adolescents, and adults, who reported experiencing three or more episodes of vaso-occlusive pain the preceding year, were enrolled in a prospective two-period treatment protocol. Following a 4-month conventional treatment baseline phase, a supplemental cognitive-behavioral pain management program that centered on self-hypnosis was implemented over the next 18 months. Frequency of self-hypnosis group training sessions began at once per week for the first 6 months, became biweekly for the next 6 months, and finally occurred once every third week for the next 6 months, and finally occurred once every third week for the remaining 6 months. Results indicate that the self-hypnosis intervention was associated with a significant reduction in pain days. Both the proportion of "bad sleep" nights and the use of pain medications also decreased significantly during the self-hypnosis treatment phase. However, participants continued to report disturbed sleep and to require

medications on those days during which they did experience pain. Findings further suggest that the overall reduction in pain frequency was due to the elimination of less severe episodes of pain. Non-specific factors may have contributed to the efficacy of treatment. Nevertheless, the program clearly demonstrates that an adjunctive behavioral treatment for sickle cell pain, involving patient self-management and regular contact with a medical self-hypnosis team, can be beneficial in reducing recurrent, unpredictable episodes of pain in a patient population for whom few safe, cost-effective medical alternatives exist.

**Tan, Siang-Yang; Leucht, Christopher A. (1997). Cognitive-behavioral therapy for clinical pain control: A 15-year update and its relationship to hypnosis. International Journal of Clinical and Experimental Hypnosis, 45 (4), 396-416**

Since Tan's (1982) review of cognitive and cognitive-behavioral methods for pain control was published 15 years ago, significant advances have been made in cognitive-behavioral therapy for pain. The scientific evidence for its efficacy for clinical pain attenuation is now much more substantial and is briefly reviewed. In particular, cognitive-behavioral therapy for chronic pain was recently listed as one of 25 empirically validated or supported psychological treatments available for various disorders. A number of emerging issues are further discussed in light of recent developments and research findings. The relationship of cognitive-behavioral therapy to hypnosis for pain control is briefly addressed, with suggestions for integrating hypnotic and cognitive-behavioral techniques.

**1996 Amigs, S.; Capafons, A. (1996). Emotional self-regulation therapy for treating primary dysmenorrhea and premenstrual distress.. In Lynn, S. J.; Kirsch, I.; Rhue, J. W. (Ed.), Casebook of clinical hypnosis. (pp. 153-171). Washington, D.C.: American Psychological Association.**

A case study on dysmenorrhea and premenstrual distress is presented, using emotional self-regulation therapy. Authors show a step by step approach in how to treat this kind of problem, using suggestions in an awake, alert state. Follow-up data are included.

**1996**

**Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.**

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning treatment with hypnosis. Evidence regarding efficacy of

hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1989

LaClave, Linda J.; Blix, Susanne (1989). Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. International Journal of Clinical and Experimental Hypnosis, 37 (1), 6-14.

This paper presents the case of a 6.5-year-old girl with malignant astrocytoma of the left brain hemisphere. During the course of her chemotherapy treatment, severe vomiting developed to the degree that on several occasions she became dehydrated. Discontinuation of chemotherapy was being considered when she was referred for hypnotherapy. Despite severe neurological impairments which excluded many traditional techniques, hypnosis was successful in eliminating emesis. Hypnosis was also utilized to decrease pain and to improve sleep patterns. Drawings are presented to help show how this child resolved anxiety associated with treatment and fears surrounding the knowledge of her impending death.

Yousufzai, N. M. (1989). Rheumatoid arthritis and hypnosis: Case report. British Journal of Experimental and Clinical Hypnosis, 6 (3), 178-181.

[http://www.imp-muenchen.de/The\\_effect\\_of\\_hypnos.698.1.html](http://www.imp-muenchen.de/The_effect_of_hypnos.698.1.html)

From: Psychology and Health, 2000, vol 14, p. 1089.

Horton-Hausknecht J, Mitzdorf U, Melchart D: The effect of hypnosis therapy on the symptoms and disease activity in rheumatoid arthritis .

In this study we aimed to assess the effectiveness of clinical hypnosis on the symptoms and disease activity of rheumatoid arthritis (RA). 66 RA patients participated in a controlled group design. 26 patients learnt the hypnosis

intervention, 20 patients were in a relaxation control group, and 20 patients were in a waiting-list control group. During hypnosis, patients developed individual visual imagery aimed at reducing the autoimmune activity underlying the RA and at reducing the symptoms of joint pain, swelling, and stiffness. Subjective assessments of symptom severity and body and joint function, using standardized questionnaires and visual analogue scales, were obtained. Objective measures of disease activity via multiple blood samples during the therapy period and at the two follow-ups were also taken. These measurements were of erythrocyte sedimentation rate, C-reactive protein, hemoglobin, and leukocyte total numbers. Results indicate that the hypnosis therapy produced more significant improvements in both the subjective and objective measurements, above relaxation and medication. Improvements were also found to be of clinical significance and became even more significant when patients practiced the hypnosis regularly during the follow-up periods.

"The effect of hypnotic suggestion on pain and mobility of joints was remarkable. On the fifth session there was hardly any pain, and shoulder movements were almost normal" (p. 179).

1987

Chaves, John; Brown, Jude (1987). Spontaneous cognitive strategies for the control of clinical pain and stress. Journal of Behavioral Medicine, 10 (3), 263-276.

The spontaneous cognitive strategies employed by 75 patients undergoing dental extractions or mandibular block injections were elicited using a structured interview. Interest focused on the relationship between these strategies and several personality variables, including state and trait anxiety, locus of control, and absorption. In addition, the effect of strategy utilization on perceived pain and stress was assessed. Forty-four percent of the patients employed cognitive strategies designed to minimize pain and stress, while 37% catastrophized, engaging in cognitive activity which exaggerated the fearful aspects of their experience. Only 19% of the patients denied any cognitive activity during the clinical procedure, and many of these used noncognitive coping strategies. Discriminant analysis revealed that situational anxiety was associated with the use of cognitive coping strategies. Catastrophizing was associated with increasing age, past dental stress, and higher levels of stress vulnerability (high trait anxiety and external locus of control). Copers reported less stress than catastrophizers but not less pain.

1986

Williams, David A.; Thorn, Beverly E. (1986). Can research methodology affect treatment outcome? A comparison of two cold pressor test paradigms. Cognitive Therapy and Research, 10 (5), 539-545.

Examined the effect of fixed or open latency instructions on subjective pain report for the cold pressor test using a single cognitive training strategy with 80 undergraduates. The fixed latency paradigm instructed Ss to leave their hand in the cold water for a fixed amount of time (e.g., 3 min), whereas the tolerance paradigm

asked Ss to endure pain for as long as possible. Results suggest that the fixed latency paradigm is associated with lower subjective pain ratings especially when a cognitive strategy is used. The tolerance groups failed to decrease their subjective perception of pain but evidenced longer latencies when a cognitive strategy was used. It is concluded that while other research has used these paradigms interchangeably to assess efficacy, these 2 paradigms apparently pose different challenges to Ss. (15 ref).

**1985**

**Kabat-Zinn, Jon; Lipworth, Leslie; Burney, Robert (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. Journal of Behavioral Medicine, 8 (2), 163-190.**

90 chronic pain patients were trained in mindfulness meditation in a 10-wk stress reduction and relaxation program. Self-report indices, including the McGill Pain Questionnaire, the Profile of Mood States, and the Hopkins Symptom Checklist, were administered to the Ss to assess multiple aspects of pain and certain pain-related behaviors. Results show statistically significant reductions in measures of present-moment pain, negative body image, inhibition of activity by pain, symptoms, mood disturbance, and psychological symptomatology, including anxiety and depression. Pain-related drug utilization decreased, and activity levels and feelings of self-esteem increased. Improvement appeared to be independent of gender, source of referral, and type of pain. A comparison group of 21 pain patients did not show significant improvement on these measures after traditional treatment protocols. At follow-up, the improvements observed during the meditation training were maintained up to 15 months postmeditation training for all measures except present-moment pain. The majority of Ss reported continued high compliance with the meditation practice as part of their daily lives.

**1983**

**Smith, Shirley J.; Balaban, Alvin B. (1983). A multidimensional approach to pain relief: Case report of a patient with systemic lupus erythematosus. International Journal of Clinical and Experimental Hypnosis, 31 (2), 72-81.**

A multidimensional approach to the relief of intense pain associated with a chronic, debilitating disease (Systemic Lupus Erythematosus) is illustrated in this case report. Techniques associated with behavioral therapy (deep muscle relaxation, systematic desensitization); hypnosis (trance states, guided imagery, age regression, anesthetic induction and transfer and auto-hypnosis); and psychodynamic psychotherapy (dyadic interchange, suggestion, encouragement, interpretation of resistance and the transference/countertransference relationship) were utilized in obtaining virtual freedom from disabling pain and the necessity for analgesic and tranquilizing medications. Follow-up over a 3-year period demonstrated the utility of the approach.

**1979**

Johnson, L. S.; Wiese, K. F. (1979). Live versus tape-recorded assessments of hypnotic responsiveness in pain control patients. International Journal of Clinical and Experimental Hypnosis, 27 (2), 74-84.

This study compared the effectiveness of live versus tape-recorded hypnotic procedures in producing general hypnotic responsiveness in hospitalized pain patients. 30 patients individually received in counterbalanced order both a live and an audiotaped presentation of the Stanford Hypnotic Clinical Scale (Hilgard & Hilgard, 1975), which contains an induction and a 5-item test of hypnotic susceptibility suitable for bed-ridden patients. The live presentation produced a significantly higher total score than the taped procedure ( $p < .05$ ), with no significant order effects. The correlation between modes of presentation was .66. Order effects were not significant but a trend in that direction was discussed. The differences were found to hold for the high and medium ranges of susceptibility. Tentative conclusions were drawn that one cannot assume taped procedures to be equivalent to live in hypnotic analgesia research with clinical populations. The non-equivalence of live and taped procedures need not invalidate the clinical use of the latter, should they prove empirically effective. A case study of low back pain is added to illustrate effective tape-induced analgesia for patients unsuccessful with self-hypnosis.

1978

Schafer, Donald W.; Hernandez, A. (1978). Hypnosis, pain and the context of therapy. International Journal of Clinical and Experimental Hypnosis, 26 (3), 143-153.

The therapeutic use of hypnosis in pain syndromes assumes that organic pain can be brought under control through hypnotic techniques. Although it might be inferred from laboratory experiments that the hypnotic control of pain is in direct proportion to the individual's hypnotizability, clinical work would indicate that most motivated patients can achieve sufficient levels of hypnosis to alleviate pain. The psychological state of the patient -- regardless of whether the pain was initially organic or psychogenic -- modifies the patient's response to therapeutic hypnosis. This paper presents an approach to the patient that helps insure that the context of hypnotherapy will be optimal. Many patients who might otherwise be classified as un hypnotizable can in the appropriate context be helped to utilize hypnosis for the control of their pain.

1966

Zane, M. D. (1966). The hypnotic situation and changes in ulcer pain. International Journal of Clinical and Experimental Hypnosis, 14 (4), 292-304.

This is a study of internal and external hypnotic conditions associated with changes in pain developed during 5 hypnosis sessions in a patient with an acute duodenal ulcer. The 12 increases and 8 decreases in pain studied were found to be related to the interaction of coexisting reactions directed toward shifting social and private goals. Pain was associated with conflict among these reactions; intensification of

**pain occurred as a train of self-propagating internal events increased the conflict; relief of pain accompanied a reduction in the conflict. Increasing bodily disorganization resulted as shifts in focus of attention among social and private goals resulted in the rapid growth of conflicting mental and physical processes. An external stimulus, in the form of a highly individualized hypnotic suggestion, was often required to stop the disorganizing processes.**

processes.

1961

Cangello, V. W. (1961). The use of hypnotic suggestion for pain relief in malignant disease. International Journal of Clinical and Experimental Hypnosis, 9, 17-22.

Using hypnotic suggestion, pain relief was attempted in 22 cases. 13 of these patients showed a decrease in narcotic requirements. Duration of effectiveness was from 1 week to 4 1/2 months. It is concluded that this method should be tried before resorting to either chemical or surgical procedures since it is relatively simple to perform, has no harmful complications, and is not unduly time consuming. From *Psyc Abstracts* 36:02:2II17C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1959

Wallace, G. (1959). Hypnosis in anesthesiology. International Journal of Clinical and Experimental Hypnosis, 7 (3), 129-138.

The author states that reassurance of surgical patients in a preoperative visit may be enhanced with "the truly interpersonal relationship that hypnosis has as its foundation" (p. 131). He does not use the word "hypnosis" per se with these patients. Suggestions may be given that the patient will tolerate required procedures comfortably. Hypnosis supplements but usually does not replace anesthesia for an entire surgical procedure, but can be used in conjunction with regional techniques such as a nerve block, or in minor procedures on its own. A period of conditioning is necessary for producing true anesthesia, and that often is too time consuming for many anesthesiologists. Hypnosis can be used postoperatively for hiccoughs, for motivating the patient to become suitably active, etc. It is especially useful in a pediatric setting and in obstetrical procedures. He describes specific techniques used for conditioning obstetrical patients. The author also discusses pain management applications of hypnosis.

1956

Stokvis, B. (1956). The application of hypnosis in organic diseases. Journal of Clinical and Experimental Hypnosis, 4 (2), 79-82.

"SUMMARY. Hypnotherapy, applied as a symptomatic treatment, is especially indicated in those cases of organic diseases in which the patient has neurotically elaborated his physical suffering. In cases presenting neither etiological nor secondary psychic factors one may try to improve the patient's condition by hypnotic treatment. Description of a case (hypnotherapy in a woman with carcinoma mammae)[sic]. The writer's lack of appreciation of hypnotherapy in organic diseases does not include the treatment of diseases which are definitely psychosomatically determined" (pp. 81-82).

## **PAIN THRESHOLD**

**1998**

**Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. Pain, 75 (1), 85-92.**

**Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.**

**Abstract from National Library of Medicine, PubMed**

**1997**

**Chaves, John F.; Dworkin, Samuel F. (1997). Hypnotic control of pain: Historical perspectives and future prospects. International Journal of Clinical and Experimental Hypnosis, 45 (4), 356-376.**

**Hypnotic analgesia has occupied a pivotal place in experimental and clinical hypnosis. It emerged early in the 19th century when effective clinical techniques for pain management had not yet developed, and the relief of pain and suffering had not even become a well-defined social goal. Its acceptance was further complicated by political struggles surrounding the humanitarian transformation of medicine during this era as well as a redefinition of the physician-patient relationship that wrested control from the patient. The initial struggle for professional acceptance was won only when the debate became almost entirely localized within the professional community. Acceptance of hypnosis by professional organizations has been followed by alternating periods of interest and indifference. While the evidence**

for the powerful effects of suggestion and related variables has often been observed and reported in nonhypnotic contexts, their relationship to hypnotic phenomena has often not been appreciated. Since the mid-20th century, scientific information about hypnotic analgesia has grown substantially and has had significant influence on strategies for acute and chronic pain management. If recent calls for its wider application in pain management are to succeed, it will require additional data from clinical populations and a balanced and scientifically prudent approach by its advocates. [Journal Abstract]

significant influence on strategies for acute and chronic pain management. If recent calls for its wider application in pain management are to succeed, it will require additional data from clinical populations and a balanced and scientifically prudent approach by its advocates. [Journal Abstract]

**1994**

Zachariae, Robert; Bjerring, Peter (1994). Laser-induced pain-related brain potentials and sensory pain ratings in high and low hypnotizable subjects during hypnotic suggestions of relaxation, dissociated imagery, focused analgesia, and placebo. International Journal of Clinical and Experimental Hypnosis, 42 (1), 56-80.

Pain reports and amplitudes of painful argon laser-induced brain potentials were obtained for 10 high and 10 low hypnotizable volunteers following placebo and a randomized sequence of four hypnotically induced conditions of (a) neutral hypnosis, (b) deep relaxation, (c) pleasant dissociated "out of body" imagery, and (d) focused analgesia of the hand. Both high and low hypnotizable subjects exhibited significant reductions of reported pain during conditions of neutral hypnosis, relaxation, dissociated imagery, and focused analgesia. High hypnotizable subjects displayed significantly greater reductions than low hypnotizables in all conditions except placebo. Both high and low hypnotizables exhibited significant reductions of reported pain in all five conditions as well as in the posthypnotic condition, when amplitudes of evoked potentials were compared to the prehypnotic baseline. Only the high hypnotizable group showed significant reductions in amplitudes when the data were recalculated to reflect relative changes compared to the average amplitude of the pre- and postconditions to compensate for a possible habituation effect indicated by the significantly lowered amplitudes in the posthypnotic condition. The results are discussed in light of a number of hypotheses concerning mechanisms of hypnotic analgesia.

**1990**

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis. The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]
2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.
3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials

were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

**Discussion.** "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

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"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespectively whether they are of opioid or nonopioid nature)" (p.550)

1987

Chaves, John; Brown, Jude (1987). Spontaneous cognitive strategies for the control of clinical pain and stress. Journal of Behavioral Medicine, 10 (3), 263-276.

The spontaneous cognitive strategies employed by 75 patients undergoing dental extractions or mandibular block injections were elicited using a structured interview. Interest focused on the relationship between these strategies and several personality variables, including state and trait anxiety, locus of control, and absorption. In addition, the effect of strategy utilization on perceived pain and stress

was assessed. Forty-four percent of the patients employed cognitive strategies designed to minimize pain and stress, while 37% catastrophized, engaging in cognitive activity which exaggerated the fearful aspects of their experience. Only 19% of the patients denied any cognitive activity during the clinical procedure, and many of these used noncognitive coping strategies. Discriminant analysis revealed that situational anxiety was associated with the use of cognitive coping strategies. Catastrophizing was associated with increasing age, past dental stress, and higher levels of stress vulnerability (high trait anxiety and external locus of control). Copers reported less stress than catastrophizers but not less pain.

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Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo? Hypnosis, 4, 135-140.)

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in Psychosomatic Medicine, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects.

The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

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1981

Houston, Rodney Earl (1981). The effects of autohypnosis, imagery, or single suggestion on pain threshold and tolerance (Dissertation, University of Cincinnati). Dissertation Abstracts International, 42 (5), 1961-A.

Pain threshold, pain tolerance, and subject's subjective opinion of the pain were studied in 94 volunteer subjects (75 female, 19 male), who had been randomly assigned to three treatment groups (self hypnosis, in-vivo imagery, single suggestion) and a control group. (The original randomized sample included 124 Ss, but 30 were lost to the study-- 22 because of initial baseline scores being above maximum, 2 after reading the consent form, and 6 not returning for post-testing.) Mean age was 25; age range was 18-59 years.

The pain stimulus was 33 degree F. ice water in which the dominant hand was submerged for as long as the subjects were able. Subjects were told to nod when pain was first felt (threshold), and remove their hand when the pain was more than they could tolerate (tolerance). They were then asked to rate the pain on a 7-point scale, from 'none' to 'extreme.' Thus the three outcome measures were threshold time, tolerance time, and degree of perceived pain.

During the week between pretesting and posttesting, the self hypnosis group was to listen to a tape training them in self hypnosis at least twice; the imagery group was to listen to their imagery training tape at least twice; the simple suggestion group received no training. Posttesting was the same as pretesting, except that the simple suggestion group was given the single waking suggestion, "You will be able to withstand the pain much longer this time."

The experimental predictions were that treatment groups would increase in threshold levels and tolerance levels more than the control group; and that the treatment groups would decrease more than the control group in reported pain level. Multivariate analysis of variance of difference scores (pre- to posttest) demonstrated significant differences on the three dependent measures when comparing the three treatment groups to the control group. " Significant differences were also found when comparing treatment groups, autohypnosis and imagery to those given the single suggestion. No significant differences were found when comparing the autohypnosis to the imagery treatment.

"The results indicate that training in autohypnosis and in-vivo imagery has an effect on threshold, tolerance and pain levels. The results also indicate that the use of a single suggestion may not have an effect on threshold, tolerance, and pain levels" (p. 1961).

1975

Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. Experimental Neurology, 49, 272-280.

The reactions of 14 volunteers to electrical stimulation near the supra- orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

Spanos, Nicholas P.; Horton, Carol; Chaves, John F. (1975). The effects of two cognitive strategies on pain threshold. Journal of Abnormal Psychology, 84 (6), 677-681.

Found that goal directed fantasy strategy suggestions were more effective than no goal directed fantasy suggestions in raising pain threshold, even when the suggestions were equated for length.

Stacher, G.; Schuster, P.; Bauer, P.; Lahoda, R.; Schulze, D. (1975). Effects of suggestion of relaxation or analgesia on pain threshold and pain tolerance in the waking and in the hypnotic state. Journal of Psychosomatic Research, 19, 259-265.

The effects of suggestion of analgesia and relaxation respectively under both hypnotic and waking conditions on pain threshold and pain tolerance measured by electrical stimulation of the skin were evaluated. Four healthy female subjects susceptible to hypnosis underwent four experiments each: (A) after two basal 16 min periods hypnotic suggestion of relaxation for 16 min followed by 16 min of hypnotic suggestion of analgesia, (B) as in (A) but suggestion of analgesia in the first and suggestion of relaxation in the second 16 min, (C) as in (A) but suggestions given in the waking state, (D) as in (B) but also suggestions given in the waking state. After all the procedures the experiments were continued for two further 16 min periods. To control for order effects, the experiment was designed as a 4 x 4 Latin square. Pain threshold and tolerance increased in varying degrees under all types of suggestions. Suggestion of relaxation given in the waking or in the hypnotic state was found to be less effective in elevating pain threshold and tolerance than suggestion of analgesia under the same conditions. Suggestion of both relaxation and analgesia resulted in higher increases of threshold and tolerance under hypnotic than under waking conditions.

Each experimental session had 4 periods. During the first 16-minute period pain threshold increased and pain tolerance increased on all experimental days. This may have been due to a habituation effect.

There were "more or less massive elevations of pain threshold and tolerance" in both hypnotic experiments (A and B). The elevations were higher following analgesia suggestions than following relaxation suggestions in all experiments.

"Suggestion of analgesia resulted generally in higher elevations of threshold and tolerance when the period with suggestion of analgesia followed the period with suggestion of relaxation than vice versa" (p. 262). "The analogous comparison for tolerance showed no significant F-values; this, again, might be due to the substitution procedure but also to the higher inhomogeneity of the tolerance values" (p. 263).

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"The different effects of suggestion of relaxation and of analgesia respectively resulted also in a significant interaction 'treatment x time' (both measures:  $P < 0.1$ ). This result has to be ascribed mainly to the hypnotic experiments: in both treatments A and B the elevations of threshold and tolerance were higher under suggestion of analgesia than under suggestion of relaxation. In the waking conditions (C and D) both measures were, on the average, higher in the second 16-min period of treatment regardless whether relaxation was followed by analgesia or analgesia by relaxation" (p. 263).

"There also seemed to be an influence of the initial values on the treatment effects, as higher initial values led to larger elevations of threshold ( $P < 0.05$ ) and tolerance ( $P < 0.1$ ). Therefore, the above reported results of the contrast between treatments A, C, and B, D respectively has to be regarded with care, since this contrast might be slightly overestimated because of the low initial values under treatment B" (p. 263).

In their discussion, the authors wrote: "The results of the present study show, that suggestion of analgesia caused higher elevations of pain threshold and tolerance than suggestion of relaxation in the hypnotic condition. This is not in favour of the hypothesis, that pain relief under hypnosis is due only to a diminution of anxiety and/or to a placebo effect [2, 3, 5], as both the anxiety relieving and the placebo effect are working in the relaxation as well as in the analgetic condition. The higher threshold and tolerance values in the latter condition seem to result from the specific contents of the suggestion of analgesia and might act via a neocortical or higher central nervous process exerting control over the activity in both the discriminative and motivational systems [18]. Our findings are consistent with those of McGlashan et al. [19], who found higher elevations of pain threshold and tolerance to ischemic muscle pain under hypnotic analgesia than under placebo.

"An interesting point is, that in the experiments with suggestions in the waking state, suggestion of analgesia in all instances resulted in higher elevations of pain threshold and tolerance when relaxation was suggested prior to analgesia than [sic] vice versa. This may be interpreted that subjects already relaxed and relatively free from anxiety respond better to explicit suggestion of analgesia.

"Pain threshold is reported to have more physiological determinants while tolerance is regarded to be relatively more sensitive to psychological factors [22]. In our study, threshold and tolerance, apart from a greater variability of the latter, agreed fairly closely with one another in the treatment periods. There is obviously considerable interdependence between these two measures" (p. 264).

1974

Bloom, Richard F. (1974). Validation of suggestion-induced stress.

Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

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psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1952

West, Louis Jolyon; Niell, Karleen C.; Hardy, James D. (1952). Effects of hypnotic suggestion on pain perception and galvanic skin response. A. M. A. Archives of Neurology and Psychiatry, 68, 549-560.

A study is reported in which pain perception and galvanic skin responses of seven subjects were measured before and during hypnosis. The depths of hypnotic trance varied from light to deep. Stimuli of measured intensity were administered, and changes in pain threshold were measured. Quantitative estimates of pain intensity were made by the subjects. Alterations in ability to discriminate between pains of differing intensities were noted. Quantitative records of galvanic skin responses were utilized, permitting statistical analysis of data from matched pairs. Data were collected at 45 experimental sessions, during which a total of 478 painful stimuli were administered, the stimuli varying in intensity from threshold to blister-producing levels. At each session, the subject's sensations from and responses to stimuli during a control period were compared with sensations from and responses to identical stimuli administered after hypnotic suggestions of anesthesia. The following observations were made: 1. Hypnotic suggestions of anesthesia influence pain perception by causing elevation of pain threshold, hypalgesia, and analgesia. 2. When hypnotic suggestions of anesthesia caused hypalgesia and elevation of pain threshold, ability to discriminate among stimuli of different intensities was impaired. 3. There was a general correlation between the depth of hypnotic trance and the degree to which pain perception was altered by hypnotic suggestion. 4. The galvanic skin response to noxious stimulation was diminished, and it sometimes disappeared, as a result of hypnotic suggestions of anesthesia. The galvanic skin response was affected even when there was no alteration in pain perception, according to subjective reports.

The authors review literature on the effects of analgesia suggestions on the galvanic skin response and other autonomic nervous system responses. The present study differs from previous studies in the following ways: "1. The subjects were studied in various stages of hypnosis. 2. Quantitatively determined noxious stimuli were used instead of pinching or pinprick. 3. Changes in pain threshold were measured. 4. Quantitative estimates of pain intensity were made by the subject in the hypnotized and the un hypnotized state. 5. Changes in ability to discriminate between pains of differing intensity were noted. 6. Quantitative records of galvanic skin responses in the control and in the hypnotized state were utilized" (p. 552).

Analgesia was defined as "that state in which none of the noxious stimuli administered were reported as painful;" hypalgesia was defined as "a state in which noxious stimuli were reported as less painful than would be expected on the basis of reports of the same subject regarding the same stimuli in control situations" (p. 554).

In their Discussion, the authors state, "As a result of hypnotic suggestions of anesthesia, the following effects on sensation were observed: (1) no alteration in reports of pain intensity; (2) hypalgesia for higher-intensity stimuli without elevation of the pain threshold; (3) definite elevation of pain threshold with hypalgesia; (4) analgesia; (5) disturbances in pain discrimination.

" The third effect was observed in the majority of trials. The threshold elevation in light trances may be similar to that which can be produced by suggestion in the un hypnotized subject, but in deeper trances the effectiveness of hypnotic suggestion is much greater. The progression of effects 1 through 4 appears to be directly related to the depth of trance. The fifth effect was variable and was seen only in conjunction with the third effect. It is described as a separate phenomenon because the disturbance of ability to discriminate relatively between stimuli of differing intensities was only clearly observed when we were remeasuring pain thresholds. In actuality, it may merely represent a facet of altered pain perception, and the variability of its appearance may be related to the variable psychological state of the subject. It must be kept in mind that the hypnotic trance is not a static state" (p. 558). For one Subject, analgesia decreased in successive hypnotic sessions, while for four Subjects analgesia increased; a sixth Subject exhibited overall variability in hypnotic depth and analgesia from session to session.

The authors indicate that their review of the literature found no evidence that hypnosis, absent suggestions for analgesia, affects the galvanic skin response. In the present study, diminishment of the GSR is related to, though not dependent on, the effectiveness of the suggestion of anesthesia. "Thus, in Subject 2, with only moderate hypalgesia, the GSR to noxious stimuli was diminished by 64%; in S 6, with analgesia on nearly all trials, only 57%. It is particularly interesting that S 1 had a reduction in GSR of 26% after hypnotic suggestions which apparently had no effect upon his pain perception, and which seemed even to make him anxious. S 5 showed a direct correlation between depth of trance and decrease of GSR while Subjects 6 and 7 showed no such correlation" (p. 559).

"It is important to realize that on some occasions hypnotic anesthesia apparently led to complete disappearance of the GSR to all stimuli during a given session, such stimuli evoking pain of 6 or 7 dols in the control period. This phenomenon was seen twice with Subject 3, twice with Subject 5, and once with Subject 6. In several trials there was only a very slight GSR to the higher stimuli during hypnosis. In all the control periods there was only one occasion on which a stimulus evoking pain of 6 or 7 dols failed to produce a GSR, while equally intense stimulation failed to produce a GSR on 14 occasions after hypnotic suggestions of anesthesia. This observation is stressed because it suggests a need for caution in the clinical use of the GSR to distinguish organic from hysterical anesthetics" (pp. 559-560).

## **PAIN TOLERANCE**

2000

Willmarth, Eric K. (2000, August). Modification of experienced pain with hypnotically induced positive mood. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

This study investigated the relationship between chronic pain and depressed mood within the context of Associative Network Theory and the High Risk Model of Threat Perception. A bi-directional relationship was hypothesized and tested by comparing pain ratings before and after the hypnotic induction of positive mood by suggestion of positive memories. These results were compared to the pain ratings of two control groups: participants who received hypnotic suggestion for relaxation only and participants who received non-hypnotic suggestion for relaxation and enhanced mood. Participants were 96 patients of a hospital-based Pain Management Center. Following assessment of hypnotic ability using the Harvard Group Scale of Hypnotic Susceptibility: Form A, and the Subjective Experiences Scale, participants recorded levels of depressed mood, sensory pain, affective pain, global pain and self control of pain before and after listening to an audio-taped treatment session. Results show that the induction of a positive mood did influence a decrease in self-reports of pain. In addition, the level of the participants' hypnotic ability was also found to be a significant factor, suggesting that screening for predisposing factors, such as hypnotic ability, and the clinical use of hypnosis for mood enhancement are warranted in a chronic pain population. - Abstract taken from *Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30*, Fall 2000.

**1999**

Milling, Leonard S.; Kirsch, Irving; Burgess, Cheryl A. (1999). Brief modification of suggestibility and hypnotic analgesia: Too good to be true?. *International Journal of Clinical and Experimental Hypnosis*, 47 (2), 91-103.

A 10-minute training procedure, based on the Carleton Skill Training Program, has previously been reported to produce substantial increments in responsiveness to hypnotic suggestion. The authors attempted to replicate this effect and also assessed the impact of the training procedure on hypnotically suggested analgesia. Ninety-eight students who had been preselected for high, medium, and low levels of initial suggestibility were randomly assigned to experimental and control groups. Training failed to increase overall suggestibility scores or to enhance the effects of a suggestion for pain reduction. Suggested pain reduction was more highly correlated with posttreatment suggestibility scores than with pretreatment suggestibility and, in a regression analysis, only posttreatment suggestibility predicted pain reduction uniquely.

**1998**

Barber, Joseph (1998). The mysterious persistence of hypnotic analgesia. *International Journal of Clinical and Experimental Hypnosis*, 46 (1), 28-43.

Hypnotic treatment of pain has a long history and, among hypnotic phenomena, pain relief is a relatively commonplace focus for intervention, yet we lack a conceptual explanation for this treatment. Hilgard's neodissociation theory accounts for the phenomenon of acute hypnotic analgesia, but not of persistent pain relief. Perhaps the enduring effect of hypnotic treatment can be explained at either of two levels: a neurophysiological model or a learning model. This explanation leads to the

**further question: How does hypnotic treatment of recurring pain achieve enduring relief? Clinical experience suggests a two-component model. First, the clinician communicates specific ideas that strengthen the patient's ability to derive therapeutic support and to develop a sense of openness to the unexplored possibilities for pain relief within the security of a nurturing therapeutic relationship. Second, the clinician employs posthypnotic suggestions that capitalize on the patient's particular pain experiences, which simultaneously ameliorate the pain experience, and which, in small, repetitive increments, tend to maintain persistent pain relief over increasing periods of time.**

**Author's Summary: "When a patient who suffers from recurring pain is treated with hypnotic methods and then reports substantial relief over time, what is significant is that the relief is so long-lasting, and that it endures through the patient's various daily activities. Although I believe that the initial alteration of consciousness via the hypnotic experience greatly facilitates subsequent analgesia, it is not necessary to believe, nor is it even plausible, that subsequent analgesia is accomplished through re-creation of the hypnotic condition. Rather, it appears that the patient is able to generalize from these initial experiences to achieve this analgesia independent of a hypnotic intervention.**

**"Laboratory research and clinical experience suggest that the persistence of hypnotic analgesia is a function of learning, the therapeutic relationship that fosters that learning, and the neurophysiological changes that subserve that learning. The patient's understanding of the meaning and purpose of the clinician's suggestions is a primary determiner of their efficacy" (pp. 39-40).**

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

**"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.**

**The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible**

to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

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1997

Chaves, John F.; Dworkin, Samuel F. (1997). Hypnotic control of pain: Historical perspectives and future prospects. International Journal of Clinical and Experimental Hypnosis, 45 (4), 356-376

Hypnotic analgesia has occupied a pivotal place in experimental and clinical hypnosis. It emerged early in the 19th century when effective clinical techniques for pain management had not yet developed, and the relief of pain and suffering had not even become a well-defined social goal. Its acceptance was further complicated by political struggles surrounding the humanitarian transformation of medicine during this era as well as a redefinition of the physician-patient relationship that wrested control from the patient. The initial struggle for professional acceptance was won only when the debate became almost entirely localized within the professional community. Acceptance of hypnosis by professional organizations has been followed by alternating periods of interest and indifference. While the evidence for the powerful effects of suggestion and related variables has often been observed and reported in nonhypnotic contexts, their relationship to hypnotic phenomena has often not been appreciated. Since the mid-20th century, scientific information about hypnotic analgesia has grown substantially and has had significant influence on strategies for acute and chronic pain management. If recent calls for its wider

application in pain management are to succeed, it will require additional data from clinical populations and a balanced and scientifically prudent approach by its advocates. [Journal Abstract]

1998

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, 31, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year study of 50 thermally injured patients with greater than 45% total body surface second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

1987

Chaves, John; Brown, Jude (1987). Spontaneous cognitive strategies for the control of clinical pain and stress. Journal of Behavioral Medicine, 10 (3), 263-276

The spontaneous cognitive strategies employed by 75 patients undergoing dental extractions or mandibular block injections were elicited using a structured interview. Interest focused on the relationship between these strategies and several personality variables, including state and trait anxiety, locus of control, and absorption. In addition, the effect of strategy utilization on perceived pain and stress was assessed. Fourty-four percent of the patients employed cognitive strategies designed to minimize pain and stress, while 37% catastrophized, engaging in cognitive activity which exaggerated the fearful aspects of their experience. Only 19% of the patients denied any cognitive activity during the clinical procedure, and many of these used noncognitive coping strategies. Discriminant analysis revealed that situational anxiety was associated with the use of cognitive coping strategies. Catastrophizing was associated with increasing age, past dental stress, and higher levels of stress vulnerability (high trait anxiety and external locus of control). Copers reported less stress than catastrophizers but not less pain.

1986

Slomoff, Daniel A. (1986, March). Hypnotic susceptibility, vividness of imagery and the ability to self-regulate pain in a cold pressor test (Dissertation, Fielding Institute). Dissertation Abstracts International, 46 (9), 3231-B.

"Previous studies suggested that subjects who used more vivid images and who are good hypnotic subjects are more involved in their imagery and therefore have better pain control. In this study, subjects were given the Harvard Group Scale of Hypnotic Susceptibility and the Sheehan-Betts Questionnaire Upon Mental Imagery and then exposed to a cold pressor test for pain. Previous studies had limitations using an imagery scale which only tested for visual imagery, asking subjects to learn a new cognitive strategy, and limiting the study to female subjects. This study used both an objective and subjective multisensory test of imagery, tested for both genders, and allowed subjects to use their inherent cognitive strategies. "It was hypothesized that hypnotically susceptible subjects would demonstrate greater pain tolerance and pain intensity. This was not supported. It was also hypothesized that subjects who scored high on pain intensity control and this was also not supported. It was discussed that the instruments may not be strong enough to measure differences when pain tolerance and pain control are being looked at. "It was

further predicted that there would be an interaction effect between hypnotizability and vividness of imagery for pain tolerance and pain intensity control. The results did not support this hypothesis. the author felt that it might be necessary to compare high and low imagers rather than high and medium imagers in this study. In that case the degree of difference between the groups might be great enough to demonstrate the interaction effects. As was predicted, it was found that highly hypnotizable subjects who were good imagers did use more imagery and rated this imagery as more effective and more vivid. "It is suggested that future research assess the type of imagery associated with a specific kind of pain experience. Pain as the result of temperature, pressure, or electrical stimulation might require different imagery as a cognitive coping strategy. Appropriate assessment tools will then need to be developed in this regard" (p. 3231).

Williams, David A.; Thorn, Beverly E. (1986). Can research methodology affect treatment outcome? A comparison of two cold pressor test paradigms. Cognitive Therapy and Research, 10 (5), 539-545.

Examined the effect of fixed or open latency instructions on subjective pain report for the cold pressor test using a single cognitive training strategy with 80 undergraduates. The fixed latency paradigm instructed Ss to leave their hand in the cold water for a fixed amount of time (e.g., 3 min), whereas the tolerance paradigm asked Ss to endure pain for as long as possible. Results suggest that the fixed latency paradigm is associated with lower subjective pain ratings especially when a cognitive strategy is used. The tolerance groups failed to decrease their subjective perception of pain but evidenced longer latencies when a cognitive strategy was used. It is concluded that while other research has used these paradigms interchangeably to assess efficacy, these 2 paradigms apparently pose different challenges to Ss. (15 ref).

1985

Spanos, Nicholas P.; Ollerhead, Virginia Gail; Gwynn, Maxwell I. (1985-86). The effects of three instructional treatments on pain magnitude and pain tolerance: Implications for theories of hypnotic analgesia. Imagination, Cognition and Personality, 5, 321-337.

Between baseline and posttesting on the cold pressor test, subjects were assigned to four treatments: a) hypnotic analgesia, b) brief instructions to "Do whatever you can to reduce pain," c) stress inoculation, and d) no instruction control. Participants in the three instructional treatments showed significantly greater baseline to posttest decrements in pain magnitude and significantly greater increments in pain tolerance than controls. However, the instructional treatments did not differ significantly from one another in these regards. Pretested hypnotic susceptibility correlated significantly with degree of pain reduction in the hypnotic analgesia treatment but not in the "Do whatever" or stress inoculation treatments. Theoretical implications are discussed.

1983

Braun, Bennett G. (1983). Psychophysiological phenomena in multiple personalities and hypnosis. American Journal of Clinical Hypnosis, 26 (2), 124-137

"Conclusion. As can be seen from the above example, the final common pathway, physiologic expression, which is seen in multiple personality is not bizarre when compared with physiologic changes achieved in non-multiples using hypnosis or, in certain cases, non-multiples without the use of hypnosis. A form of hypnosis/autohypnosis\* may be a common denominator. The neurophysiologic changes shown by Putnam et. al. (1982), but not observed by Coons (1982), may well have a similar explanation. The question of the neurophysiologic effect of hypnotic suggestion has not as yet been studied with appropriate controls or safeguards.

"That multiples do show significant changes in their psychophysiologic response patterns cannot be denied. To consider that the psychophysiologic changes of multiple personality are so rare or different as to make multiples 'freaks' is not only a disservice to them, but to medical science, since it blocks thinking. The study of multiple personality will further our understanding, theorizing, and treatment of mental and physical illness" (p. 134). "\*These terms are being used here in the generic sense" (p. 134).

1981

Houston, Rodney Earl (1981). The effects of autohypnosis, imagery, or single suggestion on pain threshold and tolerance (Dissertation, University of Cincinnati). Dissertation Abstracts International, 42 (5), 1961-A.

Pain threshold, pain tolerance, and subject's subjective opinion of the pain were studied in 94 volunteer subjects (75 female, 19 male), who had been randomly assigned to three treatment groups (self hypnosis, in-vivo imagery, single suggestion) and a control group. (The original randomized sample included 124 Ss, but 30 were lost to the study-- 22 because of initial baseline scores being above maximum, 2 after reading the consent form, and 6 not returning for post-testing.) Mean age was 25; age range was 18-59 years.

The pain stimulus was 33 degree F. ice water in which the dominant hand was submerged for as long as the subjects were able. Subjects were told to nod when pain was first felt (threshold), and remove their hand when the pain was more than they could tolerate (tolerance). They were then asked to rate the pain on a 7-point scale, from 'none' to 'extreme.' Thus the three outcome measures were threshold time, tolerance time, and degree of perceived pain.

During the week between pretesting and posttesting, the self hypnosis group was to listen to a tape training them in self hypnosis at least twice; the imagery group was to listen to their imagery training tape at least twice; the simple suggestion group received no training. Posttesting was the same as pretesting, except that the simple suggestion group was given the single waking suggestion, "You will be able to withstand the pain much longer this time."

The experimental predictions were that treatment groups would increase in threshold levels and tolerance levels more than the control group; and that the treatment groups would decrease more than the control group in reported pain level. Multivariate analysis of variance of difference scores (pre- to posttest) demonstrated significant differences on the three dependent measures when comparing the three treatment groups to the control group. " Significant differences were also found when comparing treatment groups, autohypnosis and imagery to those given the single suggestion. No significant differences were found when comparing the autohypnosis to the imagery treatment.

"The results indicate that training in autohypnosis and in-vivo imagery has an effect on threshold, tolerance and pain levels. The results also indicate that the use of a single suggestion may not have an effect on threshold, tolerance, and pain levels" (p. 1961).

Spanos, Nicholas P.; Brown, Jude M.; Jones, Bill; Horner, Donna (1981). Cognitive activity and suggestions for analgesia in the reduction of reported pain. Journal of Abnormal Psychology, 90, 554-556.

Assessed 38 undergraduates' pain magnitude and pain tolerance for arm immersion in ice water during a baseline and posttest session. Before the posttest, half the Ss received an analgesia suggestion. On the basis of their written testimony, Ss were classified as having either predominately coped (e.g., imagined event inconsistent with pain or made positive self-statements) or predominantly exaggerated (e.g., worried about and exaggerated the noxious aspects of the situation) during each immersion. On both immersions, copers reported less pain and exhibited higher pain tolerance than exaggerators. Moreover, the suggestion was associated with reductions in reported pain only when it transformed baseline exaggerators into posttest copers.

Worthington, Everett L.; Shumate, Michael (1981). Imagery and verbal counseling methods in stress inoculation training for pain control. Journal of Counseling Psychology, 28 (1), 1-6

Investigated 3 elements of stress inoculation training, a therapeutic package for helping clients control anxiety, anger or pain. 96 undergraduate females were tested twice for ice water tolerance. In a 3 design, the independent variables were the presence or absence of (a) pleasant imagery, (b) a conceptualization of pain as a multistage process, and (c) planned, explicit self-instructions. A multivariate analysis of covariance using the (transformed) pretest tolerance rating and 2 self-ratings of pain. Imagery users (Is) controlled their pain better than nonimagery users (NIs). There was a significant interaction of Imagery and Conceptualization. NIs had longer tolerance and less self- reported pain at withdrawal when they heard no conceptualization. The Is did not derive additional benefit from hearing the conceptualization. Self-instruction did not affect pain control. Results suggest that pleasant imagery effectively relieves pain and may account for much of the effectiveness of stress inoculation training. (23 ref)

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1975

Stacher, G.; Schuster, P.; Bauer, P.; Lahoda, R.; Schulze, D. (1975). Effects of suggestion of relaxation or analgesia on pain threshold and pain tolerance in the waking and in the hypnotic state. Journal of Psychosomatic Research, 19, 259-265.

The effects of suggestion of analgesia and relaxation respectively under both hypnotic and waking conditions on pain threshold and pain tolerance measured by electrical stimulation of the skin were evaluated. Four healthy female subjects susceptible to hypnosis underwent four experiments each: (A) after two basal 16 min periods hypnotic suggestion of relaxation for 16 min followed by 16 min of hypnotic suggestion of analgesia, (B) as in (A) but suggestion of analgesia in the first and suggestion of relaxation in the second 16 min, (C) as in (A) but suggestions given in the waking state, (D) as in (B) but also suggestions given in the waking state. After all the procedures the experiments were continued for two further 16 min periods. To control for order effects, the experiment was designed as a 4 x 4 Latin square. Pain threshold and tolerance increased in varying degrees under all types of suggestions. Suggestion of relaxation given in the waking or in the hypnotic state was found to be less effective in elevating pain threshold and tolerance than suggestion of analgesia under the same conditions. Suggestion of both relaxation and analgesia resulted in higher increases of threshold and tolerance under hypnotic than under waking conditions.

Each experimental session had 4 periods. During the first 16-minute period pain threshold increased and pain tolerance increased on all experimental days. This may have been due to a habituation effect.

There were "more or less massive elevations of pain threshold and tolerance" in both hypnotic experiments (A and B). The elevations were higher following analgesia suggestions than following relaxation suggestions in all experiments.

"Suggestion of analgesia resulted generally in higher elevations of threshold and tolerance when the period with suggestion of analgesia followed the period with suggestion of relaxation than vice versa" (p. 262). "The analogous comparison for tolerance showed no significant F-values; this, again, might be due to the substitution procedure but also to the higher inhomogeneity of the tolerance values" (p. 263).

"The different effects of suggestion of relaxation and of analgesia respectively resulted also in a significant interaction 'treatment x time' (both measures:  $P < 0.1$ ). This result has to be ascribed mainly to the hypnotic experiments: in both treatments A and B the elevations of threshold and tolerance were higher under suggestion of analgesia than under suggestion of relaxation. In the waking conditions (C and D) both measures were, on the average, higher in the second 16-min period of treatment regardless whether relaxation was followed by analgesia or analgesia by relaxation" (p. 263).

waking conditions (C and D) both measures were, on the average, higher in the second 16-min period of treatment regardless whether relaxation was followed by analgesia or analgesia by relaxation" (p. 263).

"There also seemed to be an influence of the initial values on the treatment effects, as higher initial values led to larger elevations of threshold ( $P < 0.05$ ) and tolerance ( $P < 0.1$ ). Therefore, the above reported results of the contrast between treatments A, C, and B, D respectively has to be regarded with care, since this contrast might be slightly overestimated because of the low initial values under treatment B" (p. 263).

In their discussion, the authors wrote: "The results of the present study show, that suggestion of analgesia caused higher elevations of pain threshold and tolerance than suggestion of relaxation in the hypnotic condition. This is not in favour of the hypothesis, that pain relief under hypnosis is due only to a diminution of anxiety and/or to a placebo effect [2, 3, 5], as both the anxiety relieving and the placebo effect are working in the relaxation as well as in the analgetic condition. The higher threshold and tolerance values in the latter condition seem to result from the specific contents of the suggestion of analgesia and might act via a neocortical or higher central nervous process exerting control over the activity in both the discriminative and motivational systems [18]. Our findings are consistent with those of McGlashan et al. [19], who found higher elevations of pain threshold and tolerance to ischemic muscle pain under hypnotic analgesia than under placebo.

"An interesting point is, that in the experiments with suggestions in the waking state, suggestion of analgesia in all instances resulted in higher elevations of pain threshold and tolerance when relaxation was suggested prior to analgesia then [sic] vice versa. This may be interpreted that subjects already relaxed and relatively free from anxiety respond better to explicit suggestion of analgesia.

"Pain threshold is reported to have more physiological determinants while tolerance is regarded to be relatively more s to psychological factors [22]. In our study, threshold and tolerance, apart form a greater variability of the latter, agreed fairly closely with one another in the treatment periods. There is obviously considerable interdependence between these two measures" (p. 264).

1954

Thaheld, Feri Herndon (1954). Nonconclusive electrostimulation under narcotic hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 175-177.

Hypnosis was used in an attempt to reduce the side effects of nonconvulsive electrostimulation in a single subject. Subject was given 2 gr of nembatal, followed

by hypnotic induction, then repeated suggestions that the "subject could feel no pain and that therefore as a result of this there could not be any physical response at all to this very harmless and quite painless treatment which was being administered" (p. 176).

Subject had 42 treatments (unidirectional, modulated, spiked current averaging 5-9 ma, through electrodes placed above the ears, for usually 3 minutes but sometimes 5-8 minutes) over 3 wk period. Ordinarily in such a situation pain would be experienced, with physiological changes (dilation of pupils, increase in pulse rate, flushing of skin, perspiration, some contraction of muscles) and emotional outbursts observed. In this subject, "none of the usual side reactions were found to be present and the further use of posthypnotic suggestions eliminated any after-effects or complications which might have arisen" (p. 176).

The author discussed the possibility that trance depth was facilitated by the pyramiding action of layering one set of suggestions on top of another, something like Vot's fractionation technique (in which subject is repeatedly hypnotized and de-hypnotized with suggestions of increasing depth).

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## **PAIN**

The author discussed the possibility that trance depth was facilitated by the pyramiding action of layering one set of suggestions on top of another, something like Vot's fractionation technique (in which subject is repeatedly hypnotized and de-hypnotized with suggestions of increasing depth).

Two theories of pain control by hypnosis currently exist: 1. Socio-cognitive model - patient actively copes with noxious stimulus. Hypnotic analgesia should be like cognitive techniques like stress inoculation training. It requires deliberate effort. 2. Dissociative control model - pain reduction requires little cognitive effort.

These 2 theories have different predictions. He explains "ironic effects" theory, in which person must identify pain to reduce pain. Wagner's reflexivity constraint: any process of mental control must be consistent with state we are trying to create.

This investigation involved 25 Highs and 24 Lows who reported pain, produced by strain gauge. Taught either hypnotic analgesia or stress inoculation. Reported every 5 sec (high load) or 45 sec (low load). Subtracted report from baseline to make pain reduction scores. Highs in hypnosis had no difference in pain reduction under high or low mental load. For the other 3 groups (Highs under stress inoculation; Lows under either hypnosis or stress inoculation) the results were different. That is, for Highs in hypnosis the mean of pain reduction scores was the same even when challenged by frequent reports of how much pain was being experienced.

Results are congruent with Miller and Bowers' dissociative control model.

Wagner's ironic process theory is useful. Frequency of pain reporting moderates Ss reports of pain in analgesia. These results challenge the cognitive social model of hypnotic analgesia and support a dissociative control model. Unlike stress inoculation, hypnotic analgesia does not require cognitive effort for high hypnotizable subjects.

## **1994**

Alden, P. A. (1994, October). Hypnotic approaches in pain control with terminally-ill patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

( These notes do not cover the entire presentation, which was based on clinical practice experience.) One conclusion reached was that J. Barber's Rapid Induction Analgesia (RIA) is more immediately effective than a direct approach to induction, but that a direct approach improves with time. RIA seems to work better for low hypnotizables. Next she plans to study whether patients would benefit from being given a tape of RIA routinely as an adjunct to pain control.

Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs) possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics

Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Crawford, Helen J. (1994). Brain systems involved in attention and disattention (hypnotic analgesia) to pain. In Pribram, Karl H. (Ed.), Origins: Brain and self organization (pp. 661-679). Hillsdale, NJ: Lawrence Erlbaum Associates.

Data are reviewed from regional cerebral blood flow, EEG, and somatosensory event-related potential (SERP; both scalp and intracranial) studies of attention to and disattention (hypnotic analgesia) of painful stimuli to provide further evidence for two neurophysiological systems of pain involving the cortex: (1) the epicritic, sensory system of pain associated with the parietal, posterior region, and (2) the protocritic, distress, comfort-discomfort system of pain associated with the far fronto- limbic region. Studies of neurophysiological changes accompanying suggested hypnotic analgesia support the hypothesis that the executive controller of the far frontal cortex, via the far fronto-limbic attentional system, acts as a gate against the ascent of painful stimuli into conscious awareness by 'directing' downward the inhibition of incoming somatosensory information coming from the thalamic region. In hypnotically responsive individuals who could eliminate the perception of pain, reviewed studies demonstrated increased regional cerebral blood in the frontal and somatosensory regions, shifts in hemispheric dominance of EEG theta power, differential surface SERP topographical patterns in the anterior and posterior regions of the brain, and reduction of the intracranial SERP P160 waveform in the gyrus cingulus.

Paradoxically, there may be physiological reactivity to pain stimuli while the hypnotized Subject reports they are not consciously aware of pain. Posner's proposal of two different attentional systems may account for why there is

physiological reactivity concurrent with lack of awareness of pain. Posner suggested that the posterior brain is involved with engaging and disengaging attention while the anterior brain is involved in attention for action or effortful attention. "Thus, the posterior region is involved in space and time, the epicritic processes, whereas the anterior region is involved in comfort- discomfort, the protocritic processes (Pribram, 1991)" (p. 665).

In parallel, there appear to be two systems of pain involving the cortex, as revealed in positron emission tomography research. Also relevant is clinical data showing that "removal of the frontal or cingulate cortex in patients with intractable pain leads to the amelioration of distress while not eliminating sensory pain (Bouckoms, 1989)" (p. 665).

The author proposes a neuropsychophysiology of hypnotic analgesia based on Hilgard's (1986) neodissociation theory of hypnosis, together with Pribram and McGuinness' (1975, 1992) attention model. In this view, "Hilgard's executive control system is the far frontal cortex 'directing' the inhibition of incoming painful stimuli" (p. 666) after determining that the somatosensory signal is 'irrelevant.'

"Highly hypnotizable individuals ('highs') have greater attentional and disattentional abilities than low hypnotizable individuals ('lows'). ... Recent neuroimaging techniques (PET, SPECT, CBF) that assess regional brain metabolism have found no differences in waking conditions between low and highly hypnotizable individuals, but have consistently reported that only highs show increased cerebral blood flow during hypnosis, suggestive of enhanced cognitive effort (Crawford, Gur et al., 1993; Halama, 1989; Meyer, Diehl, Ulrich, & Meinig, 1989; Walter, 1992)" (p. 666).

The hippocampus appears to be involved as a gating mechanism in selective attention (Crowne, Konow, Drake & Pribram, 1972; Isaacson, 1982, Isaacson & Pribram, 1986; R. Miller, 1991; Pribram, 1991; Arnolds et al., 1980) This gating function may be promoted "through a cortico-hippocampal relay [that] transmits information by theta wave modulation and Hebbian synaptic modification so that there is selective disattention" (p. 667). The author suggests that hypnotic pain control may involve directing attention away from pain sensory signals.

Highly hypnotizable people generate more EEG theta than low hypnotizables whether they are hypnotized or not, and Crawford (1990) observed marked hemispheric shifts in theta when highs (but not lows) were attempting to control pain with hypnosis.

This paper reports on preliminary results of SERP studies of people given hypnotic analgesia suggestions to reduce electric shock stimulus evoked pain. The results were analyzed individual by individual, because group data obscured pronounced shifts in SERP patterns (e.g. habituation rates differed among Subjects). For highs, the SERP tended to be reduced, and the lower amplitudes were observed as early as the N100-P200 components. This did not occur for low hypnotizables.

Different kinds of mechanisms may be operative for high hypnotizables, however. "In over half of the high hypnotizable subjects the far frontal region (Fp1, Fp2) showed strong arousal during attention to pain, but during hypnotic analgesia there was a flattening out of the SERPs to the point they are hard to measure. By contrast,

the more posterior SERPs (including F3 and F4), while reduced in amplitude, were still evident. The other half of highs showed little SERP activity in the far frontal region in either attend or disattend conditions, but substantial reductions of SERPs at all locations during hypnotic analgesia" (p. 670). Additionally, some of the highs evidenced a contingent negative variation (CNV) or a late 400-500 msec negativity in the far frontal region, which author is inclined to interpret as "a preparation for a response or for an inhibition of a response" (p. 670).

Case studies of two patients with intracranial electrodes and scalp electrodes recording SERPs are presented in support of the experimental data. The two female patients were diagnosed with obsessive compulsive disorder; one was highly hypnotizable and one was not. They received 30 moderately painful stimuli to the left middle finger under sequential conditions: waking attention, hypnosis with analgesia suggestions, and hypnosis with attention instructions. The highly hypnotizable patient reported significantly less pain during suggested analgesia, and that reduction in pain was associated temporally with reduction of SERP at P160 in the gyrus cingulus (and at no other recording sites). The 'unhypnotizable' patient showed no SERP changes. As an aside, the author notes that "Subsequent to the hypnotic analgesia, when the pain was attended to again during waking this patient showed a significant enhancement of the same positivity wave at Fz, as if there was a rebound effect (something we have also observed in some of our SERP subjects at the BRAINS Center)" (p. 674).

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Erickson, James C. (1994, October). The metaphors of pain and therapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Metaphors of Pain may be: 1. Anatomically or physiologically descriptive. 2. Extremely common, especially in chronic pain syndromes. 3. Unrecognized by many therapists. 4. Often pithy, succinct phrases (like puns). "Pain in the neck, pain in the butt" may reflect symbolic meaning of the pain, which if attended to may benefit the patient.

Head and neck pain metaphors include such things as "a headache, a pain in the neck, grit your teeth, and grin and bear it" (related to bruxism and TMJ syndrome). Also pertains to post-rhinoplasty pain in the nose.

Back pains: upper thoracic pain "a load on my shoulders" like Atlas carrying the world. Or "a cross to bear" which implies uncomplaining, but bearing a heavy burden. Low back pain - a "weak spine," or "spineless." With laminectomy, a "yellow streak up the back."

Dermatitis: Pruritis or dermatitis when "something gets under the skin."

Chest pains when "sick at heart."

Nagging, nasty situation is a "thorn in my side."

"A stab in the back" when wronged by society or a person. "Pain in the ass" may be a spouse or a situation. [Other material provided by the speaker is not reported here.]

Kiernan, Brian; Dane, Joseph R. (1994, October). Hypnoanalgesia reduces new physiologic index of pain, the R-III Index, but the role of hypnotic susceptibility remains unclear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Stimulated by work of Basil Finer, and following upon the Neodissociation theory of Hilgard; pain is registered by the body but dissociation that produces analgesia is a function of higher brain centers.

Could hypnotic analgesia be mediated lower, at the level of the spinal cord? Gate at dorsal horn could be open or shut; subject to descending modulation. Is hypnosis involved in descending modulation of activity in the dorsal horn?

Hypothesis: reduced pain intensity would be associated with reduced activity at dorsal horn. From Price & Barber, we wanted to look at affect and intensity aspects of pain. Polysynaptic reflex, R-III, latency consistent with conduction velocity (when hand touches a hot stove); even with severed spinal cord injury we still demonstrate the reflex. The magnitude of reflex is linearly related to the pain sensation. The stronger the electrical pulse, the greater the magnitude of the reflex. Magnitude of reflex is linearly related to subjective pain. It is an index of nociceptive activity.

Procedure: Evoke reflex with electrical stimulus at ankle; measure signal at muscle with EMG. We anticipated that at dorsal horn, descending modulation would dampen signal.

15 healthy volunteers. Sural nerve was stimulated. R III reflex measured via EMG response. Used the visual analogue scale (VAS) to assess pain.

1993

Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.

This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.

Covino, Nicholas A.; Frankel, F. M. (1993). Hypnosis and relaxation in the medically ill. Psychotherapy and Psychosomatics, 60, 75-90.

Interest in the application of hypnotic techniques for patients with medical disorders seems to rise and fall over the years. Enthusiasm for this work comes both from patients and from clinicians. Often, however, these techniques are offered without regard to the psychological theories that should inform their operation and the limits that clinical and experimental research suggest. This article offers a brief description of the elements of hypnosis and a review of the history of the use of hypnotic techniques with a variety of medical problems, including asthma, habits, pain, cardiology, surgical preparation, irritable bowel syndrome, persistent nausea and vomiting, trichotillomania, and infection and immunity. Special attention is placed on the psychological and physiological principles that help to establish the valid use of hypnotherapy.

Crawford, Helen J.; Gur, Ruben C.; Skolnick, Brett; Gur, Raquel E.; Benson, Deborah M. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic analgesia. International Journal of Psychophysiology, 15, 181-195.

Using <sup>133</sup>Xe regional cerebral blood flow (CBF) imaging, two male groups having high and low hypnotic susceptibility were compared in waking and after hypnotic induction, while at rest and while experiencing ischemic pain to both arms under two conditions: attend to pain and suggested analgesia. Differences between low and highly-hypnotizable persons were observed during all hypnosis conditions: only highly-hypnotizable persons showed a significant increase in overall CBF, suggesting that hypnosis requires cognitive effort. As anticipated, ischemic pain produced CBF increases in the somatosensory region. Of major theoretical interest is a highly-significant bilateral CBF activation of the orbito-frontal cortex in the highly-hypnotizable group only during hypnotic analgesia. During hypnotic analgesia, highly-hypnotizable persons showed CBF increase over the somatosensory cortex, while low-hypnotizable persons showed decreases. Research is supportive of a neuropsychophysiological model of hypnosis (Crawford, 1991; Crawford and Gruzelier, 1992) and suggests that hypnotic analgesia involves the supervisory, attentional control system of the far-frontal cortex in a topographically specific inhibitory feedback circuit that cooperates in the regulation of thalamocortical activities.

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

1992

Adams, P. C.; Stenn, P. G. (1992). Liver biopsy under hypnosis. Journal of Clinical Gastroenterology, 15, 122-124.

Two patients underwent outpatient percutaneous liver biopsy under hypnosis without complications. One patient had severe anxiety about the procedure because of a previous adverse experience with liver biopsy, and the other had a history of severe allergy to local anesthesia. Both patients had undergone a session of hypnosis at least once prior to the biopsy. One received no local anesthesia, and the other received 1% lidocaine as a local anesthetic. Both patients were completely cooperative during the procedure with the required respiratory maneuvers. Both patients stated that they were aware of the procedure under hypnosis but described no pain and would be most willing to have the procedure done under hypnosis in the future.

Alden, Phyllis (1992, October). The use of hypnosis in the management of pain on a spinal injuries unit. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

To have a spinal injury is one of the most devastating injuries that can happen, reducing you suddenly from a normal life to situation of loss of control, helplessness, etc.- -with nothing to say about what is being done in surgery or other aspects of treatment.

In UK patients come for acute care and rehabilitation all in one place. Over 2 1/2 yrs we had 46 referrals. 7 refused hypnosis ("witch doctoring"). 30 benefitted

1991

Blankfield, Robert P. (1991). Suggestion, relaxation, and hypnosis as adjuncts in the care of surgery patients: A review of the literature. American Journal of Clinical Hypnosis, 33, 172-186.

He notes that the authors provide little information re complications, and length of stay (LOS) is one of the most sensitive response measures used in these studies. The mean difference in LOS for 5 studies that have randomized assignment is 1.3 days. The N's are 80-100 for 3 of the studies, 39 and 60 for others. For two well controlled studies that did not achieve significance, the N's were 40 and 45. Many studies mixed the diagnosis and types of surgeries, making it difficult to interpret the results.

Clarke, J. H.; Reynolds, P. J. (1991). Suggestive hypnotherapy for nocturnal bruxism: A pilot study. American Journal of Clinical Hypnosis, 33, 248-253.

Although one can find many case reports of hypnotherapy for bruxism, there is a paucity of scientific research on the subject. This study describes the use of suggestive hypnotherapy and looks at its effectiveness in treating bruxism. Eight subjects who reported bruxism with symptoms such as muscle pain and complaints of bruxing noise from sleep partners were accepted into the study. An objective baseline of the bruxing was established using a portable electromyogram (EMG) detector attached over the masseter muscle during sleep. Hypnotherapy was then employed. Both self-reports and posttreatment EMG recordings were used to evaluate the hypnotherapy. Long-term effects were evaluated by self-reports only. The bruxers showed a significant decrease in EMG activity; they also experienced less facial pain and their partners reported less bruxing noise immediately following treatment and after 4 to 36 months.

1990

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken

during waking , hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis. The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]
2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.
3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

Discussion. "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

Barabasz, Arreed F.; Barabasz, Marianne (1989). Effects of restricted environmental stimulation: Enhancement of hypnotizability for experimental and chronic pain control. International Journal of Clinical and Experimental Hypnosis, 37, 217-231.

Enhancement of hypnotizability and pain tolerance has been demonstrated using restricted environmental stimulation therapy (REST) with university students as Ss (A. F. Barabasz, 1982). The purpose of the present study was to determine whether or not similar results could be obtained with chronic pain patients. Ss consisted of outpatients in treatment for conditions in which pain is prominent who also demonstrated low hypnotizability after repeated hypnosis plateau sessions. 2 groups of Ss were exposed to REST. Situational demand characteristics (Orne, 1962) favored an increase in hypnotizability for REST Group 1 (high demand). REST Group 2 (low demand) was exposed to situational demand characteristics designed to disguise the experimental hypothesis. 2 groups of control Ss were exposed to the same alternative demand characteristic manipulations as the experimental groups, but environmental stimulation was maintained. The Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and E. R. Hilgard (1962), including a posthypnotic suggestion for an anesthetic reaction, and an ischemic pain test were administered prior to treatment and again immediately following treatment. After 6 hours of REST, significant increases in SHSS:C scores were found for high-demand and low-demand experimental Ss, as well as for high-demand control Ss. No such increase was found for low-demand controls. Significant decreases in pain scores were found for both high- and low-demand experimental groups. No significant pain score decreases were found for either control group, suggesting a relatively weak effect of demand characteristics. An independent postexperimental inquiry suggested all Ss believed they received active

treatments. The inquiry, conducted 10-15 days after the experiment, also revealed a majority of experimental Ss were using hypnosis on a daily basis to reduce pain with a substantial decrease in pain medication. Only 2 control Ss (highest in hypnotizability) reported similar success. Anecdotal reports of pain reduction experiences using hypnosis after REST intervention were supportive of E. R. Hilgard's (1977) neodissociation theory.

Outpatients getting treatments for conditions involving significant pain, who also were low in hypnotizability (and had reached a plateau level through repeated inductions), had REST (restricted environmental stimulation). Experimental Group 1 = high demand, Experimental Group 2 = low demand (disguised experimental hypothesis). Control groups had pseudo-REST conditions. All Subject spent 6 hrs in the REST chamber (controls read, listened to radio, played computer games, were not stimulus deprived).

The two control groups had the same demand characteristic manipulations as the Experimental groups, but Control Group 1 was cued to the hypnotic focus of the study and given instructions favoring an increase in hypnotizability, while Control Group 2 (low- demand/disguised hypothesis) emphasized the "important psychophysiological measures."

In both high-demand control and experimental groups, E wore a lab coat, maintained an aura of seriousness, and had a medical tray. In low-demand conditions Es dressed in regular clothes.

The Stanford-C was administered, also including a posthypnotic suggestion for an anesthetic reaction,. An ischemic pain test was administered prior to treatment and again immediately following treatment. After 6 hours of REST, significant increases in SHSS:C scores were found for high-demand and low-demand experimental Subjects, as well as for high-demand control Subjects. No such increase was found for low-demand controls.

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Postexperimental inquiry was conducted by an independent interviewer 10-15 days after the experiment. All 20 Subjects believed they received active treatments. This belief seemed to be strong due to the "extensive efforts in the hypnosis plateauing sessions" (p. 225). Also, a majority of experimental Subject were using hypnosis on a daily basis to reduce pain, with a substantial decrease in pain medication. These were Ss who had the highest post-REST SHSS:C scores (9-12 range). Only 2 control Subjects (highest in hypnotizability) reported similar success. Anecdotal reports of pain reduction experiences using hypnosis after REST intervention were supportive of E. R. Hilgard's (1977) neodissociation theory.

"[In an earlier study] instructional demand cues for compliance (A. F. Barabasz, 1982) raised Ss' subjective reports of hypnotic depth in a control condition but failed to significantly raise SHCS scores" (p. 225). The present study "indicate(s)

that chamber REST by itself increases hypnotizability and ischemic pain tolerance, and that experimental demand characteristics do not further potentiate this effect" (p. 225).

The authors note that because they used the posthypnotic suggestion of anesthesia for all Subjects, "it is not possible to determine whether the lowered pain reports of REST Ss were due to the posthypnotic suggestion because of enhanced hypnotizability or whether the lowered pain sensitivity was a nonsuggested collateral consequence of REST" (p. 226).

The data support the conclusion that REST enhances hypnotizability and concomitantly decreases ischemic pain reports after a posthypnotic suggestion. This effect, of course, may or may not be mediated by a response to hypnotic suggestion. "It is important to recognize the quality of the anecdotal pain control reports as remarkably consistent with E. R. Hilgard's (1977) neodissociation theory of hypnosis. Successful pain controllers did not anesthetize their clinical pains, as asked to do for the ischemic pain, but rather dissociated their pain to other parts of their bodies or outside their bodies" (p. 227).

**Bierman, Steven F. (1989). Hypnosis in the emergency department. American Journal of Emergency Medicine, 7, 238-242.**

Five cases are presented wherein hypnosis was used by the emergency physician either as the primary mode of treatment or as an adjuvant to standard medical care. Common hypnotic phenomena (e.g. anesthesia, analgesia), as well as novel effects, are reported. The technique used for trance induction and utilization is briefly outlined, and criteria are set forth for the bedside recognition of hypnotic trance.

**Edelson, Jeffrey; Fitzpatrick, Jody L. (1989). A comparison of cognitive-behavioral and hypnotic treatments of chronic pain. Journal of Clinical Psychology, 45, 316-323.**

27 male chronic pain patients were assigned to 1 of 3 treatment groups: hypnosis, cognitive-behavioral, and attention control. Hypnosis and cognitive-behavioral treatments were identical, with the exception of the hypnotic induction. Scores on the McGill Pain Questionnaire (MPQ) and a measure of the overt motor behavior element of chronic pain were collected at pretreatment, posttreatment, and follow-up intervals. Analyses showed significant increases in activity and decreases in pain intensity for the cognitive-behavioral treatment.

Changes for the hypnosis treatment were noted only on the MPQ. Changes for both groups were sustained on the 1-mo follow-up. Findings generally support the superiority of the cognitive-behavioral treatment on behavior measures and its equivalence to hypnosis on subjective measures.

**1988**

**Barabasz, Arreed F. (1988, November). Cold pressor pain and spontaneous hypnosis in flotation restricted environmental stimulation. [Paper] Presented at the**

annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

6 hours of REST (reclined on bed in sound attenuated chamber) led to 100% increase in hypnotizability. They didn't get changes with flotation that are obtained with awake bed rest. Chamber method is very good in cigarette smoking (11 replications) but not flotation rest - despite the demand characteristics of a flotation tank. Subjects must remain awake (sleepfree) if meaningful hypnotizability is achieved.

Davies, Peter (1988). Some considerations of the physiological effects of hypnosis. In Heap, Michael (Ed.), Hypnosis: Current clinical, experimental and forensic practices (pp. 61-67). London: Croom Helm Ltd.

This chapter reviews literature on physiological correlates of hypnosis, but these notes are limited to only one fact reported in the review. The author writes, 'A recently completed, and as yet unpublished study by C. Gillett and H. D. Griffiths at Bradford University investigated the relation between hypnosis and classical conditioning of psychophysiological responses. In a complex design involving both normal conditioning and normal test trials and a repetition of both acquisition and test trials under hypnosis, they found not only suppression of the conditioned response but also suppression of skin conductance responses to the half-second bursts of a 115-dB tone used as the unconditioned stimulus. Not to produce a significant autonomic response to such an intrinsically aversive stimulus is a remarkable feat which is probably outside the repertoire of simulators. However, even such results are not conclusive as the design did not include simulator control groups nor even neutrally instructed non-hypnotized group' (pp. 64-65 ).

Van der Does, A. J.; Van Dyck, R.; Spijker, R. E. (1988). Hypnosis and pain in patients with severe burns: A pilot study. Burns Including Thermal Injuries, 14, 399-404.

Presents a pilot study on the effectiveness of hypnosis in the control of pain during dressing changes of burn patients. Eight patients were treated, and all evaluated the interventions as beneficial. The treatment of four patients was more closely analyzed by obtaining pain and anxiety ratings daily. Results show a 50%-64% decrease in reported pain level for three patients and a 52% increase of pain for one patient. The mean decrease for these four patients was 30% (for overall as well as worst pain during dressing changes). A 30% reduction of anxiety level and a modest reduction of medication use were achieved concurrently. It is concluded that hypnosis is of potential value during dressing changes of burn patients. Comparison of global evaluations and daily pain ratings shows that systematic research in some cases leads to conclusions opposite from clinical observations. Follow-up recommendations for future studies are given.

Elton, D.; Boggi-Cavallo, P.; Stanley, G. V. (1988). Group hypnosis and instructions of personal control in the reduction of ischaemic pain. Australian Journal of Clinical and Experimental Hypnosis, 16, 31-37.

Three groups of students were tested on ischemic pain threshold and pain tolerance. The control group of 95 subjects received a single pain test. The hypnosis group of 42 subjects received a single session of hypnotic induction prior to the pain test. The hypnosis and personal control group of 32 subjects received hypnotic induction and suggestions of personal control prior to the pain test. The hypnotic procedure included the use of a pendulum, coupled with suggestions of arm elevation and lip analgesia. It was found that hypnotic induction resulted in lower [sic] pain threshold and pain tolerance. Suggestions of personal control and hypnosis further lowered [sic] the pain measures.

The ABSTRACT appears to have mis-statements, for the word should be "higher" or "raised." In the article the results are stated as, "The hypnosis conditions with suggestion of personal control produced the higher pain threshold (mm/Hg) and longer tolerance (seconds) than the hypnosis only group and both hypnotic inductions produced higher threshold and longer tolerance than the control condition" (p. 35)

"The results suggest that a single brief group session of hypnosis can produce a significant change in response to ischaemic pain. The added instruction of increased personal control produced a greater effect and reinforces the importance of the self concept in the reaction to pain" (p. 36).

Evans, C.; Richardson, P. H. (1988). Improved recovery and reduced postoperative stay after therapeutic suggestions during general anesthesia. Lancet, 2 (8609), 491-493.

The clinical value of suggestions during general anesthesia was assessed in a double-blind randomized placebo-controlled study. 39 unselected patients were allocated to suggestion (N = 19) or control (N = 20) groups who were played either recorded suggestions or a blank tape, respectively, during hysterectomy. The patients in the suggestion group spent significantly less time in the hospital after surgery, suffered from a significantly shorter period of pyrexia, and were generally rated by nurses as having made a better-than-expected recovery. Patients in the suggestion group, unlike the control group, guessed accurately that they had been played an instruction tape.

1987

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. Journal of Personality and Social Psychology, 53, 563-571.

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance

on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception.

Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo? Hypnosis, 4, 135-140.)

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in Psychosomatic Medicine, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects. The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

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Farthing, G. William; Venturino, Michael; Brown, Scott W.; Lazar, Joel D. (1986, April). Internal vs. external distraction in the control of pain as a function of hypnotic susceptibility. [Paper] Presented at the annual meeting of the Eastern Psychological Association, New York.

This study tested the prediction, derived from their 1984 study: for highly hypnotizable subjects, pain reduction methods involving either attention to external distracting stimuli or attention to internally generated distracting images will be effective in reducing pain. However, for low hypnotizables only external stimulus distraction will be effective, and internal images will not be effective distractors for reducing pain.

Used independent groups of college students, with 1/3 highs, 1/3 mediums, and 1/3 lows. Used five conditions: (n=12 per subgroup 3H x 5T) 1. Suggestion - Subjects told "to image as vividly as you can that your hand is numb and insensitive, as if it were made of rubber." (No hypnotic induction was used.) 2. Guided imagery - Subjects told to listen to a story that would be read to them, and to try to imagine the scenes as vividly as possible. (Story included scenes where the s was the main character.) 3. Word memory - Subjects told to listen to a list of words that would be read to them and try to remember them for later recall test (30 abstract nouns, at rate of 1 every 2 seconds. 4. Pursuit rotor - which subjects did during the ice water immersion. 5. Placebo control - included suggestion, "For this test you will find that you can succeed in not being disturbed by the cold water if you carefully follow the following instructions. While your hand is in the water you should not try to control your thoughts. Just let your mind wander freely to whatever feelings or thoughts or ideas happen to come to you."

1985

Domangue, Barbara B.; Margolis, Clorinda; Lieberman, D.; Kaji, H. (1985). Biochemical correlates of hypnoanalgesia in arthritic pain patients. Journal of Clinical Psychiatry, 46, 235-238.

Self-reported levels of pain, anxiety, and depression, and plasma levels of beta-endorphin, epinephrine, nor-epinephrine, dopamine, and serotonin were measured in 19 arthritic pain patients before and after hypnosis designed to produce pain reduction. Correlations were found between levels of pain, anxiety, and depression. Anxiety and depression were negatively related to plasma norepinephrine levels. Dopamine levels were positively correlated with both depression and epinephrine levels and negatively correlated with levels of serotonin. Serotonin levels were positively correlated with levels of beta-endorphin and negatively correlated to epinephrine. Following hypnotherapy, there were clinically and statistically significant decreases in pain, anxiety, and depression and increases in beta-endorphin-like immunoreactive material

Finer, B. (1985, August). Altered substance P concentrations in CSF during hypnotic analgesia. [Paper] Presented at the 10th International Congress of Hypnosis and Psychosomatic Medicine, Toronto, Canada.

These notes are not a complete record of the presentation.

Substance P is present at many sites of endorphins or enkephalons. Sometimes a strange sleepiness follows triggerpoint stimulation. Acupuncture also may lead to similar changes (e.g. feeling groggy; having difficulty standing - lasts 1-4 hours). If you inject 4 mgms (10 times the ordinary dose) of Naloxone into Ss it leads to groggy sleepiness, for Naloxone-reversed hypnotic analgesia.

1984

D'Eon, Joyce Lillian (1984). Response to pressure pain as moderated by hypnotic susceptibility, type of suggestion strategy, and choice (Dissertation, Concordia University, Canada). Dissertation Abstracts International, 45 (n4-B), 1313-1314.

"The present study examined the relationship between hypnotic susceptibility and ability to control pain, by comparing high and low susceptible subjects' response to pressure pain when these subjects employed either an imagery or a distraction pain attenuating strategy. The effect of providing subjects with a choice of which strategy to employ was investigated. In addition, the subjects' imagery ability and the types of cognitive strategies they engaged in were assessed. Subjects who scored either 9 or above or 4 and below on the Harvard Group Scale of Hypnotic Susceptibility: Form A, were asked to participate in a pain study. All 84 subjects first received a baseline trial on a modified version of the Forgione-Barber Strain Gauge Pain Stimulator, within susceptibility levels. Subjects who were able to keep their finger in the apparatus for 60 seconds were randomly assigned to a Choice, a No Choice, or a Control condition. The 36 high and low susceptible subjects in the Choice condition were given the option of using either an imagery suggestion strategy or a

low distraction strategy on the second trial. The 32 high and low susceptible subjects in the No Choice condition were told about both strategies but were assigned randomly to either the imagery or the distraction strategy group. The 16 subjects in the Control group did not receive a strategy. Both pain intensity and pain tolerance were measured. Results indicated that an equivalent number of high and low susceptible subjects, given a choice of strategy, chose the imagery and distraction strategies. There were no differences in either pain intensity or pain tolerance between high and low susceptible subjects in the Choice conditions. The Choice condition subjects exhibited significant pain reductions from the first to the second trial. No Choice and Control subjects did not reduce pain significantly. In addition, high and low susceptible subjects who chose the imagery strategy did not have higher imagery scores than those subjects who chose the distraction strategy. Subjects in the No Choice condition used fewer coping strategies than subjects in the Choice condition, on the second trial. The implication of these results and directions for future research are discussed" (p. ).

Elkins, Gary R. (1984). Hypnosis in the treatment of myofibrositis and anxiety: A case report. American Journal of Clinical Hypnosis, 27, 26-30.

A 38-year-old woman with chronic myofibrositis pain was treated by the use of hypnosis and psychotherapy. Hypnotherapeutic techniques, including symptom alteration, relaxation, and insight, are described. This regimen resulted in reduction in pain and emotional distress, which was maintained at three months and one year after treatment.

Farthing, G. William; Venturino, Michael; Brown, Scott W. (1984). Suggestion and distraction in the control of pain: Test of two hypotheses. Journal of Abnormal Psychology, 93, 266-276

96 18-30 yr old undergraduates, preselected for high or for low hypnotic susceptibility on the Harvard Group Scale of Hypnotic Susceptibility - Form A, reported their level of perceived pain during a 50-sec baseline immersion of their hand in ice water. In a second immersion, independent groups of high and low hypnotizables (n = 12) were tested (without hypnosis) under 4 conditions: analgesia suggestion alone, verbal- distraction task alone, a combination of suggestion plus distraction, and control. Among high hypnotizables, as compared to the control group, all 3 experimental treatments were effective in reducing pain. The combination of suggestion plus distraction was no more effective than was either of the single treatments alone in reducing pain. Among low hypnotizables, only the distraction treatment was effective. Results support an attentional- diversion explanation of the effect of waking analgesia suggestions rather than a special resources hypothesis. It appears that both high and low hypnotizables can divert attention toward external stimuli, but only high hypnotizables can successfully divert attention inward to control pain.

Information about this study presented at the annual meeting of the Society for Clinical and Experimental Hypnosis indicates that for the waking suggestion group,

the analgesia suggestion was given without any prior hypnotic induction; it involved telling the subjects to imagine that their hand and forearm were numb and insensitive, like a piece of rubber.

[The fact that distraction did not reduce pain ratios more among high hypnotizables than among lows (whereas suggestion did) is similar to Blum & Nash's (1982) finding that positive heightened alert attention to a stimulus did not interfere with an illusion, but inhibiting awareness did.]

Fogel, Barry S. (1984). The 'sympathetic ear': Case reports of a self-hypnotic approach to chronic pain. American Journal of Clinical Hypnosis, 27 (2), 103-106.

Secondary gain issues may limit the success of hypnotherapeutic approaches to chronic pain. A self-hypnotic suggestion that promotes patients' awareness of the interpersonal aspects of their pain complaints was used in the treatment of two patients with chronic headache. Hypnotic suggestions that help make secondary gains conscious may be a useful addition to hypnotic techniques of pain management.

1983

Bassman, S. (1983). The effects of indirect hypnosis, relaxation and homework on the primary and secondary psychological symptoms of women with muscle contraction headache (Dissertation). Dissertation Abstracts International, 44, 1950-B.

Compared the effects of indirect hypnosis (e.g., metaphors, stories, vague suggestions, and implied directives) on muscle contraction headaches with a relaxation and a no-treatment control condition. Both hypnosis and relaxation conditions reduced symptoms more than did the no-treatment condition. Unlike relaxation, indirect hypnosis did not reduce the intensity and duration of headaches, although it did reduce the amount of medication and also benefitted sleep.

1981

Chen, Andrew C.; Dworkin, Samuel F.; Bloomquist, Dale S. (1981). Cortical power spectrum analysis of hypnotic pain control in surgery. International Journal of Neuroscience, 13, 127-136.

Cortical power spectrum (CPS) of brain potentials was recorded from the scalp between prefrontal and parietal regions in both right hemisphere (RH) and left hemisphere (LH). A pattern of laterality shift in CPS occurred at different stages during an extensive oral surgery, performed under hypnosis, in a young female patient. Video and audio recordings as well as psychophysiological recordings were obtained through the following 6 stages: Baseline, Hypnosis, Surgery (1 hr, no cortical recording), Immediate Postsurgery Procedure, Hypnotic Re-experience, Hypnotic Rest, and Posthypnotic Baseline. Indications of anxiety and pain scores were reported in writing by the patient through verbal command by the hypnotist. In each stage, 10 min of CPS (10 spectrum/stage, 8 epochs/spectrum, 6

seconds/epoch) were analyzed by a PDP-11 computer. The results of CPS analysis demonstrated significant large total power reduction at different stages. There was significant correlation between both hemispheres at baseline, but dissociation of hemispheric power output occurred during hypnosis stages. LH was more dominant than RH during baseline and presurgery hypnosis, but both were leveled-off immediately following the surgery procedure. However, RH became more dominant during all postsurgery hypnosis stages. Interestingly, this pattern shifted back to the original relationship during the posthypnotic baseline stage. Specific changes of spectral power in theta and alpha of EEG activities in both hemispheres also occurred in conjunction with hypnosis.

Subject was a 25 year old woman, described as only medium in hypnotizability. She scored 3 on the 5-point Stanford Hypnotic Clinical Scale, 7 on the 12-point Stanford Hypnotic Susceptibility Scale, and 3 on up-gaze, between 2 and 3 on eye roll, on the Spiegel eye roll test.

The principal hypnotic approach was a suggestion of dissociation, i.e. that the patient "experience herself swimming freely and powerfully, in a deep cold mountain lake, pre-occupied with the intensity of the blue-black color of the water, the shimmering of light from above, and the possibilities of exploration of rock formations, caves, etc. It was suggested that while she was experiencing the exhilaration and strenuous stimulation of the cold water and the vigorous exercise, an 'observing-self' would remain on the shore, watching and ensuring that no harm would come to the person. The suggestion was reinforced that any stimulation experienced was experienced in the body, not in the person" (p. 129).

The patient was trained in inductions and dissociation first in the therapist's office, then with two sessions in the research laboratory (where tooth pulp stimulation pain thresholds were measured), and then two sessions in the hospital dental operatory.

The results of the computerized CPS were analyzed by hemispheres. "Large reductions in total power occurred at different stages associated with hypnosis and these reductions in power output of the CPS showed significant left-right differences" (p. 130).

"The total energy output of LH [left hemisphere] continued to diminish as hypnosis continued by as much as 80% of baseline value, while RH [right hemisphere] power output tended to be stabilized from the initial hypnosis recording stage until the awake baseline stage" (p. 130).

"Those stages involving hypnosis were characterized by dominant RH energy output in the alpha spectrum. ...

"Alpha output for the LH decreased an average of 65% between awake baseline levels and postsurgery hypnosis stages, while RH alpha only decreased approximately 50% of resting levels. This resulted in a relative shift of alpha output which was approximately equal in both hemispheres prior to surgery, to a 2:1 shift in favor of RH alpha output as hypnosis progressed. This differential shift in laterality of alpha was reversed when the subject awakened from hypnosis.

"Of interest was the observation that total power reductions and laterality shifts associated with hypnosis were not altered by the profound instrumentation of surgery and postoperative pain, nor were observed laterality shifts affected by hypnotic suggestions aimed at recreating the surgical experience (see Stage 5)" (p. 130).

During the experiment when the investigators used hypnotic suggestion to recreate the surgical experience, LH output continued to diminish while RH output did not change, making the LH-RH contrast highly significant. "This suggests that the RH is active during deep stages of hypnosis and can remain so despite hypnotic suggestions which are presumed to be intensely aversive" (p. 131).

In their Discussion, the authors reinforced the conclusion that overall cortical functioning is reduced during hypnosis, and that the left cerebral hemisphere shows a greater reduction than the right. They discuss the increased theta density in RH and LH during the postsurgery hypnosis stage in terms of reports that theta is associated with altered states of consciousness (Tebecis et al., 1975; Ulett et al., 1972; Anad, China, & Singh, 1961; Banquet, 1973; Kasamatsu & Hirai, 1966; Wallace, 1970) and with cognitive tasks like mental arithmetic (Dolce et al., 1974).

The authors note that their results are congruent with Hilgard's neodissociation theory of hypnosis, and add that since their suggestions were dissociative in nature rather than of local anesthesia, the EEG may reflect the brain physiology of dissociation.

Finally, they comment on the implications for pain neurophysiology. "The total power changes and shifting patterns in laterality of cortical functioning observed more closely tracked the hypnosis experience than the pain experience; this is, in fact, a very puzzling issue. It appears on the face of it that the EEG measurements recorded are not reflective of EEG-related pain phenomenology despite the strenuous and invasive surgical procedures used. The observations that overall power output continued to decrease during the several hypnosis stages after strenuous surgery and then increased as the patient came out of hypnosis makes reasonable the possibility that hypnosis has some functional brain correlates; we cannot conclude from the present cortical power spectrum analysis that any brain correlates of surgical pain were revealed. We are well aware that EEG recordings were not available during actual surgery itself, because of artifacts resulting from head movements, etc. Nevertheless, it can be fairly claimed that recordings obtained immediately after such oral surgery of one hour duration, could reasonably be expected to be associated with a person in pain. But, both by verbal report and available objective data, any surgically induced traumatic pain was of brief duration under hypnosis" (p. 135).

Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, 138, 1182-1187.

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by

measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive 133 Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

1980

Adams, Henry E.; Feuerstein, Michael; Fowler, Joanne L. (1980). Migraine headache: Review of parameters, etiology, and intervention. Psychological Bulletin, 87 (2), 217-237.

The migraine headache is a disorder of much interest to clinicians and researchers in the areas of psychology and medicine. Research that has investigated various characteristics of this disorder and the factors contributing to its etiology and a variety of treatment techniques have appeared in both the medical and the psychological literature. The present article provides a comprehensive critical appraisal of this literature, with particular emphasis on psychological intervention. Theoretical issues involving biological and psychological factors in migraine etiology are discussed, and a psychobiological model for the migraine disorder is proposed. Areas requiring further basic and clinical research are identified. Major conclusions include (a) that etiological factors of migraine remain unclear; (b) that pharmacological intervention does not constitute an adequate treatment method in terms of headache elimination; (c) that although a number of psychological treatment approaches have been reported in the literature, there are few well-controlled evaluations, and definitive conclusions regarding differential effectiveness of the various techniques are difficult; and (d) that a biofeedback approach directed at modifying the peripheral pain mechanism in migraine appears to be a promising treatment technique for this disorder.

Crowley, R. (1980). Effects of indirect hypnosis (Rapid Induction Analgesia) for relief of acute pain associated with minor podiatric surgery (Dissertation). Dissertation Abstracts International, 40, 45-49.

Lynn et al. (1993) cited this dissertation. They noted that all 30 volunteer subjects responded painfully when stimulated by a needle administered by a podiatrist and that the Rapid Induction Analgesia of Joseph Barber (RIA) was not as effective as local chemical analgesia. Furthermore, according to Lynn et al., RIA patients did not report a reduction in their anxiety following podiatric surgery comparable to that reported by patients who received chemical analgesia. The author also found that hypnotizability was related to multiple chronic pain indices.

Edwards, William Henry (1980). Direct versus indirect hypnosis for the relief of chronic pain in spinal cord injured patients (Dissertation, United States International University). Dissertation Abstracts International, 40 (10-B), 4996

This study compared effectiveness of direct hypnosis and indirect hypnosis (Rapid Induction Analgesia, developed by Joseph Barber) in reducing experimental and clinical pain in spinal cord injured patients. The 30 male paraplegic patients who had chronic benign pain volunteered for the study. They were administered three tests: the Pain Estimate Scale (Sternbach, 1974), Ischemic Muscle Pain Test (IMPT), and the Stanford Profile Hypnotic Susceptibility Scale, Form II -- SPHSS -- (Weitzenhoffer and Hilgard, 1967). Each patient experienced three sessions: (1) Baseline Control, (2) Direct Hypnosis, and (3) Indirect Hypnosis. Patients were randomly assigned to Sessions (2) and (3). The results indicated no significant statistical difference in the effectiveness of direct versus indirect hypnotic analgesia in these chronic pain patients. Direct and indirect hypnosis were equally effective; hypnotizability was not associated with outcome. Furthermore, there was no interaction between treatment effects and pretreatment pain level. The results were similar for both clinical and experimental pain.

1979

Barber, Joseph; Donaldson, David; Ramras, Susan; Allen, Gerald D. (1979). The relationship between nitrous oxide conscious sedation and the hypnotic state. Journal of the American Dental Association, 99, 624-626.

Nitrous oxide-oxygen produces a state of consciousness in the patient that is reported to be similar to the hypnotic state. In this investigation, the authors test the hypothesis that nitrous oxide-oxygen heightens a patient's responsiveness.

This study apparently did not have a control group receiving nitrous oxide but no suggestions, to evaluate the amnesia and analgesic effects of the drug alone.

Beers, Thomas M.; Karoly, Paul (1979). Cognitive strategies, expectancy, and coping style in the control of pain. Journal of Consulting and Clinical Psychology, 47, 179-180.

Measures of tolerance, self-reported pain threshold, and overall discomfort of cold-pressor pain were obtained from 114 male subjects in a pretest-training-posttest experiment. Training consisted of brief practice in one of four cognitive strategies: rational thinking, compatible imagery, incompatible imagery, and task-irrelevant cognition. Analyses of covariance indicated (a) that cognitive-imaginal strategies facilitated endurance of pain and raised self-reported threshold, (b) that rational thinking and compatible imagery were generally the most effective treatments, (c) that expectancy alone was not a significant pain-attenuating factor, (d) that treatments did not affect discomfort ratings, and (e) that individual differences in imaginal ability and coping style did not correlation with changes in any of the dependent measures.

**Bennett, Henry L.; Giannini, Jeffrey A.; Kline, Mark D. (1979, September). Consequences of hearing during general anesthesia. [Paper] Presented at the annual meeting of the American Psychological Association, New York.**

**A double blind 2X2 study exposed 23 herniorrhaphy and cholecystectomy patients to either a 45 minute suggestion tape or to the actual sounds of the operation. Structured interviews conducted postoperatively assessed hypnotic susceptibility and regressed patients under hypnosis to operative events. Ten patients accurately recalled significant events from surgery but only under hypnosis. Recall was greater and more accurate in patients scoring high on the Stanford Clinical Hypnosis Scale. Fewest number of pain medications were given postoperatively to patients receiving the suggestion tape. Hernia patients showed better recall than gallbladder patients.**

**1978**

**Barber, Joseph (1978, August). Hypnosis: A suggestion for pain relief. Pain Topics, 7.**

**He lists 3 misconceptions that prevent hypnosis being used more widely for pain control: 1. Hypnosis renders a patient helplessly under the control of the hypnotist. 2. Hypnosis can only relieve psychogenic pain, not pain of a clearly somatic origin. 3. Hypnosis is effective only in 'susceptible' individual (the most damaging misconception). He also gives examples of indirect suggestions of pain relief (i.e. increased comfort, etc.)**

**1977**

**Barber, Joseph (1977). Rapid induction analgesia: A clinical report. American Journal of Clinical Hypnosis, 19, 138-149.**

**This is a report of clinical dental experience using a newly developed, hypnotic pain control procedure. Characteristics of the procedure are outlined, an explanation for its success is suggested, and the broader implications of this success are discussed. The unusually high incidence of clinical analgesia rapidly obtained with this procedure leads the author to question the meaning and relevance of the concept of 'hypnotic susceptibility' for the practical clinical application of hypnosis.**

**Berk, Stephen N.; Moore, Mary E.; Resnick, Jerome H. (1977). Psychosocial factors as mediators of acupuncture therapy. Journal of Consulting and Clinical Psychology, 45 (4), 612-619.**

**This study investigated a number of psychosocial variables that have been suggested as possible mediating factors in acupuncture therapy. Forty-two volunteers with bursitis and/or tendonitis of the shoulder served as subjects. All were randomly assigned to one of four treatment groups: acupuncture - positive milieu, acupuncture - negative milieu, placebo acupuncture - positive milieu, and placebo acupuncture - negative milieu. Pretreatment and posttreatment subjective pain**

reports and shoulder motion studies, as well as pretreatment assessments of hypnotic susceptibility and suggestibility, were determined for each subject. Results indicated that (a) acupuncture and placebo acupuncture were equally effective in producing highly significant ( $p < .001$ ) reductions in subjective pain reports; (b) neither treatment effectively improved objective shoulder motion; (c) subjects treated in the positive milieu reported more improvement than those in the negative milieu ( $p < .053$ ); and (d) hypnotic susceptibility, suggestibility, belief in the treatment, and the satisfaction of expectations showed no relationship to treatment outcome. It is concluded that acupuncture therapy provides a powerful placebo. Treatment milieu variables warrant future study in the attempt to understand the acupuncture phenomena.

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous--rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

1976

Chaves, John F.; Barber, Theodore Xenophon (1976). Hypnotic procedures and surgery: A critical analysis with applications to 'acupuncture analgesia'. American Journal of Clinical Hypnosis, 18 (4), 217-236.

Although hypnotic procedures are useful for reducing the anxiety of surgery and helping patients tolerate surgery, they do not consistently eliminate pain. Six factors that are part of or associated with hypnotic procedures help patients tolerate surgery. These factors pertain to patient selection, the patient-physician relationship, the preoperative 'education' of the patient, the adjunctive use of drugs, and the use of suggestions of analgesia and distraction. It appears that the same factors account for the apparent successes of 'acupuncture analgesia' as well. A frequently-overlooked fact, that most internal tissues and organs of the body do not hurt when they are cut by the surgeon's scalpel, is also important in understanding how surgery can be performed with either 'hypnoanesthesia' or 'acupuncture analgesia.'

1975

Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. Experimental Neurology, 49, 272-280.

The reactions of 14 volunteers to electrical stimulation near the supra-orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

Anderson, J. A. D.; Basker, M. A.; Dalton, R. (1975). Migraine and hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 23 (1), 48-58.

Therapeutic measures for migraine are largely ineffective. Prophylaxis by hypnosis (including autohypnosis) and prochlorperazine is difficult to assess because of the intermittency of the disease and the subjective nature of the disabling symptoms. A method of studying this problem is described in this article. Random allocation of 47 patients was made to one or other prophylactic measure. This was followed by monthly assessments and independent evaluation of 1 year of continuous care. Criteria of improvement were the number of attacks per month, number who had Grade 4 attacks, and complete remission. Results showed that the number of attacks and the number who suffered blinding attacks were significantly lower for the group receiving hypnotherapy than for the group receiving prochlorperazine. For the group on hypnotherapy, these 2 measures were significantly lower when on hypnotherapy than when on previous treatment. Prochlorperazine seemed about as effective as previous treatment. 10 out of 23 patients on hypnotherapy achieved "complete remission" during the last 3 months of the trial as opposed to only 3 out of 24 on prochlorperazine. It is concluded that further trials of hypnotherapy are justified against some other treatment not solely associated with the ingestion of tablets.

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of the trial as opposed to only 3 out of 24 on prochlorperazine. It is concluded that further trials of hypnotherapy are justified against some other treatment not solely associated with the ingestion of tablets.

Andreychuk, Theodore; Skriver, Christian (1975). Hypnosis and biofeedback in the treatment of migraine headache. International Journal of Clinical and Experimental Hypnosis, 23 (3), 172-183.

A study was made to explore the effects of subject hypnotizability in response to 3 treatment procedures applied to 33 migraine headache sufferers. These treatment procedures included biofeedback training for hand-warming, biofeedback training for alpha enhancement and training for self-hypnosis. The Hypnotic Induction Profile (HIP) of Spiegel & Bridger (1970) was given to each S to determine degree of hypnotizability and the MMPI was administered to all Ss. All 3 treatment groups showed significant reductions in headache rates and there were no significant differences between groups. Cutting across treatment groups, high hypnotizable Ss (N - 15) showed significant reductions in headache rates when compared with low hypnotizable Ss (N - 13). There was no correlation between HIP scores and the hysteria scale of the MMPI.

Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35.

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

Clawson, T. A.; Swade, R. H. (1975). The hypnotic control of blood flow and pain: The cure of warts and the potential for the use of hypnosis in the treatment of cancer. American Journal of Clinical Hypnosis, 17 (3), 160-169.

Case histories show that hypnosis can control massive bleeding and pain, and it can remove warts, probably by stopping blood flow to them. We propose that blood flow to cancerous tumors can likewise be controlled, which could destroy them outright, or which control could be a useful adjunct to chemo- or radio-therapy.

1974

Chaves, John F.; Barber, Theodore Xenophon (1974). Acupuncture analgesia: A six-factor theory. Psychoenergetic Systems, 1, 11-21.

The dramatic successes claimed for acupuncture suggest that Western medicine has failed to identify important factors that pertain to the nature of pain and its control. This may not be the case, as there are at least six factors which are often overlooked by writers describing the absence of pain (i.e., analgesia) during acupuncture: (a) the patients accepted for surgery under acupuncture usually believe that it will work, (b) drugs are frequently used in combination with acupuncture, (c) the pain associated with surgical procedures is less than is generally assumed, (d) the patients are prepared in special ways for surgery under acupuncture, (e) the acupuncture needles distract the patient from the pain of surgery and, (f) suggestions for pain relief are present in acupuncture treatment. It is concluded that more research is needed to determine whether additional factors are needed to help explain the phenomenon of acupuncture analgesia

Chaves, John F.; Barber, Theodore Xenophon (1974). Cognitive strategies, experimenter modeling, and expectation in attenuation of pain. Journal of Abnormal Psychology, 83 (4), 356-363.

Verbal reports of pain were obtained from 120 subjects during a base-level pretest and also during a posttest conducted under one of several experimental treatments. The pain stimulus was a heavy weight applied to a finger for two minutes. During the posttest, subjects who had been asked to utilize cognitive strategies for reducing pain (to imagine pleasant events or to imagine the finger as insensitive) showed a reduction in pain as compared to uninstructed control subjects. Subjects led to expect a reduction in pain, but not provided with cognitive strategies, also showed reduced pain during the posttest as compared to control subjects, but the reduction was smaller than for subjects using cognitive strategies. An experimenter modeling procedure, used with one half of the subjects under each experimental treatment, was effective in reducing verbal reports of pain only for subjects with high pretest levels who were asked to imagine pleasant events.

1972

Cedercreutz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.

In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting.

1970

Bowers, Kenneth S.; Kelly, P. (1970). Stress, disease, psychotherapy, and hypnosis. Journal of Abnormal Psychology, 490-505.

Presents evidence for the importance of suggestion and hypnotic ability in the healing or amelioration of various somatic disorders. It is argued that even in some treatment interventions that are not explicitly hypnotic, suggestion and hypnotic ability may be hidden factors that help to promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

Evans, Michael B.; Paul, Gordon L. (1970). Effects of hypnotically suggested analgesia on physiological and subjective responses to cold stress. Journal of Consulting and Clinical Psychology, 35 (3), 362-371.

Relative effects of suggested analgesia and hypnotic induction were evaluated with regard to reduction of stress responses (self-report, heart rate, pulse volume) to the physical application of ice-water stress. Four groups (N = 16 each) of undergraduate female Ss, equated on hypnotic susceptibility, were run individually, receiving (a)

hypnotic induction plus analgesic suggestion, (b) hypnotic induction alone, (c) waking self-relaxation plus analgesic suggestion, or (d) waking self-relaxation alone. The major findings were that suggestion, not hypnotic induction procedures, produced reductions in the self-report of distress, and that the degree of reduction was related to hypnotic susceptibility in both "hypnotic and "waking" conditions. Neither suggestion nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of hypnotic phenomena, results are related to other literature, suggesting that an adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

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**1969**

Barber, Theodore Xenophon (1969). An empirically-based formulation of hypnosis. American Journal of Clinical Hypnosis, 12 (2), 100-130.

A formulation is presented which does not invoke a special state of consciousness ("hypnosis" or "trance") to account for the behaviors that have been historically associated with the word hypnotism. Instead, so-called hypnotic behaviors - e.g., "analgesia," "hallucination," "age-regression," and "amnesia" - are conceived to be functionally related to denotable antecedent variables which are similar to those that control performance in a variety of interpersonal test-situations. The antecedent variables which determine behavior in a "hypnotic" situation include Ss' attitudes, expectancies, and motivations with respect to the situation, and the wording and tone of instructions- suggestions and of questions used to elicit subjective reports. The formulation is exemplified by several dozen experimental studies, and prospects for further research are delineated.

**1967**

Dahinterova, Jeanette (1967). Some experiences with the use of hypnosis in the treatment of burns. International Journal of Clinical and Experimental Hypnosis, 2, 49-53.

EXPERIENCE WITH HYPNOSIS AS A MEANS OF ELIMINATING PAIN DURING SURGICAL PROCEDURES FOR THE TREATMENT OF SEVERE BURNS HAS BEEN FAVORABLE IN 3 OUT OF THE 4 CASES DISCUSSED. THESE INCLUDE PATIENTS WHO HAD RELATIVELY CHRONIC, SERIOUS, AND SEVERE BURNS. IT IS CONCLUDED THAT HYPNOSIS CAN BE AN IMPORTANT AND USEFUL ADJUNCT IN PSYCHOTHERAPEUTIC TREATMENT OF BURNS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1965**

**Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.**

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

**Attar, A.; Muftic, M. (1964). Narcohypnosis in abdominal surgery. British Journal of Medical Hypnotism, 16 (1), 29-32**

Effectiveness of a relaxation technique to increase the comfort level of patients in their first postoperative attempt at getting out of bed was tested on 42 patients, aged 18 to 65, who were hospitalized for elective surgery. Study group patients were taught the relaxing technique; control group patients were not taught the technique. Each group had an equal distribution of cholecystectomy, herniorrhaphy, and hemorrhoidectomy patients. Blood pressure, pulse, and respiratory rates of subjects in both groups were compared prior to surgery and after the postoperative attempt to get out of bed. Subjects' reports of incisional pain and bodily distress were measured via a pain and distress scale after their attempt at getting out of bed. Amount of analgesics used in the first 24 hrs following surgery was examined. Mean differences in report of incisional pain and body distress, analgesic consumption, and respiratory rate changes were statistically significant, supporting the hypothesis that use of a relaxation technique to reduce muscular tension will lead to an increased comfort level of postoperative patients.

1961

Cangelo, V. W. (1961). The use of hypnotic suggestion for pain relief in malignant disease. International Journal of Clinical and Experimental Hypnosis, 9, 17-22.

Using hypnotic suggestion, pain relief was attempted in 22 cases. 13 of these patients showed a decrease in narcotic requirements. Duration of effectiveness was from 1 week to 4 1/2 months. It is concluded that this method should be tried before resorting to either chemical or surgical procedures since it is relatively simple to perform, has no harmful complications, and is not unduly time consuming. From *Psyc Abstracts* 36:02:2II17C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Cedercreutz, Claes (1961). Hypnosis in surgery. International Journal of Clinical and Experimental Hypnosis, 9, 93-95.

(Author's Summary) "It is possible to treat painful conditions and spasms in the alimentary canal by hypnosis. In the rehabilitation of patients with limb injuries and fractures, hypnosis has also proved useful. There is seldom reason to resort to this method of inducing anaesthesia in surgery" (p. 95).

1955

Ament, Phillip (1955). A psychosomatic approach to the use of anesthesia for a hysterical dental patient: A case history. Journal of Clinical and Experimental Hypnosis, 3, 120-123. (Abstracted in *Psychological Abstracts* 56: 1280)

Author describes a case highly resistant both to anesthesia and dentistry. Although very responsive to hypnosis, she continued moaning and moving from side to side (later determined to be her way of preventing dental work even though anesthetized). Ultimately a combination of hypnosis and multiple anesthetics was needed, including nembutal, sodium pentothal, nitrous oxide and novocain. In the

author's experience, most other patients require only hypnosis or hypnosis plus novocaine.

## **PARALYSIS**

**1988**

**Radil, T.; Snydrova, I.; Hacik, L.; Pfeiffer, J.; Votava, J. (1988). Attempts to influence movement disorders in hemiparetics. Scandinavian Journal of Rehab. Med. Suppl., 17, 157-161.**

Step duration, measured in hemiparetic patients walking on a circular path, showed that step duration of the affected foot is usually longer. Functional electrical stimulation of the peroneal nerve in the swing phase of the step (eliminating foot drop) shortened step duration in the majority of cases. Hypnosis induced by the verbal fixation technique was used in hemiparetic patients (a) to ascertain whether the patients' mobility would increase during hypnosis and to determine (in positive cases) whether this approach might be used to predict the effect of rehabilitation performed by classical methods; (b) to use hypnosis as a method of auxiliary treatment. The general finding was that the extent of movements of the hemiparetic upper extremity considerably improved during and immediately after hypnosis. This effect could be observed both at the level of severe impairment (at the beginning of treatment) and during the later stages when mobility greatly improved due to rehabilitation and recovery.

**1985**

**LaRiccia, P. J.; Katz, R. H.; Peters, J. W.; Atkinson, G. W.; Weiss, T. (1985). Biofeedback and hypnosis in weaning from mechanical ventilators. Chest, 87, 267-269.**

Weaning patients from mechanical ventilation can be hindered by both physical and psychologic factors. Biofeedback has been used successfully as an adjunct in difficult weaning problems. We have used a combination of hypnosis and biofeedback to wean a patient with neurologic disease who previously failed weaning by standard procedures. A 30-year-old woman with respiratory failure secondary to multiple sclerosis with transverse myelitis was given eight sessions of biofeedback over 12 days in which the movements of her chest wall, as monitored by magnetometers, were displayed on an oscilloscope. The patient was praised for targeted respiratory rate, amplitude, and rhythm. These sessions included hypnosis in which the patient was given suggestions of well-being and that she could breathe as she had five years earlier. In this manner the patient was successfully weaned. Respiratory biofeedback and hypnosis appear to be useful adjuncts in weaning patients from ventilators.

**Pajntar, M.; Roskar, E.; Vodovnik, L. (1985). Some neuromuscular phenomena in hypnosis. In Waxman, D.; Misra, P.C.; Gibson, M.; Basker, M.A. (Ed.), Modern trends in hypnosis (pp. 181-206). New York: Plenum Press.**

The phenomena presented here allow us to conclude that with hypnosis, the functioning of the neuromuscular system may be significantly influenced, either by increasing or decreasing the functioning of voluntary or electrically stimulated contractions, and that the function of movements may be improved. Two suggestions proved to be most efficient: 1) physical and mental relaxation, and 2) age regression. In age regression the patient recalls the ideomotor system, which is likely to result in a reconstruction of the forgotten motor contractions or in a strong intensification of these contractions under additional suggestions. With regard to relaxation, on one hand it intensifies the functioning of the voluntarily stimulated neuro-muscular systems, and on the other hand it prevents an excessive functioning of the involuntarily reflex stimulated antagonistic systems" (pp 202; 204).  
, on one hand it intensifies the functioning of the voluntarily stimulated neuro-muscular systems, and on the other hand it prevents an excessive functioning of the involuntarily reflex stimulated antagonistic systems" (pp 202; 204).

1981

Nardi, T. J. (1981). Treating sleep paralysis with hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (4), 358-365.

The use of hypnosis in the management of sleep paralysis is described and discussed. 2 cases are presented in which autohypnosis was used to desensitize the patients to the anxiety that accompanied their sleep paralysis. The autohypnosis also provided a means of terminating the attacks. Follow-up data suggests that this approach may serve to decrease the frequency of sleep paralysis attacks.

1980

Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.

In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.

1977

Schneck, Jerome M. (1977). Sleep paralysis and microsomatognosia with special reference to hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 25, 72-77.

Sleep paralysis is described in connection with a patient whose episodes incorporated the experience of her entire body feeling extremely small. The psychological implications of the paralysis and her microsomatognosia are discussed. Comparisons are made with other perceptual distortions involving the sense of change in body size. The characteristics of sleep paralysis and associated personality patterns are delineated. This material is discussed with special reference to experiences of patients in hypnosis, especially hypnotherapy and hypnoanalysis.

1963

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

**"Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.**

**" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.**

**"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).**

**1962**

**Spankus, Willerd H.; Freeman, Linda G. (1962). Hypnosis in cerebral palsy. International Journal of Clinical and Experimental Hypnosis, 10 (3), 135-139.**

**Hypnosis was used with 19 cerebral palsy patients to determine its value in the treatment of this condition. 4 patients demonstrated definite benefit; however, in general, the results were not remarkable. Interpersonal relationships developed during therapy were probably as important in the improvement of the patient as was the hypnotic state itself. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

## **PARAPSYCHOLOGY**

**2002**

**Gravitz, M.A. (2002). The search for Bridey Murphy: Implications for modern hypnosis.. American Journal of Clinical Hypnosis, 45, 3-10.**

**The 1956 publication of "The Search for Bridey Murphy" was a noteworthy event in the history of hypnosis. This internationally best selling book, written for lay readers, described several recorded sessions of alleged time-regression to a prior life nearly two centuries before 1956. While subsequent investigations disproved that claim, there were a number of important implications for the science and practice of hypnosis. Although it was concluded that the Bridey Murphy interviews were**

products of cryptomnesia, the book was a significant factor associated with a resurgence of public and professional interest in the modality.

The author notes that the hypnotist was a layman who did no mental status evaluation prior to the hypnosis. The author also considers and rejects several alternative hypotheses (reincarnation or regression to past lives; fraud or hoax; monetary motivation on the part of the hypnotist; and development of a dissociated identity, i.e. multiple personality disorder. He concludes, "Tighe's expectancies, her prior hypnotic experiences with Bernstein, her compliance, transference, acquiescence, and heightened suggestibility, could have set the stage for the subsequent behavior of both the hypnotist and subject in a nonconscious interrelationship in which both parties accepted their beliefs as reality" (p. 7).

**1996**

Dixon, Mike; Labelle, Louise; Laurence, Jean-Roch (1996). A multivariate approach to the prediction of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 44 (3), 250-264.

The present study examined the relation between various self-report measures and two measures of hypnotizability within a multivariate framework. A group of 748 participants was tested on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), the Tellegen Absorption Scale (TAS), as well as the Preference for an Imagic Cognitive Style (PICS) questionnaire. One hundred ninety of these participants also completed the Paranormal Experiences Questionnaire (PEQ). Data were analyzed using hierarchical multiple regression equations, and the results of the analyses indicated that both the TAS and PICS accounted for significant amounts of unique variance in each of two 373-member samples of HGSHS:A scores. A further sub-sample of participants (n = 161) was tested on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) to see if these results would generalize to another measure of hypnotizability. Hierarchical multiple regression analyses revealed that although the PEQ predicted significant amounts of unique SHSS:C variance over and above that predicted by the TAS, the PICS failed to do so. This inconsistency in results may be due in part to the generally low intercorrelation between the different hypnotizability scales and points to the need to develop new predictor variables that are orthogonal to each other. - Journal Abstract

**1994**

Atkinson, Richard P. (1994). Relationships of hypnotic susceptibility to paranormal beliefs and claimed experiences: Implications for hypnotic absorption. American Journal of Clinical Hypnosis, 37, 34-40.

This study examined the relationship of hypnotic susceptibility level to belief in and claimed experience with paranormal phenomena. The Harvard ... and the Inventory of Paranormal Beliefs and Experiences [developed for this study] were administered on consecutive days to 43 undergraduate students (14 men, 29 women) ... . a

significant multiple correlation was obtained ( $r = .55, p < .001$ ). A partial correlation between hypnotic susceptibility and belief in paranormal phenomena was also significant ( $r = .53, p < .001$ ), while hypnotic susceptibility was not found to be significantly related to claimed paranormal experiences. Implications of these relationships for the role of absorption in hypnosis are discussed.

Discusses relationship to Absorption, and the fact that Labelle, Dixon, Laurence, & Nadon (1990) got correlation of hypnotizability with paranormal experience

Walsh, Roger (1994, August). Transpersonal psychology--the state of the art. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Twenty-five years ago a group formed that was called transpersonal psychology, following after humanistic psychology (e.g. Maslow). Some of the humanistic psychologists came into transpersonal psychology. Maslow was interested in healthy people, and in peak experiences that were transpersonal in nature--experiences encompassing wider aspects of life, including mystical experiences.

Peak experiences were thought to be positive, but also overwhelming. When psychologists looked Eastward, they found that there were whole families of these types of experiences, and that they could be induced by will and could be stabilized into not only peak but plateau experiences. There was a reservoir of wisdom in the world's religions that could be drawn upon. This wisdom is being integrated with Western science to create the discipline of transpersonal psychology.

There is a broad spectrum of altered states of consciousness. Traditionally, altered states of consciousness were thought to be few in number, and usually pathological. Our society has been resistant toward studying them. For example, Esdaile's use of hypnosis in surgery was not welcomed, even though he was lowering morbidity and mortality because he controlled shock. His paper was turned down for publication. He amputated a leg in front of colleagues in Britain, who commented that he "must have hired a very hard rogue" to have his leg cut off under hypnosis.

Our culture is monophasic, deriving its world view almost exclusively from the waking state; other cultures are polyphasic and also draw their world view from dreams, meditative, or yogic contemplative states, etc. Recently we can apply more sophisticated analyses, to compare states of consciousness and map these out, phenomenologically. There are several key dimensions of experience for mapping the states: 1. Control 2. Awareness of Environment 3. Concentration 4. Mental Energy/Arousal 5. Emotion 6. Identity or Self Sense 7. Out-of-Body Experience 8. Content of Experience

Using these dimensions, we could compare shamanic, yogic, and Buddhist practices. A Nepalese shaman drums himself into a trance state, demonstrating: 1. Ability to enter and leave an altered state of consciousness and partly control experience 2. Decreased awareness of his environment 3. Increased concentration, fluid attention 4. Increased mental energy/arousal 5. Either pleasurable or not [pleasurable] emotion 6. Separate self sense: may be experienced as a non-physical "spirit" or "soul" 7. Controlled ecstasy (Out of Body experience)

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Buddhist meditation is training awareness to examine experience as minutely as possible, in effect a heightened awareness (Vipassana).

A yogic practitioner engages in concentration, focusing on a fixed stimulus and holding it unwaveringly, till it dissolves a sense of separation into a unity with the object, ultimately with the Self.

[Author showed a slide comparing the three.] All three approaches have increased control and concentration. (The Yogi's is unshakable.) An awareness of the environment is increased for the Buddhist; the Yogi may lose awareness entirely. Others have ecstatic experience; the yogi has enstatic experience. Identity for the shaman is separate (a soul); for the Buddhist awareness is so precise that what was "I" is deconstructed into evanescent flux, into thoughts, images, emotions (like a movie with solitary frames); the yogi dissolves the self sense, but because of fixed concentration the separate self disappears and yogis feel like merging with larger Self.

So now for first time in history we can compare and map both similarities and differences. Now we have new possibilities for understanding and contrasting different practices. We can now differentiate the many states of consciousness that are available. But there are an awful lot of states. Can we find an over-arching framework? For the first time, we can say yes--due to the work of Ken Wilber. This is Developmental Structuralism (looking for common deep structures).

For example, you can identify millions of different faces, and they are surface structures; but they all have a common deep structure. Likewise, if we see that a Hindu creates images of [devas] and a Christian sees saints, they are seeing archetypal images. Likewise, Buddhists experience nirvana in which all phenomena disappear, and so does another group. This [sense of all phenomena disappearing] is common to both, but different from those who see archetypal images. We may be able to come up with a typology of altered states.

Wilber also says that these deep structures and corresponding states may develop in a developmental sequence, with common stages. Three transpersonal stages are subtle, causal, and non-dual. In meditation, first you learn how out of control the mind is, then gradually it quiets and you discover subtle experiences that you usually overlooked. Going further, all thoughts cease to arise, and there is only pure consciousness. Beyond that, images re-arise but are now recognized as projections of consciousness.

Subtle images may be formless (as in pure light, pure sound). The person may pay attention to more and more subtle sounds. Or the images may have form (as in shamanic power animals).

At the casual stage, the person may be aware of consciousness itself, only consciousness, with no objects: pure consciousness, void, the Atman of Vedanta, abyss of gnosticism.

At the non-dual stage, objects arise again: everything is recognized as expressions of consciousness--e.g., Zen's "one mind." Consciousness now has awoken and sees itself in all things, unbounded by space and time and limits because consciousness is what creates space, time, and limits. This is Moksha, Enlightenment, etc.

This is not the final task, because the final task is bringing the awakening to the world (Plato's re-entering the cave, to educate others; Zen oxherder entering the marketplace with help-bestowing hands; Christianity's "fruitfulness of the soul"). For Joseph Campbell, this was the hero's return. Toynbee observed that each great contributor had withdrawn and then returned to the world to offer what they had found.

[It is a process of] transforming a peak into plateau experience; an altered state into a trait; stabilized into enduring understanding, and then bringing it back into the world.

Is there evidence for enlightenment? There now is analogical and laboratory support for this. Analogical support is lucid dreaming. Until 20 years ago, Western psychology thought lucid dreaming was impossible, but now LaBerge at Stanford University has shown physiological evidence. We know from every night's experience that we can create worlds and bodies on which our lives seem to depend. The claim of spiritual traditions is that there is a state of consciousness that bears a relationship to the ordinary [waking] state as lucid dreaming has to nonlucid dreaming. The Dalai Lama said they train yogis to be aware during dreams, not to lose awareness 24 hours a day; then to be aware of dreaming while in a waking period. A Tibetan dream yoga aim is the "great realization," that everything in existence is like a dream.

Laboratory studies have been done on enlightened people. The EEG data obtained while they are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

The implications for our usual state are that normality is not the peak of human development; normality is arrested development. The link between apes and civilization is us! We experience a consensus trance, a collective psychosis, society's hypnosis. We live in the biggest cult of all: CULTURE. The answer is, "Wake up."

A most important question is, if it is true that our conventional state of development is suboptimal, how do we develop other states? The classic answer is: take up a discipline, a practice (e.g., meditation, service, being in nature). One problem is that spiritual traditions are usually couched in archaic language, and have accumulated nonsense around them over the years. It is desirable to abstract out the essential elements. That is a recent thrust of transpersonal research.

There are six common elements: 1. Ethics: the moment you sit down to meditate, what emerges is all the unethical stuff you've done and what was done to you. Ethical behavior (not conventional morality) is a tool for mind training. 2. Attentional training: ordinarily we cannot sustain attention. (William James said the maximum is 3 seconds.) The aim is to be able to maintain attention on what one wants. It leads to the stabilization of mind, calming. 3. Emotional training:

destroying negative emotions (well developed in Western psychology, maybe better than in the Eastern traditions, because we recognize the problem with repression); cultivating positive emotions (where contemplative practices do well, because they offer tools for unwavering, unconditional, and all-encompassing [positive regard]; what is known as agape in Christianity). 4. Redirection of motivation: changing what you want, etc. 5. Perceptual refinement: we mistake shadows for realities; according to St. Paul we "see through a glass darkly." This enhances sensitivity, accuracy, and subtlety of perception. 6. Wisdom: actually the first element, playing a role all through the path. Initial motivation sees suffering of the world; provides motivation for realizing that there must be another way of living, culminates with deep insight into nature of the world, mind, consciousness, reality (prajna; Christian's gnosis). When the mind is trained, stabilized, and clarified, the mind has a heightened capacity for understanding.

So for the first time we can recognize the common elements in religions; we can see that the contemplative core contain practices and road maps. This approach recognizes multi-state psychologies and philosophies.

**APPLICATION.** Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25 years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

For a fuller account of transpersonal psychology, see R. Walsh & F. Vaughan (Eds). (1993) *\_Paths Beyond Ego: The Transpersonal Vision.\_* New York: Tarcher/Putnam.

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**1992**

Pekala, R. J.; Kumar, V. K.; Cummings, J. (1992). Types of high hypnotically susceptible individuals and reported attitudes and experiences of the paranormal and the anomalous. Journal of the American Society for Psychical Research, 86, 135-150.

A total of 575 subjects were given the Harvard Group Scale of Hypnotic Susceptibility and completed two self-report questionnaires that assessed the frequency of paranormal and unusual experiences and attitudes and beliefs towards such experiences. Subjects highly susceptible to hypnosis endorsed a significantly greater number of the psi-related items and anomalous and unusual beliefs and experiences than did subjects who were not highly susceptible to hypnosis. Subsequent cluster analyses of the responses of the highly-susceptible subjects suggested that about 10% of the high susceptibles (about 1% of the total subject population) were especially likely to report psi-related and unusual experiences. The implications of using such individuals in parapsychological research to increase the effect size associated with paranormal events are discussed.

Richeport, Madeleine M. (1992). The interface between multiple personality, spirit mediumship, and hypnosis. American Journal of Clinical Hypnosis, 34, 168-177.

The author draws parallels between multiple personality disorder (dissociative identity disorder), spirit mediumship, and hypnosis. She uses historical, anthropological, and clinical perspectives. According to the author, Milton Erickson's view of multiple personality disorder was that it was not necessarily pathological, and he employed hypnosis to gain access to personalities and to transform their behavior from involuntary to voluntary actions. "Natural trance therapies in other cultures offer a new perspective for viewing the normalcy or pathology of "other selves"" (p. 168).

**1991**

Nelson, Peter L. (1991-92). Personality attributes as discriminating factors in distinguishing religio-mystical from paranormal experients. Imagination, Cognition and Personality, 11, 389-406.

In the first section of this article, an operationalized notion of preternatural experience is described which includes two general classes of experience: religio-mystical (Ontic) and paranormal (Perceptual). The exploratory study which follows uses the personality measures of the complete Tellegen Differential Personality Questionnaire taken from 120 subjects who reported having had spontaneous religio-mystical and/or paranormal experiences at some time in the past. The scores on all eleven primary dimensions, three higher order affect factors, and two validity scales were used individually, in univariate ANOVAs, and together, in a Direct Discriminant Function Analysis, to successfully separate two classes of preternatural experiencers from non-experiencers and from each other.

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Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166

Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.

Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).

This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).

The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."

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Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid (n = 8) or invalid (n = 8). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who

reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, *Cortex*, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

Richards, D. G. (1991). A study of the correlations between subjective psychic experiences and dissociative experiences. *Dissociation*, 19, 83-91.

Subjective psychic experiences, such as telepathy, clairvoyance, and out-of- body experiences, are often reported in conjunction with dissociative experiences. This study examined the relationship between the Dissociative Experiences Scale and a variety of psychic experiences in a nonclinical population with a high level of psychic experiences. The DES correlated moderately (.3 to .4) with most but not all of the experiences. The mean DES score was 17.2 (SD = 12.5), substantially above adult norms. Although psychic experiences are correlated with dissociation, they are not necessarily associated with pathology.

1990

Adityanjee (1990). 'Multiple personality disorder in India': Reply. *American Journal of Psychiatry*, 147 (9), 1260-1261.

Replies to comments by J. Downs et al (see PA, Vol 78:4589) concerning the article on multiple personality and possession syndrome in India by Adityanjee et al (see PA, Vol 77:12344). Both syndromes reflect parallel dissociative disorder with similar etiologies. The present diagnostic classification for multiple identity phenomena is in need of revision.

Council, James R.; Huff, Kenneth D. (1990). Hypnosis, fantasy activity, and reports of paranormal experiences in high, medium and low fantasizers. British Journal of Experimental and Clinical Hypnosis, 7 (3), 9-15.

The personality construct "fantasy-proneness" (Wilson and Barber, 1983a) has important implications for theories of hypnosis, imagination, and paranormal phenomena. The present study compared characteristics of persons who received high, medium or low scores on a self-report measure of fantasy-proneness. Results revealed that the three groups differed significantly on measures of absorption, daydreaming styles, and reports of paranormal experiences. However, although high fantasizers were significantly more hypnotizable than low fantasizers, they did not differ from the middle group. These results are used to further characterize fantasy-prone persons, and implications of extremely low fantasy-proneness are discussed.

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189.

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

**DISCUSSION.** The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be

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**Richards, D. G. (1990).** Hypnotic susceptibility and subjective psychic experiences. Journal of Parapsychology, 54, 35-51. (Abstracted in American Journal of Clinical Hypnosis, 34, 145-146)

Some studies have shown a correlation between hypnotic susceptibility and self-reports of psychic experiences. This study used a population reporting a very high level of psychic experiences and correlated the Harvard Group Scale of Hypnotic Susceptibility with psychic experiences as measured by two scales. The mean Harvard score (6.31) was approximately the same as published norms, suggesting that the population was not unusual in terms of hypnotic susceptibility. Studies of people with large numbers of psychic experiences who have low hypnotic susceptibility may aid in understanding other factors that are involved.

**1989**

**Zamore, Neal; Barrett, Deirdre (1989).** Hypnotic susceptibility and dream characteristics. Psychiatry Journal of the University of Ottawa, 14 (4).

This study examined the relationship of hypnotic susceptibility to a variety of dream characteristics and types of dream content. A Dream Questionnaire was constructed synthesizing Gibson's dream inventory and Hilgard's theoretical conceptions of hypnosis. Several dream dimensions correlated significantly with hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory. For Ss as a whole, the strongest correlates were the frequency of dreams which they believed to be precognitive and out-of-body dreams. Ability to dream on a chosen topic also correlated significantly with hypnotic susceptibility for both

genders. For females only, there was a negative correlation of hypnotizability to flying dreams. Absorption correlated positively with dream recall, ability to dream on a chosen topic, reports of conflict resolution in dreams, creative ideas occurring in dreams, amount of color in dreams, pleasantness of dreams, bizarreness of dreams, flying dreams, and precognitive dreams.

1988

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing

Council, James R.; Greyson, Bruce; Huff, Kenneth D. (1988, November). Reports of paranormal experiences as a function of imaginative and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Wilson and Barber (1983) have suggested that some excellent hypnotic subjects ("fantasy prone" persons) may be more likely to report paranormal experiences than the rest of the population. Council and Greyson (1985), studying a sample of subjects who had reported near-death experiences (NDEs), found a significant relationship between fantasy-proneness and NDEs, and a much stronger relationship between fantasy-proneness and reports of paranormal experiences in general. This paper presents new data from the study of NDE reporters and a replication and extension of those findings with a sample not selected for NDEs. These data indicate a strong association between fantasy-proneness and reports of paranormal experiences. Hypnotic susceptibility bears a weaker relationship with such reports that appears dependent upon variance shared with measures of fantasy-proneness. Other data from these studies suggests that both imaginative ability and reports of paranormal experiences may be related to a history of stressful or traumatic childhood experiences.

Tobacyk, Jerome; Milford, Gary; Springer, Thomas; Tobacyk, Zofia (1988). Paranormal beliefs and the Barnum effect. Journal of Personality Assessment, 52 (4), 737-739.

Examined in 128 college students the hypothesis that paranormal beliefs emphasizing divinatory procedures that produce personalized feedback are associated with greater susceptibility to the Barnum effect, which is acceptance of bogus personality feedback consisting of relatively trivial statements with a high

base rate. 76% of the Ss rated the accuracy of their personality descriptions favorably, showing a robust Barnum effect.

1987

Nadon, Robert; Laurence, Jean-Roch; Perry, Campbell (1987). Multiple predictors of hypnotic susceptibility. Journal of Personality and Social Psychology, 53, 948-960.

Report two experiments in which various measures thought to be related to hypnotizability were analyzed by stepwise discriminant analysis. Absorption and preference for an imagic style of thinking predicted hypnotizability. Addition of 2 other variables in Experiment 2--a Sleep-Dream score derived from Evans's Cognitive Control of Sleep Mentation subscale and Gibson's Dream Questionnaire, and the Belief in the Supernatural subscale of the Taft Experience Questionnaire--increased the correct classification of the medium-hypnotizable subjects from chance levels to 74%. Argue for a confirmatory and hierarchical approach in future studies to explore correlates of hypnotizability more fully.

The following notes were made at an SCEH presentation: [Robert Nadon, Hypnotizability: A Correlational Study Involving Experiential, Imagery, and Selective Attention Variables.]

Author used a number of variables that have related to hypnotizability in single measure studies to predict with a multiple r. 30 male and 30 female Ss, given Harvard (?) then screened on Form A, and finally on Form C. Classed as Low (0-2), Medium (5-10 without amnesia), and High (11-12 with amnesia).

Independent Variable Triserial r % Correctly Classified Sheehan (1967) short Betts -.69\*\* 57 Preference for Imagery Mode of Thought

(Isaacs 1982) .64\*\* 57 Tellegen's Absorption .58\*\* Personal Experience Questionnaire .51\*\* 80

(Evans 1982) Concordia Fantasy Questionnaire Pavio Stroop Random Number Generation Task Modified Van Nuys Meditation Task 8 Auditory attention tasks

1983

Flatt, Jennifer R. (1983). What makes therapy work? Thoughts provoked by a case study. Australian Journal of Clinical and Experimental Hypnosis, 11 (2), 63-72.

The case described is offered as illustrating the doubt common to introspective therapists: what did cure the patient? "Francesca's" presenting problem and the object of the short-term psychological intervention described here, was a fairly circumscribed set of fears related to enclosed spaces. The therapeutic approach adopted was primarily hypnobeavioural, with hypnotically-assisted systematic desensitization and "in vivo" exposure being the main components of the planned programme. However, at the client's suggestion, one hypnotic session with content planned by the therapist as age regression produced rather dramatic and unexpected results claimed by the patient to effect complete cure.

The therapist suggested that "her mind would take her back to a time that was important in understanding her fears and that she would be able to stay calm and

relaxed while this past event was revealed to her" (p. 69). She subsequently imagined being in a cave, peaceful and calm. "On being roused from hypnosis, Francesca eagerly described her cave image. She was enthusiastic about the significance of this experience, claiming that it was evidence that in a previous life she had died from being locked into a cave as some sort of punishment and that this experience made her fear of enclosed places rational and comprehensible to her" (p. 69).

**1965**

Vasilev, L. (1965). Mysterious phenomena of the human psyche. New York: University Books. (Abstracted in American Journal of Clinical Hypnosis, 1965, 8:2, 146-147)

The review of this book by Leo Wollman (American Journal of Clinical Hypnosis, 1965, vol. 8, pp. 146-147) states, "Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B. N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

" An interesting and perhaps little known fact elicited from Chapter III (Hypnotism and Suggestion) is the high percentage (12%) of those replies to questionnaires during the First International Congress on Experimental Psychology held in Paris in 1899, which indicated that 3,000 respondents had hallucinations while in a normal state of health. The majority were visual; auditory and tactile hallucinations were less frequent" (pp. 146-147).

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Vasilev, L. (1965). Mysterious phenomena of the human psyche. New York NY: University Books. (Reviewed by Leo Wollman in American Journal of Clinical Hypnosis, 1965, 8 (2), 146-147)

AJCH Abstract by Leo Wollman: Many interesting theories about hypnosis are aired in this book. The opinions Pavlov propounded many years ago, about cortical

inhibition are assiduously asserted, yet some statements made bear investigation. The mere sight of the experimenter in B.N. Birman's experiments with dogs put the dog into a hypnotic state. The appearance in the room of other people, who had not participated in the experiments, had no sleep-inducing effect. For the experimental animal, therefore, the experimenter himself had been transformed into a conditioned hypnogenous stimulus. Similarly, in group hypnotherapy, the entrance of the physician-hypnotist into the room often effects a hypnotic state in some of the subjects. The doctor has become the stimulus for the conditioned response, that of hypnotic trance state induction.

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Dr. P. P. Podyapolsky, in 1905, wrote 'I tried unsuccessfully to induce in a peasant a reddening of the skin from a mock mustard plaster not only was there no reddening, there wasn't even any appropriate sensation of burning or smarting. I surmised that this simple man had probably never experienced a mustard plaster; therefore, his mind lacked the corresponding images and the ability to reproduce them with all their consequences... And so it turned out--he had never experienced a mustard plaster. It happened that he later had occasion to put a mustard plaster on his chest, and when I hypnotized him thereafter, suggestion quickly created not only the appropriate burning sensation but also reddening of the skin where the mock mustard plaster was applied.' This phenomenon is explained by the fact that the connection between the skin and cerebral cortex by means of neural conductors may, under certain circumstances, alter the activity of different organs. The alteration operates, apparently, in the category of conditioned-reflex formation.

This book is interesting reading and from a historic point of view is worth having in one's library

1956

Guze, Henry (1956). Kline, M. V. A scientific report on 'The Search for Bridey Murphy' [Review]. Journal of Clinical and Experimental Hypnosis, 4 (3), 127-130.

This book contains chapters by scientists who are critical of the book on Bridget Murphy written by Morey Bernstein. The critiques discuss the following phenomena in relationship to reports of 'past lives':

idea of traveling back in time, glossolalia or speaking in tongues, ecstatic states in certain religious sects, physiological regression (Babinski), medical hypnosis, mysticism, reincarnation theories in religion and philosophy, miraculous healing, and supernatural phenomena.

Kline describes a parallel case described by Professor Flourney (Helene Smith) in which previous life on other planets and use of Martian language was claimed.

**Pavlov**

**1990**

McNally, Richard J. (1990). Psychological approaches to panic disorder: A review. Psychological Bulletin, 108 (3), 403-419.

Panic disorder has been the subject of considerable research and controversy. Though biological conceptualizations have been predominant, psychological theorists have recently advanced conditioning, personality, and cognitive hypotheses to explain the etiology of panic disorder. The purpose of this article is to provide an empirical and conceptual analysis of these psychological hypotheses. This review covers variants of the "fear-of-fear" construal of panic disorder (i.e., Pavlovian interoceptive conditioning, catastrophic misinterpretation of bodily sensations, anxiety sensitivity), research on predictability (i.e., expectancies) and controllability, and research on information-processing biases believed to underlie the phenomenology of panic. Suggestions for future research are made.

**1989**

Gardner, Beatrix T.; Gardner, Allen R. (1989). Beyond Pavlovian classical conditioning. Behavioral and Brain Sciences, 12, 143-144.

This is a commentary on the article by Turkkan (1989) entitled "Classical conditioning: The new hegemony" in Behavioral and Brain Sciences, 12, 121-179. (Pavlov's theory of hypnosis was based on a conditioning model, which is why this material may be relevant.)

"Traditionally, the mechanism of stimulus association proposed by Pavlov early in this century is invoked to account for conditioning that is independent of the positive and negative consequences of responding. ... Pavlov attributed this result to stimulus substitution (i.e., the subject responds to the Sa as if it were the S\*) and this has been the dominant view throughout this century" (p. 143).

'In Pavlov's classical procedure, only increases and decreases in the original consummatory or defensive response are counted as conditioned responses. ... Pavlov's classical procedure is only a special case of a much broader case of a phenomena" (p. 143).

"Key-pecking by pigeons and lever-pressing by rats are responses that were long held up as prototypes of arbitrary behaviors that could only be shaped by response-

contingent reinforcement. In the autoshaping procedure, however, these same responses have been easily conditioned to an arbitrarily selected stimulus (Sa) when the delivery of food was entirely independent of the response of the subjects. Not only that, but robust rates of responding have been maintained when food was withheld if the pigeons pecked the key or the rats pressed the lever, that is, when the contingency was negative (Williams & Williams 1969)" (p. 143).

"Turkkan follows a grand tradition when she discusses the similarities between associative conditioning and fundamental aspects of human verbal behavior. Yet an essential characteristic of verbal behavior is the difference between the response to an object and the response to a word for the object. The response to the spoken or written word 'apple' must be distinctly different from the response to an actual apple. Whatever we learn when we acquire vocabulary, it cannot be the simple stimulus-stimulus connection advocated in Pavlov's classical theory.

Even the popular Rescorla (1967) design for separating stimulus-stimulus contiguity from stimulus-stimulus contingency only succeeds in comparing two sources of stimulus-stimulus association. Meanwhile, the recently discovered autoshaping experiment does offer us a laboratory model in which associative conditioning can result in a response to the Sa that is different from the consummatory response to the S\*" (p. 144).

"The theory of stimulus-stimulus association that Pavlov built upon the results of his special procedure is inadequate to deal with the wide range of phenomena of associative conditioning that have been discovered since his time.

"We wholeheartedly agree with Turkkan regarding the enormous theoretical and practical significance of the new discoveries but we are convinced that the terms 'Pavlovian conditioning' and 'classical conditioning' serve us best in their historical usage. ... The new discoveries seem to us to show that a wide range of significant phenomena fall outside the boundary conditions of traditional Pavlovian and Skinnerian theories" (p. 144).

Griffiths, M. D.; Gillett, C. A.; Davies, P. (1989). Hypnotic suppression of conditioned electrodermal responses. Perceptual and Motor Skills, 69, 186.

With 5 subjects who had previously been aversively conditioned to a stimulus, during hypnosis previously acquired electrodermal responses were found to be significantly lower than in 12 control Ss. Thus previously conditioned electrodermal responses were suppressed. This contradicts findings of Edmonston (1968) who found that neutral hypnosis does not influence conditioned electrodermal responses and the validity of Pavlov's (1927) conditioning (inhibition) theory of hypnosis.

1982

Chertok, Leon (1982). The unconscious and hypnosis. International Journal of Clinical and Experimental Hypnosis, 30 (2), 95-107.

This paper reviews Soviet approaches to the unconscious and to hypnotic phenomena, before examining psychoanalytic theories of hypnosis which are

generally based on transference. The author believes the existing theories are inadequate, arguing that there is a psychophysiological dimension to hypnosis; but what unconscious processes does this conceal? Psychoanalysis opened one road to the unconscious, but affect, nonverbal communication, and psychophysiological process are still uncharted territories towards which hypnosis may yet prove to be another royal road.

The author concludes, "hypnosis and the unconscious ... are closely linked. Historically, experiments on posthypnotic suggestion were in fact the starting point for the discovery of the unconscious. Posthypnotic suggestion is in effect one of the most irrefutable proofs that psychical contents can influence behavior, albeit eluding the subject's consciousness.

"In this paper, the present author provides a description of Soviet researchers' conceptions of the unconscious, and of the point of view from which they approach hypnotic phenomena. Psychoanalytic theories of hypnosis are then presented, which are essentially based on transference. It is shown why this notion seems to the present author powerless to account for the specific nature of the hypnotic relationship. There is, in effect, a psychophysiological dimension to hypnosis. It lies at the crossroads between the instrumental and the relational dimension. But nothing is known about what unconscious processes hide at the psychophysiological level. Psychoanalysis has brought to light the laws governing the functioning of unconscious representations. But the realm of the affect, the nonverbal communication, and bodily processes still remain beyond our knowledge. This is a hidden side of the unconscious, in relation to which hypnosis may serve as another 'royal road'" (pp. 104-105).

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1970

Kratochvil, Stanislav (1970). Sleep hypnosis and waking hypnosis. International Journal of Clinical and Experimental Hypnosis, 18, 25-40.

Subjected 6 highly susceptible female students to a short-term training procedure to induce 2 different types of hypnosis: (a) a sleep hypnosis, and (b) an active waking hypnosis. Ss behavior in both types, during the carrying out of 11 standard suggestions, was rated by 2 independent Os. The behavior in both artificially induced types of hypnosis differed significantly at the 1% level in the expected direction. The failure to obtain more dramatic results is attributed to the shortness of training, to the implicit demands concerning activity, or to Ss' personality traits, which may lower the intrapersonal variability. The relevance of the results for the Pavlovian theory of hypnosis is discussed: They do not support the hypothesis that behavioral characteristics which resemble sleep are intrinsic phenomena of the

hypnotic state. (Spanish & German summaries) (34 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Sternbach, Richard A. (1968). Pain: A psychophysiological analysis. New York: Academic Press

Anxiety potentiates pain, no matter what the source of the anxiety ("meaning of the wound, intensity of the stimulus, a personality characteristic or introduced into the situation" (p. 25). "Local muscles show a marked increase in their electrical potentials following localized pain produced by pressure (Simons, Day, Goodell, and Wolff, 1943), and this striated muscle can potentiate and prolong the responses to the original stimulus (Hardy, Wolff, and Goodell, 1952)" (p. 51). Shor (1962) investigated the physiological response to pain during hypnotic analgesia and used procedures to minimize anxiety in both waking and hypnotized conditions. The 'pure pain' physiological response involved a slight increase in heart rate, depth of respiration, and palmar sweating, "little more than an orienting reflex" (p. 54).

Because people vary in the degree to which their pattern of response to pain is stereotyped, it is difficult to detect a pattern specific to pain. However, frequently there is inhibition of motility of the gastrointestinal tract and blocking of or more rapid contractions; increased oxygen consumption with hyperventilation; increase in muscle tension and hypermotility; and variable cardiovascular responses--sometimes elevated blood pressure, sometimes increased pulse, stroke volume, or peripheral vasoconstriction. The physiological changes appear to be preparing the person to take action.

Personality characteristics have been investigated with respect to pain reactivity and tolerance. Mueller (1962) predicted response to spinothalamic tractectomy for 14 patients with intractable pain due to spinal cord injuries with 85% accuracy using the Rorschach. Field dependence on the rod and frame test is associated with parasympathetic reactivity to pain, and less reaction to pain. "Those who can tolerate pain (intense stimulation) best can tolerate sensory deprivation (minimal stimulation) least, and vice versa" (p. 62). Also, the nondominant hand is more sensitive than the dominant hand.

Sternbach distinguishes pain tolerance from willingness to complain about pain. For example, cultural factors (ethnicity) affect not only pain toleration but also physiological response. Voluntary participation in a pain experience can in fact reduce the discomfort of the pain stimulus. "Pain tolerance may be in part a function of their ability to reduce anxiety concerned with the duration of time (a) a noxious stimulus will last, or (b) before a noxious stimulus will be experienced" (p. 67).

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function of their ability to reduce anxiety concerned with the duration of time (a) a noxious stimulus will last, or (b) before a noxious stimulus will be experienced" (p. 67).

Phantom pain is an example of centrally occurring pain. It occurs in only a few patients who have a phantom limb, from 2-10% depending on how they are assessed. Scars and neuromas at the stump may reduce thresholds to peripheral stimulation or may themselves act as pain stimuli. Surgery on the neuromas and scar tissues seldom reduces the phantom limb pain. Most investigators assume it is a 'central' phenomenon of some sort, 'superadded sensations' which may be of psychogenic origin (Henderson & Smyth, 1948) or a 'central state of hyperexcitability' (Cronholm, 1951). Affect seems to be involved. The affects, and the individual's style of coping with them, seem to be the equivalents of the 'central' phenomena which result in pain. Two affects in particular seem to be associated with pain: anger, intropunitively expressed; and grief, the phantom pain representing both the loss and the wish to deny it. Both of these are likely to be associated with depression.

A psychological (rather than neurological) explanation for phantom limb pain is supported by the success demonstrated by three interventions: psychotherapy, electroshock therapy, and sensorimotor task concentration. The latter approach, reported by Morganstern (1984) requires patients to concentrate on sensorimotor tasks while ignoring distracting stimuli, for 2 hours/day. Morganstern attributed their improvement to a combination of concentration and distraction so that central sensory processes gradually are reorganized and the patients become habituated to stimulation of the stump. Sternbach notes that these factors also characterize hypnosis and hypnotic analgesia. He proposes that the Morganstern results should inform our neurological explanation of phantom pain.

Sternbach goes on to discuss hypnosis, particularly as it offers information that could inform us about pain. He notes that hypnotic inductions and the hypnotic state are characterized by "immobility and sensory canalization, a reliance on the hypnotist for information and direction, and an altered state of awareness in which the environs are perceived as suggested by the hypnotist" (pp. 136-137). The Kubie and Margolin (1944) description of a concentrated focus of excitation in the brain with surrounding areas of inhibition is like the description of hypnosis presented by Ivan Pavlov. During this process, the hypnotized subject becomes dependent on the hypnotist for contact with the outside world, but this emotional/motivational response is not central to the induction. "What is essential is the restriction of sensory and motor activity which, in a variety of natural or experimental settings, with or without another person present, will invariably produce hypnoidal states and hypnagogic reverie" (p. 134).

The profound alterations in perception that are observed in hypnosis are relevant to the understanding of pain because pain "involves perception of certain tissue changes." Sternbach notes that the experimental problem of ascertaining whether a subject is faking hypnotic phenomena is similar to the experimental difficulties inherent in evaluating the (internal) experiencing of pain. He suggests that the Orne (1959) test for toleration of logical inconsistencies is an independent means of evaluating for genuine hypnotic response. Other possible indices are less

spontaneous behavior (Gill & Brenman, 1959) or alterations in subjective awareness (Ludwig & Levine, 1965). On the Ludwig & Levine questionnaire, subjects reported changes in thinking, time sense, feelings of loss of control, body image changes, changes in sensations, etc.

It has been observed that physiological response depends on presence or absence of a shock, but behavioral and verbal response depends on suggested or not suggested analgesia (Sutcliffe, 1961).

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It has been observed that physiological response depends on presence or absence of a shock, but behavioral and verbal response depends on suggested or not suggested analgesia (Sutcliffe, 1961).

In Sternbach's summary of the section on hypnosis in this book, he states, "Hypnotic analgesia adds to the above [hypnotic induction] the hypnotist's suggestion of pain relief, or the inability to perceive pain. Experimental and clinical data suggest that in most but not all instances, pain responses are then greatly attenuated. The data further suggest the reasonable inference that such hypnotic analgesia is effective either because attention is focused elsewhere, or because anxiety (concern about the stimulus effects) is very low. ...

"It seems to us reasonable to make a further inference from these data, concerning the relative roles of attention focusing and anxiety-reduction. It is our impression, from the studies cited above, that the focusing of attention is not in itself essential to the elimination of pain. It is necessary for the induction of hypnosis, and it is a useful (but not the only) means for a subject or patient to gain control over anxiety concerning pain stimuli. But the data strongly suggest that in hypnotic analgesia, as well as in other conditions, it is the absence of anxiety about the stimulation which is the single necessary and sufficient condition for perceiving the stimulus as a nonpainful sensation. This is suggested by the fact that subjects with hypnotic analgesia are able to attend to (focus attention on) the stimulus, and even describe it accurately as a sensation, and yet not produce pain responses. This is true also of subjects in control conditions without hypnosis. On the other hand, anxious subjects ( or patients), as we have seen elsewhere (Chapter V), typically produce marked pain responses to appropriate stimulation. Thus it seems reasonable to hypothesize that 'focusing attention' serves primarily to reduce a person's anxiety about his current situation, thus making possible either (1) the regression and altered state of consciousness of a hypnotic trance, or (2) the perception of a noxious stimulus as a nonpainful sensation" (pp. 140-141).

1959

Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.

On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents

the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.

**Note:** Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.

"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal, there is also a functional dissociation of the two signal systems and within the second signal system. 2

The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new cortical dynamic structures under the verbal influences of the hypnotist, these structures representing the physiological basis for effectuating the suggested actions and states.

"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).

"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.

"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is

**impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.**

**"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).**

**"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after wakening. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions.**

During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

## **Pediatrics**

### **2002**

Anbar, Ron (2002, Dec 3). Hypnosis in pediatrics: applications at a pediatric pulmonary center.. BMC Pediatrics, 2 (1), 11-18.

This report describes the utility of hypnosis for patients who presented to a Pediatric Pulmonary Center over a 30 month period.

**METHODS:** Hypnotherapy was offered to 303 patients from May 1, 1998 - October 31, 2000. Patients offered hypnotherapy included those thought to have pulmonary symptoms due to psychological issues, discomfort due to medications, or fear of procedures. Improvement in symptoms following hypnosis was observed by the pulmonologist for most patients with habit cough and conversion reaction. Improvement of other conditions for which hypnosis was used was gauged based on patients'" subjective evaluations.

**RESULTS:** Hypnotherapy was associated with improvement in 80% of patients with persistent asthma, chest pain/pressure, habit cough, hyperventilation, shortness of breath, sighing, and vocal cord dysfunction. When improvement was reported, in some cases symptoms resolved immediately after hypnotherapy was first employed. For the others improvement was achieved after hypnosis was used for a few weeks. No patients'" symptoms worsened and no new symptoms emerged following hypnotherapy.

**CONCLUSIONS:** Patients described in this report were unlikely to have achieved rapid improvement in their symptoms without the use of hypnotherapy. Therefore, hypnotherapy can be an important complementary therapy for patients in a pediatric practice.

### **2001**

Anbar, R. D. (2001). Self-hypnosis for management of chronic dyspnea in pediatric patients. Pediatrics, 107 (2), E21.

Instruction in self-hypnosis was offered to 17 children and adolescents with chronic dyspnea, which had not resolved despite medical therapy, and who were documented to have normal lung function at rest. ... Chronic dyspnea was defined as recurrent difficulty breathing or shortness of breath at rest or with exertion, which

had existed for at least 1 month in patients who had not suffered within a month from an acute pulmonary illness. ... Additionally, imagery relating to dyspnea was developed by coaching patients to change their imagined lung appearance from a dyspneic to a healthy state. ... The mean duration of their dyspnea before learning self-hypnosis was 2 years (range: 1 month to 5 years). ... A patient with a history of psychogenic cough declined to learn self-hypnosis. ... Thirteen of the 16 patients reported their dyspnea and any associated symptoms had resolved within 1 month of their final hypnosis instruction session. ... There was no recurrence of dyspnea, associated symptoms, or onset of new symptoms in patients in whom the dyspnea resolved."

**1999**

**Liossi, Christina; Hatira, Popi (1999). Clinical hypnosis versus cognitive behavioural training for pain management with pediatric patients undergoing bone marrow aspirations. International Journal of Clinical and Experimental Hypnosis, 47 (2), 104-116.**

**Journal of Clinical and Experimental Hypnosis, 47 (2), 104-116.**

A randomized controlled trial was conducted to compare the efficacy of clinical hypnosis versus cognitive behavioral (CB) coping skills training in alleviating the pain and distress of 30 pediatric cancer patients (age 5 to 15 years) undergoing bone marrow aspirations. Patients were randomized to one of three groups: hypnosis, a package of CB coping skills, and no intervention. Patients who received either hypnosis or CB reported less pain and pain-related anxiety than did control patients and less pain and anxiety than at their own baseline. Hypnosis and CB were similarly effective in the relief of pain. Results also indicated that children reported more anxiety and exhibited more behavioral distress in the CB group than in the hypnosis group. It is concluded that hypnosis and CB coping skills are effective in preparing pediatric oncology patients for bone marrow aspiration.

**1998**

**Felt, Barbara T.; Hall, Howard; Olness, Karen; Schmidt, Wendy; Kohen, Daniel; Berman, Brad D.; Broffman, Gregg; Coury, Daniel; French, Gina; Dattner, Alan; Young, Martin H. (1998). Wart regression in children: Comparison of relaxation-imagery to topical treatment and equal time interventions. American Journal of Clinical Hypnosis, 41 (2), 130-137**

Relaxation mental imagery (RMI), standard topical treatment (Top Tx), and equal time-control interventions were compared on measures of wart regression in sixty one, 6-12-year-old children. Subjects chose one common ("index") wart and attended 4 visits over 8 weeks. At each visit, total and "index" extremity wart number were counted and a photo was taken of the "index wart" for later measurement. On average, total wart number decreased by 10% and "index wart" area decreased by 20% with no significant group differences during the first eight weeks. Phone follow [sic] was conducted 6 to 18 months from study entry. At phone follow up, there was a trend for more RMI and Top Tx subjects to report complete

wart resolution ( $p = 0.07$ ) with a majority of RMI children reporting use of RMI or no specific treatment pursuit. We conclude there was no significant short-term benefit for RMI in this randomized controlled trial of wart regression in children. However, longer term benefits for RMI and Top Tx groups are suggested.

1996

Hall, Howard; Papas, Angela; Tosi, Michael; Olness, Karen N. (1996). Directional changes in neutrophil adherence following passive resting versus active imagery. International Journal of Neuroscience, 85, 185-194.

This study was designed to determine whether increases or decreases in neutrophil adherence could be achieved following a self-regulation (relaxation/imagery) intervention. Fifteen subjects were randomly assigned to one of three conditions. Two experimental groups employed imagery focused on either increasing or decreasing neutrophil adherence. Subjects had two weeks of self-regulation practice (4 total training sessions) prior to blood drawings. A third group of control subjects had the same number of resting sessions without imagery training. All subjects had blood samples collected before and after either 30 minutes of self-regulation or resting practice for two sessions. Pulse and peripheral finger temperature measures were taken before and after the blood samples. Both experimental groups demonstrated decreases in neutrophil adherence, and the control group showed a tendency toward increases in this measure. The psychophysiologic data for the control group was suggestive of a relaxation response. The experimental group that attempted to increase neutrophil adherence demonstrated psychophysiologic responses that were contrary to relaxation. We concluded that an active cognitive exercise or process is associated with decreases in neutrophil adherence irrespective of the intent of the exercise. In contrast, relaxation without an active imagery exercise was associated with increases in neutrophil adherence. The results of this study are discussed in terms of behavioral engineering of directional immune changes.

-herence irrespective of the intent of the exercise. In contrast, relaxation without an active imagery exercise was associated with increases in neutrophil adherence. The results of this study are discussed in terms of behavioral engineering of directional immune changes

Sugarman, L. I. (1996). Hypnosis in a primary care practice: Developing skills for the 'new morbidities'.

Training in hypnotherapy provides the primary care practitioner with skills needed to address increasingly common, significant sources of childhood morbidity: stressful life events, psychophysiological symptoms, chronic disease, and behavioral problems. Although there are many reports on the utility of hypnosis in these areas, there are few on its use within primary care. This paper describes the integration of hypnotherapeutic methods into the continuum of pediatric encounters in a solo general pediatric practice. Specific techniques for approaching and examining young patients and their problems are illustrated. Preliminary data are presented

from a prospective chart review of those children and adolescents within the practice who use hypnosis. Guidelines for the application of hypnosis in pediatric primary care are summarized. Emphasis is placed on the necessity and opportunity for research on the efficacy of these methods in the primary care setting.

1994

Culbert, Timothy P.; Reany, Judson B.; Kohen, Daniel P. (1994). Cyberphysiologic strategies for children: The clinical hypnosis/biofeedback interface. International Journal of Clinical and Experimental Hypnosis, 42 (2), 97-117.

This article presents an in-depth discussion of the integrated use of self-hypnosis and biofeedback in the treatment of pediatric biobehavioral disorders. The rationale for integrating these techniques and their similarities and differences are discussed. The concepts of children's imaginative abilities, mastery, and self-regulation are examined as they pertain to these therapeutic strategies. Three case studies are presented that illustrate the integrated use of self-hypnosis and biofeedback in the treatment of children with psychophysiological disorders. The authors speculate on the specific aspects of these self-regulation or "cyberphysiologic" techniques that appear particularly relevant to positive therapeutic outcomes.

1992

Zeltzer, Lonnie K. (1992). Hypnosis with children in pain. [Paper] Clinical Hypnosis Seminar, UCLA Department of Psychiatry & Biobehavioral Sciences (J. Holroyd, Instructor).

We use an active approach with children, e.g. "Wouldn't it be fun to ...? Do you have a bike? What's it like? What do the handlebars feel like?" We use lots of sensory images, and go back and forth between fantasy and the environment. Children often keep their eyes open because they have to check out the strange environment of the hospital.

Preparation for the medical or surgical procedure: 1. Cognitive (a rehearsal of what will happen, what to expect). 2. Sensory (rehearsing what it will feel like).

For someone who has had bad experiences one might say something like, "Wouldn't it be interesting if it could be different this time? I wonder how it might be different?"

If the child is anxious, the less controls they have, so we do things to help them reorganize. The one thing they can do is breathe. We might whisper something like, "It would be nice to take a nice deep breath" The child may continue screaming, but has to take a breath sooner or later, to which you might say, "Oh, that felt so good." And it continues along that line. So now the child has some control.

**PAIN**

Hypnoanalgesia in anesthesia. In hypnosis, child has readiness to call upon past anesthetic experiences. (We had one boy who was a skier and could anesthetize his hand by imagining that he put it into snow, but snow may produce vasoconstriction, so a thick warm leather glove was used with that child so the veins didn't close down

and prevent needle insertion.) We may use imagery of Disneyland here in Southern California, to get attention off the noxious stimulus.

How many sessions are needed? It depends on whether they have become frightened and phobic due to bad experiences; then they need desensitization. Otherwise, if they had no previous bad experience, 1/2 hour is sufficient. For children with chronic pain, the work takes longer. For younger children, you help the parents and child to be a team.

Screaming does not necessarily mean the child is in severe pain, because a child may scream to focus attention.

The goal is to assist the patient to cope with anxiety and pain, not to make it go away completely.

How young can a child be, to use hypnosis? Josie Hilgard dates fantasy to 3-4 years. Younger children, you may use props (e.g. a red block becomes a fire engine, even with their eyes open). Lee Orick Cutner uses stories for 2-5 year olds (with the parent telling the story), like a transitional object. Capturing the child's curiosity is critical, as a competing stimulus for the needle which is a potent stimulus.

"Wouldn't it be fun to take a hose and fill this room and make it into a swimming pool? Capture something dramatic in fantasy at the moment of greatest pain (e.g. "and here comes the big whale!"

Hilgard's dissociation theory is relevant: part of the patient is in Disneyland. There are 3 components of pain: 1. sensory 2. emotional (suffering) 3. motivational (drive to get rid of it)

With children, they don't need to relax, e.g. active imagery is useful.

For dying children who are withdrawn and have chronic pain, story telling is used to work through their worries, and fears that child might not have vocabulary for. As an example, one can use fantasy about taking a trip, whales (fear of being alone), or building a house (sense of accomplishment).

Elliott Blass found that stroking rats decreased their pain (and this was not mediated by opioid pathways); sucrose on tongue is mediated by opioid pathways (Naloxone) and also diminishes pain. (Cocaine babies settle down when you stroke them.) In the animal research if you use both together, the stroking wipes out the effect of sucrose.

Susan Jay in research on children published in the Journal of Consulting and Clinical Psychology article, presented a cafeteria of self-control techniques to the children. When there was pre-treatment with Valium, the patients did worse during the procedure, vs no pre-treatment with Valium. It may be because the Valium medicated patients didn't have clarity of attention during learning. Therefore, short-term gain may lead to long-term losses.

Can increase lockout period of patient- controlled analgesia (PCA). PCA can be used with patients as young as 4-5. You can make an agreement with the patient not to use PCA for a certain period, during which you teach the psychological control technique such as hypnosis.

There is no reason to use intramuscular injections with children; no need to cause pain to decrease pain.

There is no reason to use intramuscular injections with children; no need to cause pain to decrease pain.

**1991**

**Zeltzer, Lonnie K.; Dolgin, M. J.; LeBaron, Samuel; LeBaron, C. (1991). A randomized, controlled study of behavioral intervention for chemotherapy distress in children with cancer. Pediatrics, 88, 34-42.**

**Subjects were randomly assigned to hypnosis, nonhypnotic distraction/relaxation, or attention placebo control. children in the hypnosis group reported the greatest reduction in both anticipatory and postchemotherapy symptoms. Distraction/relaxation kept symptoms from getting worse, but they did not get better, and the control children's symptoms became much worse.**

**1988**

**Kuttner, Leora (1988). Favorite stories: A hypnotic pain-reduction technique for children in acute pain. American Journal of Clinical Hypnosis, 30, 289-295.**

**For young children (aged 3 to 6-11) with leukemia, a hypnotic trance consisting of a child's favorite story was found to be statistically more effective than behavioral distraction and standard medical practice in alleviating distress, pain, and anxiety during painful bone marrow aspirations. Measured by a behavioral checklist and judgment ratings by physician, parent, nurse, and observers, the favorite-story hypnotic technique had immediate therapeutic impact on these young patients, and the reduction in distress, pain, and anxiety was sustained on subsequent medical procedures. Self-report measures, however, were nonsignificant.**

**1987**

**Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, 55, 860-865.**

**This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate, and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.**

Lonnie Zelzer, M.D., in a UCLA Hypnosis Seminar lecture in 1992, stated that in pre-treatment with Valium the patients did worse during the procedure, vs no pretreatment with Valium, because the medicated patients didn't have clarity of attention during the cognitive behavioral learning

1986

Kohen, D. P. (1986). Applications of relaxation/mental imagery (self-hypnosis) in pediatric emergencies. International Journal of Clinical and Experimental Hypnosis, 34 (4), 283-294.

Problems for which children come to Emergency Rooms are anxiety-producing for children and parents, whether or not these problems are perceived as "true" emergencies by health care professionals. Fear and pain are important factors in the response to such situations. Self-hypnosis (relaxation/mental imagery) is a useful adjunct for rapid reduction of anxiety and discomfort in pediatric emergency situations; it can serve to diminish fear, improve self-control, and alter the perception of discomfort. Hypnosis can also enhance development of a sense of mastery in the injured or ill child. 6 case examples are described which illustrate the variety of specific clinical applications and hypnotherapeutic approaches.

1984

Kohen, D.; Olness, K.; Colwell, S.; Heimel, A. (1984). The use of relaxation-mental imagery (self-hypnosis) in the management of 505 pediatric behavioral encounters. Journal of Developmental and Behavioral Pediatrics, 5, 21-25.

This report assessed outcomes of hypnotherapeutic interventions for 505 children and adolescents seen by four pediatricians over a period of one year and followed from four months to two years. Presenting problems included enuresis, acute pain, chronic pain, asthma, habit disorders, obesity, encopresis, and anxiety. Using strict criteria for determination of problem resolution (e.g., all beds dry) and recognizing that some conditions were intrinsically chronic, the authors found that 51% of these children and adolescents achieved complete resolution of the presenting problem; an additional 32% achieved significant improvement, 9% showed initial or some improvement; and 7% demonstrated no apparent change or improvement. Children as young as three years of age effectively applied self-hypnosis techniques. In general, facility in self-hypnosis increased with age. There was an inverse correlation (p less than 0.001) between clinical success and number of visits, suggesting that prediction of responsivity is possible after four visits or less.

Discusses the treatment of 505 pediatric patients with a variety of problems(enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic examinations).

1982

Gardner, G. Gail; Lubner, Alison (1982-83). Hypnotherapy for children with cancer: Some current issues. American Journal of Clinical Hypnosis, 25 (2-3), 135-142

The authors review some of the problems that now face clinicians and researchers working in the field of hypnotherapy for pediatric cancer patients. These include (1) understanding and dealing with resistance and refusal, (2) developing preventive hypnotherapeutic strategies for children who will survive cancer, and (3) carrying out research that

children who will survive cancer, and (3) carrying out research that clarifies the value of hypnotherapy with childhood cancer patients and elucidates when and how specific approaches can best be utilized.

1982

Hall, Marian D. (1982-83). Using relaxation imagery with children with malignancies: A developmental perspective. American Journal of Clinical Hypnosis, 25 (2-3), 143-149.

Developmental theory has been the foundation for this program of relaxation-imagery therapy with its goal of increasing the efficacy of immune mechanisms, thus increasing the survival rate of children with malignancies and/or improving the comfort and quality of their lives. Three basic constructs--the impact of social stress, the positive development of attachment and the negative effects of separation and loss, and the stages of concept formation relating to the functioning of the human body, the processes of disease and death--are basic approaches to the use of imagery-relaxation as an integral part of a comprehensive care plan.

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched-pairs signed ranks test) were found in nausea ( $Z = 2.37, p < .02$ ), vomiting ( $Z = 2.52, p < .01$ ), bother ( $Z = 2.24, p < .02$ ), and disruption of activities ( $Z = 2.38, p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

1976

**Gardner, G. Gail (1976). Attitudes of child health professionals toward hypnosis: Implications for training. International Journal of Clinical and Experimental Hypnosis, 24, 63-73.**

A survey of child health professionals -- pediatricians, pediatric nurses, child psychologists, and child psychiatrists -- revealed that they have generally positive attitudes toward hypnosis but little knowledge of its specific advantages or applications. Recommendations are made for designing training opportunities in hypnosis which might enhance the probability that the professional will actually use hypnosis or refer a child elsewhere for hypnotherapy.

**Gardner, Gail G. (1976). Hypnosis and mastery: Clinical contributions and directions for research. International Journal of Clinical and Experimental Hypnosis, 24 (3), 202-214.**

This paper explores the concept of mastery in relation to hypnotherapy by pulling together clinical observations and suggesting directions for research. It is suggested that a sense of mastery may enhance the effectiveness of hypnosis, either by facilitating induction, or by strengthening hypnotherapeutic suggestions, or by maintaining hypnotherapeutic gains. Moreover, the question is raised as to whether hypnotherapy, as compared with other psychotherapeutic approaches, better facilitates the development of a sense of mastery.

1965

Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Perception

1995

Crawford, Helen J.; Kapelis, Lia; Harrison, David W. (1995). Visual field asymmetry in facial affect perception: Moderating effects of hypnosis, hypnotic susceptibility level, absorption, and sustained attentional abilities. International Journal of Neuroscience, 82 (n1-2), 11-23.

Effects of hypnotic level, affect valence and cerebral asymmetry on reaction time (RT) in the discrimination of Ekman and Friesen (1978) stimuli of angry and happy faces were studied in counterbalanced conditions of waking and hypnosis. Assessed previously on two hypnotic susceptibility scales (Harvard Group Scale of Hypnotic Susceptibility; Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C)], non-depressed subjects were 16 low (0-4 SHSS:C) and 17 highly (10-12 SHSS:C) hypnotizable, right-handed college students. Subjects were required to identify affect of faces, presented tachistoscopically to left (LVF) or right (RVF) visual fields, by using a forced-choice RT paradigm. Highs were significantly faster than lows in angry and happy affect recognition. Hypnosis had no significant effects. For highs only, angry emotional valence was identified faster when presented to the right hemisphere (RVF), but there were no significant hemispheric effects for happy emotional valence. For lows there were no hemispheric differences. Gender was a nonsignificant factor. Significant correlations showed that faster reaction times to angry and happy stimuli, in both LVF and RVF in waking and hypnosis, were obtained by subjects who reported more deeply absorbed and extremely focused

and sustained attention on the Tellegen (1982) Absorption Scale and a subscale of the Differential Attentional Processes Inventory (Grumbles & Crawford, 1981). Vividness of Visual Imagery Questionnaire (Marks, 1973) and Affect Intensity Measure (Larsen, 1985), in general, did not correlate with RTs. The potential role of the fronto-limbic attentional system in the recognition of external visual sensory affect is discussed.

**Spiegel, David (1995, November). Neurophysiological effects of hypnotic perceptual alteration. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

We studied the relationship between selective attention and hypnotic processes. Michael Posner's theory has different centers for different kinds of attentional processes. Posterior (anterior to the occipital) cortex seems related to arousal. Anterior system has 2 loci: anterior cingulate and [missed words] pole, which relates to the narrowing of attention in hypnosis. We used cued target detection tasks, with MRI measures.

We think hypnotic attention is related to the anterior system.

In an earlier study we used 10 Highs, measured their visual ERPs, with both hypnotic obstructive hallucination and normal attention conditions. We found early and late evoked potential wave component differences: P100, P200, and P300. We were surprised by the P100 or attentional component.

Steven Hilliard's work used an ERP model, and an attentional paradigm with only 1/2 visual field involved. Usually N1 and P1 loci of EEG are the most affected in attentional studies using the evoked response potential measure.

He compared hypnotic attention with hypnotic obstruction (which was a suggestion that a brick wall was "covering" the L or R visual field). They found a difference between attended and ignored stimuli in the Frontal area ERP!  
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However, there are problems with ERPs and localization due to diffusion of signal throughout the scalp.

In a hypnotic obstruction condition the effect is a bit later than in selective inattention; and it is more posterior than in selective inattention. Thus, if we find a difference due to hypnotic obstruction at P100, it may be due to selective inattention. The difference we can produce with hypnotic obstruction comes at P200 and posterior in the occipital cortex, where a visual stimulus is processed. Generation of internal images may contribute. Are there differences if you tell yourself not to see vs to see something obstructing the image?

Ability to do the hypnotic obstruction is related to the eyeroll item on the Hypnotic Induction Profile (HIP). (High eyeroll score makes it easier to reduce P200 amplitude in response to the obstruction suggestion.) So eyeroll score on the HIP has some validation as a biological marker.

Effects of supportive group therapy for cancer patients study: anxiety and depression modulate the pain more than the location of the cancer. Melzack's theory indicates input from cortex can modulate pain. We taught Self Hypnosis for pain control: used metaphors that induce relaxation, suggestions to filter hurt out of the pain, not fight the pain, focus on a competing sensation. By end of year the intervention group had half the pain that the non-intervention group had. The frequency and duration of pain attacks were not different.

We are now in year 5 of a 10 year replication study.

ignored stimuli in the Frontal area ERP!

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In a hypnotic obstruction condition the effect is a bit later than in selective inattention; and it is more posterior than in selective inattention. Thus, if we find a difference due to hypnotic obstruction at P100, it may be due to selective inattention. The difference we can produce with hypnotic obstruction comes at P200 and posterior in the occipital cortex, where a visual stimulus is processed. Generation of internal images may contribute. Are there differences if you tell yourself not to see vs to see something obstructing the image?

Ability to do the hypnotic obstruction is related to the eyeroll item on the Hypnotic Induction Profile (HIP). (High eyeroll score makes it easier to reduce P200 amplitude in response to the obstruction suggestion.) So eyeroll score on the HIP has some validation as a biological marker.

Effects of supportive group therapy for cancer patients study: anxiety and depression modulate the pain more than the location of the cancer. Melzack's theory indicates input from cortex can modulate pain. We taught Self Hypnosis for pain control: used metaphors that induce relaxation, suggestions to filter hurt out of the pain, not fight the pain, focus on a competing sensation. By end of year the intervention group had half the pain that the non-intervention group had. The frequency and duration of pain attacks were not different.

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**1993**

Atkinson, Richard P. (1993, October). Shifts in Muller-Lyer Illusion difference thresholds: Are high hypnotizables more sensitive than lows in hypnosis?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Refers to Wallace (1979) finding that hypnotizability correlates with afterimage persistence. Atkinson showed highs perform better than lows in perceptual tasks in hypnosis only. Also studies indicate highs are more susceptible to illusions. Our study showed difference in threshold and point of subjective equality for highs and lows.

32 undergraduates had Harvard and Group Stanford Form C, were 9-12 or 0-3 on both scales. Counterbalanced conditions of waking and hypnosis. Used computer monitor to compare length of lines. Waking condition Ss had to close eyes for 15 minutes before the trials, same length of time as for hypnosis condition.

Significant interaction between hypnotizability and sessions was observed: highs had significantly decreased difference thresholds in hypnosis compared to waking, and significantly decreased difference thresholds compared to lows in hypnosis. Thus they had greater sensitivity than lows.

The point of subjective equality ANOVA did not yield significant effects.

Highs show higher sensitivity to illusion in hypnosis than in waking, and more than the lows.

McCormack, K.; Gruzelier, J. (1993). Cerebral asymmetry and hypnosis: A signal-detection analysis of divided visual field stimulation. Journal of Abnormal Psychology, 102 (3), 352-357.

These authors studied the effect of hypnosis on brightness discrimination with the aid of a signal-detection procedure in three sessions, the second with hypnosis. After two or three training sessions with hypnosis, which involved listening to a taped hypnotic relaxation induction, subjects were subdivided into high- and medium-susceptible groups on the

subjects were subdivided into high- and medium-susceptible groups on the basis of a 'scale inspired by the Stanford Scales.' High-susceptible subjects were found to show increases in perceptual sensitivity in the left visual field (right hemisphere) with hypnosis, whereas medium-susceptible subjects showed bilateral enhancements. The attitudes, or criterion set by the subjects remained invariant in both groups across the three sessions. It was concluded that the results provided evidence of altered brain function with hypnosis and an association of focal right hemispheric changes with high susceptibility, and through the invariance of motivational factors, failed to support the attribution of perceptual changes to attitudinal, non-state factors

Wallace, Benjamin (1993, October). The importance of considering imagery in hypnosis research. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

We looked at both hypnotizability (Harvard Scale) and imagery (Vividness of Imagery - Marks) ability in an embedded words task (like the letter matrices in newspapers). Ss were grouped on both variables, forming four groups: high-high, high- low, low-high, and low-low.

Search time in the embedded figures task was greatest for low-lows and least for high-Highs, whether the words are easy, average, or difficult. A list of the possible words was also provided.

Strategies the subjects in different groups used are different. High-high's use holistic (Crawford) or efficient (Wallace) strategies--studying the list of possible solutions as if storing the words in long-term memory. Low-low's seem to use the list as a check-off list.

Embedded in the matrix were false alarm words, that weren't on the list. The low-lows were also prone to more of these errors. Getting rid of those false alarm trials, when presented with matrices with no false alarms, we still get a differences in search time with the same relationship as before.

CONCLUSION. It's insufficient to simply look at hypnotic susceptibility as there's an imaging component, a memory or a storage component that we should examine. The percent of variance associated with the embedded figures task success was the same-- 20%--for each ability. The correlation between the two (imaging ability and hypnotizability) was significant at .26.

1992

Atkinson, Richard P.; Crawford, Helen J. (1992). Individual differences in afterimage persistence: Relationships to hypnotic susceptibility and visuospatial skills. American Journal of Psychology, 105 (4), 527-539.

To investigate the moderating role of individual differences in hypnotic susceptibility and visuospatial skills on afterimage persistence, we presented a codable (cross) flash of light to 40 men and 46 women who had been dark adapted for 20 minutes. In an unrelated classroom setting, subjects had previously been given two standardized scales of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Shor & Orne, 1962; Group Stanford Hypnotic Susceptibility Scale, Form C, Crawford & Allen, 1982) and the Mental Rotations Test (Vandenberg & Kuse, 1978). The first afterimage interval and the afterimage duration correlated significantly with hypnotic responsiveness, supporting Wallace (1979), but did not show the anticipated relationships with mental rotation visuospatial skills. Individuals in the high hypnotizable group had (a) significantly longer afterimage intervals between its first appearance and first disappearance than did those in low groups, but those in medium groups did not differ significantly from the other groups. Discriminant analysis using the afterimage persistence measures classified correctly 65.2% of high hypnotizables, 37.5% of medium hypnotizables, and 54.8% of low hypnotizables. Hypothesized cognitive skills that assist in the maintenance of afterimages and underlie hypnotic susceptibility include abilities to maintain focused attention and resist distractions over time and to maintain vivid visual images.

"Because there is no apparent evidence for physiological differences of the visual system between low and high hypnotizables (e.g., Wallace, 1979), cognitive factors are suggested as possible moderators of afterimage persistence.

"Hypnotic susceptibility per se is not the moderator of afterimage duration. Rather, we argue that hypnotic susceptibility represents a constellation of underlying cognitive skills (e.g., for reviews, see Crawford, 1989; Kihlstrom, 1985) that assist an individual to respond to hypnotic suggestions as well as assist in the persistence of afterimages by interacting with more primary causal mechanisms that are physiological in origin. These cognitive skills are thought to include the abilities to focus attention selectively upon both external stimuli and internally generated images, to maintain vivid visual images, to sustain attention over time and remain absorbed in the experience at hand, and to resist distractions. The relationships between these cognitive skills and hypnotic susceptibility are reported in a large body of literature (e.g., Crawford, 1982, 1989; Crawford et al., 1991; Crawford & Grumbles, 1988; Finke & Macdonald, 1978; Grumbles & Crawford, 1981; Mitchell, 1970; Tellegen & Atkinson, 1974)....

"Sustained and selective attention without interference from extraneous stimuli plays an important role in hypnosis. Individuals who are responsive to hypnosis demonstrate greater skills in extremely focused and sustained attention (e.g., Crawford et al., 1991; Tellegen & Atkinson, 1974). Electrophysiological research had found that high hypnotizables often generate substantially more theta electroencephalogram (EEG) power than do low hypnotizables (e.g., Crawford 1990, 1991; Crawford & Gruzelier, 1992; Sabourin, Cutcomb, Crawford, & Pribam, 1990). Such a relationship may be interpreted as further evidence of greater attentional skills in highs, because certain theta waves have been correlated with

enhanced problem solving and attentional task performance (e.g., Crawford & Gruzelier, 1992; Schacter, 1977)....

"Hypnosis is seen often as a condition of amplified attention, where attention can be either more focused or diffuse dependent upon set (e.g., Krippner & Binder, 1974). Increases in vigilant performance during hypnosis have been reported, albeit inconsistently (e.g., Barabasz, 1980; Fehr & Stern, 1967; Kissen, Reifler, & Thaler, 1964; Smyth & Lowy, 1983). Fehr and Stern's results suggest that hypnotized subjects devote more attention to a primary task with less available attentional resources for a secondary task. Hypnosis has been found to have an enhancing effect on the imaginal processing of information-to-be-remembered that consists of literal or untransformed representations of pictorial or nonverbal information for high but not low hypnotizables (Crawford & Allen, 1983; Crawford, Nomura, & Slater, 1983; Crawford, Wallace, Nomura, & Slater, 1986). This may possibly be the result of increased attention and/or shifts in cognitive strategies. Supportive of the hypothesis that sustained attention can be enhanced during hypnosis, Atkinson (1991) recently found that high but not low hypnotizables report significantly more persistent afterimages in hypnosis than in waking.

"Although we have argued for a cognitive explanation for individual differences in afterimage persistence and their possible relationship to hypnotic susceptibility and sustained attentional abilities, as has Wallace (1979, 1990), we must point out the possibility that high hypnotizables may be more suggestible to imagery instructions or more willing to discuss or experience imagery than low hypnotizables, particularly in the context of hypnosis and hypnotic susceptibility testing (e.g., Zamansky, Scharf, & Brightbill, 1964). A contextual account of the longstanding relationship between hypnotic susceptibility and absorption was raised by Council, Kirsch, and Hafner (1986), but was not supported by two independent, and more methodologically sound, studies reported by Nadon, Hoyt, Register, and Kihlstrom (1991). The context of hypnosis was not an issue in the present study, because none of the subjects was aware of the investigated relationship between afterimage persistence and hypnotic susceptibility at the time of recruitment or participation" (pp. 533-535).

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Bruner, Jerome (1992). Another look at New Look 1. American Psychologist, 47, 780-783.

New Look 1 was not initially about the unconscious. It was the new mentalism on its way to becoming the Cognitive Revolution. Its subsequent concern with

"unconscious defense mechanisms," although useful, was not its main theoretical thrust. Its principal questions have always been how and where selective processes operate in perception. Obviously, many such processes are unconscious, for consciously guided attention and search become automatized easily in use. And they are fairly flexible as well. So how smart is "the unconscious"? Not very, but a big help anyway.

Greenwald, Anthony G. (1992). New Look 3: Unconscious cognition reclaimed. American Psychologist, 47, 766-779.

Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long-term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809.

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude.

In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.

Lewicki, Pawel; Hill, Thomas; Czyzewska, Maria (1992). Nonconscious acquisition of information. American Psychologist, 47, 796-801

The authors review and summarize evidence for the process of acquisition of information outside of conscious awareness (covariations, nonconscious indirect and interactive inferences, self-perpetuation of procedural knowledge). Data indicate that as compared with consciously controlled cognition, the nonconscious information - acquisition processes are not only much faster but are also structurally more sophisticated, in that they are capable of efficient processing of multidimensional and interactive relations between variables. Those mechanisms of non-conscious acquisition of information provide a major channel for the development of procedural knowledge that is indispensable for such important aspects of cognitive functioning as encoding and interpretation of stimuli and the triggering of emotional reactions.

Merikle, Philip M. (1992). Perception without awareness: Critical issues. American Psychologist, 47, 792-795.

This is the introduction to a group of articles. "To a large extent, this entire controversy over perception without awareness has centered on the issue, What constitutes an adequate behavioral measure of conscious perceptual experience? Depending upon one's answer to this question, the evidence for perception without awareness is either overwhelming or nonexistent.

The distinction is much more significant and interesting if conscious and unconscious processes lead to qualitatively different consequences than if unconscious processes are simply quantitatively weaker versions of unconscious processes. Three different qualitative differences have been established: 1. Groeger (1984, 1988) has demonstrated that words are coded differently depending on whether they are perceived with or without awareness. 2. Stroop effect research showed that prediction based on stimulus redundancy only occurs when subjects consciously perceive the predictive stimuli (Cheesman & Merikle, 1986). The fact that the color word predicted the name of the color patch on 75% of the trials was only used by the subjects to facilitate naming of the color patches when the words were clearly visible. 3. Marcel (1980) showed that conscious awareness is necessary for the selection of a context-relevant interpretation of a stimulus.

The important findings are that performance differs qualitatively across the aware and nonaware conditions

Rondi, Glenys (1992, October). Postoperative impact of information presented during general anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

We tried to improve on the methodology in the literature. Thus we included a limited range of surgery procedures; standardized anesthesia; monitoring of anesthesia; suggestions that were only positive (the suggestions did not mention pain or nausea); patient-controlled analgesia in order to have a more accurate measure;

and hypnotizability was measured. They do not equate the hypnotic state with the anesthesia state, but there may be an overlap in the ability to perceive and respond to suggestions in these two states.

All hysterectomy and bilateral [missed word ...ectomy] patients were approached, excluding those without English language, etc.

Bowers and she phrased simple, positive suggestions to maximize benefits; Suggestions lasted 3 minutes, and were repeated 3 times on a 60 minute tape. Brief melodies alternated with suggestions or with silence. Conditions included: 1. Suggestions 2. Melody 3. Suggestions + melody 4. Blank tape

Half of the tapes contained suggestions; half not. It was a counterbalanced design. Double blind ratings were made by students.

State-trait Anxiety and Profile of Mood States were measured before surgery. Patients were reminded to listen to suggestions for recovery just before they fell asleep. MDs ordered premedication for the surgery "only if very necessary."

Patients rated their own recovery as -3 worse than expected to +3 better than expected; and completed a visual analogue scale. Then 24 hours later the researchers asked them if they remembered the tape, and if they had been given suggestions or not.

On Day 5 post operation they administered the Stanford C hypnotizability scale.

**RESULTS.** None of the patients recalled or dreamed anything that could be attributed to the period of anesthesia. There was a response bias to say "Yes" to "Did you have suggestions?" (34 of Suggestion patients and 28 of non-suggestion patients said "Yes" and there were 48 in each group. Taking response bias into consideration, patients with suggestions were above chance in saying "Yes" to "Did you have suggestions?"

Only 73 of the 96 completed the hypnotizability scale. Duration of the tape (therefore of surgery) was longer for the suggestion group (90 vs 72 minutes). So authors also did a univariate measure.

They divided morphine use by patient weight for each post operative day. The difference in dose for suggestion and no suggestion groups did not reach significance on Day 1 but on Day 2 patients who had suggestions used significantly less morphine.

The correlation matrix showed that patient age was negatively correlated with morphine use; subjected to 1-way ANOVA of covariance; the effect of suggestions remains significant.

Surgery time was covaried out, as it was associated with more negative post operative symptoms; patient age was a second covariate. None of the main effects or 2- way interactions were significant.

Hypnotizability, suggestion group, and their interaction were analyzed. Neither hypnotizability nor its interaction with suggestion contributed to any outcome variable.

Using only highs (13) and lows (12) for another analysis and 2x2 ANOVAS to examine suggestion by hypnotizability. Highs used significantly less morphine in the first hours, whether or not they received suggestions.

Even when weight is taken into account, hypnotizability accounted for significant amount of variance in first 24 hours. Highly hypnotizables' guesses about whether they were played a tape with suggestions was 100% accurate; guesses of lows were 42% accurate.

with suggestions was 100% accurate; guesses of lows were 42% accurate.

**CONCLUSIONS.** Some patients show evidence of hearing, and of responding to suggestions. Hypnotic ability did not mediate the response; but patients with high ability showed 100% accuracy in guessing whether they were played suggestions, in the absence of confidence in their response. They may be particularly sensitive to their environment during general anesthesia.

Schacter, Daniel L. (1992). Understanding implicit memory. *American Psychologist*, 47 (4), 559-569.

Dissociations between implicit and explicit memory have attracted considerable attention in recent memory research. A central issue concerns whether such dissociations require the postulation of separate memory systems or are best understood in terms of different processes operating within a single system. This article presents a cognitive neuroscience approach to implicit memory in general and the systems-processes debate in particular, which draws on evidence from research with brain-damaged patients, neuroimaging techniques, and nonhuman primates. The article illustrates how a cognitive neuroscience orientation can help to supply a basis for postulating memory systems, can provide useful constraints for processing views, and can encourage the use of research strategies that the author refers to as cross-domain hypothesis testing and cross-domain hypothesis generation, respectively. The cognitive neuroscience orientation suggests a complementary role for multiple systems and processing approaches.

"Implicit memory is an unintentional, nonconscious form of retention that can be contrasted with explicit memory, which involves conscious recollection of previous experiences" (p. 559). The author provides examples of memory dissociations, some of them from neuropathology and some from experimental psychology.

Different brain systems may account for some of the dissociations. For example, there are "studies of patients who show relatively intact access to perceptual-structural knowledge of words or objects, despite severely impaired access to semantic knowledge of the same items. ... Similarly, studies of lexical processing using positron emission tomography (PET) indicate that visual word form information and semantic information are handled by separate brain regions. ... These kinds of observations suggest the existence of a perceptual representation system (PRS)" (p. 561).

"Marsolek et al. (1992) drew on independent evidence from cognitive neuroscience concerning the characteristics of the hemispheres to argue that a left hemisphere subsystem computes abstract word form representations that do not preserve specific features of particular inputs, whereas a right-hemisphere subsystem computes perceptually specific word form representations (in the present terminology, both could be viewed as PRS subsystems)" (p. 562)..

"Our approach to auditory implicit memory was guided by neuropsychological studies of patients who exhibit dissociations between access to form and semantic information in the auditory domain that are similar to those discussed earlier in the visual domain. ... More specifically, patients with so-called word meaning deafness are unable to understand spoken words (e.g. Ellis & Young, 1988). However, they can repeat spoken words quite well and show some ability to write words to dictation, thus suggesting that they can gain access to stored auditory word form representations. ... Rather more frequently encountered are patients with transcortical sensory aphasia (e.g. Kertesz, Sheppard, & MacKenzie, 1982), who exhibit spared abilities to repeat spoken words and write them to dictation, together with impaired comprehension. In these patients, however, the comprehension deficit is also observed in other modalities, thus indicating damage to the semantic system itself.

"These dissociations point toward the existence of a PRS subsystem that handles information about auditory word forms separately from semantic information (cf. Ellis & Young, 1988)" (p. 565)..

"Various investigators have argued that auditory processing differs in the two hemispheres: The left hemisphere relies on categorical or abstract auditory information and operates primarily on phonemes, whereas the right hemisphere relies more on 'acoustic gestalts' and operates primarily on prosodic features of speech, including voice information... In addition, studies of normal subjects using dichotic listening techniques have shown a left-ear (i.e., right-hemisphere) advantage for certain types of voice information, in contrast to the usual right-ear advantage for speech" (p. 566).

Wallace, Benjamin; Kokoszka, Andrzej (1992). Experience of peripheral temperature change during hypnotic analgesia. International Journal of Clinical and Experimental Hypnosis, 40, 180-193.

Many Subjects who experience hypnotic analgesia in a portion of their body often report that it is accompanied by sensations of coldness in the affected area. Experiments were conducted to determine if such reports are the result of a physical change in peripheral temperature or are due to psychological factors. When analgesia was induced in a limb or in the back of the neck, a concomitant physical change in temperature was not observed. Subjects did report experiencing coldness, however, in the affected body part. Such experiences were attributed to associations that Subjects developed between numbness or analgesia and a drop in peripheral temperature. As a result, coldness as an associate of hypnotic analgesia is suggested as a manipulation check for the presence of such sensation reduction.

When a limb feels numb, there also appears to be degradation of proprioceptive abilities (Wallace & Garrett, 1973, 1975; Wallace & Hoyenga, 1980). When Ss are asked to touch their nose with finger, either subjects miss the nose or they take longer to do the task. This kind of proprioceptive decrement has also been reported by Spanos, Gorassini, and Petrusic (1981) and Welch (1978, p. 27).

This study used highly hypnotizable Ss (10-12 on Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) and low hypnotizables (0-2) in Experiment 1 which established temperature variability in an arm and sites for measuring temperature during hypnotic analgesia.

In Experiment 2, 40 subjects (20 highs and 20 lows by above standards, with group assignment confirmed by Stanford Hypnotic Susceptibility Scale, Form C, on which highs  $M = 10.4$ , lows  $M = 1.2$ ) were given relaxation imagery (e.g. to imagine a white, fluffy cloud gently moving across a deep, blue sky during a count of 20, while at the same time, listening only to the voice of E describing the scene to them.

The analgesia suggestion was that "their right arm had been injected with massive doses of Novocain, that Novocain had been injected in their shoulder, in their elbow, in their forearm, in their hand, and in their fingers ... their arm would become progressively more and more numb as E counted backward from 20 to 1" (p. 185; for more details see Wallace & Hoyenga, 1981). They were asked to perform the nose touch test as confirmation of the analgesia suggestion response

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Highs and lows who served as control subjects had the same treatment except instead of analgesia instructions they were told their arm would become progressively more and more relaxed as E counted backwards from 20 to 1.

The peripheral skin temperature was monitored during the procedures, and following the experimental manipulation Ss completed a questionnaire on their experience of numbness, heaviness, changes in limb temperature (very warm to very cold), and changes in mobility.

Analyses of variance were used to analyze the results. Although there were no objective skin temperature changes, there was a significant interaction effect for pointing error. Highs who received analgesia suggestions were off 4.35 cm; the other 3 groups had mean error of .45 cm or less. There was also an interaction effect for latency of response: highs with analgesia instructions took 3.05 seconds longer than in relaxation condition, while other three groups only took .27 sec longer, on average. Additionally, there was a correlation between receiving analgesia instructions and feeling limb heaviness for the high hypnotizables ( $r = .68$ ) but not for lows or for any Ss asked to relax their arm during the procedures.

The sensation of coldness was reported by the majority of highs receiving analgesia suggestions (7 of 10), but 2 Ss scoring 12 on the SHSS:C did not report coldness. Cold sensation was not reported by any S in any of the three other groups. The correlations between cold sensation and heaviness ( $r = .65$ ,  $p < .05$ ) and cold sensation and immobility ( $r = .79$ ,  $p < .05$ ) were found only in the High hypnotizable, analgesia suggestion group.

The authors performed a third experiment to determine whether temperature change could be used to confirm analgesia. This would be useful when one cannot confirm with inability to move the body part, e.g. when the analgesia is being developed in a part of the body that usually doesn't move. The design for Experiment 3 was the same as for Experiment 2.

Analgesia rated on a 7-point scale was reported as 6.1 by high hypnotizables and 1.2 by low hypnotizables. "Reports of a temperature change during the induction were

also related to hypnotic analgesia and being classified as high in hypnotizability. Such a relationship was only significant, however, for a feeling of coldness ( $r = .63$ ,  $p < .05$ ), and 7 of the 10 high hypnotizable Subjects assigned to the analgesia group reported the aforementioned sensation. A significant experiencing of a temperature change (cold or warm) was not reported by the other three groups of Subjects" (p. 189).

In their Discussion, the authors suggest that expectancy might account for the results, since during post-experiment interviews many Ss said that they expected their arm would become cold when it was numb. That was based on their previous experience, e.g. in placing ice on the skin. Notable, people did not exhibit this association if they were not able to develop the analgesia in response to suggestion. The authors also take note of the fact that none of the Subjects reported associating cold with pain, though cold and pain often are concurrently experienced. This might be because only extreme cold is painful, and coolness might actually be perceived as pleasant.

1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties,

in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) ... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

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Dixon, Norman F.; Henley, Susan H. (1991). Unconscious perception: Possible implications of data from academic research for clinical practice. Journal of Nervous and Mental Disease, 179 (5), 243-252.

Evidence for the reality of unconscious perception and perceptual defense suggests that the experimental paradigms used to investigate these phenomena might play a role in the understanding and treatment of mental disorders. The literature on applying subliminal stimulation to problems of diagnosis and therapy indicates that

data support the view that the meaning of external stimuli of which the recipient is unaware may be responded to and determine emotional responses, lexical decisions, overt behavior, and subjective experience. Data confirm the reality of psychopathology as a substrate of emotionally colored, stored information with a potential for producing somatic symptoms and disorders of thinking, affect, and behavior. To the extent that psychopathology is screened from conscious scrutiny and thus impervious to supraliminal information, it may be accessed and ameliorated by drive-related stimuli of which the S is not aware.

Kunzendorf, Robert G.; Beltz, Susan McLaughlin; Tymowicz, Gina (1991-92). Self-awareness in autistic subjects and deeply hypnotized subjects: Dissociation of self-concept versus self-consciousness. Imagination, Cognition and Personality, 11, 129-141.

By refining past tests of self-awareness in mirrors, current testing demonstrates that autistic subjects' percepts are dissociated from self-concept, whereas hypnotized subjects' sensations are dissociated from self-consciousness. In the current test of self-concept, subjects could not directly see a line inside the box on their lap, but subjects could see the line indirectly in a televised mirror image. When instructed to touch the line, autistic subjects reached towards the televised line, whereas nonautistic subjects reached towards the actual line occluded inside the box. This first result suggests that the autistic subject's visual percept of the televised line is dissociated from its spatial relationship to the subject's self-concept. In the current test of self-consciousness, subjects were told to use a televised mirror-image to move their hands together until touching, but were not told that they were actually seeing a pre-recorded tape of their hands struggling unsuccessfully to touch. When queried, hypnotized subjects denied that their tactually joined hands were touching, whereas nonhypnotized subjects confirmed that their hands were touching. This latter result suggests that the hypnotized subject's hand-touching sensations are dissociated from the immediate and incontrovertible self-consciousness that one is perceiving the hands touching (not imaging them touching).

Nelson, Peter L. (1991-92). Personality attributes as discriminating factors in distinguishing religio-mystical from paranormal experients. Imagination, Cognition and Personality, 11, 389-406.

In the first section of this article, an operationalized notion of preternatural experience is described which includes two general classes of experience: religio-mystical (Ontic) and paranormal (Perceptual). The exploratory study which follows uses the personality measures of the complete Tellegen Differential Personality Questionnaire taken from 120 subjects who reported having had spontaneous religio- mystical and/or paranormal experiences at some time in the past. The scores on all eleven primary dimensions, three higher order affect factors, and two validity scales were used individually, in univariate ANOVAs, and together, in a Direct Discriminant Function Analysis, to successfully separate two classes of preternatural experients from non- experients and from each other.

1990

**Bornstein, Robert F. (1990). Critical importance of stimulus unawareness for the production of subliminal psychodynamic activation effects: A meta-analytic review. Journal of Clinical Psychology, 46, 201-210.**

Performed meta-analysis that assessed the magnitude of behavior change produced by subliminal vs supraliminal drive-related stimuli (DRS) on 11 subliminal psychodynamic activation (SPA) studies (published 1966-1989) that employed both types of stimuli. The analysis revealed that subliminal presentation of DRS produced significantly stronger effects on behavior than supraliminal presentation of the same stimuli. Stimulus content, type of outcome measure, and S characteristics influenced the magnitude of subliminal/supraliminal response differences. Results support L. H. Silverman's (1983) hypothesis that DRS must be presented subliminally to produce SPA effects.

**Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.**

In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.

**McLintock, T. T.; Aitken, H.; Downie, C. F.; Kenny, G. N. (1990). Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. British Medical Journal, 301 (6755), 788-790.**

Sixty-three women undergoing elective abdominal hysterectomy were randomly assigned to a tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the women. Postoperative analgesia tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the women. Postoperative analgesia was provided through a patient-controlled analgesia system for the first 24 hours. Pain scores were recorded every 6 hours. The outcome measures were morphine consumption in the first 24 hours and pain scores. Mean morphine requirements were 51.0 mg in women who

were played positive suggestions, and 65.7 mg in those played a blank tape ( $p = 0.028$ ). Pain scores were similar in the two groups. It was concluded that intraoperative suggestions seem to have a positive effect in reducing patients' morphine requirements in the early postoperative period.

Wallace, Benjamin (1990). Hypnotizability and the modification of cognitive search strategies. International Journal of Clinical and Experimental Hypnosis, 38, 60-69.

An experiment was conducted to determine if Ss judged to be low in hypnotizability could be taught the efficient search strategies used by high hypnotizable Ss in the performance of a cognitive search task. Ss were requested to find objects embedded within a variety of pictorial scenes. High hypnotizable Ss were found to be more adept than low hypnotizables at finding more objects correctly. When low hypnotizable Ss were taught the efficient search strategies used by the high hypnotizables, their performance improved and was not significantly different from that of the high hypnotizable Ss. Implications of these results for teaching search strategies are discussed.

Wallace, Benjamin (1990). Imagery vividness, hypnotic susceptibility, and the perception of fragmented stimuli. Journal of Personality and Social Psychology, 58, 354-359.

Two experiments were conducted to determine the role of hypnotic susceptibility level (high or low) and imaging ability (vivid or poor) in the performance of gestalt closure tasks. In Experiment 1, subjects were required to identify fragmented stimuli in the Closure Speed Test and in the Street Test. In Experiment 2, subjects reported on fragmented stimuli that were projected to the right eye and subsequently produced an afterimage. Individuals were asked to identify the composite if possible and to report on the duration of the afterimage. In both experiments, hypnotic susceptibility level and imaging ability affected reports of gestalt closure. The greatest number of correct closures was reported by those who were both high in hypnotic susceptibility and vivid in imaging ability. In addition, in the second experiment, this group also reported the longest enduring afterimage. These results are discussed in terms of the processes required to perform in a gestalt closure task.

Weinberger, Joel; Hardaway, Richard (1990). Separating science from myth in subliminal psychodynamic activation. Clinical Psychology Review, 10, 727-756.

This paper reviews subliminal psychodynamic activation (SPA). Eight common criticisms are described and evaluated: (a) SPA data analysis is too liberal; (b) there are enough nonsignificant unpublished SPA studies to offset those showing effects; (c) SPA studies are difficult to replicate; (d) the claims of SPA proponents rely on unpublished studies; (e) SPA stimuli are not really subliminal; (f) experimenter expectancy effects and/or demand characteristics can account for SPA effects; (g) the mediating events said to underlay SPA effects have never been evinced; and (h)

alternative explanations for SPA effects are superior to the psychoanalytic ones typically offered. Theoretical and statistical analyses revealed that only the argument concerning mediating events has serious merit. The SPA stimulus for which the most support was found was Mommy and I Are One. Oedipal sanction stimuli were also found to yield reliable effects whereas Oedipal prohibition stimuli did not. Suggestions for future research are offered. Resistance to SPA findings are considered in Kuhnian terms.

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**1989**

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. Cognition and Emotion, 3 (1), 1-26.

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. International Journal of Psychosomatics, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.

Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self-consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

Litz, Brett T.; Keane, Terence M. (1989). Information processing in anxiety disorders: Application to the understanding of post-traumatic stress disorder. Clinical Psychology Review, 9, 243-257.

Several of the key defining features of PTSD are symptoms that reflect problems related to perception, attention, and memory processes (hypervigilance, flashbacks, nightmares, psychogenic amnesia, and concentration difficulties). Although there have been several recent attempts to explain such phenomena through facets of cognitive psychology, little empirical work has been completed to confirm or explicate such processes in PTSD. This paper critically reviews the theoretical and empirical work done to date in the area of information processing in anxiety disorders, so as to provide a context for future empirical work to identify the specific psychological mechanisms and controlling variables responsible for symptoms of PTSD. A working theoretical model of information processing variables in PTSD is also proposed to stimulate future research in this area.

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no

difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

Fine, C. G. (1988). Thoughts on the cognitive perceptual substrates of multiple personality disorder. Dissociation, 1, 5-10.

Although MPD [multiple personality disorder] patients typically present to treatment with affective symptoms, trauma-related information is originally encoded in the patients' perceptions and mediated by their cognitions. This paper describes the dysfunctional assumptive and perceptual categories that form the building blocks of MPD patients' distorted experiences. Perceptual shifting techniques and cognitive reframing will consequently be the recommended interventions prior to therapeutic abreactive work

Jones, Lynette A. (1988). Motor illusions: What do they reveal about proprioception. Psychological Bulletin, 103 (1), 72-86.

Five illusions involving distortions in the perception of limb position, movement, and weight are described in the context of their contribution to understanding the sensory processes involved in proprioception. In particular, these illusions demonstrate that the position sense representation of the body and the awareness of limb movement results from the cross-calibration of visual and proprioceptive signals. Studies of the vibration illusion and phantom-limb phenomenon indicate that the perception of limb movement and position are encoded independently and can be dissociated. Postural aftereffects and the illusions of movement induced by vibration highlight the remarkable lability of this sense of limb position, which is a necessary feature for congruence between the spatial senses. Finally, I discuss the role of corollary discharges in the central processing of afferent information with respect to the size-weight and vibration illusions.

Sheehan, Peter W.; Donovan, Paul; MacLeod, Colin M. (1988). Strategy manipulation and the Stroop effect in hypnosis. Journal of Abnormal Psychology, 97, 455-460.

When asked to name the ink color of an incompatible color word (e.g., the word red printed in green ink), people show strong interference from the word. This study examined Stroop interference in subjects who were either high or low in susceptibility to hypnosis. Compared with performance in the waking state, the Stroop effect actually increased under hypnosis, a result particularly evident in the high- susceptible subjects. This contradicts the notion that high susceptibility subjects freely select appropriate strategies when hypnotized, a conclusion strengthened by an analysis of reported strategies in the two states. However, when provided with an attentional focusing instruction under hypnosis, high susceptibility subjects sharply reduced the Stroop effect, whereas low-susceptible subjects decreased it only slightly. One role of hypnosis may be to assist the subject in tuning attention, but only when an appropriate strategy is provided.

Wallace, Benjamin (1988). Hypnotic susceptibility, visual distraction, and reports of Necker cube apparent reversals. Journal of General Psychology, 115, 389-396.

Subjects, either susceptible (n = 50) or resistant (n = 50) to hypnotic suggestion, were asked to report on frequency of apparent reversals (ARs) to the Necker cube illusion. Such reports were made in the presence or absence of various types of visual, geometric surrounds (squares, triangles, crosses, or parallelograms). In agreement with a number of previous experiments, susceptible subjects reported perceiving more ARs than did resistant subjects. This difference held whether visual surrounds were present or absent. The presence of surrounds did serve to reduce AR reports regardless of hypnotic susceptibility level. The results are examined in terms of the ability of subjects to selectively attend when confronted with potential visual distractors.

AR reports regardless of hypnotic susceptibility level. The results are examined in terms of the ability of subjects to selectively attend when confronted with potential visual distractors.

1987

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Monty, Richard A. (1987). Visual information processing speed in hypnotized and nonhypnotized subjects. Journal of General Psychology, 114 (4), 363-372.

Using a backward-masking paradigm with a bias-free and ceiling-free psychophysical task, we tested hypnotized and control subjects for speed of visual information processing. Approximately half of each group received visual imagery suggestions in an attempt to influence attention. Imagery produced no significant differential effect. Although an absence of a hypnotizability-performance relationship was in keeping with findings of a previous study, those subjects in the present study who performed under hypnosis were, as a group, significantly superior to the other subjects in speed of information processing

Kihlstrom, John F. (1987). The cognitive unconscious. Science, 237, 1445-1452.

Contemporary research in cognitive psychology reveals the impact of nonconscious mental structures and processes on the individual's conscious experience, thought, and action. Research on perceptual-cognitive and motoric skills indicates that they are automatized through experience, and thus rendered unconscious. In addition, research on subliminal perception, implicit memory, and hypnosis indicates that events can affect mental functions even though they cannot be consciously perceived or remembered. These findings suggest a tripartite division of the cognitive unconscious into truly unconscious mental processes operating on knowledge structures that may themselves be preconscious or subconscious.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern-masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

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An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related

choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

**Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials**

**Response Category S Group N Related Unrelated Total**

**Hypnotized 9 7.22 10.78 18**

**(40.13%) (59.88%) (100%)**

**Simulating 15 12.13 5.87 18**

**(67.43%) (32.61%) (100%)**

**Baseline 19 8.79 9.21 18 Controls (48.82%) (51.17%) (100%)**

**Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials**

**Related Responses S Group Phonetic Semantic Hypnotized 1.78 5.44**

**(9.89%) (30.24%) Simulating 7.07 5.07**

**(39.27%) (28.16%) Baseline 4.21 4.58 Controls (23.38%) (25.44%)**

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.)

In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related

responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

**Popham, Coralee; Bowers, Kenneth (1987, October). A non-replication of the effects of hypnotizability and hypnosis on holistic processing. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles**

This reports a non-replication of findings of Crawford & Allen's work with Meir Memory for Pictures art task (retaining a picture in memory while comparing it to a second picture). Only highs got an increase in picture memory while hypnotized. Crawford attributed improvement during hypnosis to holistic processing. This study replicates and extends Crawford, using her task and a second task to assess whether the underlying process is holistic processing (using a Gestalt test they developed). The test involved an incoherent Gestalt produced by rotating parts of a coherent Gestalt. (Ss were required to select the coherent one, and to make a forced choice if they couldn't identify which was correct).

Research Design 1. measured the number correct and percent of unsolved Gestalts correctly selected (Guiding Index) 2. Items were in 2 subsets (40 and 35 items) so Ss could be used as their own controls 3. 48 Ss were screened with the Harvard and then the Waterloo Group Scale form C

Order

Pretest: 1. Waterloo - no effect of hypnosis ability on solving Gestalts 2. Waking condition - when Ss don't know hypnosis is relevant, highs don't do better 3. Lows in Waking condition do better

Posttest: 1. The second subset of 35 pictures was more reliable than the first used above in the pretest. 2. There was no increase from baseline to posttest on Memory for Pictures. 3. There was a significant 3-way interaction: lows' performance was worse hypnotized than during baseline; highs performance was about the same. 4. The Waterloo had a 6% increase but no group interaction. 5. Hypnosis ability didn't lead to the effect. 6. The same goes for the Guiding Index - just practice effects were

found. 7. There was an absence of the 3-way interaction found by Crawford. But the Gestalt task used by Crawford also was different. The shift may be due to primary process thinking (the stimulus is a jumping off point for decreased memory and organization) as opposed to holistic perception (in which there is increased synthesis while remaining responsive to stimulus). This may account for changes observed in highs. That is, highs may be responsible to rather than responsive to the stimulus.

1986

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Church, Katherine L.; Monty, Richard A. (1986). Hypnotizability and speed of visual information processing. International Journal of Clinical and Experimental Hypnosis, 34, 234-241

Following the determination of the luminance threshold of each S, high and low hypnotizable Ss were tested for speed of information processing using a backward masking paradigm with a bias-free and ceiling-free psychophysical task. No significant relationship between hypnotizability as measured by the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) of Weitzenhoffer and Hilgard (1959) and speed of information processing was observed. The order of administering SHSS:A, pre- or postthreshold task, was significantly related to luminance threshold. Results were compared to other studies wherein some evidence for a relationship between hypnotizability and speed of visual information processing had been offered.

106 college students were tested using tachistoscopic presentation of stimuli. 52 Ss received the SHSS:A immediately prior to the experimental tasks, 54 immediately after, and testing was terminated for each Subject after they failed 3 successive items. The test flash was set at 0.3 log units above threshold, i.e. double the threshold intensity. A trial consisted of 2 observation intervals, separated by warning tones. The test flash occurred randomly in one of the two intervals. The S indicated which observation interval contained the test flash by pressing a button. Feedback tones gave S information about the correct response.

"The masking experiment was begun with the suprathreshold test flash occurring 250 milliseconds prior to the onset of the larger bright masking stimulus. As before, a two-interval forced -choice staircase procedure was used, but this time the test intensity was constant, and ISI was changed. If S 'hit' three trials in a row, ISI was decreased by 10 milliseconds. The ISIs continued to decrease in 10-millisecond steps, until S "missed," causing an increase in ISI" (p. 348).

RESULTS were analyzed by 2 x 2 x 2 ANOVA (Hypnotizability, sex, and order of hypnotizability measurement). High hypnotizables = 7-12 on the SHSS:A, and low hypnotizables = 0-6. Ss receiving SHSS:A prior to the tasks had a significantly lower luminance threshold (-1.99 log mL) than did those having it after tasks (-1.93 log mL),  $p < .05$ . None of the other analyses were significant. No significant relationships were observed vis a vis the masking task, and the mean masking thresholds were almost identical for the lows and highs.

**DISCUSSION.** "Spanos (1982), in studying the effects of hypnotizability and suggestions in altering auditory sensitivity, reviewed the difficulties inherent in the measurement of perceptual accuracy and emphasized the role of response bias in the confounding of results" (p. 239). Secondly, these tasks reflect more fundamental, central processes and use more neutral stimuli than letter recognition used earlier. "Thus, while the masking effects of both the previous recognition tasks (masking by pattern) and the current detection tasks (masking by nearby contours) are presumably mediated through similar high level central processes, the differences in findings could possibly have been related to additional processing cues required in letter recognition" (p. 239). A footnote mentions, "Other studies have shown that with stimulus configurations similar to that used in the present study, there are significant central masking effects (Battersby & Wagman, 1962; Markoff & Sturr, 1971; Turvey, 1973)" (p. 239).

"Quite intriguing is the luminance threshold finding which, although not as robust as one would desire, suggests that a hypnotic induction procedure given prior to a task may significantly affect sensitivity on that task. Speculatively, the relaxation suggestions inherent in SHSS:A may account for the changes in luminance threshold" (p. 239).

Priebe, Frances A.; Wallace, Benjamin (1986). Hypnotizability, imaging ability, and the detection of embedded objects. International Journal of Clinical and Experimental Hypnosis, 34, 320-329.

40 Ss participated in an experiment designed to determine the influence of hypnotizability and imaging ability on cognitive performance. Individuals were asked to locate objects embedded within a series of pictorial scenes. For each scene, Ss were allocated a total of 6 minutes to find as many objects as possible. The objects were described to Ss prior to their search for them. Although there were no significant differences in total number of objects found as a function of hypnotizability, high hypnotizable Ss made significantly fewer errors in locating and identifying objects. This difference was attributed to the superior ability of the high hypnotizability Ss in visualizing the hidden objects and in using produced images as a means for correctly identifying them. This did not appear to be the case for the low hypnotizability Ss. It was this difference in search strategy that may ultimately have led to the error difference between high and low hypnotizable Ss.

High hypnotizables "have been shown to be better able to resist distractions in a tracking task (Mitchell, 1970); to concentrate on their own breathing or on a candle flame (Van Nuys, 1973); to listen to a target story along with a nontarget story and to report what they could remember about the target story (Karlin, 1979); and to perceive Necker cube and Schroeder staircase illusory reversals (Wallace, Knight, & Garrett, 1976).

"Cognitive performance also has been shown to be influenced by imaging ability. For example, Paivio & Ernst (1971) found that when Ss were asked to identify letters, pictures, and geometric forms flashed to either the left or right visual field, those judged to be high imagers on a self-report test demonstrated better visual

recognition. Similar findings were reported by Gur and Hilgard (1975) and Paivio (1978a, b).

"In addition to reports that imaging ability and hypnotizability affect performance on a variety of cognitive tasks, there have also been reports that these two variables are related, at least to some degree (Diamond & Taft, 1975; Palmer & Field, 1968; Sutcliffe, Perry, & Sheehan, 1970). Some, however, have found that ... low imagers tend to be low in hypnotizability but high imagers may not necessarily be high in hypnotizability (Perry, 1973)" (pp. 320-321). A correlation between hypnotizability and imaging ability also was found by T'Hoen (1978) in a paired associates learning task in which imagery and concreteness of the word pairs was varied; and by other investigators using other research designs (Gur & Hilgard, 1975; Paivio, 1978a, b; Paivio & Ernst, 1971).

Cognitive performance of high hypnotizable people was superior to low hypnotizables when the task was locating an imbedded letter ('Z') or completing double-digit arithmetic problems (Wallace and Patterson, 1984), possibly because highs may be using imagery to facilitate their performance. Highs performed better in detecting small differences in picture pairs when hypnotized but not when awake (Crawford and Allen, 1983). It appears that both highs and lows may use memorization of details for task performance, but only highs switch to a 'holistic' cognitive processing style, and mostly during hypnosis. Actually, Wallace and Patterson (1984) found that highs also used a holistic strategy in the waking state, not just in the hypnotized condition.

In the present study, subjects were 40 volunteers (20 highly hypnotizable subjects with scores of 9-12 on the Harvard Group Scale of Hypnotic Susceptibility, and 20 lows with scores of 0-3). The task was to locate hidden objects in pictures, with level of difficulty rated as hard, medium, or easy. The outcome data were analyzed by analysis of variance for hypnotizability, picture difficulty, and time (six successive 1-min periods).

In Session 1 subjects were administered the Harvard Scale and the Marks Vividness of Visual Imagery Questionnaire; in Session 2 the group Stanford Hypnotic Susceptibility Scale: C was administered.

Before the actual experimental task of circling hidden pictures within larger pictorial scenes, each subject was given a list of words representing things that were embedded in the scenes, and asked to visualize each item. Then they were given six minutes to complete the item-finding task. They received three scores: the total number of objects located in six minutes, the number of objects correctly found, and number of errors. The 2x3x6 ANOVA was performed for each of these three dependent variables.

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Hypnotizability was not an important variable determining the number of correct objects located, but was significantly associated with the occurrence of fewer errors. Mean errors were 4.5 for Lows and 2.7 for Highs. Furthermore, hypnotizability was associated with using a 'holistic strategy' rather than a 'detail strategy' for finding items (self report on storing a memory of the list of objects-to-be found, preparatory to making the search, rather than checking back with the list during the search). Hypnotizability correlated with imaging ability  $r = .34, p < .05$ .

In their Discussion, the authors noted that low hypnotizable people did not tend to use imagery for locating hidden objects, but would glance back and forth between the list and the picture--sometimes using a check-off mark next to items. High hypnotizables spent an average of 20 seconds looking at the list and becoming more familiar with it before starting to try to find the hidden objects. "One can assume this was a preparatory step in the formation of images for a subsequent visual search and the deployment of a holistic strategy during the search.

"When asked why they engaged in their respective behaviors, low hypnotizables generally said that they were not too concerned with the list initially because they searched for hidden items by constructing objects out of discrepancies in the picture. Only when they found what they thought had the properties of an embedded object did the list become important. At that point they would refer back to the list to determine if the object was among those to be located. The list thus served as a tool for confirming the existence of an object they had found as well as a means for enabling them to double check which items they still had to find. High hypnotizable Ss generally claimed that they formed mental images in their heads for

each item on the list. Once they found an object in the picture, they compared that object to the formed, mental image rather than referring back to the actual list.

"As was previously mentioned, Crawford and Allen (1983) only found a difference in cognitive strategy between high and low hypnotizable Ss in the hypnotic state. In the present study, however, a strategy difference between these groups was noted in the waking state but only in terms of number of errors produced. A significant difference between high and low hypnotizables was not found in terms of the number of objects correctly found in a pictorial scene within a set period of time. It is possible that had cognitive strategies used in the hypnotic state been compared to those used in the waking state, our results might have been different. It is equally plausible, however, that hypnosis is not the critical factor in producing the difference between the results of the present study and those of Crawford and Allen (1983). It is possible that high hypnotizable Ss may show a holistic strategy when they are encouraged to involve themselves imaginatively and this encouragement is naturally provided in hypnosis, but it could also be present in the waking state if the task being used is appropriately structured. The task used in the present study is one that could be said to especially encourage the use of imagery, and in this sense, it may be relatively distinct from that used by Crawford and Allen. The fact that Ss practiced imagery on the element list beforehand simply reinforces the difference. Thus, the nature of the cognitive task may be what is at issue and not the presence or absence of

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Wallace, Benjamin (1986). Latency and frequency reports to the Necker cube illusion: Effects of hypnotic susceptibility and mental arithmetic. Journal of General Psychology, 113 (2), 187-194.

An experiment (N = 32) was conducted to assess latency of first apparent reversal (AR) and AR frequency while observing the Necker cube illusion. Subjects who were either high in hypnotic susceptibility (susceptibles) or low in hypnotic susceptibility (resistant subjects) observed the cube either while performing or not performing mental addition problems. Susceptibles reported perceiving the first AR more quickly and a greater frequency of ARs than did resistant subjects. Also, latency of the first AR was negatively correlated with AR frequency. These results were interpreted in terms of the ability of susceptibles to allocate concentrative or selective attention in a manner that was conducive to faster performance when faced with competing tasks.

1985

Acosta, Enrique; Crawford, Helen J. (1985). Iconic memory and hypnotizability: Processing speed, skill or strategy differences?. International Journal of Clinical and Experimental Hypnosis, 33, 236-245.

The purported relationship between hypnotizability and speed of information transfer from iconic to short-term memory was studied in a comparison of 12 low and 12 high hypnotizable Ss. As in Ingram, Saccuzzo, McNeill, and McDonald (1979), high hypnotizable Ss showed less interference from a visual mask in the report of a briefly presented item than did low hypnotizable Ss when the mask delays were predictable. When the delay of the mask could not be anticipated, however, differences between high and low hypnotizable Ss disappeared. It is suggested that differences in information processing related to hypnotizability may be due to differences in strategy, skills, or other factors, rather than underlying information processing speed.

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Hypnosis may require concentrative or selective attention, which usually is measured by self-report (e.g. Absorption) or by experimental measures. Several investigations indicate that high hypnotizable people are better than low hypnotizables at focusing on a task and ignoring extraneous information (Brown, Crawford, Smith, Leu, & Brock, 1983; Graham & Evans, 1977; Karlin, 1979; Miller, 1975; Wallace, 1979; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976). One way to study attentional processes is through the effect of presenting a mask (e.g. \$\$\$\$) shortly after presenting a stimulus (e.g. ABCDE). Ingram (1979) found that highs had faster information processing, but that might be due to anticipation bias associated with the method of limits employed. This study uses both an ascending method of limits, like Ingram, and a condition in which the mask delays were presented randomly within another block of trials.

## RESULTS

"While the present study replicated Ingram et al.'s (1979) findings when an ascending method of limits was used (the same used by Ingram et al.) differences were not found in processing when ISIs were presented randomly. Thus, these results suggest that high and low hypnotizable Ss do not differ in their information transmission rates, but rather they may differ in other aspects which mediate performance in this task" (pp. 241- 242).

"Several lines of evidence point towards strategy or skill differences between high and low hypnotizable Ss as a possible explanation for the present findings. First, it was found that when Ss could anticipate the mask delay (the ascending condition), high hypnotizable Ss outperformed the low hypnotizables. When this anticipation was controlled, as in the random condition, the two groups did not differ when the data were scored by serial position. When the data were scored by a free recall scheme, there was a nonsignificant trend for high hypnotizable Ss to score higher than did the low hypnotizables. This trend suggests that high hypnotizable Ss may be more willing to guess, and to guess more accurately than low hypnotizables, when they have partial information about a letter, and/or they may have greater skill in perceiving incomplete information. The latter suggestion finds indirect support from Crawford (1981) who reported that high hypnotizable Ss can process fragmented stimuli (Gestalt Closure tests, see Thurstone & Jeffrey, 1966), significantly better than can low hypnotizables. High imagers have been shown also to perform significantly better than low imagers in Gestalt Closure tasks (Ernest, 1980). At a speculative level, given that recent research has suggested that iconic memory may be a right hemisphere phenomenon (e.g. Cohen, 1976, but also see DiLollo, 1981), and high hypnotizable Ss outperform low hypnotizables on certain right hemisphere tasks (e.g. Crawford, 1981), it may be asked if the trends found with the free recall scoring scheme in the present study might be a reflection of differential right hemisphere processing. Such a hypothesis could be investigated in future research by comparing the performance of high and low hypnotizable Ss, as possibly moderated by visuo-spatial ability, for stimuli presented to the left versus the right visual hemifield (Ernest, 1983).

"A second set of evidence in favor of strategy differences was found in Saccuzzo et al. (1982) which was published after the data for the present experiment were collected. In the Saccuzzo et al. (1982) paper, which was an extension and replication of Ingram et al. (1979), the same mask delay was used throughout a 10-trial block. The order of the blocks (i.e., the mask delays) was random. Thus, while S did not know which mask delay was used in the first trial of a block, the remaining 9 trials were the same and could be anticipated. During the first session, high hypnotizable Ss outperformed the low hypnotizables, but these differences disappeared on the second testing session. These results suggest that practice may have affected performance, rather than any underlying information processing speed differences" (pp. 242-243).

Oliver, J. M.; Burkham, Robert (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 644.

Contends that the present authors' (see PA, vol 69:1571) failure to replicate L. H. Silverman's (1976) description of subliminal psychodynamic activation, which was disputed by Silverman (see PA, vol 73:12007), can be traced in part to Silverman's (1978) description of the "symbiotic" stimulus (MOMMY AND I ARE ONE"), 1 of the 2 experimental stimuli used, as a "ubiquitous therapeutic agent". It is suggested that, although Silverman's willingness to modify his theory in light of empirical findings is commendable, modifications that are too frequent and numerous will pose problems for both theory and research. (5 ref)

Porterfield, Albert L.; Golding, Stephen L. (1985). Failure to find an effect of subliminal psychodynamic activation upon cognitive measures of pathology in schizophrenia. Journal of Abnormal Psychology, 94 (4), 630-639.

Replicated the work of L. H. Silverman and colleagues (see PA, vols. 43:14557 and 46:1566) using 30 21-59 year old schizophrenics. Ss were exposed to an aggressive, a merging, and a meaningless lexical stimulus in a within-S design. Dependent variables were inkblot through pathology and form quality, as measured on Rorschach and Holtzman Inkblot Techniques, and performance on the interference task of the Stroop Color-Word Test. Analyses of variance conducted on simple poststimulation scores, rather than on unreliable change scores, revealed no effect of stimulus content. Predicted interactions between stimulus content, Ss self-object differentiation, and temporal position of the assessment tasks did not emerge. Findings do not support Silverman's hypothesis that subliminal tachistoscopic presentations of stimuli with aggressive content temporarily increase thinking disorder in schizophrenics. (44 ref.)

Porterfield, Albert L. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 645-646.

Contends that in defending his nonverbal pathology measure against the claim that it lacks demonstrated validity, L. H. Silverman (see PA, vol 73:12007) painted a misleading picture of its face validity. A correction to that picture is presented, and the impact of the present author and S. L. Golding's (see PA, vol 73:11992) findings on subliminal psychodynamic activation explanations of schizophrenic thought disorder is defended, despite the absence of a nonverbal pathology measure. (5 ref)

Silverman, Lloyd H. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Rejoinder to Oliver and Burkham and to Porterfield. Journal of Abnormal Psychology, 94 (4), 647-8.

Considers the replies of A. L. Porterfield (see PA, vol 73:11991) and J. M. Oliver and R. Burkham (see PA, vol 73:11985) to the critique of the present author (see PA,

vol 73:12007). The original criticisms are seen as valid. A critical deficiency in the design of Porterfield and S. L. Golding's (see PA, vol 73:11992) study is viewed as disqualifying it as a fair attempt at replication. It is suggested that although Oliver and Burkham's (see PA, vol 69:1571) study was well-designed, statements made in their write-up are unwarranted. (12 ref)

Silverman, Lloyd H. (1985). Comments on three recent subliminal psychodynamic activation investigations. Journal of Abnormal Psychology, 94 (4), 640-643.

Contends that unwarranted statements about subliminal psychodynamic activation research by the present author (1976, 1983, 1984) were made in the work of J. M. Oliver and R. Burkham (see PA, vol. 69:1571); K. C. Haspel and R. S. Harris (see PA, vol 69:4952) and A. L. Porterfield and S. L. Golding (see PA, vol 73:11992). Issues considered include the choice of subliminal stimuli, the present author's statistical analyses, and the necessity of a nonverbal measure of psychopathology in this research (17 ref).

Silverman, Lloyd H. (1985). Research on psychoanalytic psychodynamic propositions. Clinical Psychology Review, 5 (3), 247-257

Discusses a research program in which the present author has been involved that deals with the subliminal psychodynamic activation method. In this method, verbal and/or pictorial stimuli, some of which contain content related to unconscious wishes, fears, and fantasies and other of which are (relatively) neutral, are presented to Ss at 4-msec exposures. A variety of psychoanalytically based hypotheses have been tested on various clinical and nonclinical populations. Two major findings have emerged: (a) a number of clinical groups (e.g., schizophrenics, depressives, stutterers) have shown intensifications of their symptoms after the subliminal exposure of stimuli designed to stir up particular unconscious conflicts; and (b) various clinical and nonclinical groups have manifested enhanced adaptive behavior after the subliminal exposure of the message "Mommy and I are one," conceived as activating unconscious symbiotic fantasies.

1984

Bryant-Tuckett, Rose; Silverman, Lloyd H. (1984). Effects of the subliminal stimulation of symbiotic fantasies on the academic performance of emotionally handicapped students. Journal of Counseling Psychology, 31 (3), 295-305.

Divided 64 10.8 - 19.3 yr old emotionally disturbed residents of a treatment school into an experimental and control group matched for age, IQ, and reading ability. Both groups were seen 5 times/week for 6 weeks for tachistoscopic exposures of a subliminal stimulus. The stimulus for the experimental group was the phrase, "Mommy and I are one," conceived of as activating symbiotic fantasies that in a number of previous studies with varying groups of Ss had led to greater adaptive behavior. The control group was exposed to the phrase, "People are walking." Results show that experimental Ss

manifested significantly greater improvement on the California Achievement Tests--Reading than did the controls. On 5 of 6 secondary variables--arithmetic achievement, self-concept, the handing in of homework assignments, independent classroom functioning, and self-imposed limits on TV viewing--the experimental Ss showed better adaptive functioning. It is suggested that activation of unconscious symbiotic fantasies can increase the effectiveness of counseling and teaching. (42 ref)

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott (1984). The direct hypnotic suggestion of altered mind/body perception. American Journal of Clinical Hypnosis, 27, 95-102.

Attentional and emotional shifts are examined following a hypnotically suggested out-of-body experience (OBE). Two hypotheses were tested: 1) that the OBE is maintained by blocking the perception of body-relevant stimulation at a sensory level; 2) that a hypnotically produced OBE is an emotionally neutral or even pleasant experience. Fourteen hypnotic subjects and 15 simulating Ss were administered a standardized induction followed by suggestions for an OBE. Geometric figures were then presented to the body but not to the "awareness." Although hypnotic Ss reported that they could not see the information, they still correctly "guess" the identity of the figures beyond chance levels. Thus, body-relevant information was obviously not blocked at a sensory level, but was kept out of awareness by some other mechanism. In addition, a significantly greater number of hypnotized than simulating Ss reported the OBE to be troubling and unpleasant, despite explicit suggestions for a positive experience. The potentially disturbing nature of OBEs and ways to minimize risk of negative affect are discussed.

Palumbo, Robert; Gillman, Irene (1984). Effects of subliminal activation of oedipal fantasies on competitive performance: A replication and extension. Journal of Nervous and Mental Disease, 172 (12), 737-741.

Conducted a subliminal psychodynamic activation experiment in which the effects of 5 subliminal stimuli were sought on the dart-throwing performance of 40 male Ss (aged 22-46 years). The stimuli consisted of the following messages, each accompanied by a congruent picture: "beating dad is ok," "beating dad is wrong," "beating him is ok," "beating him is wrong," and "people are walking." The 1st 2 stimuli were intended to activate competitive motives within the context of the Oedipus complex; the next 2, competitive motives outside that context; and the last message was intended as a control stimulus. Findings show that "beating dad is ok" led to greater dart-throwing accuracy than each of the other 4 conditions, which, in turn, did not differ from each other. This finding replicates a result reported by L. H. Silverman et al (1978) and is in keeping with the formulation that the activation of oedipal motives can affect competitive performance (7 ref)

Venturino, Michael (1984, August). Perceptual monitoring and allocation of attention (Dissertation, University of Maine). Dissertation Abstracts International, 45 (2), 707-B.

"The processing ability of perceptual monitoring was investigated using a dichotic listening and shadowing task. Individual differences in the effectiveness of perceptual monitoring were also investigated by using susceptibility to hypnosis as a grouping factor. Subjects' skin conductance response (SCR) was conditioned to specific words by an electric shock. These conditioned words, and words semantically and acoustically related to them were presented in the relevant and irrelevant messages of the dichotic listening and shadowing task. Probability and magnitude measures of SCRs and subjects' verbal shadowing accuracy were used to assess performance. SCRs to critical words were significantly greater than to control words in both the relevant and irrelevant messages. However, the SCRs to words in the irrelevant messages were not as great as those responses elicited to words in the relevant message. The pattern of responding to the semantically and acoustically related words was similar for both the relevant and irrelevant messages. Subjects low in hypnotic susceptibility responded to critical words with significantly greater probability and magnitude of response than did subjects high in hypnotic susceptibility. Analysis of the shadowing performance data showed that the perceptual monitoring process was quite effective. The occurrence of the conditioned word in the irrelevant message caused a shift in attention to the irrelevant message, manifested by a shadowing error. Subjects shadowing the message in their left ear committed significantly more shadowing errors than subjects shadowing the message in their right ear. No differences in shadowing performance were obtained for the hypnosis factor. The results were interpreted in terms of the deployment of attention to the environment, and the relationship of this deployment to the perceptual monitoring process" (p. 707).

Wallace, Benjamin; Patterson, Sondra Lou (1984). Hypnotic susceptibility and performance on various attention-specific cognitive tasks. Journal of Personality and Social Psychology, 47, 175-181.

Conducted two experiments to investigate cognitive performance as related to level of hypnotic susceptibility. In Experiment 1 time-to-location of a target in a visual search task was assessed. For this task the letter Z was embedded either within straight- form or round-form letters. Results indicated that high hypnotizable Subjects were significantly faster than low-hypnotizability Subjects in locating the embedded letter. Experiment 2 investigated performance on single- and double-digit arithmetic (addition) problems as a function of hypnosis susceptibility level. Subjects were presented with arithmetic problems and were asked to complete them within a 60-s time period. Highs completed a significantly greater number of double-digit problems but not single-digit problems within this time frame than did lows. The results of the two experiments are explained in terms of the application of differing strategies or operations by highs and lows in the performance of cognitive tasks.

1983

**Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.**

**This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.**

**Crawford, Helen J.; Allen, Steven N. (1983). Enhanced visual memory during hypnosis as mediated by hypnotic responsiveness and cognitive strategies. Journal of Experimental Psychology: General, 112 (4), 662-685.**

**To investigate the hypothesis that hypnosis has an enhancing effect on imagery processing, as mediated by hypnotic responsiveness and cognitive strategies, four experiments compared performance of low and high, or low, medium, and high hypnotically responsive subjects in waking and hypnosis conditions on a successive visual memory discrimination task that required detecting differences between successively presented picture pairs in which one member of the pair was slightly altered. Consistently, hypnotically responsive individuals showed enhanced mean number of correct performance during hypnosis, whereas nonresponsive ones did not. Hypnotic responsiveness correlated .52 ( $p < .001$ ) with enhanced performance during hypnosis, but it was uncorrelated with waking performance (Experiment 3). Reaction time was not affected by hypnosis, although high hypnotizables were faster than lows in their responses (Experiments 1 and 2).**

**Subjects reported enhanced imagery vividness on the self-report Vividness of Visual Imagery Questionnaire during hypnosis. The differential effect between lows and highs was in the anticipated direction but not significant (Experiments 1 and 2).**

**Two cognitive strategies appeared to mediate visual memory performance: (a) detail strategy (memorization and rehearsal of individual details) and (b) holistic strategy (looking at and remembering the whole picture with accompanying imagery). Both lows and highs reported predominantly detail-oriented strategies during waking; however the highs shifted to a more holistic strategy during hypnosis. It appears that high hypnotizables have a greater capacity than lows for cognitive flexibility (Battig, 1979).**

**Results are discussed in terms of Paivio's (1971) dual coding theory and Craik and Tulving's (1975) depth of processing theory. The authors also discuss whether**

hypnosis involves a shift in cerebral dominance, as reflected by the cognitive strategy changes and enhanced imagery processing.

Spanos, Nicholas P.; Dubreuil, Debora L., Saad, Carol L., Gorassini, Donald (1983). Hypnotic elimination of prism-induced aftereffects: Perceptual effect or responses to experimental demands?. Journal of Abnormal Psychology, 92 (2), 216-222.

Two experiments assessed adaptation to displacing prisms in hypnotically limb-anesthetized Ss. Experiment I with 18 college students disconfirmed the hypothesis that the displacement aftereffect is eliminated in limb-anesthetized hypnotic Ss who adapt to prisms in the absence of a visual target. Such Ss showed as large a displacement aftereffect as control Ss who received neither a hypnotic induction procedure nor an anesthesia suggestion. Experiment II with 30 undergraduates demonstrated that under some testing conditions hypnotic Ss complied with experimental demands and eliminated the behavioral but not the perceptual component of the aftereffect.

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1982

Farthing, G. William; Brown, Scott W.; Venturino, Michael (1982). Effects of hypnotizability and mental imagery on signal detection sensitivity and response bias. International Journal of Clinical and Experimental Hypnosis, 30, 289-305.

It was hypothesized that the ability to selectively concentrate attention on mental images would be greater among high hypnotizable Ss than among low hypnotizable Ss, as indicated by a greater interference with visual signal detection by concurrent visual mental imagery in response to specified nouns. This hypothesis was not supported in the overall results, though the finding of a significant interference effect among the high hypnotizable female Ss, but not among other subgroups, indicates that further research with a more refined procedure might be worthwhile. On the control trials without images, the high hypnotizable Ss made more false alarms than lows, and had a significantly different bias index indicating that high hypnotizable Ss were more likely than lows to respond "yes" when uncertain about whether the signal was present; false alarms can be interpreted as a nonhypnotic measure of suggestibility. The high and low hypnotizable Ss did not differ in their times to generate images in response to the specified nouns.

Saccuzzo, Dennis P.; Safran, Deborah; Anderson, Virginia; McNeill, Brian (1982). Visual information processing in high and low susceptible subjects. International Journal of Clinical and Experimental Hypnosis, 30, 32-44.

High and low hypnotically susceptible Ss were compared in their ability to identify a briefly exposed informational target stimulus consisting of a letter when it was preceded (forward masking) or followed by (backward masking) a

noninformational mask stimulus. There were 4 intervals between the target and mask and a no mask control for both forward and backward masking. The experiment was replicated in 2 independent sessions. In Session 1 high susceptible Ss were superior to lows in identifying the target stimulus. The superiority was not maintained in Session 2. Implications of the findings and directions for future research are discussed.

Silverman, Lloyd H.; Lachmann, Frank M.; Milich, Robert H. (1982). The search for oneness. New York: International Universities Press.

This book summarizes research on preconscious activation (subliminal psychodynamic activation) of fantasies of oneness, following tachistoscopic presentation of words like, "Mommy and I are one." It represents an attempt to test and validate, through experimental investigation, psychoanalytic concepts. The authors show how such fantasies can improve psychosocial adaptation for people with varying kinds of psychopathology.

Wallace, Benjamin; Fisher, Leslie E. (1982). Hypnotically induced limb anesthesia and adaptation to displacing prisms: Replication requires adherence to critical procedures. Journal of Abnormal Psychology, **91** (5), 390-391.

N. P. Spanos et al. (see PA, vol 66:7289) reported a failure to confirm the results of an experiment on prism adaptation reported by the present authors (see PA, vol 65:6956) that required Ss to adapt to a prismatically displaced environment when their adapting limb was hypnotically anesthetized. The present authors argue that the failure of Spanos et al to replicate their findings is due to their failure to duplicate the critical conditions of the experiment. (7 ref)

1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, **133** (3), 161-169.

"The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding S2 differed only after the most intense S1. Hypnotic

suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

Hilgard, Ernest R. (1980, October). Hypnotic modification of sensitivity and control. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Chicago.

The author presents a factor analysis of several scales in the hypnosis domain: HGSHS:A, Wilson-Barber CIS, Stanford Hypnotic Susceptibility Scale Form C, Questionnaire on Mental Imagery (Sheehan's modification of Betts) and the Tellegen- Atkinson Absorption Scale. Scales were broken down into components first. He didn't report all of the factors, but shows how these tests fall on a graph defined by Factor 1 (Amnesia/Cognitive) and Factor 4 (Absorption/Imagery). "Capacity for fantasy and amnesia are so different that hypnosis probably includes both."

Hilgard concludes that he doesn't like a state theory for hypnosis or the idea of "trance" because it is unidimensional. He prefers "dissociation" because we think of it as a continuum. Even Highs differ one from another in the nature of their responses. Altered- state-of-consciousness theories don't readily explain partial dissociation (e.g. persistence of a suggestion such as arm rigidity after hypnosis is terminated; or hysterical paralysis).

Shevrin, Howard; Dickman, Scott (1980). The psychological unconscious: A necessary assumption for all psychological theory?. American Psychologist, 35 (5), 421-434.

The notion of complex psychological processes operating outside of awareness has traditionally been associated with the concept of the unconscious used by psychodynamically oriented clinicians; it has never found an equivalent place in the mainstream of American experimental psychology. However, mounting evidence from several rather diverse fields of empirical research (e.g., selective attention, cortical evoked potentials, subliminal perception) provides support for such a concept, and, in fact, explanatory constructs of a similar nature have been embodied in several current models of perceptual processing. While there clearly remains an enormous gap between the clinically based conception and the experimentally based conception of the nature of these unconscious processes, they nevertheless seem to provide an interface between two seemingly disparate approaches to the understanding of personality.

1979

Ingram, Rick E.; Saccuzzo, Dennis P.; McNeill, Brian; McDonald, Roy (1979). Speed of information - processing in high and low susceptible subjects - preliminary study. International Journal of Clinical and Experimental Hypnosis, 27 (1), 42-47.

A backward masking paradigm was employed to test the hypothesis that high hypnotic susceptible Ss are able to process information at a faster rate than low

susceptible Ss. The critical interstimulus interval was determined for 8 high and 8 low susceptible Ss. A t-test analysis of the critical interstimulus intervals showed a significant difference between high and low susceptible Ss with the high susceptible Ss showing a lower critical interstimulus interval. Mean critical inter-stimulus intervals for the high (76 milliseconds) and low (98 milliseconds) susceptible groups suggested that the high susceptible Ss were an average of 22 milliseconds faster at processing information. Results were interpreted as being consistent with, and providing support for attentional theories of hypnosis.

Spanos, Nicholas P.; Ansari, Ferhana; Stam, Henderikus J. (1979). Hypnotic age regression and eidetic imagery: A failure to replicate. Journal of Abnormal Psychology, 88 (1), 88-91.

Walker, Garrett, & Wallace (1976) reported the restoration of eidetic imagery in hypnotically age-regressed subjects. In an attempted replication of that study, 60 subjects who previously scored high on hypnotic susceptibility were 'hypnotically regressed' to age 7. Before administration of the hypnotic procedures and again after age regression, subjects were tested for eidetic imagery using the random-dot stereograms employed by Walker et al. None of our subjects including those who were age regressed according to standard criteria and who reported having been eidetikers as children, were successful at the stereogram tasks. Although these results fail to replicate those of Walker et al., they are consistent with the available evidence concerning the performance of children on stereogram tasks. Contrary to the impression conveyed by Walker et al., children tested to date, including those classified as eidetikers by Haber and Haber's criteria, have been unsuccessful at stereogram tasks.

1978

Blum, Gerald S.; Porter, M. L.; Geiwitz, P. J. (1978). Temporal parameters of negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 26, 30-44.

Negative visual hallucination was investigated by hypnotically programming two highly trained undergraduates not to see the colored lines of consonants while perceiving clearly a set of dots superimposed on the lines in another color. Effects of three temporal parameters were noted in tachistoscopic presentations of the consonants: priming time, i.e., opportunity for the subject to prepare to execute the negative visual hallucination after the posthypnotic cue was flashed and before the consonant appeared; duration of consonant exposure; and intensive practice over protracted periods of time. Signal strength and inhibitory skill emerged as significant variables.

This paper reports 4 experiments with two highly trained subjects. The authors conclude, "From these observations, signal strength and inhibitory skill emerge as major determinants of the outcome in NVH. The stronger the input, the greater the likelihood of insufficient inhibitory action. Differences in skill show up at both the intra- and inter-individual levels of analysis. Even the initially skilled F1 improved

her NVH ability with practice, as inferred from the disappearance of undercalling. The lesser skill of F2 was evidenced in her longer required priming time, higher accuracy of color guesses, greater number of color breakthroughs, and reported feeling of mental strain" (p. 42).

1977

Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

1976

Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations.

1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations.

1972

Graham, Charles; Leibowitz, Herschel W. (1972). The effect of suggestion on visual acuity. International Journal of Clinical and Experimental Hypnosis, 20, 3.

In experiment one, all subjects participating attained the maximum score on the BSS. The subjects were hypnotized and post-hypnotic suggestions were given to the effect that the subject really knew how well they could see, and this was contingent upon relaxation. The patient was now given an opportunity to re-read the eye charts. It was found that in this experiment, myopic visual acuity was significantly improved through the use of hypnosis and positive suggestion.

In experiment two, subjects who scored the maximum and the minimum on the BSS were used. The same procedure was used as in number one except that the highly susceptible subjects were told that "various studies had demonstrated that being hypnotized was not a pre-requisite for obtaining improvement." The insusceptibles were told that "acuity improved under hypnosis, but like many other phenomena associated with hypnosis, improvement in vision was also well within the reach of the non-hypnotizable subjects, if they simply learned to relax their eyes." It was found that myopic visual acuity was significantly improved in the absence of a formal hypnotic induction. This improvement was for the highly hypnotizable subjects only, and did not transfer to outside the experimental situation.

In experiment three, subjects were used who scored the maximum on the BSS and the Harvard Group Scale. Testing was done in both the hypnotized and waking state. It was found that the rank order correlation between initial and final acuity levels was .98 ( $p < .001$ ), indicating the effect of suggestion was selective.

**Sutcliffe, J. P. (1972). Afterimages of real and imaged stimuli. Australian Journal of Psychology, 24 (3), 275-289.**

Tested 45 university students and 15 7-10 yr. olds for after-images of images and of real stimuli. 8 different colored stimuli were used and observations made enabled a check on reliability. Real stimuli typically produced negative afterimages in most Ss. Only half the Ss could project images of the stimuli, only 1/3 reported afterimages of those images, and of those images only 7% were negative. Afterimages of images had a longer latency and a shorter duration than afterimages of real stimuli. Thus qualitatively and quantitatively afterimages of images differ from afterimages of real stimuli. Findings are related to individual differences in general vividness of imagery. (18 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1970**

**Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.**

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary

-duced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

**1969**

**Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73.**

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3 in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1966**

**Andreasen, A. G.; Singer G. (1966). Hypnosis and hypnotizability: Delusion or simulation?. International Journal of Clinical and Experimental Hypnosis, 14 (3), 257-267.**

Because Sutcliffe (see 36:4) showed that hypnotic suggestions are not comparable in sensory content with real stimuli, the postulated difference between "pseudoperception" and "simulation" as indexed by reported subjective experiences of hypnotic Ss was tested. From 215 undergraduates, 30 high-susceptibility (HS) and 30 low-susceptibility (LS) Ss made kinesthetic and visual judgments of horizontality. A significant response, not attributable to simulation, was found only for the HS-hypnosis induction group; the effect was not attributable individually to susceptibility, hypnosis induction, or motivation. It is concluded that hypnosis, defined by this significant interaction effect between high susceptibility and hypnosis induction can be interpreted as a pseudoperceptual response to suggestion. (Spanish & German summaries) (28 ref.) (PsycINFO)

**1965**

**Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.**

The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal

populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

-ables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

**Brady, J. P.; Levitt, E. E. (1964). Hypnotically-induced 'anosmia' to ammonia. International Journal of Clinical and Experimental Hypnosis, 12, 18-20.**

The procedure to demonstrate anosmia by the inhalation of ammonia is discussed. Deeply hypnotized Ss who are not knowledgeable of the relevant facts of physiology may fail to respond to ammonia fumes when it is suggested that they have no sense of smell (anosmia). However, persons who, in fact, are anosmic do respond to ammonia fumes because they are a powerful stimulus to the pain fibers in the nasal mucosa. This procedure illustrates that the crucial factor in the response of the hypnotized S is not the actual facts of anatomy and physiology, but the S's concept of them. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1961**

**Pearson, R. E. (1961). Response to suggestion given under general anesthesia. American Journal of Clinical Hypnosis, 4, 106-114.**

Employed a double-blind design with placebo control. Audio tapes containing therapeutic suggestions were played to 43 experimental patients during anesthesia. The main theme of the suggestions was that the patient would cope better and recover faster if he could become relaxed. Placebo tapes (music or blank tapes) were played to the 38 control patients. Only E, who had no contact with the patients, knew which tape was played to a given patient. Three postoperative variables were studied: (a) number of doses of narcotics in the first 5 postoperative days; (b) a numerical rating by the surgeon of the postoperative course; and (c) number of postoperative days until release. Although no significant differences were found between the suggestion group and placebo group on need for narcotics or rated course of recovery, patients receiving suggestions were discharged an average of 2.42 days sooner ( $p < .05$ ).

**1960**

Salzberg, Herman Carl (1960). The effects of hypnotic, posthypnotic, and waking suggestion on performance using tasks varied in complexity. International Journal of Clinical and Experimental Hypnosis, 8, 251-258.

5 Ss were instructed to respond with a reaction time key to colors and figures presented tachistoscopically. In the 1st series of experiments a steady reaction to figures (with the right hand) and to colors (with the left hand) was established. In the 2nd series figures and colors were presented 1 by 1 at random, and the Ss had to react according to the previously established habit. In the 3rd series combinations of figures and colors were shown and the Ss had to react with both hands at the same time. 4 different types of reactions were observed in the last series depending upon the shifting or the distribution of attention. From Psyc Abstracts 36:01:3CE87P. From Psyc Abstracts 36:01:3CF06N. From Psyc Abstracts 36:01:3CF14L. From Psyc Abstracts 36:01:3CF17S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Sukhakarn, Khun Vichit (1960/1962). Extra ocular vision [Letter]. British Journal of Medical Hypnotism, 14 (2), 41-47

The article is in the original form of a letter to Herbert Spiegel, M.D. The author describes experiences training subjects, both blind and with normal vision, to 'see' through the skin of their cheeks. Training involved concentrative meditation (Buddhist) and hypnosis. Simple tests were performed, apparently independently, by two other scientists.

"From information available from our subjects, the Extra Ocular Vision gained through the cheek-skin is different from those through the eyes as best explained here below:-- (1) The vision through the cheek-skin first takes a form of a series of spots somewhat like the image of coarse gain prints. Only after further training the spots are transformed into a clear object, so clear that needle threading is possible. (2) Objects seen through the cheek-skin are as clear as through the eyes. Distant objects can be magnified by the subject's wish, just like looking through an opera glass. (3) The vision gained through the cheek-skin is first 'seen' in black and white, and the 'colour picture' is achieved only after further training. But the colour 'seen' through the cheek is more intense than those through the eyes. (4) The field of vision 'seen' through each side of the cheek is more narrow than those seen through each eye. (5) There is a sign indicating that the vision through the cheek is only two-dimensional, the subjects find it difficult at first to stand the finger to another finger test" (p. 42).

1957

Barber, Theodore Xenophon (1957). Hypnosis as perceptual-cognitive restructuring: I. Analysis of concepts. Journal of Clinical and Experimental Hypnosis, 5 (4), 147-166.

"Summary

1. 'Trance' involves a selective and relative inattention to internal and external stimulation.

2. Hypnosis involves one type of 'trance' behavior but hypnosis differs from other types of 'trance' in that it is an interpersonal relationship in which one person, the operator, restructures the 'perceptions' and conceptions of the other person, the subject.

3. The operator can restructure the thoughts and 'perceptions' of the 'good' hypnotic subject because (a) the subject is relatively detached and inattentive to his self and his surroundings and (b) the subject is 'set' -- he is ready and willing -- to accept the operator's words as true statements and to 'literally think as the operator wants him to think.'

4. 'Perceptual-cognitive restructuring' and not 'suggestion' is the essential element in hypnosis.

5. We can begin to understand hypnosis and the phenomena of hypnosis by one general principle: the hypnotic subject behaves differently because he 'perceives' and conceives differently. The behavior of the hypnotic subject is in strict accordance with his altered conceptions of his self and his surroundings" (p. 162).

1955

Naruse, Gosaku; Obonai, Torao (1955). Decomposition and fusion of mental images in the post-hypnotic hallucinatory state. II: Mechanism of image composing activity. Journal of Clinical and Experimental Hypnosis, 3 (1), 2-23.

**Summary.** This is a report of the studies continued from the previous work, as regards the mode and law of modification of images, by experiments on the image-fusion which is observed in a post-hypnotic hallucinatory state. The writers investigated the configuration law of the Gestalt school, also whether there was nothing other than the overlapping of images. Various experiments were performed using accorded figures (Fig.1), discorded figures (Fig. 3), the composed image partly changed in size (Fig. 4), the incomplete figures with concrete meaning (Fig. 5,A) and the figures in which the perception and meaning were discorded with each other (Fig. 6). The results were as follows:

(1) There were some subjects whose images were clear, and others whose images were vague. In general, the images were clear in deep hypnotic trance, and vague in the medium trance.

(2) In the case of the clear images, they were prominently overlapping while in the case of the vague images, they overlapped one another and were disjointed or integrated.

(3) After conditioning two kinds of figures with two kinds of sounds, a composed image could be aroused by the two stimuli; in this case, by changing the tempo of one kind, a part of the composed image was changed. This fact would prove that the composed images were combinations of elements.

(4) In the case of the integrated images, the modification of both clear and vague images could be explained satisfactorily not by the Gestalt theory but by the intervention of the meaning. Moreover, the hypothesis of the integration or hierarchy of cerebral functions corresponding to these phenomena was possible.

(5) Modification through meaning was more frequent in the vague images than in the clear ones.

(6) The spontaneous effect of meaning of the image was dependent on the depth of trance. This effect was comparatively weak in deep trance and strong in medium trance. It was assumed that in medium trance which reproduced the integrated images, meaning activity still remained.

(7) Having presented incomplete figures with concrete meanings to examine the effect of meaning, it was clear that the modification of images by meaning took place distinctly under the influence of suggestion.

If perception and meaning of the figure were made to be in discord with each other, the meaning suggested at the time of conditioning produced more effect on the modification of the image than that at the time of recall" (p. 22).

**1953**

**Kline, Milton V. (1953).** Hypnotic retrogression: A neuropsychological theory of age regression and progression. Journal of Clinical and Experimental Hypnosis, 1, 21-28.

**Author's Summary -** In a review of the salient aspects of research in hypnotic age regression an evaluation of the data tended to indicate that under certain conditions valid age regression is discussed in the light of a neuropsychological theory of age regression. This theory based upon a concept of hypnotic retrogression views regression and progression phenomena in hypnosis as a form of psychological

activity involving disorientation for the subject and a reorganization of his perceptual equilibrium and control mechanisms with particular reference to time-space perception. The term hypnotic retrogression is used to describe the centrally induced state which alters time-space perception and renders hypnotic regression and progression possible.

## **Performance**

**1997**

Schoenberger, Nancy E.; Kirsch, Irving; Gearan, Paul; Montgomery, Guy; Pastyrnak, Steven L. (1997). Hypnotic enhancement of a cognitive behavioral treatment for public speaking anxiety. Behavior Therapy, 28, 127-140.

The effectiveness of a multidimensional cognitive behavioral treatment for public speaking anxiety was compared with that of the same treatment supplemented by hypnosis. The hypnotic treatment included all components of the cognitive behavioral treatment. It differed from the nonhypnotic treatment only in that relaxation training was presented as a hypnotic induction, automatic thoughts were referred to as self-suggestions, and explicit hypnotic suggestions for improvement were added. Participants in both treatment conditions improved more than those in a wait-list control group. Moreover, labeling the treatment "hypnotic" appeared to enhance treatment effectiveness. The hypnotic treatment generated expectancies for greater change among participants than did the nonhypnotic treatment, and these expectancies were correlated with treatment outcome. Implications for the use of hypnosis in treatment are discussed.

**1994**

Wormnes, Bjorn (1994, October). Hypnosis in working with performance anxiety and peak performance. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Better training facilities and procedures combined with scientific methods and knowledge bring athletes' performance continuously to a higher standard. Being able to perform at their very best in important competitions depends on mental training and mental ability. Hypnosis is important to integrate in systematic training programs for peak performance. Important psychological factors influencing peak performance are discussed. Self-confidence, ability to concentrate, imagery training, goal-setting capacity, openness to communication and body signals, team building, delay capacity, and secure relations with coaches are shown to be significant. Integrating hypnosis into mental training is valuable both for working on temporary obstacles and in long-term programs.

**1991**

Cochrane, Gordon J. (1991). Client-therapist collaboration in the preparation of hypnosis interventions: Case illustrations. American Journal of Clinical Hypnosis, 33, 254-262.

Therapists can use hypnosis in a variety of situations to help clients utilize their own resources effectively. In both heterohypnosis and tape-assisted self-hypnosis, the respectful collaboration of therapist and client in the development of specific intervention strategies can be effective. I have described four cases to illustrate the collaborative aspect of heterohypnosis in a surgical setting and tape-assisted self-hypnosis for anxiety, tinnitus, and situational depression. In each case the clients were willing and able participants.

"Hypnotic interventions as adjunctive therapeutic modalities for a variety of surgical procedures have been well documented (Frankel, 1987; Gravitz, 1988; Nathan, Morris, Goebel, & Blass, 1987). The availability, relative safety, dependability, and ease of use have made chemical agents the anesthetic of choice in the majority of surgical situations, but hypnosis, either alone or in conjunction with chemical agents, can have a number of advantages for some patients (Udolf, 1987, p. 248). Some patients who have extreme preoperative pain and anxiety can learn to use self-hypnosis (Frankel, 1987); others may use hypnosis when experiencing postoperative nausea and other uncomfortable side effects of chemical anesthetics. Some may fear death under general anesthesia or react to a previous trauma arising from general anesthesia and the operating room procedures in general (Udolf, 1987, p. 250) and therefore choose hypnotic strategies. In the following case illustration the patient feared general anesthesia because of a previous negative postoperative experience" (p. 255).

While collaboratively planned hypnosis often empowers the patient, contributing to a sense of personal control and well being, some patients are not able to participate in that manner. Cochrane cites patients who are severely depressed or "who struggle with narcissism and other severe pathologies" (p. 260). He notes that audiotapes are useful for supplementing in-session therapy, contributing to skill development, attitude change, and a sense of self-worth. He cites Eisen and Fromm (1983) as indicating that self hypnosis is also useful for clients "who struggle with issues of control and intimacy" (p. 260).

Wagaman, Jeffrey D.; Barabasz, Arreed F.; Barabasz, Marianne (1991). Flotation rest and imagery in the improvement of collegiate basketball performance. Perceptual and Motor Skills, 72, 119-122.

22 expert collegiate basketball players were exposed to either imagery training only or restricted environmental stimulation (REST) with imagery training. The REST group showed significantly better performance on both objective game performance and coaches' blind ratings.

1990

Clark, Duncan B.; Agras, W. Stewart (1990). The assessment and treatment of performance anxiety in musicians. American Journal of Psychiatry, 148 (5), 598-605.

94 adults with a performance anxiety problem were recruited by mass media announcements and were seen in a university-based outpatient psychiatric clinic. Assessments were questionnaires for all 94 ss, diagnostic interview of 50 ss, and laboratory performance of 34 ss. Treatment conditions were 6 weeks of buspirone, 6 weeks of placebo, a five-session group cognitive-behavior therapy program (CBTP) with buspirone, or the CBTP with placebo. All Ss fulfilled criteria for Diagnostic and Statistical Manual of Mental Disorders-III-Revised (DSM-III-R) social phobia. Of the 15 full-time professional musicians, 10 had tried propranolol and 3 had stopped performing. Most Ss had substantial anxiety and heart rate increases during lab speech and musical performances. CBTP resulted in significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence.

McAleney, Patrick J.; Barabasz, Arreed; Barabasz, Marianne (1990). Effects of flotation restricted environmental stimulation on intercollegiate tennis performance. Perceptual and Motor Skills, 72, 1023-1028.

The study investigated the effects of flotation Restricted Environmental Stimulation (REST) with an imagery message on the competitive performance of intercollegiate tennis players (10 men, 10 women). Pre- and posttreatment athletic performance was measured during intercollegiate competition. Posttreatment results indicated that subjects exposed to flotation REST with an imagery message performed significantly better than subjects exposed to imagery only on a measure of first service accuracy. Findings suggest that flotation REST can be used to enhance the performance of a well learned skill by athletes of high ability.

1989

Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. American Journal of Clinical Hypnosis, 31, 173-180.

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego- strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

1988

Neiss, Rob (1988). Reconceptualizing arousal: Psychobiological states in motor performance. Psychological Bulletin, 103 (3), 345-366.

This review of research dealing with psychologically induced arousal and motor performance focuses on the hypothesized inverted-U function relating arousal to performance. The inverted-U hypothesis is supported only in a weak and psychologically trivial fashion. More useful research in human motor performance would investigate discrete psychobiological states, which include affect and cognition as well as physiology. Examination of profound individual differences in response to incentive and threat suggests that psychobiological states have their genesis in response expectancies and hypnotic-like self-inductions. The cognitive and affective components of these states are highly interactive and perhaps not profitably separated. Because performance anxiety is a central problem in the motor realm, it is carefully delineated and the test anxiety literature is scrutinized. Psychophysiological test batteries and other investigations in the area are described, and guidelines for future research are provided.

Neiss, Rob (1988). Reconceptualizing relaxation treatments: Psychobiological states in sports. Clinical Psychology Review, 8 (2), 139-159.

Reviews studies relating relaxation treatments to motor performance and attempts to explain these treatments from a psychological perspective. The inverted-U hypothesis is based on arousal, which has construct validation problems and is a physiological, rather than a psychological, construct. Arousal cannot distinguish among fear, anger, sexuality, and other psychobiological states; predictive validity is low in the area of motor performance. The inverted-U hypothesis is effectively refutable in current usage, and empirically weakly supported. Relaxation treatments are reconceptualized as relatively nonspecific psychological therapies, potentially useful in alleviating dysphoric, debilitating psychobiological states. These treatments are particularly apt for athletics, where performance anxiety is a pervasive problem.

1987

Jacobs, Sharon B.; Salzberg, Herman C. (1987). The effects of posthypnotic performance-enhancing instructions on cognitive-motor performance. International Journal of Clinical and Experimental Hypnosis, 35, 41-50.

The effects of performance-enhancing instructions on a cognitive-motor task (typing) was assessed using 3 groups: hypnosis and control groups with performance-enhancing instructions, and a control group without instructions. Unlike previous hypnosis research, the performance-enhancing instructions were given after substantial learning had occurred. Results indicated that posthypnotic performance-enhancing instructions, or performance-enhancing instructions alone, did not have a facilitative effect on performance. The results also suggested potential negative performance effects following hypnotic induction, depending on Ss' initial typing ability. The implications of these findings are discussed.

The research investigated whether hypnotic suggestions could influence various factors thought to inhibit peak performance by increasing confidence, increasing motivation, and decreasing performance anxiety. 84 undergraduates of varying

levels of typing ability were recruited, not mentioning in advance that the research involved hypnosis (in order to avoid selection bias). The experimental materials included a modified version of the Apple Typing Tutor program, which measures words per minute (WPM), key strokes missed (KM), and net words per minute (NWPM, which was obtained by subtracting 2 (KM) from WPM). These measures were obtained for the average of every 9 paragraphs.

Subjects received nine practice sessions and then were assigned to Experimental or Control group based on NWPM and sex. The hypnosis group received the Stanford Hypnotic Susceptibility Scale, Form C, minus suggestions for drowsiness, sleepiness, or posthypnotic amnesia. Additional suggestions for performance enhancement were introduced. The control group watched a film. The average of every nine paragraphs was used.

The analyses of variance for dependent measures revealed no significant effects except for one interaction effect that actually was in the unexpected or wrong direction. That effect appeared to be spurious as it was due to extreme errors produced by one subject.

"Only speed of typing (WPM) changed from pre to posttreatment, and this effect interacted with ability level. Post hoc analyses (Scheffe) indicated that beginner typists became less proficient, intermediate typists did not change, and advanced typists became more proficient" (p. 46).

Hypnotizability on SHSS:C did not correlate with change on NWPM.

A 3 x 3 x 2 ANOVA indicated a significant change over time on KM. "Although no change occurred from pretreatment to posttreatment, there was a decrease in errors at follow-up. There was also a significant Group x Level x Time interaction for KM ( $F = 2.57$ ,  $p < .05$ ). This was accounted for by post hoc analyses showing that hypnotized beginner Ss changed over time, while control beginner Ss did not. Hypnotized Ss made significantly more errors following hypnosis than at pretreatment or follow-up" (p. 46).

"There was a significant main effect for time on NWPM. ... The Ss' overall typing performance decreased from pretreatment to posttreatment, but increased at follow-up. Only the advanced Ss demonstrated significant improvement between pretreatment and follow-up.

"There was also a significant interaction between time and ability level on WPM. ... beginner Ss typed significantly slower at posttreatment than at pretreatment or follow-up" (p. 47).

In their Discussion, the authors note that the outcomes of their investigation are consonant with results obtained by other investigators studying hypnosis effects on skills (Arnold, 1971; Edmonston & Marks, 1967). In contrast, earlier studies on reaction time demonstrated that either motivational instructions and/or alert hypnotic inductions improved performance (e.g. Ham & Edmonston, 1971; Rader, 1972). They raise the question whether Ss' relaxation following hypnosis may have slowed response time and canceled the effects of motivating instructions.

"When looking at all groups combined, Ss did not improve between pretreatment and posttreatment. At follow-up, however, Ss showed significant improvement on two out of the three measures. This suggests that learning had occurred, but that

temporary inhibitory factors such as S restlessness and indifference observed by Es may have affected performance at posttreatment. The length of the task (90 minutes in one sitting) may have been responsible for the fatigue and boredom that seemed to set in. It is probable that the performance-enhancing instructions were not potent enough to counteract these effects. At follow-up (which took much less time) fatigue and boredom were apparently absent, hence typing improved. In addition, other factors may have affected performance (e.g., anxiety, lack of motivation). The data indicate that Ss of different ability levels responded differently over time.

"The results of the present study cast doubt on the utility of hypnosis in improving performance on a cognitive-motor task. Although there are many anecdotal reports of hypnosis improving performance, research studies indicate that hypnosis, with motivational instructions, is effective only in improving reaction time and not more complex measures of performance. This apparent inconsistency may be explained by considering the level of motivation of participants. It is likely that a person requesting hypnosis to help improve performance is more motivated than experimental Ss" (p. 48).

1981

Wallace, Benjamin; Hoyenga, Katharine Blick (1981). Performance of fine motor coordination activities with an hypnotically anesthetized limb. International Journal of Clinical and Experimental Hypnosis, 29, 54-65.

3 experiments were conducted to determine the effects of induced hypnotic anesthesia in S's dominant arm upon the performance of various motor coordination tasks. Experiment 1 assessed the ability of Ss to tap a pencil within a 20 mm diameter circle while the limb performing the task was or was not anesthetized. Experiment 2 determined the effect of hypnotic anesthesia upon the ability to perform a hand-turn task. Experience 3 considered the effects of hypnotic anesthesia on the ability to draw and duplicate a sine-wave pattern. IN all 3 experiments, hypnotic anesthesia adversely affected task performance. Their results were interpreted as indicating a possible relationship between induced hypnotic anesthesia and mimicked cerebellar dysfunction.

notic anesthesia on the ability to draw and duplicate a sine-wave pattern. IN all 3 experiments, hypnotic anesthesia adversely affected task performance. Their results were interpreted as indicating a possible relationship between induced hypnotic anesthesia and mimicked cerebellar dysfunction.

"Although the induction of hypnotic anesthesia in a limb appears to mimic cerebellar dysfunction or damage, the present authors are not implying that this is actually happening. In fact, there are few physiological correlates of hypnosis or hypnotic anesthesia (Evans, 1979; Sarbin & Slagle, 1979) and, to date at least, cerebellar involvement does not appear to be one of them. There appears to be a curious relationship, however, between performance on a motor task as a function of induced hypnotic anesthesia in a limb and as a function of cerebellar damage. This relationship may simply be coincidental at best but before it can be dismissed

as such, further experimentation should take place to study this interesting phenomenon" (p. 61).

1980

Russell, Robert J. (1980). The effects of hypnosis and mastery imagery on task performance (Dissertation, Western Michigan University). Dissertation Abstracts International, 41 (n6-B), 2368. (Order No. DA 8027229)

"The purpose of this study was to determine the efficacy of combining mastery imagery with hypnosis to facilitate performance on a motor task, and to identify the variables which are responsible for such an effect. 99 students were pretested on the Pursuit Rotor Task and screened for hypnotic susceptibility. From this screening, 40 high susceptibility Ss were randomly assigned to one of four conditions: (1) hypnosis and mastery imagery, (2) hypnosis, (3) mastery imagery (H) and (4) no-treatment control. Ten low susceptibility Ss were directly assigned to a second mastery imagery (L) condition which served as a special comparison group. Following the treatment intervention, Ss were posttested on the Pursuit-Rotor Task and were asked to complete a questionnaire regarding their experience in the experiment. ANOVA found no significant differences among the five groups" (p. 2368).

Salzberg, H. C.; DePiano, F. A. (1980). Hypnotizability and task motivating suggestions: A further look at how they affect performance. International Journal of Clinical and Experimental Hypnosis, 28 (3), 261-271.

An attempt was made to ferret out the separate effects on cognitive performance of hypnotic susceptibility, task motivating suggestions, and the hypnotic trance state. An equal number of susceptible and unsusceptible Ss were given 3 cognitive tasks, first to ascertain their baseline performances, and then again following either a traditional hypnotic induction, an alert trance induction or a short interview. All Ss were given task motivating suggestions prior to administering the alternate form of the 3 tasks. An additional control group of Ss was used to assess practice effects. Results indicated that task motivating suggestions were effective in enhancing performance for all groups on the digit symbol and abstract reasoning tasks but not on the memory task. Waking suggestion Ss performed as well as hypnotized SWs when both groups of Ss were given task motivating suggestions. It was concluded that when the experimental design of a study incorporates necessary controls, hypnosis does not facilitate performance.

This paper reviews a long term research project relating hypnotic susceptibility to performance and personality variables. Several experiments indicated that people who are low in hypnotic susceptibility try harder than high susceptibles for maximum performances on strength, endurance, psychomotor coordination, and cognitive tests, though high susceptibles are generally more pleased with their own performances. Other experiments indicated that people of high hypnotic susceptibility have slower brain-wave patterns under relaxed, nonhypnotic conditions, than do low susceptibles. These findings, together with a third set of

findings on the developmental character of hypnotic susceptibility, led to the theory that hypnotic susceptibility and brain-wave patterns are both inversely correlated with achievement motivation and with its developmental roots in childhood independence training. An elaborate research program was initiated to investigate the hypothesized relationships.

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

**1970**

**Sakata, Kenneth I.; Anderson, John P. (1970). The effects of posthypnotic suggestion on test performance. International Journal of Clinical and Experimental Hypnosis, 18 (1), 61-71.**

Tested 45 undergraduates preselected for hypnotizability on 2 learning tasks by E and retested on the tasks by other Es a mo. later. Before being retested Ss were randomly assigned to 1 of 3 treatment conditions: (a) a posthypnotic suggestion condition, (b) a waking suggestion condition, and (c) a hypnosis-no-suggestion condition in which Ss were merely dehypnotized without exhortative instructions. Es were blind to the experimental design. Analyses of covariance indicate that the posthypnotic suggestion group performed more rapidly and accurately on a Rational Learning Test (RLT), but not on a Digit Symbol Test (DST), than the waking suggestion group. The posthypnotic suggestion group did not differ from the hypnosis-no-suggestion group, which also performed more accurately but not more rapidly than the waking suggestion group on the RLT. There were indications that posthypnotic suggestions had interfered with performance on the DST, which involved motor manipulations. Findings supported previous studies indicating differences between a posthypnotic and waking suggestion group in task performance. No definite conclusions to account for the differences could be offered. (Spanish & German summaries) (18 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1965**

Evans, Frederick J.; Orne, Martin T. (1965). Motivation, performance, and susceptibility to hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (2), 103-116.

Earlier reports found that the waking base level performance of Ss who are relatively insusceptible to hypnosis is higher than the waking base level of highly susceptible Ss on tasks of muscular strength, endurance, coordination, and verbal learning and that any increment in performance under hypnosis tends to be at least as great with insusceptible Ss as with highly susceptible Ss. These previous studies were carefully replicated, but the results were not confirmed. No differences in base level or hypnosis performance were found, except for poorer hypnosis performance of Ss of medium susceptibility to hypnosis, arising in part from the emphasis on relaxation in the induction procedure, and in part because of subtle demand characteristics present in the counterbalanced experimental design. (22 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

McCord, Hallack (1965). Trance induction under unusual circumstances. International Journal of Clinical and Experimental Hypnosis, 13, 96-102.

In order to obtain a test under naturalistic field conditions of the possible facilitory or inhibitory effects of ongoing tasks on hypnotizability and the interaction of such effects with S's set either to oppose or not oppose entering hypnosis, a series of Ss were hypnotized either singly or in groups while they were performing a variety of tasks typical of those encountered in office or factory situations. Included were such tasks as typewriting, reading a book, engaging in creative writing, performing the Bennett Hand Tool Dexterity and the Minnesota Rate of Manipulation tests, and performing the Pennsylvania Bi-Manual Worksample. In many cases, it was found that hypnosis could be induced under these conditions. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Naruse, Gosaku (1965). The hypnotic treatment of stage fright in champion athletes. International Journal of Clinical and Experimental Hypnosis, 13 (2), 63-70.

The use of direct hypnotic suggestion, posthypnotically produced autohypnosis, and self-hypnosis in conjunction with autogenic training and progressive relaxation in the treatment of "stage fright" in athletes is discussed. Illustrative case histories drawn from a sample of athletes participating in the 1960 Olympic Games are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Levitt, Eugene E.; Brady, J. P. (1964). Muscular endurance under hypnosis and in the motivated waking state. International Journal of Clinical and Experimental Hypnosis, 12, 21-27.

8 female Ss scoring at least 10 on the Stanford Hypnotic Susceptibility Scale were required to hold a weight in the outstretched hand in 3 states: (a) under hypnosis,

(b) under hypnosis with the upper arm and shoulder anesthetized hypnotically, and (c) in the waking state with motivation provided by a verbal exhortation and monetary payment. Order of performance in the 3 states was varied. No significant differences among states were found. The interaction between states and orders was significant, but it appears more likely to be the result of intersubject variability rather than of position or fatigue effects. Ss' expectancies and estimates of performance time, obtained postexperimentally, did not appear to be related to performance itself. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

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Moskowitz, Arnold E. (1964). A clinical and experimental approach to the evaluation and treatment of a conversion reaction with hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (4), 218-227.

A combination of hypnotherapeutic techniques within a clinical and experimental context provided a method of understanding, evaluating, and predicting the course of a conversion reaction. During waking and hypnotic conditions, 5 trials of dynamometer presses were obtained from a patient having primary symptoms of paralysis of his left arm. Difference scores between the left and right hands during waking and hypnotic conditions were evaluated. Findings were: (a) At the beginning of treatment, significant differences were found between the waking and hypnotic conditions (b) The largest differences between the waking and hypnotic conditions occurred during the early stages of treatment, while the smallest differences occurred on the final day of treatment. (c) With a complete remission of the patient's symptoms, no significant differences between the waking and hypnotic conditions were found. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Salzberg, Herman Carl (1960). The effects of hypnotic, posthypnotic, and waking suggestion on performance using tasks varied in complexity. International Journal of Clinical and Experimental Hypnosis, 8, 251-258.

5 Ss were instructed to respond with a reaction time key to colors and figures presented tachistoscopically. In the 1st series of experiments a steady reaction to figures (with the right hand) and to colors (with the left hand) was established. In the 2nd series figures and colors were presented 1 by 1 at random, and the Ss had to react according to the previously established habit. In the 3rd series combinations of figures and colors were shown and the Ss had to react with both hands at the same time. 4 different types of reactions were observed in the last series depending upon the shifting or the distribution of attention. From Psyc Abstracts 36:01:3CE87P. From Psyc Abstracts 36:01:3CF06N. From Psyc Abstracts 36:01:3CF14L. From Psyc Abstracts 36:01:3CF17S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Personality Disorder

2002

McNeal, Shirley A. (2002). A character in search of character: Narcissistic personality disorder and ego state therapy. American Journal of Clinical Hypnosis, 45 (3), 233-243.

The individual diagnosed with narcissistic personality disorder presents with grandiosity, extreme self-involvement, and lack of interest in and empathy for others. This paper reviews current theories concerning the development and treatment of this disorder, and presents a case study in which ego state therapy was successfully utilized and integrated into hypnotically facilitated psychotherapy with a 48-year-old man diagnosed with narcissistic personality disorder. The ego state model of treatment is described and demonstrated with case material. Initially ego states that reveal the grandiosity are accessed. As therapy progresses, ego states that hold the underlying feelings of emptiness, rage, and depression are able to emerge. With further treatment, transformation and maturation of the ego states occur, reflecting the changes in internal structure and dynamics as well as improvement in external interpersonal relationships. Issues concerning ego state therapy as utilized with personality disorders are discussed and contrasted with more traditional methods of treatment. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm,

accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

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**1995**

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

**1991**

Chu, James A.; Dill, Diana L. (1991). Dissociation, borderline personality disorder, and childhood trauma. American Journal of Psychiatry, 148 (6), 812.

Comments on the article by S. N. Ogata et al (see PA, vol 78:4681) on the high prevalence of childhood physical and sexual abuse in inpatients with borderline personality disorder. It is suggested that dissociative symptoms in borderline patients may simply be a less severe form of intrapsychic fragmentation than multiple personalities.

**1990**

Fink, D.; Golinkoff, M. (1990). Multiple personality disorder, borderline personality disorder, and schizophrenia: A comparative study of clinical features. Dissociation, 3, 127-134

Found that MPD was differentiated from schizophrenia on the great majority of test measures. MPD could not be distinguished from borderline personality on the MMPI or MCMI but differed in many clinical features, severity of abuse, and dissociative symptoms

1988

Kemp, Kristen; Gilbertson, Alan D.; Torem, Moshe (1988). The differential diagnosis of multiple personality disorder from borderline personality disorder. Dissociation, 1 (4), 41-46.

Considerable controversy [sic] surrounds the relationship between multiple personality disorder (MPD) and borderline personality disorder (BPD). Some authors argue that MPD is a variant of BPD, and most agree that the differential diagnosis of the two is often very difficult. In this article data are presented from a study comparing historical, demographic and psychological testing variables between the two groups. No statistically significant differences were found between the two groups on these variables. However, certain trends emerged which may serve as a catalyst for further research. The relationship between the disorders may be complex; clinicians may need to use more sophisticated research techniques and develop more sensitive diagnostic criteria before it is understood.

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1987

Fromm, Erika (1987). Significant developments in clinical hypnosis during the past 25 years. International Journal of Clinical and Experimental Hypnosis, 35 (4), 215-230.

In the past 25 years, important changes have taken place in clinical hypnosis. It has become scientifically respectable as the field has moved from publishing anecdotal case reports to testing hypotheses on significant samples of patient populations. In addition, new treatment approaches have been introduced, foremost among them hypnoanalysis of psychotic, borderline, narcissistic, and post-traumatic stress disorders, as well as hypno-behavioral methods for the treatment of habit disorders and somatic and psychosomatic diseases. The former treatment approaches combine hypnotic techniques with the newer psychoanalytic methods derived from object relations and self-theories; the latter combine hypnosis with the methods of behavioral medicine and attempt to teach the patient voluntary control over ordinarily involuntary somatic processes. In general, while formerly the therapeutic use of hypnosis involved mainly direct and indirect suggestion, in the last 25 years hypnotherapists of all persuasions have become more and more convinced of the important role imagery plays in the application of hypnosis for therapeutic purposes. Several areas of clinical application are described.

Kluft, Richard P. (1987). Unsuspected multiple personality disorder: An uncommon source of protracted resistance, interruption, and failure in psychoanalysis. Hillside Journal of Clinical Psychiatry, 9 (1), 100-115.

Multiple personality disorder (MPD) is being recognized with increasing frequency. A great imitator, it may be encountered among patients who appear to have a wide range of other diagnoses, and have been in treatment for years without the presence

of MPD being discovered. Nine of 241 MPD patients interviewed by the author, 3.7%, had been accepted for psychoanalysis. In only one case had the diagnosis been appreciated by the analyst prior to his accepting the patient for analytic treatment. Four patients were profoundly resistant and/or inaccessible to analysis for protracted periods. In one of these cases the diagnosis became clear and successful analysis was concluded, but three analyses ended unsuccessfully with the diagnosis still unknown. Two patients' analyses ended unsuccessfully with the diagnosis still unknown. Two patients' analyses were interrupted due to abrupt regressive events initially perceived to indicate severe ego weakness incompatible with sustaining an analytic process, but later appreciated as signs of MPD. In three cases it appeared that the patients' being accepted for analysis triggered the emergence of the dissociative process, and either the patient or the analyst decided to pursue a different form of therapy. Unsuspected MPD appears to account for a small percentage of stalemates, failures, interruptions, and early flights from analysis.

"In most other literatures, dissociation is considered reflective of a capacity for hypnotizability, without any connotation of a particular level of psychopathology. There is solid evidence that hypnotizability is intrinsic to MPD (Bliss, 1980, 1983, 1984; Lipman, Frischholz, and Braun, 1984), and a borderline level of organization is not (Horevitz and Braun, 1984).

It is more parsimonious and consistent with clinical experience and research findings to infer that the splitting noted in pregenital pathologies and the splitting found in MPD are different although enticingly similar phenomena, and that in some patients they coexist in such a way that one could easily agree that a patient was both MPD and borderline. The linguistic confusion is to be deplored, and hopefully to be remedied in the near future" (p. 111).

Malon, Don W.; Berardi, Deborah (1987). Hypnosis with self-cutters. American Journal of Psychotherapy, 41 (4), 531-541.

Contends that hypnotic techniques can add to effective therapy with self-cutting patients in the context of a strong, communicative, and flexible relationship. "Neutral hypnosis" (i.e., the trance state in which specific suggestions are avoided so that physiological arousal is minimized) and relaxation techniques can be employed to counteract the frightening depersonalization that leads to the cutting. Techniques of uncovering and controlled regression are also possible. Hypnotic relaxation techniques, such as breath counting, positive imagery, and clinical vignettes are provided as illustrations.

1986

Copeland, Donna R. (1986). The application of object relations theory to the hypnotherapy of developmental arrests: The borderline patient. International Journal of Clinical and Experimental Hypnosis, 34 (3), 157-168.

The present paper reviews the literature on object relations theory with respect to the borderline patient and, within this perspective, discusses its application to

hypnotherapy. Emphasis is placed on developmental aspects of the attachment-separation-individuation process that relate to certain characteristics of the hypnotic experience and the therapeutic relationship, including transference, regression, and the internalization of positive aspects of the therapeutic alliance. The therapeutic process as described parallels normal developmental phases. Specific techniques to facilitate therapeutic integration are outlined and illustrated with case examples. These help to structure the internalization of the therapeutic relationship as a foundation to restructuralization of the patient's representational world.

1984

Jensen, Peter S. (1984). Case report of conversion catatonia: Indication for hypnosis. American Journal of Psychotherapy, 38 (4), 566-570.

Describes the successful hypnotic treatment of a 25-yr-old Black male who displayed symptoms of suicidal ideation, insomnia, and feelings of depression alternating with emptiness and boredom that led to an acute catatonic reaction. S met DSM-III criteria for borderline personality disorder. It is contended that since conversion mechanisms may underlie some presentations of catatonia, hypnosis may assist clinicians in the differential diagnosis of acute catatonic conditions.

Stava, L. (1984). The use of hypnotic uncovering techniques in the treatment of pedophilia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 350-355.

This case study describes the use of the hypnotic uncovering techniques of induced dreams (Sacerdote, 1967) and the affect bridge (Watkins, 1971) in reducing inappropriate sexual arousal in a male pedophile. Treatment effects were examined through the use of both psychophysiological measures of penile tumescence and psychological tests. The hypnotherapeutic treatment regime consisted of 25 sessions over approximately 9 months. At the end of treatment, psychophysiological measures revealed a definite reduction of sexual excitation to slides of prepubescent children. Psychological testing indicated reduced defensiveness as well as reduced sexual anxiety to adult women. Various hypnotherapeutic experiences which may have contributed to the treatment effects are discussed.

Watkins, John G. (1984). The Bianchi (L.A. hillside strangler) Case: Sociopath or multiple personality?. International Journal of Clinical and Experimental Hypnosis, 32 (2), 67-101.

The case of Kenneth Bianchi (the Los Angeles "Hillside Strangler") has been controversial ever since he was first arrested in January, 1979. This contributor saw Bianchi as a consultant on March 21st and 22nd, 1979. Under hypnosis, he manifested what appeared to be a multiple personality. An underlying personality, "Steve," whose existence was apparently unknown to Bianchi, claimed responsibility for the 2 murders in Bellingham and those in Los Angeles. As a

consequence, the court appointed 5 other consultants to examine the defendant. On April 20, 1979, I activated the Steve personality without a hypnotic induction. It described many murders in Los Angeles, indicating which ones he (Steve) had done and which ones Bianchi's cousin (Angelo Buono) did. The major personality (Ken) appeared to be amnesic to all this. 2 additional "personalities" were elicited by Martin Orne, another consultant. However, Orne would not accept the diagnosis of multiple personality. He diagnosed Bianchi as an "Antisocial Personality" (Sociopath) and claimed that he was a clever malingerer. He also asserted that Bianchi had never been hypnotized. The evidence, Rorschach tests, intelligence tests, handwriting samples, art creations, plus recorded sessions by Watkins, Orne and others, are analyzed. This writer concludes that the diagnosis of multiple personality is strongly supported.

1983

Baker, Elgan L. (1983). Resistance in hypnotherapy of primitive states: Its meaning and management. International Journal of Clinical and Experimental Hypnosis, 31 (2), 82-89.

This paper examines various aspects of resistance that become manifest in hypnotherapy with borderline, narcissistic, and psychotic patients. Specific clinical presentations are described and contrasted with forms of resistance encountered in work with neurotic patients. An ego psychology theoretical perspective is presented to conceptualize these more primitive resistance phenomena in terms of transference issues and dynamics relating to separation/attachment conflicts, and specific suggestions for management are outlined. 2 case examples are presented to demonstrate both conceptual and technical aspects of this approach.

Baker, Elgan L. (1983). The use of hypnotic dreaming in the treatment of the borderline patient: Some thoughts on resistance and transitional phenomena. International Journal of Clinical and Experimental Hypnosis, 31 (1), 19-27

This paper examines some phenomena of resistance to learning and utilizing self-hypnosis which may occur in the treatment of patients with borderline level ego organization and pathology. Conflicts around separation, individuation, and the constancy of self/other representations are highlighted as significant dynamic factors central to this resistance. The use of hypnotic dreams and the facilitation of transitional relatedness through dream processes and symbols are suggested and discussed as avenues for the clinical management of resistance to auto-hypnosis in hypnotherapy with these patients.

Epstein, S. J.; Deyoub, P. L. (1983). Hypnotherapeutic control of exhibitionism: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (2), 63-66.

Hypnotherapy was used to treat a 30-year-old exhibitionist in 8 sessions. Under hypnosis, he explored causes for his behavior, developed tension reducing techniques, and learned a posthypnotic emergency response. If he felt exposure

imminent, his fists would clench, precluding the possibility of exposure. At 2-year follow-up, there were no known exposures.

Polk, W. M. (1983). Treatment of exhibitionism in a 38-year-old male by hypnotically assisted covert sensitization. International Journal of Clinical and Experimental Hypnosis, 31 (3), 132-138.

This case study reports the successful treatment of a 38-year-old male with a 14 year history of exhibitionism. A multifaceted treatment program was used, involving hypnotically assisted covert sensitization and brief marital therapy. Hypnosis was used to develop psychic aversive and reinforcing stimuli from the patient's past experience. The value of hypnosis in enhancing imagery in cognitive treatment approaches and the need for only experienced clinicians to utilize the present intervention strategy is discussed.

1981

Kellerman, J. (1981). Hypnosis as an adjunct to thought stopping and covert reinforcement in the treatment of homicidal obsessions in a twelve-year-old boy. International Journal of Clinical and Experimental Hypnosis, 29 (2), 128-135.

A combined cognitive behavioral approach was used to successfully treat matricidal obsessions in an otherwise psychologically well-adjusted 12-year-old boy. The primary problem was conceptualized as anxiety over loss of control. Therapeutic techniques included re-defining of symptoms, thought-stopping, hypnotic enhancement of imagery in order to facilitate cognitive restructuring, covert reinforcement, home practice, and paradoxical instructions to produce the symptom. A decline in obsessions began after 3 sessions and total remission was observed after 6 sessions (10 weeks). 2-year follow-up revealed no recurrence of symptoms. The value of hypnosis as an adjunct to behavior therapy with children is discussed.

Scrignar, C. B. (1981). Rapid treatment of contamination phobia with hand-washing compulsion by flooding with hypnosis. American Journal of Clinical Hypnosis, 23, 252-257.

Two obsessive-compulsive patients with contamination phobias and hand-washing compulsions are presented. Psychoanalytic psychotherapy had resulted in little change. Behavior therapy techniques of thought-stopping, systematic desensitization, progressive muscle relaxation, cognitive restructuring and self-imposed response prevention were first used, resulting in some subjective improvement, but no change in the hand-washing rate. Hypnosis, emphasizing relaxation, positive suggestion and corrective information provided further temporary subjective improvement but little change in compulsive rituals. Hypnosis, combined with the behavioral technique of flooding, produced rapid improvement. The patients maintained improvement at seven years and two years. Flooding under hypnosis may afford obsessive-compulsive patients a rapid and economical therapeutic procedure.

**1979**

**Bauer, Rudolph (1979). The use of trance in working with the borderline personality. Psychotherapy: Theory, Research and Practice, 16 (4), 371-375.**

**Describes in detail those aspects of trance that facilitate the ongoing therapy process with the borderline personality and discusses the utilization of trance phenomena to work directly with the borderline person's experience and particular ego deficits. The discussion is developed from an object relations viewpoint, and 2 representative cases are presented.**

**1975**

**Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.**

**Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.**

**Berderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.**

1954

Bowers, Margaretta; Berkowitz, Bernard; Brecher, Sylvia (1954). Hypnosis in severely dependent states. Journal of Clinical and Experimental Hypnosis, 2, 2-12.

[From the Introduction] "The patient with deep dependency needs, usually the schizophrenic or borderline case, presents difficult treatment problems, which make great demands on the personality of the therapist. A good therapeutic result in these cases requires a dependable positive transference. Yet the presence in the patient of ungratified infantile needs occasions severe hostility, which initially impedes the positive transference and continually renders its management difficult. We have found in hypnosis a procedure equal to these difficulties and offering, with reasonable consistency, a means of significantly improving the status of a patient group, until quite recently considered beyond the reach of psychotherapy. We consider in this paper, why and how hypnosis helps these patients, and some of the psychological hazards it presents for the therapist" (p. 2).

[From the section titled "Implications"] "Hypnosis affords real advantages, but it is also hard work, demanding far more from the therapist in skill and activity, especially in the hypnotic training of fragmented, distracted subjects. Consequently, where the patient could be reached by other means, hypnosis was not attempted" (p. 12). "There is evidence that hypnosis provides a respite, a holding operation, which permits the marshalling of positive forces within the patient. There are also indications that through hypnosis the patient is more quickly brought to a point of social remission, although the over-all time required in treatment is not materially lessened" (p. 12).

## Personality

1994

Csoli, Karen; Ramsay, Jason T.; Spanos, Nicholas P. (1994, August). Psychological correlates of the out-of-body experiences--a reexamination. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

12% of population reports an out-of-body experience (OBE) sometime in their lives. They leave their body and can see self from the outside. Awareness is confined to the new point of view, not fragmented; there is unimpaired intellectual ability; feelings of detachment, completeness, well being, and profound relaxation. Can occur under stress or deep relaxation; not while driving a car.

Psychological correlates aren't known. Studies are inconclusive with respect to belief systems (religious, death anxiety, etc.); measures of absorption, hypnosis, imaginative ability, imagery controls. Recent Carlton study with 87 Ss (33 had OBE) got results we didn't expect. They completed questionnaires, were tested for hypnotizability, had an interview re OBE experience.

This study found the OBE-experiencing people had higher levels of anxiety, psychosomatic symptoms, and panic attacks. They were also higher on magical

thinking, perceptual aberration, and Schizophrenia scores. They didn't differ on mysticism, levels of drug or alcohol use, or level of self esteem.

1993

Council, James R.; Grant, Debora L. (1993, October). Context effects: They're not just for hypnosis anymore. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Context effects in Absorption research are found in correlations, not in mean differences. Original paper has been replicated and yet results are not always significant. Now we are trying to generalize the effect to other areas: an individually administered measure will influence other measures made in the same session.

Other tests that correlate with hypnosis are studied with 2 x 2 design, enabling order effects and same vs separate contexts to be studied. Or two tests are administered at two points in time, with "bridges" between the two sessions (e.g. same experimenter, same consent forms, etc.) As one adds more and more bridging cues, the correlation of Absorption with other Tellegen MPQ subscales increases.

Same context assessment increases correlation between hypnotizability and 6-8 other scales; with childhood trauma scale when trauma scale is administered first; with beliefs in paranormal phenomena when the measure is related to an adjustment scale. The same inflation of correlations was found in Beck Depression scale research.

These results are of concern because we may have to re-do a lot of personality research that suggested correlation between personality test variables, as the correlations may be inflated by the effects of testing in the same context.

Glisky, Martha L.; Kihlstrom, John F. (1993). Hypnotizability and facets of openness. International Journal of Clinical and Experimental Hypnosis, 41 (2), 112-123.

Absorption, a correlate of hypnotizability, is related to a broader dimension of openness to experience, one construal of the "Big Five" structure of personality. But openness itself is very heterogeneous, and some of its facets may be unrelated to hypnotizability. A total of 651 subjects completed a questionnaire measuring three different aspects of openness -- absorption, intellectance, and liberalism -- before receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A. The three dimensions were only modestly related to each other, and only absorption was significantly related to hypnotizability. Adding intellectance and liberalism to absorption did not enhance the prediction of hypnotizability. The results indicate that the various facets of openness are rather different from each other and that the "Big Five" structure may need to be expanded. Absorption and hypnosis share a kind of imaginative involvement that is not necessarily part of other kinds of openness, such as intellectance and liberalism.

1992

Barrett, Deidre (1992). Fantasizers and dissociaters: Data on two distinct subgroups of deep trance subjects. Psychological Reports, 71, 1011-1014.

The study delineated two subgroups of highly hypnotizable subjects. The first subgroup (fantasizers) entered trance rapidly, scored high on absorption (mean of 34 on the 37-item Absorption Scale), and described hypnosis as much like their rich, vivid, and very realistic waking fantasy life. None of the fantasizers experienced unsuggested amnesia, and 5/19 failed to produce suggested amnesia. Only 2/19 fantasizers described hypnosis as very different from their other experiences. The earliest memories of fantasizers were all identified as occurring before age 3, and before age 2 for 11 of 19. The second subgroup (dissociaters) took time to achieve a deep trance (unlike Wilson and Barber's fantasy-prone subjects, but they did achieve as deep a trance as fantasizers), experienced hypnosis as different from any prior experiences, and were more likely to exhibit amnesia for both hypnotic experience and waking fantasies. None of the dissociaters described their waking imagery as entirely realistic, and the earliest memories in this group were all over the age of 3 (mean age - 5). Of the 15 dissociaters, 7 scored below the norm on the Absorption Scale (Mean - 26).

Lynn, Steven Jay; Sivec, Harry (1992). The hypnotizable subject as creative problem-solving agent. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 292-333). Guilford Press.

These notes are taken only from the section of this chapter that deals with Hypnotic Responding, Imaginative Activity, and Expectancies, and they treat of the concept of nonvoluntary responding (pp 315-316). Other topics covered in the chapter include: Imagination, Fantasy, and Hypnosis Theories; The Hypnotizable Subject as Creative Problem-Solving Agent; Hypnosis and Subjects' Capability for Imaginative Activity; Goal-Directed Fantasy: Patterns of Imaginative Activity during Hypnosis; Hypnosis and Creativity; and a Conclusion.

Several studies manipulated expectancies re the relationship between imagination and involuntariness. When Ss were told that "good" hypnotic subjects could (or could not) resist suggestions, "this information affected their ability to resist the hypnotist and tended to affect subjects' report of suggestion-related involuntariness ... [Lynn, Nash, Rhue, Frauman, & Sweeney, 1984]. Furthermore, subjects who successfully resisted suggestions and subjects who failed to do so reported comparable levels of hypnotic depth and imaginative involvement in suggestions.

"Spanos, Cobb, and Gorassini (1985) conducted a similar experiment in which they found that hypnotizable subjects who were instructed that they could become deeply involved in suggestions and yet resist them successfully resisted 95% of the suggestions and rated themselves as maintaining voluntary control over their behavior. Thus, subjects are able to resist nearly all of the suggestions when resistance is facilitated by situational demands. It is worth noting that subjects in this research who resisted hypnotic suggestions rated themselves as just as deeply

involved in the suggestions as Ss who failed to resist suggestions after being informed that deeply hypnotized subjects were incapable of resisting suggestions" (pp. 315-316).

Lynn, Snodgrass, et al. (1987). showed that hypnotizable Ss who were just "imagining" along with suggestions but instructed to resist responding to motoric suggestions acted the way hypnotized Ss did in their earlier countersuggestion research: imagining subjects tended to move in response to suggestion (that "good" Ss responded in certain ways), despite being instructed to resist. In this study, with instructions designed to increase the use of goal directed fantasies (GDFs), low and high hypnotizable subjects reported equivalent GDF absorption and frequency of GDFs. However, highs responded more and reported greater involuntariness than lows, even when their GDFs were equivalent.

"A number of other studies have examined the effects of expectancies on imaginings and hypnotic behavior. Spanos, Weekes, and de Groh (1984) informed subjects that deeply hypnotized individuals could imagine an arm movement in one direction while their unconscious caused the arm to move in the opposite direction. Even though subjects so informed moved in the opposite direction, they imagined suggested effects and described their countersuggestion behavior as involuntary" (p. 317).

**1990**

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a

typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.]

"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).

"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.

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"The finding that blunTERS experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunTERS are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunTERS experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. International Journal of Psychosomatics, 37, 82-85.

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilita musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

Council, James R.; Huff, Kenneth D. (1990). Hypnosis, fantasy activity, and reports of paranormal experiences in high, medium and low fantasizers. British Journal of Experimental and Clinical Hypnosis, 7 (3), 9-15

The personality construct "fantasy-proneness" (Wilson and Barber, 1983a) has important implications for theories of hypnosis, imagination, and paranormal phenomena. The present study compared characteristics of persons who received high, medium or low scores on a self-report measure of fantasy-proneness. Results revealed that the three groups differed significantly on measures of absorption, daydreaming styles, and reports of paranormal experiences. However, although high fantasizers were significantly more hypnotizable than low fantasizers, they did not differ from the middle group. These results are used to further characterize fantasy-prone persons, and implications of extremely low fantasy-proneness are discussed.

Lombard, Lisa S.; Kahn, Stephen P.; Fromm, Erika (1990). The role of imagery in self-hypnosis: Its relationship to personality characteristics and gender. International Journal of Clinical and Experimental Hypnosis, 38 (1), 25-38.

30 volunteer Ss practiced self-hypnosis for approximately 4 weeks and wrote a record of their experiences in a diary following each session. Imagery produced during self-hypnosis was coded in 2 ways: the imagery was either reality oriented or it was fantastic and had primary process qualities. Levels of imagery production remained virtually the same over a 4-week period. Self-hypnotic imagery was significantly greater for the female Ss than for the male Ss, particularly primary process imagery. Verbal expressivity (measured as the average number of words per page of each S diary) was calculated to control for the effects of verbal production on Ss' imagery scores. When imagery scores were standardized based on verbal expressivity, female Ss still produced significantly more primary process imagery than male Ss. Personality characteristics (assessed by standardized personality inventories) were examined in relation to self-hypnotic imagery. "Impulse Expression" was positively related to primary process imagery for the female Ss. "Outgoingness" was positively related to primary process imagery for the entire sample, but especially for the female Ss.

1989

Buss, A. H. (1989). Personality as traits. American Psychologist, 44, 1378-1388.

Personality traits have been challenged as unimportant determinants of behavior, but evidence suggests that traits may carry as much variance as experimental manipulations. Asking whether traits or manipulations control more variance is useless because researchers can plan paradigms that favor one or the other. When traits and manipulations complement each other there are several major kinds of interaction. The trait-manipulation dichotomy is analogous to the person-environment dichotomy, and both are related to active versus passive models of behavior. Trait variance is increased by aggregating across responses, situations, and time. Underlying aggregation are the issues of units and classes of behavior. Individual responses are on a continuum of breadth that extends successively upward to response classes, personality traits, and higher order traits. Broad and narrow traits each have advantages and disadvantages. Recent research has led to novel personality traits and to knowledge about the origin and maintenance of traits. If there is to be a specialty called personality, its unique and therefore defining characteristic is traits.

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. Cognition and Emotion, 3 (1), 1-26

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic

moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

Hoyt, Irene P.; Nadon, Robert; Register, Patricia A.; Chorny, Joseph; Fleeson, William; Grigorian, Ellen M.; Otto, Laura; Kihlstrom, John F. (1989). Daydreaming, absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 332-342.

It appears that the consistent correlation between hypnotizability and positive-constructive daydreaming is carried largely by three subscales--Acceptance of Daydreaming, Positive Reactions to Daydreaming, and Problem-Solving. Number other subscales consistently correlated with hypnotizability.

When absorption was taken into account, daydreaming activity made no independent contribution to the prediction of hypnotizability. "The present results differ from Crawford's (1982) somewhat, however, in terms of the specific aspects of daydreaming activity that are associated with hypnosis. Crawford found that hypnotizability correlated consistently (i.e., in both men and women) with three subscales tapping imagery variables: the presence of visual and auditory imagery in daydreams and the hallucinatory vividness of daydream imagery. In the present study, the imagery subscale, including both visual and auditory items, did not correlate significantly with hypnotizability; unfortunately, the hallucinatory vividness subscale is not represented on the short form (SIPI) of the daydreaming questionnaire used in this study. Crawford (1982) did not find consistent correlations between hypnotizability and scales measuring acceptance, positive reactions, and problem solving--the subscales that consistently yielded significant correlations in the present study. Not too much interpretive weight should be given to any of the correlations between hypnotizability and daydreaming subscales, until a full replication with reliable subscale measurements (such as those provided by the long, original IPI) has been completed. The important point made by Crawford (1982), and confirmed in the present study, is that hypnotizability is related to positive-constructive rather than guilty-dysphoric daydreaming" (p. 338). The two studies agree that absorption and hypnosis are not correlated with daydreaming scales reflecting poor attentional control. Given the theoretical emphasis in both domains on the narrowing of attention and exclusion of potentially distracting input, negative correlations with this aspect of daydreaming might have been expected.

Kahn, Stephen P.; Fromm, Erika; Lombard, Lisa S.; Sossi, Michael (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. International Journal of Clinical and Experimental Hypnosis, 37, 290-304.

Studied multidimensional nature of self-hypnotic depth in 22 high hypnotizables who volunteered for self hypnosis research. On personality scales, they were

distinguished from the population at large by: strong theoretical orientation, high level of curiosity, disregard for opinions of others, and high Mf scale on the MMPI. Used the Stanford Profile Scale, SHSS:C and HGSHS:A, which measure the entire range of phenomena ordinarily used in experimental studies of hypnosis, including ideomotor phenomena, hypnotic fantasy and dreams, hypermnasias and age regressions, analgesias, negative and positive hallucinations, amnesias, posthypnotic phenomena, and cognitive and affective distortions. They asked Subjects to experience self hypnosis for 60 minutes/day for 4 weeks. Journals were coded for imagery production by scoring for both reality-oriented and primary process imagery. Subject had been taught to monitor their hypnotic depth using a slightly revised version of the Extended North Carolina Scale (ENCS) of Tart (1979). Previously, ENCS has been used only with hetero-hypnotic Subjects. The self-reports of depth using ENCS correlated highly with hypnotizability as measured by the Revised Stanford Profile Scale of Hypnotic Susceptibility... and with imagery production. Results demonstrate that ENCS scores are also a valid indicator of self-hypnotic depth among highly hypnotizable Subjects. Furthermore, they indicate that both hetero- hypnotizability and imagery production are related to self-hypnotic depth, but that the association between imagery and hypnotizability is due to their individual relationships to self-hypnotic depth. and hypnotizability is due to their individual relationships to self-hypnotic depth.

Malott, James M.; Bourg, Audrey L.; Crawford, Helen J. (1989). The effects of hypnosis upon cognitive responses to persuasive communication. International Journal of Clinical and Experimental Hypnosis, 37, 31-40.

Several writers have suggested that hypnotic responsiveness is directly related to the content of S's covert self-statements. To test this notion, low and high hypnotizable subjects in either hypnosis or waking conditions were exposed to a recorded message advocating that college seniors be required to pass a comprehensive exam in order to graduate. Following message presentation, subjects listed all of the thoughts which occurred to them while listening to the message; these thoughts were later coded as counterarguments, favorable thoughts, or neutral thoughts. Hypnotized subjects generated significantly fewer counterarguments and agreed more with the message than waking subjects. In addition, high hypnotizable subjects (in both waking and hypnosis conditions) produced significantly more favorable thoughts and agreed more with the message than low hypnotizability subjects. Results, therefore, provided a demonstration of the differential impact of context (induction) and trait (hypnotizability level) upon different cognitive phenomena. Implications for the occurrence of hypersuggestible behavior are discussed.

N = 48 (24 highs, 24 lows, blocked on sex and hypnotizability level, then randomly assigned to one of two conditions).

Hypnosis subjects generated significantly fewer counterarguments than waking subjects (12% vs 45%). Main effect for hypnotizability level was nonsignificant, as was the condition x hypnotizability interaction.

High hypnotizable subjects generated significantly more favorable thoughts than low hypnotizable subjects (28% vs 12%). The main effect for condition was nonsignificant, as was the condition x hypnotizability interaction.

Unexpectedly, hypnosis subjects produced a significantly greater number of neutral thoughts. The main effect for hypnotizability level did not reach significance, nor did the condition x hypnotizability interaction.

"Thus, as suggested by McConkey (1984), it may be the hypnotic context, rather than a hypnotic "state" which is responsible for reduced levels of counterarguing. ... the data indicate that an induction decreases counterarguing among high and low hypnotizable subjects alike; on the other hand, the incidence of favorable thoughts is related only to hypnotizability level and not to the hypnosis context. ... the present findings suggest that both context and trait play a role in the occurrence of hypnotic behavior, although each may do so by impacting upon different cognitive responses.

There appears to be a relationship between counterarguing and acceptance of the persuasive communication in the present study. First, there was a significant negative correlation between those two measures (collapsing across conditions), indicating that higher levels of counterarguing were associated with lower levels of communication acceptance. Second, subjects in the hypnosis condition who counterargued less than waking subjects, also indicated significantly higher levels of communication acceptance than waking subjects.

In a similar fashion, there appears to be a relationship between favorable thought production and communication acceptance. There was a significant positive correlation between the two measures, and high hypnotizable subjects who generated significantly more favorable thoughts than low hypnotizables, also produced higher scores on the attitude measure.

measures, and high hypnotizable subjects who generated significantly more favorable thoughts than low hypnotizables, also produced higher scores on the attitude measure.

They attribute the greater number of neutral thoughts for hypnosis subjects to minor differences in the instructions (p. 38).

1988

Council, James R.; Greyson, Bruce; Huff, Kenneth D. (1988, November). Reports of paranormal experiences as a function of imaginative and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Wilson and Barber (1983) have suggested that some excellent hypnotic subjects ("fantasy prone" persons) may be more likely to report paranormal experiences than the rest of the population. Council and Greyson (1985), studying a sample of subjects who had reported near-death experiences (NDEs), found a significant relationship between fantasy-proneness and NDEs, and a much stronger relationship between fantasy-proneness and reports of paranormal experiences in general. This paper presents new data from the study of NDE reporters and a

replication and extension of those findings with a sample not selected for NDEs. These data indicate a strong association between fantasy-proneness and reports of paranormal experiences. Hypnotic susceptibility bears a weaker relationship with such reports that appears dependent upon variance shared with measures of fantasy-proneness. Other data from these studies suggests that both imaginative ability and reports of paranormal experiences may be related to a history of stressful or traumatic childhood experiences.

Gudjonsson, Gisli (1988). Interrogative suggestibility: Its relationship with assertiveness, social-evaluative anxiety, state anxiety and method of coping. British Journal of Clinical Psychology, 27 (2), 159-166.

Investigated in 30 adults some of the theoretical components related to individual differences thought by the present author and R. Clark (1986) to mediate interrogative suggestibility as measured by a scale developed by the present author (1984). The variables studied were assertiveness, social-evaluative anxiety, state anxiety, and the coping methods generated and implemented during interrogation. Low assertiveness and high evaluative anxiety correlated moderately with suggestibility, but no significant correlations emerged for social avoidance and distress. State anxiety correlated significantly with suggestibility, particularly after negative feedback had been administered. Coping methods (active-cognitive/behavioral vs. avoidance) significantly predicted suggestibility scores. The findings give strong support to the present author's theoretical model.

Hines, Larry; Handler, Leonard (1988, November). Hypnotizability and ego functions. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Researchers employed Bellak's Ego Functions Test (based on the clinical interview). Ss were 47 students and 1 non-student, some of whom had previously experienced hypnosis. They were all volunteers. Studied 12 ego functions. Used plateau hypnotizability which was defined as no improvement in Stanford Hypnotic Susceptibility Scale Form C after two hypnotic inductions; if they did not reach a plateau by Session 4, the highest score was used. Stanford Hypnotic Susceptibility Scale scores ranged 4-12. High 10-12, Medium 6-9, Low 4-5.  $\bar{x}=9.04$ ,  $SD=2.21$ .

On the Bellak Test, High 12-13, Medium 10-11 (average functioning.), Low 1-9. Range 5-13; widest range was in Adaptive Regression in Service of Ego Highest Mean = reality testing Lowest Mean = ARISE Majority fell into the medium range on all 12 ego functions measured.

A significant difference was found between High and Low hypnotizables on the following ego functions. [N.B. There may be transcription errors in the figures that follow.] 1. ARISE  $p<.02$   $r = .31$  Highs have greater ability to experience pleasure in regression. 2. Stimulus Barrier  $p<.003$  Highs are more flexible in their ability to separate from stimuli in their environment, Lows experienced stimulus overload. 3.

Autonomous Functioning  $p < .01$  Primary acct./ in attention, learning, memory, motor function. 4. Objective Relativity  $p < .07$  5. Regulating control of drive  $p < .06$  Multiple regression accounted for 33% of variance in 12 ego functions. Stimulus Barrier alone accounted for 14% ( $p < .005$ ); ARISE accounted for 5% ( $p < .01$ ). 47% of Ss were High hypnotizables, 42% were in the Medium range.

LeBaron, Samuel; Zeltzer, Lonnie K. (1988). Imaginative involvement and hypnotizability in childhood. International Journal of Clinical and Experimental Hypnosis, 36, 284-295.

2 pilot studies assessed the relationship between hypnotizability in children and extent of involvement in fantasy-related activities during early childhood. The Stanford Hypnotic Clinical Scale for Children and a structured interview questionnaire regarding fantasy activities based on previous work by Singer (1973) were given to 30 medical patients aged 6-18 years in the first study and to 37 healthy children aged 6-12 years from a school population in the second study. In both studies, hypnotizability correlated moderately (.42 and .39, respectively) with extent of involvement in fantasy-related activities. Results support Hilgard's (1979) findings that hypnotizability is related in part to the development of imaginative involvement in childhood.

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic

Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

-sizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI), and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

Lytle, Richard A.; Lundy, Richard M. (1988). Hypnosis and the recall of visually presented material: A failure to replicate Stager and Lundy. International Journal of Clinical and Experimental Hypnosis, 36, 327-335.

Stager and Lundy (1985) found hypnotic hypermnesia without increased memory errors. The present study, an attempted partial replication of Stager and Lundy (1985), presented Ss with free recall and multiple choice questions about a short movie they had seen a week earlier. The experimental Ss, who were hypnotized, given hypermnesia suggestions, and retested, did not generally increase their accurate memory scores on posttest; the Stager and Lundy (1985) findings were thus not confirmed. An increase in memory scores did occur, however, but only with high hypnotizable Ss, whether they were hypnotized or not, and only with multiple choice questions. The high hypnotizable Ss had the greatest increase in inaccurate memory scores on the free recall questions.

This study provides data on response tendencies by using two forms of question: recall (as in Stager & Lundy (1985) and recognition, from a 4-choice multiple choice format.

120 Ss were screened with Harvard Scale to yield 24 high (10-12) and 24 low (0- 4) hypnotizable Ss. They were randomly assigned to four groups (two recall conditions and two test form conditions).

Ss saw a 15-minute movie, "Posters," and a week later were tested: oral presentation of questions (on audiotape), alternating multiple-choice and recall formats, ABBA for 50% and BAAB for 50% of Ss. After 40 pretest questions they were hypnotized (or given attention-focusing awake instructions to count randomly occurring clicks barely audible over white noise for 15 minutes--described as a very important task). Then all Ss were told they would again hear 40 questions about the movie, that they would find the answers "coming more easily" than before, and that they should give the best answers that they could. They received the same test form as before (post-test).

**RESULTS.** Total Scores were analyzed with a 4-way ANOVA (hypnotizability; recall condition = hypnosis or attention control; question format = multiple choice or free recall; and pretest-posttest). The ANOVA yielded 3 main effects: 1. Posttest

scores were greater than pretest scores. 2. Multiple choice scores were greater than free recall scores. 3. High hypnotizable scores were greater than low hypnotizable scores.

Also they found a 2-way interaction between hypnotizability and pre- vs. postadministration. There was an increase from pretest to posttest for the high hypnotizable Ss and the highs had greater scores relative to the lows in the posttest administration.

Correct Scores analysis showed two main effects: 1. Posttest scores were greater than pretest scores. 2. Multiple choice scores were greater than free recall scores.

Also there was a two-way interaction between hypnotizability and pre-postadministration, such that the scores of highs relative to the scores of lows increased more from pre- to posttest.

Also there was a three-way interaction for hypnotizability, question format, and pre-postadministration was significant. There was an increase from pre- to posttest in the scores of the high hypnotizable Ss on the multiple choice format, with no increase for the low hypnotizables or on the free recall format.

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Incorrect Scores showed three main effects: 1. Posttest scores were greater than pretest scores. 2. Free recall scores were greater than multiple choice scores. 3. High hypnotizable scores were greater than low hypnotizable scores.

A three-way interaction also was found: the pretest to posttest increase was only for the free recall questions with high hypnotizable Ss, and free recall posttest scores for highs was greater than those same scores for lows. Pretest differences between hypnotizability groups and pre- postdifferences for the low hypnotizable Ss were not found.

In the Discussion, the authors note that this study did not confirm Stager and Lundy. "Although the high hypnotizable Ss in the hypnosis condition did increase their free recall correct scores, this increase was not significant or different from the general increase made by all Ss. Further, the increase of the incorrect scores in free recall ...[was] greater, though not significantly, for the high hypnotizable Ss in the hypnosis condition than for any other group" (p. 331). The differences in results may be due to different question format. On the other hand, reviews such as those by Shields and Knox (1986) usually find little, or at best modest, improvement of memory with hypnosis. In the present study, as with Stager and Lundy (1985) the memory increase observed was with the highly hypnotizable Ss. But those Ss are also the ones who increase their incorrect scores. "When the correct response is available to Ss (the multiple choice format), the high hypnotizables increase their correct scores. When the correct response, or any other alternative, is unavailable to Ss (the free recall format), the high hypnotizables increase their incorrect scores" (p. 332).

"The high hypnotizable Ss gave more incorrect responses than the low hypnotizables on both pre- and posttest and in both test formats. Although this tendency to respond incorrectly is most apparent in the posttest free recall condition, Table 3 also shows that even in the multiple choice form, the high hypnotizable Ss appear to be responding more incorrectly. Thus, the high hypnotizables not only incorporate more incorrect information presented to them, as found by Sheehan (1985, 1988), but they also make more errors in test situations which supply them with no information and which supply them with the correct information. Also, high hypnotizable Ss have been found by Laurence, Nadon, Nogrady, and Perry (1986) to believe that hypnotically suggested pseudomemories are in fact veridical" (pp. 332-333).

The authors suggest that the increase in both correct and incorrect scores (for both question formats) may be due to a decrease in the 'don't know' or no response category. This suggests that high hypnotizable Ss may be more willing to guess in the posttest. Perhaps it is a criterion shift. If so, the shift occurs whether or not they are hypnotized, and it leads to increased accuracy sometimes but also decreased accuracy sometimes. "When the correct answer is available, as in the multiple choice format, the high hypnotizable Ss can increase their correct responses significantly, but when the correct response is not available, as in free recall, they increase their incorrect responses significantly" (p. 333).

The authors present a cautionary note. "Although the statistical analysis confirms hypnotizability as a significant effect, it must be remembered that this study, and the others reported above, took place in a hypnotic context. ... The results suggest, however, that the personality characteristics underlying measured hypnotizability may be important factors in memory enhancement and memory distortion and that studies directed toward tapping those characteristics will be fruitful in future research efforts" (pp. 333-334).

Re forensic application, "changes in memory that occur in the hypnotic context probably occur as a result of witnesses' decreased reticence, that is, as a result of their belief that they can now answer questions that they previously could not answer" (p. 334).

1987

Lynn, Steven Jay; Rhue, Judith W. (1987). Hypnosis, imagination, and fantasy. Journal of Mental Imagery, 11, 101-112.

Considers three questions pertaining to the relationship between hypnotic responsiveness and imaginative processes: Are subjects' nonhypnotic imaginative involvements related to hypnotic susceptibility? Do some fantasy prone subjects share a unique constellation of personality attributes and experiences, including an ability to respond to hypnotic suggestions? What are the childhood developmental antecedents of persons who score at the extremes of hypnotic ability and measures of fantasy and imagination? Reviews literature.

Monteiro, Kenneth P.; Zimbardo, Philip G. (1987). The path from classroom seating to hypnotizability--a dead end: A brief communication. International Journal of Clinical and Experimental Hypnosis, 35, 83-86.

It has been proposed that classroom seating behavior predicts brain functioning involved in hypnotizability and in other cognitive processes. The present authors attempted to test this hypothesis and to replicate some earlier findings. The relationships between classroom seating preference, actual seating location, and hypnotizability in male and female students were investigated. No relationship was found between any of the seating measures and hypnotizability. These findings lend no support for the hypothesis that classroom seating predicts hypnotizability. This failure to replicate is discussed in relationship to the lack of theoretical grounding for the seating-hypnosis connection.

The authors review the literature, then present and test specific hypotheses that right-side seating preferences would be correlated with hypnotizability for males, while actual seating on the right side of the class would be associated with higher hypnotizability scores for females. This pattern should be more robust for right-handed than for left-handed students. They found no support for these hypotheses. They suggest that other measures of cognitive processing may correlate with a social behavior such as classroom seating. Monteiro & Zimbardo (unpublished ms.) found that the variables of field independence and field sensitivity predicted actual seating behavior in males and seating preference in females.

1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

620, Belicki & Bowers, 1982 ABSTRACT: Investigated the role of demand characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A),

which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

Lynn, Steven Jay; Rhue, Judith W. (1986). The fantasy-prone person: Hypnosis, imagination, and creativity. Journal of Personality and Social Psychology, 51, 404-408.

Experimenters selected subjects who ranged along the continuum of fantasy proneness and assessed hypnotizability, absorption, vividness of mental imagery (QMI; Sheehan, 1967), response to waking suggestion (Creative Imagination Scale), creativity, and social desirability (Crowne & Marlowe). Fantasy-proneness was evaluated with the Inventory of Childhood Memories and Imaginings (Wilson & Barber, 1981). Strong support was secured for J. R. Hilgard's construct of imaginative involvement and Wilson and Barber's contention that fantasy prone persons can be distinguished from others in terms of fantasy and related cognitive processes. Fantasizers were found to outscore subjects in both comparison groups on all of the measures of fantasy, imagination, and creativity, with social desirability used as a covariate. Low fantasy-prone subjects were no less creative or less responsive to hypnosis than their medium fantasy-prone counterparts.

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

(From the Discussion Section). As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance

on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used.

Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual

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If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

**1985**

**Kerry Buhk; Rhue, Judith; Henry, Stephanie; Lynn, Steven Jay (1985, November). Fantasy proneness: Are their word associations richer?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.**

Experimenters screened 7000 students to get 6 samples of fantasy prone Ss (top 2.4% on Wilson and Barber's ICMI). They found less association between fantasy proneness and hypnotizability than did Wilson and Barber.

They had fantasizers hallucinate a second cup next to a first styrofoam cup. Results were that 87% of High fantasizers, < 50% Medium fantasizers, < 25% Low fantasizers could do it, but they didn't describe seeing the hallucinated cup "as real as real" as Wilson and Barber said they did.

Experimenters were concerned about context effects (expectancy) because the Creativity and Fantasy Proneness tests were run proximal in time, so they separated

in time the administration of Fantasy Prone and Creativity tests and also looked at word associations.

23 High and 20 Low fantasy prone students selected by ICMI, which was administered to Subjects 18 mos before the creativity study. At the time of the creativity study, Ss were informed they were randomly picked. There were two 90' sessions, counterbalanced.

Sessions: 1. Hallucinate image of R.A. and of styrofoam cup. Other tests were administered for intelligence and personality: Shipley-Hartford, MMPI, Crowne-Marlowe, etc. 2. Creativity tests (Revised Art Scale, Hilgard's Alternate Uses; story production which was scored on detail, imagery and fantasy and on imagery nouns.) Results of this study which was independent of context (i.e. the tests being correlated were administered independently of each other, separated by time). 1. Fantasizers were more creative than low fantasizers on both Creativity Scales. 2. Fantasizers show more divergent thinking on Hilgard Alternate Uses test, but relationship between fantasy proneness and creativity were not strong,  $r = .30$ . 3. Fantasizers and non fantasizers did not differ on the story measures! This diverges from Wilson and Barber's results. Fantasizers may have more vivid images, but storytelling does not capture that.

Kunzendorf, Robert G.; Benoit, Michelle (1985-86). Spontaneous post-hypnotic amnesia and spontaneous rehypnotic recovery in repressors. Imagination, Cognition and Personality, 5 (4), 303-310.

The Salpatriere school of hypnosis posited that true hypnotic effects occur spontaneously in people with repressive tendencies. Consistent with this early position, the current study indicates that both spontaneous amnesia after hypnosis and spontaneous recovery during rehypnosis are statistically associated with repression (but not with hypnotic suggestibility). In contrast, both suggested forgetting and suggested recovery are statistically associated with hypnotic suggestibility (but not with repression). Whereas the latter effects of suggestibility are attributable to the demand characteristics of hypnotic suggestions, the spontaneous effects of hypnosis on repressors' memories are not reducible to social psychological principles.

1982

Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. International Journal of Clinical and Experimental Hypnosis, 30, 417-442.

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5

more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

**1981**

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis.

Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

**1978**

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not

influenced by social desirability. Factor analysis indicated that subjective and objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

1977

Grant, Guy (1977). The psychophysiology and hypnotherapeutic management of cancer. Australian Journal of Clinical Hypnosis, 5, 35-49.

Reviews research on psychophysiology of cancer, effect of stress on host resistance, cancer prediction from personality traits, psychological theories of cancer aetiology, and psychological characteristics of patients with different types of neoplasms. The hypnotherapy of cancer patients is outlined in terms of its effect upon the malignancy, relief of discomfort, and psyche of the cancer patient. Recommends direction of hypnotherapeutic treatment of cancer patients.

1976

Cooper, Leslie M.; London, Perry (1976). Children's hypnotic susceptibility, personality, and EEG patterns. International Journal of Clinical and Experimental Hypnosis, 24, 140-148.

19 boys and 16 girls, aged 7 to 16, were given the EEG and then the Children's Hypnotic Susceptibility Scale, while a parent watched. About 1 week later, after some separate tests and interviews, each child was given a puzzle to solve in the parent's presence, while Es recorded offers and requests for help. Hypnotic susceptibility was positively correlated with the alpha duration with eyes open, but not with eyes closed. Both susceptibility and alpha duration tended to be negatively correlated with age. Highly susceptible children tended to wait longer than low susceptibles before asking parents for help with the puzzle, and their parents tended to be more strict, anxious, and impatient than did the parents of low susceptible children.

King, Dennis R.; McDonald, Roy D. (1976). Hypnotic susceptibility and verbal conditioning. International Journal of Clinical and Experimental Hypnosis, 24, 29-37.

18 Subjects highly susceptible to hypnosis and 18 Subjects refractory to hypnosis were studied in a verbal conditioning task modeled after the one used by Taffel (1955). Results indicated that the highly susceptible group showed significantly greater conditioning than the low group. Awareness of the reinforcement contingency by S was not related to the learning task nor to hypnotic susceptibility. A measure of S's attitude toward the reinforcement cue during learning showed that the highly susceptible group had a more positive set toward the cue, whereas the low group tended to respond to it in a neutral or negative manner. Results were interpreted in terms of the theoretical nature of hypnotic susceptibility

They review literature on attempts to correlate hypnotizability with verbal conditioning ability.

Volunteer students participated; screened by HGSHS:A: highs 10-12, lows 0-4.

Verbal conditioning procedure: S viewed 100 3x5 cards on which were a two-syllable, past tense verb, below which typed in upper case letters on one line were the pronouns I, WE, HE, SHE, THEY, and YOU (randomly assigned to different orders). E was blind to hypnotizability. E instructed S to make up a sentence using the verb and a pronoun; gave no response for first 20 trials; said "good" to usage of I or WE during conditioning.

Afterwards, S filled in an Awareness Questionnaire (What was purpose? If E gave cues, what were they? If you noticed cues, what do you think they indicated?) and attitude toward the reinforcement cue (Did you notice that I did anything special? What? Did I say "good" for a special reason? What was the reason for my saying "good"? How did hearing the word "good" affect you during the experiment? IN a positive, negative, or neutral way?

Results. Groups did not differ at baseline but did differ at Blocks 2 (highs 9.7 vs lows 6.3;  $p < .05$ ) and 3 (highs 10.4 vs lows 6.3;  $p < .05$ ). Although the High group continued to maintain a somewhat higher level of responding than the Low group during extinction (9.8 vs 7.6), this difference did not reach statistical significance. (The graph shows an increase for Lows during extinction!)

Using a liberal definition of awareness and a learning index computed for each S by subtracting his operant level of response from the mean number of correct responses shown during the 3 blocks of acquisition trials, Subjects were ordered and a median test applied; contingency coefficient of .28 not significant ( $p < .10$ ).

Attitude significantly differentiated High and Low hypnotizability groups (see Table 2) with Highs more often responding in positive manner to reinforcement cue and Lows giving a neutral rating. Awareness of reinforcement contingency was equally represented in High and Low groups. The Aware High Positive groups learning index differed significantly from Aware Low Neutral group ( $p < .01$ ); the Unaware Low Positive group ( $p < .05$ ); and the Unaware Low Neutral group ( $p < .001$ ).

Thus, the Aware High Positive group's learning index score was significantly higher than that of the 3 Low groups. Also, the Unaware High Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ). No other High groups differed from the Low groups and none of the High groups differed among themselves.

Among the Low groups, only the Unaware Low Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ).

Discussion. Data show that hypnotizability is important in response to verbal conditioning, extending findings of Das (1958) by showing that primary suggestibility is associated with operant as well as classical conditioning but also those of Weiss et al. (1960) in illustrating that higher hypnotic susceptibility leads to enhanced verbal conditioning, using an improved measure of hypnotic susceptibility.

Awareness of reinforcement contingencies is not sufficient to account for subject differences in verbal conditioning; the characteristics tapped by HGSHS:A produce conditioning which cannot be accounted for by awareness alone.

extending findings of Das (1958) by showing that primary suggestibility is associated with operant as well as classical conditioning but also those of Weiss et al. (1960) in illustrating that higher hypnotic susceptibility leads to enhanced verbal conditioning, using an improved measure of hypnotic susceptibility.

Awareness of reinforcement contingencies is not sufficient to account for subject differences in verbal conditioning; the characteristics tapped by HGSHS:A produce conditioning which cannot be accounted for by awareness alone.

The fact that high susceptible Subjects here rated E's cue more positively than low susceptible Subjects is further consistent with some of the personological descriptions associated with hypnotic susceptibility which have been offered by Hilgard (1968). In addition, Cairns and Lewis (1962) and Spielberger et al. (1962) found that persons who assigned more positive value to the kind of reinforcement present in verbal conditioning experiments produced greater conditioning than Subjects whose attitudes were less favorable or non-committal toward the reinforcement. This relationship is not clear-cut in the present data in that although the High groups had an overall more positive attitude regarding reinforcement, only the Aware High Positive group learned better than all the Low groups, while the only other High group learning better than a Low group was the Unaware High Positive which had a significantly better learning index score than the Unaware Low Neutral group. Moreover, positive attitude did not differentiate learning within the High groups or the Low groups. Thus, the present data are unclear regarding the role attitude plays in the acquisition of verbally conditioned responses.

The roles of awareness and attitude could probably be better defined in future research using larger experimental groups. The attitude measure employed here was a gross one and a more sophisticated assessment of the valence characteristics of reinforcement cues could reveal more complex relationships in subsequent research. In addition, a more careful assessment than was done here of the role of cooperation and demand characteristics would contribute substantially to understanding more completely the effect of awareness on these phenomena.

The general indications regarding attitude may in part account for the increased interest in production of conditioned responses in Figure 1 shown by the Low group (graph) during the extinction phase of this experiment. Although highly susceptible Subjects show a decrease in the correct response with nonreinforcement, low susceptible Subjects begin to evidence an increase in the correct response. The attitude measure indicates that Subjects in the Low group did not respond positively to the reinforcement cue, and one of these Subjects reported in the interview that he did not like being told what to do by the E. It can be speculated that these Subjects were aware of the reinforcement contingency but did not "cooperate" until the reinforcement was absent. This follows the interpretation of Farber (1963) who found that aware Subjects who conformed to the demand characteristics of the experimental situation showed greater verbal conditioning than those who were aware and nonconforming. It thus appears that a willingness to go along with E's expectations and a positive, cooperative attitude are common features in individuals who make good hypnotic Subjects and who evidence an enhanced propensity for verbal conditioning.

Lenox, J. R.; Bonny, H. (1976). The hypnotizability of chronic alcoholics. International Journal of Clinical and Experimental Hypnosis, 24, 419-425.

Research on the hypnotizability of alcoholics is rare, contradictory, and fails to consider the age of alcoholic samples, who are much older than college norm groups. 36 male chronic alcoholics were given the Harvard Group Scale of Hypnotic Susceptibility, Forms A and B of Shor and E. Orne (1962, 1963a), administered individually and then averaged. Alcoholics scored lower, but not significantly so, than controls matched for age and sex. An expected negative correlation of age with hypnotizability was not found. The implications of these results for past studies are discussed.

Miller, Lawrence J. (1976). A comparison of hypnotic susceptibility for internal and external locus of control subjects in hetero- and self-hypnotic treatments (Dissertation). Dissertation Abstracts International, 37, 978-979.

"This study investigated the use of self- and hetero-hypnosis with internal and external locus of control subjects. Fifty-eight subjects, matched on hypnotic susceptibility and internal-external locus of control, were randomly assigned to the self- or hetero-hypnotic treatments. Self reports of their hypnotic behavioral scores and hypnotic subjective responses were obtained for each subject. "The statistical analyses showed there were no significant differences between the internal and external locus of control groups or within groups in regard to self- and hetero-hypnosis total behavioral scores, "challenge" or "non-challenge" items, ... their reported subjective experiences. The results supported the similarity of hetero- and self- hypnosis. Various findings from past research in regard to I-E subjects were also challenged in terms of their generalizability to hypnotic settings" (pp. 978-979).

1970

Fromm, Erika; Oberlander, Mark I.; Gruenewald, Doris (1970). Perceptual and cognitive processes in different states of consciousness: The waking state and hypnosis. Journal of Projective Techniques and Personality Assessment, 34, 375-387.

Hypnosis was assumed to influence perceptual and cognitive functioning in the direction of increased primary process ideation and adaptive regression. The Rorschach test was administered to 32 Ss in the waking state and under hypnosis in counterbalanced order. Hypnosis was induced by a standardized procedure. Ss received identical instructions for the Rorschach in both conditions. Protocols were scored according to Holt's system for manifestations and control of primary process. Hypnotic Rorschachs showed an increase in primary process manifestations, but no changes in defensive and coping functioning, and no overall changes in the Adaptive Regression Score. However, the nature of the data was found to be influenced by Ss' sex and level of adjustment.

1968

Chambers, Helen (1968). Oral eroticism revealed by hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 151-157.

A CASE STUDY OF THE OUTPATIENT TREATMENT OF A SEVERELY DEPRESSED WOMAN. THE CASE WAS COMPLICATED BY THE S'S REFUSING USUAL ANTIDEPRESSANT TREATMENTS. COMMUNICATION WAS DIFFICULT BUT WAS FINALLY ACHIEVED BY THE USE OF ETHER AT

ACHIEVED BY THE USE OF ETHER AT ALTERNATE INTERVIEWS. WITHDRAWAL OF ETHER WAS THEN USED TO CREATE A SITUATION OF DEPRIVATION TO AROUSE IN THE TRANSFERENCE ATTITUDE THE FEELINGS PRODUCED BY THE EARLY TRAUMA. THE S'S COMPULSION TO EAT RAW POTATOES WAS STUDIED WHILE SHE WAS DEEPLY HYPNOTIZED. PSYCHOANALYTIC THEORIES THAT PLACE THE ORIGIN OF DEPRESSION AT THE TIME WHEN THE ORAL PHASE IS PRIMARY WERE CONFIRMED. THE S REFUSED ANY OTHER ANTIDEPRESSANT TREATMENT. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database

Faw, Volney; Sellers, David J.; Wilcox, Warren W. (1968). Psychopathological effects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 26-37.

The probability that hypnotic induction produces psychopathological effects has not been experimentally determined. The present study hypothesizes various negative effects following hypnosis such as increased signs of personality disturbances, increased need for medical attention, greater tendencies toward suicide, and negative effects among the more maladjusted persons of the population sample. 107 college students were assigned at random to experimental and control groups. The experimental group was hypnotized 3 times in successive weeks. A comparison between control and experimental groups in respect to pre- and post-MMPI score differences plus a follow-up with the college counseling center and infirmary for a 90-day period following induction led to the rejection of the hypotheses. A comparison of measures yielded some significant differences in favor of the experimental group. It is concluded that there are nondetrimental effects when hypnosis is used with a normal college population.

1965

Cooper, Leslie M.; Pedersen, Darhl M. (1965). A note on the failure to find personality differences between volunteers and nonvolunteers for hypnotic research. International Journal of Clinical and Experimental Hypnosis, 13 (4), 274-278.

Personality measures were administered to 136 students in an introductory psychology class at Brigham Young University. 30 Ss subsequently volunteered to have their hypnotic susceptibility assessed. There were no significant differences found between the means of the resulting 23 variables for the 30 volunteers and 106 nonvolunteers. 2 variables (age and ego strength) showed significantly different

variances for the 2 groups, but these may be attributed to chance because of the number of significance tests made. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1964**

Cooper, G. W.; Dana, R. H. (1964). Hypnotizability and the Maudsley Personality Inventory. International Journal of Clinical and Experimental Hypnosis, *12*, 28-33.

The Maudsley Personality Inventory was administered to 349 male college students. 9 male Ss were chosen to represent each of the 4 possible combinations (total N = 36) of extreme high and low extraversion and introversion scores. An attempt was made to hypnotize each S by means of the Stanford Hypnotic Susceptibility Scale, Form C. Analysis of variance indicated no significant relationship between either extraversion or neuroticism and hypnotizability, although the relationship between extraversion and hypnotizability approached significance. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

the relationship between extraversion and hypnotizability approached significance. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

Deckert, G. H.; West, L. J. (1963). The problem of hypnotizability: A review. International Journal of Clinical and Experimental Hypnosis, *11*, 205-235.

This paper summarizes the relatively unsuccessful effort to relate hypnotizability to sex, age, psychiatric diagnoses, suggestibility, and various personality traits. The problems of measurement, subject selection, controls, and experimenter bias are reviewed. Comparison of data is difficult and replication of studies infrequent. This might be attributed to incomplete reporting of methodology, defects in experimental design, and various conceptual problems. Concepts which view hypnotizability as "something" universal, "something" unique, or "nothing" are briefly appraised. Finally, hypnotizability is seen as a "term" describing a relationship between a "route" and a "state"--each identifiable by measurable criteria. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J. (1963). The Maudsley Personality Inventory, suggestibility and hypnosis. International Journal of Clinical and Experimental Hypnosis, *11*, 187-200.

An attempt to replicate the claim of Furneaux and Gibson (1961) that stable extraverts and neurotic introverts were more susceptible to hypnotic suggestion than neurotic extraverts and stable introverts, using the MPI dimensions, was unsuccessful. Some "trends" are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneaux, W. D. (1963). Neuroticism, Extraversion, answer suggestibility: A comment. International Journal of Clinical and Experimental Hypnosis, *11*, 201-202.

Author develops hypotheses about the relationships between scores on the Maudsley Personality Inventory (MPI) and suggestibility.

"(a) The effective-drive experienced by a S in a suggestibility test, or hypnosis situation, is positively correlated with both neuroticism and with extraversion, as measured by the MPI.

(b) Effective-drive is also a function of the "press" of the test situation, and of the S's previous experience.

(c) Within the range of values of effective-drive lower than the Yerkes-Dodson optimum for the test being studied, the magnitude of response to a suggestibility test (or hypnosis) is a positive function of drive.

(d) For values of effective-drive greater than the Yerkes-Dodson optimum, response is a negative function of drive" (p. 201).

Levitt, Eugene E.; Lubin, B. (1963). TAT card '12MF' and hypnosis themes in females. International Journal of Clinical and Experimental Hypnosis, 11, 241-244. Modification of TAT Card 12M, so that the supine figure was a female, did not increase the frequency of hypnosis themes among sophomore student nurses. The hypothesis that difficulty in identifying with a male figure accounted for the card's inability to predict attitudes towards hypnosis in females was, therefore, not supported. The modified card did elicit significantly more identifications of the standing figure as a professional person. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Brady, J. P.; Lubin, B. (1963). Correlates of hypnotizability in young women: Anxiety and dependency. Journal of Personality, 31, 52-57.

"2 measures of anxiety and 1 of dependency distinguished between groups of hypnotizable and refractory student nurses, according to the hypothesis that low anxiety and high dependency are associated with hypnotizability . . . . Sign analyses of all 6 possible combinations of anxiety and dependency variables were carried out. For all combinations, the frequency of Ss whose reactions to hypnosis were predictable according to the hypothesis significantly exceeded chance expectation." (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

As, Arvid; Lauer, Lillian W. (1962). A factor analytic study of hypnotizability and related personal experiences. International Journal of Clinical and Experimental Hypnosis, 10 (3), 169-181.

To throw further light on the exclusivity of "primary suggestibility" as reported by other investigators, a factor analysis was performed in a sample of 102 female college students on the basis of the intercorrelations of 23 items of personal experiences earlier shown to be related to hypnotizability, and 19 items from 2 hypnosis scales. No simple factor structure emerged. 2 factors were interpreted: the 1st as a hypnotic factor with special emphasis on the capability to sustain the effect

of suggestion over time, and the 2nd as a combination of psychological changeableness and social influencibility. A brief discussion was given of the composite picture of hypnotic susceptibility emerging from the fact that many hypnotic items loaded on both factors. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Gibson, H. B. (1962). Furneaux's discussion of extroversion and neuroticism with regard to suggestibility. International Journal of Clinical and Experimental Hypnosis, 10, 281-287. (Abstracted in Index Medicus, 63, March, S-676)

Hypotheses suggested by Furneaux (see 36: 4II95F) are criticized on the grounds that his basic assumption that extraverts attend more closely in the interpersonal situation is unwarranted. It is maintained on the contrary that introverts are the less distractible and it is shown that the data published earlier by Furneaux and Gibson (see 36: 3II67F) accord with a theoretical model derived from Spence. The results are also discussed in terms of an alternative interpretation. It is further contended that Furneaux's treatment of the data leads to other inconsistencies. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kuhner, Arthur (1962). Hypnosis without hypnosis. International Journal of Clinical and Experimental Hypnosis, 10 (2), 93-99.

The traditional concept of hypnosis that seeks a "sleep" state through employment of formal induction techniques seriously limits its general clinical applicability. It fails to fit the special needs of the patient. An approach designed to counteract this shortcoming manipulates the interpersonal relationship factor. Case illustrations from dental practice support the viewpoint that the proper relationship is akin to the hypnotic one and comparable results obtain without resort to ritualistic induction methods. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Lubin, Bernard; Brady, J. P. (1962). On the use of TAT Card 12M as an indicator of attitude toward hypnosis. International Journal of Clinical and Experimental Hypnosis, 10 (3), 145-150. (Abstracted in Psychological Abstracts, 63: 5233)

This investigation indicates that responses to TAT Card 12M do not predict attitude toward hypnosis in female Ss, though such predictiveness has been reported for male respondents. The basis for this differential predictiveness may be that the latter give a significantly greater proportion of themes involving hypnosis. An explanatory hypothesis, based on perceptual theory and the stimulus properties of the card, is advanced. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

London, Perry; Cooper, Leslie M.; Johnson, Harold J. (1962). Subject characteristics in hypnosis research. International Journal of Clinical and Experimental Hypnosis, 13-21.

Items of experiences, interests, and attitudes, in London's Survey, tended to cluster among themselves, suggesting a separate factor for each. The items were compared to several objective tests, but correlations were low. The Survey and Shor's Personal Experiences Questionnaire combined, correlated .64 with Stanford Scale A, suggesting the possible development of a paper-and-pencil predictor of hypnotic suggestibility. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Furneau, W. D.; Gibson, H. B. (1961). The Maudsley Personality Inventory as a predictor of susceptibility to hypnosis. International Journal of Clinical and Experimental Hypnosis, 9, 167-177.

99 Ss were tested on the MPI, Body-Sway, and reaction to hypnotic induction. The Extraversion and Neuroticism scales when used in conjunction were efficient predictors of susceptibility, though the relationships were not simple linear and additive. The most susceptible Ss were the Stable Extraverts, while those scoring high on the Lie scale tended to be insusceptible to hypnosis. From Psyc Abstracts 36:01:3II67F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneau, W. D. (1961). Neuroticism, extroversion, drive, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 9, 195-214. (Abstracted in Psychological Abstracts, 62: 4 II 95F)

In the group studied, the body-sway scores of stable extraverts and neurotic introverts tended to be large, whereas they were smaller for stable introverts and neurotic extraverts. This result was explained in terms of a theoretical model in which the effective drive produced in a S by a test-situation is a function of both his neuroticism and his extraversion. The author believes that the theoretical model generates a number of predictions and suggestions which can serve to guide future experimental work in this field. From Psyc Abstracts 36:04:4II95F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hilgard, Josephine R.; Hilgard, Ernest R.; Newman, Martha (1961). Sequelae to hypnotic induction with special reference to earlier chemical anesthesia. Journal of Nervous and Mental Disease, 133, 461-478.

Although a review of relevant literature turned up little in the way of statistical studies, some case studies were located in which unintended or unexpected results of hypnosis were observed. The authors located 15 cases in which the symptoms that developed subsequent to symptom removal using hypnosis were more disturbing than the original symptom. This type of response occurred in patients with extensive psychiatric history, prior to the hypnosis experience. However, it could not be determined whether the undesired response was due to hypnosis or to the psychotherapy that was provided to these patients.

In order to avoid the complications introduced by studying undesired sequelae in psychiatric patients receiving posthypnotic suggestions for therapeutic purposes, this investigation used a sample of non-patient university students (114 male and

106 female) who volunteered for research. Subjects were asked about "aftereffects" in followup interviews. Aftereffects that might be considered sequelae are exemplified by statements such as, "I was 'in a fog' for one hour" and "Things were hazy and vague for four hours."

Of the 220 Subjects, 17 (7.7%) reported sequelae, many of them "minor and fleeting." None of the sequelae was of psychotic proportions. Only 2.3% of the sample experienced sequelae that lasted as long as a few hours. Although the relationship of sequelae to hypnotizability was slight, there seemed to be a relationship to having had a difficult experience with chemical anesthesia in early childhood. They present six case studies, three who had difficulty with chemical anesthesia and three for whom the sequelae appeared to relate to a different kind of childhood experience.

The investigators concluded that "a routine experience of hypnosis is generally harmless in a student population, but E (or therapist) should be alert for possible aftereffects, and provisions should be at hand for occasional brief psychotherapy, even though the experiments themselves are not oriented toward therapy" (p. 477).

The authors present a psychodynamic explanation for the sequelae observed. "It is conjectured that the conflicts within the induction phase of hypnosis that produce either immediate or delayed symptoms are primarily those having to do with the exercise of power and the reaction to authority, hence, conflicts between the conscious willingness to be hypnotized and the unconscious resistance to or fear of the submissive role required. The individual forms that such conflicts take are highly varied.

"The conflicts within the established state differ, in that the state is not reached unless the conflicts of the induction are at least temporarily resolved. The new state, which has regressive characteristics, makes S vulnerable to conflicts based on reality distortions (as in suggested hallucinations) or ethical-social issues (as in suggested behavior violating his moral code or superego demands). Sometimes specific suggestions revive early experiences that were traumatic or provocative of fear.

Sometimes specific suggestions revive early experiences that were traumatic or provocative of fear.

"While the language of psychodynamics is appropriate in the discussion of these cases, the many redintegrative factors also suggest that learning theory can have much to say in explanation of them. Because learning theory has ways of dealing with conflict and conflict resolution, it can also encompass some of the problems discussed as conflicts over authority, commonly treated in psychodynamics as transference problems.

"The many reflections of earlier childhood experiences in the sequelae, including some of the dreams, suggest the promise of a developmental theory of hypnosis" (p. 477).

London, Perry (1961). Subject characteristics in hypnosis research: Part I. A survey of experience, interest, and opinion. International Journal of Clinical and Experimental Hypnosis, 151-161.

Questionnaire measuring (a) direct and observational experience with hypnosis, and (b) stereotyped attitudes towards hypnosis was administered to 645 undergraduate students of psychology. Results indicate hypnosis considered in generally favorable light. Girls were less willing than boys to be hypnotic Ss. Items regarding the nature of hypnosis reflected a rather sophisticated attitude. From *Psyc Abstracts* 36:01:3II51L. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Faw, Volney; Wilcox, Warren W. (1958). Personality characteristics of susceptible and unsusceptible hypnotic subjects. *Journal of Clinical and Experimental Hypnosis*, 6 (2), 83-94.

"1. The Ss for this study of hypnosis were a cross section of a college population, 44 women and 36 men. A group or mass induction technique was used; the Ss were divided into three sections for ease in administering the hypnotic suggestions which were read.

1. A susceptibility scale was developed on which trained Os rated the Ss and Ss rated themselves. The susceptible were defined as those above the median and the unsusceptible as those below the median. The r between the self and O ratings was .68 which indicates a substantial though not high relationship.

3. When the susceptible are compared with the unsusceptible, the susceptible had better over-all adjustment scores on the MMPI, the group Rorschach and the clinical assessment of diaries, which indicates that susceptibility is a characteristic possessed in greater degree by the better adjusted.

4. However, there were among the more poorly adjusted of the susceptible, a small group with high Hy scores indicating that they had responses similar to clinic patients who had developed conversion hysteria. Their susceptibility was attributed to two factors: first, on the psychic items of the Hy scale their responses indicate rather optimistic cooperative attitudes which would make their initial responses to hypnotic suggestions favorable; second, their tendencies to translate psychological stress into bodily symptoms which have a great similarity to the criteria of hypnotic behavior would indicate a common response mechanism for the expression of symptomatology and hypnotic behavior.

5. The unsusceptible tended to have poorer over-all adjustment scores on the MMPI, the Rorschach and the clinical evaluation of diaries. They had significantly poorer scores on the D, Mf and Sc scales indicating a greater tendency toward depression, less security in regard to sex status and more distraction in the form of bizarre thoughts and feelings than do the susceptible.

6. Neither the profiles of the susceptible nor those of the unsusceptible correspond to the three generalized patterns of the MMPI: the neurotic, the behavior problem or the psychotic.

7. Our general conclusion is that while susceptibility is associated predominately with the well adjusted personality save for those with high Hy scores on the MMPI, the unsusceptible belong to a deviant group not easily classified by a term in general use in abnormal or clinical psychology" (pp. 93-94).

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**1956**

Barber, Theodore Xenophon (1956). A note on 'hypnotizability' and personality traits. Journal of Clinical and Experimental Hypnosis, 4, 109-114. (Abstracted in Psychological Abstracts 58: 3288)

1. Eighteen 'typical students' were ranked on a scale of hypnotizability and on the ten traits measured by the Guilford-Zimmerman Temperament Survey. The ranks on the hypnotizability scale were determined by the subjects' responses -- after twenty minutes of standard hypnotic induction -- on five standard tests of suggestibility.

2. The coefficients of correlation between hypnotizability and 'ascendance,' 'sociability,' 'emotional stability,' and 'objectivity' ranged between +0.47 and +0.70. There was a negative coefficient of -0.45 between hypnotizability and 'restrain' [sic].

3. This investigation tends to confirm the studies that find a relationship between hypnotizability and 'desirable character traits' and the studies that find no relationship between hypnotizability and maladjustment.

4. If these results are confirmed on a larger and more representative sample we may be able to accept a 'good guy' theory of hypnotizability -- at least for college students. The more hypnotizable students tend to confirm [sic] to our cultural definition of a 'good guy' -- sociable, emotionally stable, non-submissive, non-hypersensitive, happy-go-lucky, and interested in overt activity" (p. 113).

**1954**

Kupfer, David (1954). Hypnotherapy in a case of functional heart disorder. Journal of Clinical and Experimental Hypnosis, 2 (3), 186-190.

"Summary. A young soldier with functional cardiac complaints was treated with hypnosis in a total of 4 interviews. The dynamics were bypassed and the therapeutic suggestions attached to 2 significant events in the patient's childhood, dealing intimately with the oedipal conflict and castration fears. Follow-up studies of 3 weeks duration revealed that significant changes had been produced in the patient's attitudes towards himself and towards his role in the military service" (p. 190).

Kline, Milton V.; Haggerty, Arthur D. (1953). An hypnotic experimental approach to the genesis of occupational interests and choice. III. Hypnotic age regression and

the Thematic Apperception Test -- a clinical case study in occupational identification. Journal of Clinical and Experimental Hypnosis, 3, 18-31.

**"1. Hypnotic age regression responses to TAT cards in reference to occupational identifications appear quantitatively and qualitatively different from waking simulation responses.**

**2. A quantitative analysis of the hypnotic age regression protocols points strongly in the direction of further confirmation of the neuropsychological validity of hypnotic age regression.**

**3. TAT cards suitable for children are significantly more productive as psychological stimuli in the hypnotic regression state than in waking simulation.**

**4. Adult TAT cards fail to elicit the ratio of productivity in hypnotic age regression that they do in waking simulation.**

**5. Hypnotic age regression appears to involve perceptual alterations of ego functions and related neuropsychological activity.**

**6. Simulation behavior appears to be primarily projective behavior with recall and role-playing characteristics interspersed within a behavior pattern which retains its adult perceptual orientation.**

**7. The utilization of a language usage quotient technique adds to the holistic validity of neuropsychological age regression and sharply differentiates hypnotic behavior from role-playing simulation.**

**8. The technique of hypnotic age regression described in this paper would appear to be a valid and useful method for the systematic study of occupational interests and choice within the framework of ego functions and developmental psychology.**

**9. Hypnosis would appear to produce empathizing and identifying processes more productively than the waking state" (pp. 30-31).**

**Author's Summary - "This paper is a further report on the use of varied hypnotic methods and techniques for the investigation of the origins of occupational interests and vocational choices. As an experimental means for studying the development of such interests and attitudes, hypnotic age regression would appear to have considerable validity and value. As a clinical technique in certain cases of vocational maladjustment it would seem to have considerable value" (p. 31).**

## **Phantom Pain**

**2000**

**Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)**

**This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment**

strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

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1994

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

Case #2: Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image

of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

Case #3: Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

Case #4: Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

## Philosophy

1998

Chapman, C. Richard; Nakamura, Yoshio (1998). Hypnotic analgesia: A constructivist framework. International Journal of Clinical and Experimental Hypnosis, 46 (1), 6-27.

Hypnotic analgesia remains an enigma. Recent neuroscience studies demonstrate that widespread distributed processing occurs in the brains of individuals experiencing pain. Emerging research and theory on the mechanisms of consciousness, along with this evidence, suggest that a constructivist framework may facilitate both pain research and the study of hypnosis. The authors propose that the brain constructs elements of pain experience (pain schemata) and embeds them in ongoing consciousness. The contents of immediate consciousness feed back to nonconscious, parallel distributed processes to help shape the character of future moments of consciousness. Hypnotic suggestion may interact with such processing through feedback mechanisms that prime associations and memories and thus shape the formation of future experience.

#### NOTES

1:

The authors suggest that emerging paradigms for the study of consciousness may be useful in bridging research on hypnotic analgesia with advances in research on pain control. The constructivist framework emphasizes central processing of nociceptive signals, and consciousness as "an emergent property of a self-organizing process in a distributed neural network" (p. 14). The Dennett & Kinsbourne (1992) 'multiple drafts model' of consciousness and the authors' constructivist framework provide a way of understanding phantom limb pain, which classical models of pain cannot do. Pain is experienced as the brain blends schemata reflecting current stimuli, memories, associations formed by conditioning, emotions, and cognitions. "Hypnotic suggestions can engender temporally dominant schemata that influence ongoing consciousness construction of the subject" (p. 20). They suggest that "hypnotic analgesia depends heavily on the formation of suggestion-related schemata and subsequent priming effects, that somatosensory imagery is the key element in the contents consciousness [sic], and that the mechanisms behind hypnotic analgesia phenomena are largely related to the competition among schemata for a dominant position within the contents of consciousness" (p. 23). Jean Holroyd

1997

Covino, Nicholas (1997). The integration of clinical and experimental work. International Journal of Clinical and Experimental Hypnosis, 45 (2), 109-125.

The work and the professional relationships of clinicians who use hypnosis and their research counterparts always contain a certain degree of tension. This is especially true when one group or the other claims to have a purchase on truth. A review of the strengths and limitations of each subspecialty is provided along with an understanding of some of the subspecialty is provided along with an understanding of some of the differences between the clinical and experimental perspectives. The author raises a number of points with the hope that this article will promote discussion among those who are engaged in clinical and experimental work and those few who are active in both.

Several suggestions for integration and collaboration are offered for consideration by both groups. -- Journal Abstract

1996

Rosenbaum, Robert & Dyckman, John (1996). No self? No problem! Actualizing empty self in psychotherapy . In Hoyt , Michael F. (Ed.), Constructive therapies (2, pp. 238-274). New York NY: Guilford.

NOTES

1:

In this book chapter, Rosenbaum and Dyckman (1996) argue that self has no permanently fixed, defining, thing-like characteristics (p. 270). They thus dispute the classical notion--commensurate with the position of philosophical realism --that the self is a substance, with fixed qualities and measurable qualities. The authors refer to this classical self as a full self, contained inside the skin and delimited by its participation in linear time. Instead, they propose an empty self, not to be construed as a void, but as a fluid, connected, relational self that overflows the traditional boundaries of the skin and is open to greater possibilities for change. To support their view of an empty self, the authors include several case examples of working with hypnosis and strategic/narrative therapy with clients experiencing a variety of psychological and physical symptoms. The authors further contend that self is not unitary, but the product of multiple drafts (p. 248)[Editor note: See Dennett, 1991, in this database]. In the narrative-constructivist tradition, they argue, if we speak in terms of multiple contextual selves for us all...[then, people diagnosed with MPD/DID] are not so different from the rest of us (p. 249). The chapter draws from western & Buddhist philosophy, strategic/systemic and narrative therapies, Ericksonian hypnosis, and, cognitive science theories regarding memory, consciousness, embodiment, and language, to support their alternative view of, and treatment for, the self.

1994

Walsh, Roger (1994, August). Transpersonal psychology--the state of the art. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

NOTES

Twenty-five years ago a group formed that was called transpersonal psychology, following after humanistic psychology (e.g. Maslow). Some of the humanistic psychologists came into transpersonal psychology. Maslow was interested in healthy people, and in peak experiences that were transpersonal in nature--experiences encompassing wider aspects of life, including mystical experiences.

that were transpersonal in nature--experiences encompassing wider aspects of life, including mystical experiences.

Peak experiences were thought to be positive, but also overwhelming. When psychologists looked Eastward, they found that there were whole families of these types of experiences, and that they could be induced by will and could be stabilized into not only peak but plateau experiences. There was a reservoir of wisdom in the

world's religions that could be drawn upon. This wisdom is being integrated with Western science to create the discipline of transpersonal psychology.

There is a broad spectrum of altered states of consciousness. Traditionally, altered states of consciousness were thought to be few in number, and usually pathological. Our society has been resistant toward studying them. For example, Esdaile's use of hypnosis in surgery was not welcomed, even though he was lowering morbidity and mortality because he controlled shock. His paper was turned down for publication. He amputated a leg in front of colleagues in Britain, who commented that he "must have hired a very hard rogue" to have his leg cut off under hypnosis.

Our culture is monophasic, deriving its world view almost exclusively from the waking state; other cultures are polyphasic and also draw their world view from dreams, meditative, or yogic contemplative states, etc. Recently we can apply more sophisticated analyses, to compare states of consciousness and map these out, phenomenologically. There are several key dimensions of experience for mapping the states: 1. Control 2. Awareness of Environment 3. Concentration 4. Mental Energy/Arousal 5. Emotion 6. Identity or Self Sense 7. Out-of-Body Experience 8. Content of Experience

Using these dimensions, we could compare shamanic, yogic, and Buddhist practices. A Nepalese shaman drums himself into a trance state, demonstrating: 1. Ability to enter and leave an altered state of consciousness and partly control experience 2. Decreased awareness of his environment 3. Increased concentration, fluid attention 4. Increased mental energy/arousal 5. Either pleasurable or not [pleasurable] emotion 6. Separate self sense: may be experienced as a non-physical "spirit" or "soul" 7. Controlled ecstasy (Out of Body experience)

Buddhist meditation is training awareness to examine experience as minutely as possible, in effect a heightened awareness (Vipassana).

A yogic practitioner engages in concentration, focusing on a fixed stimulus and holding it unwaveringly, till it dissolves a sense of separation into a unity with the object, ultimately with the Self.

[Author showed a slide comparing the three.] All three approaches have increased control and concentration. (The Yogi's is unshakable.) An awareness of the environment is increased for the Buddhist; the Yogi may lose awareness entirely. Others have ecstatic experience; the yogi has enstatic experience. Identity for the shaman is separate (a soul); for the Buddhist awareness is so precise that what was "I" is deconstructed into evanescent flux, into thoughts, images, emotions (like a movie with solitary frames); the yogi dissolves the self sense, but because of fixed concentration the separate self disappears and yogis feel like merging with larger Self.

So now for first time in history we can compare and map both similarities and differences. Now we have new possibilities for understanding and contrasting different practices. We can now differentiate the many states of consciousness that are available. But there are an awful lot of states. Can we find an over-arching framework? For the first time, we can say yes--due to the work of Ken Wilber. This is Developmental Structuralism (looking for common deep structures).

For example, you can identify millions of different faces, and they are surface structures; but they all have a common deep structure. Likewise, if we see that a

Hindu creates images of [devas] and a Christian sees saints, they are seeing archetypal images. Likewise, Buddhists experience nirvana in which all phenomena disappear, and so does another group. This [sense of all phenomena disappearing] is common to both, but different from those who see archetypal images. We may be able to come up with a typology of altered states.

Wilber also says that these deep structures and corresponding states may develop in a developmental sequence, with common stages. Three transpersonal stages are subtle, causal, and non-dual. In meditation, first you learn how out of control the mind is, then gradually it quiets and you discover subtle experiences that you usually overlooked. Going further, all thoughts cease to arise, and there is only pure consciousness. Beyond that, images re-arise but are now recognized as projections of consciousness.

Subtle images may be formless (as in pure light, pure sound). The person may pay attention to more and more subtle sounds. Or the images may have form (as in shamanic power animals).

At the casual stage, the person may be aware of consciousness itself, only consciousness, with no objects: pure consciousness, void, the Atman of Vedanta, abyss of gnosticism.

At the non-dual stage, objects arise again: everything is recognized as expressions of consciousness--e.g., Zen's "one mind." Consciousness now has awoken and sees itself in all things, unbounded by space and time and limits because consciousness is what creates space, time, and limits. This is Moksha, Enlightenment, etc.

This is not the final task, because the final task is bringing the awakening to the world (Plato's re-entering the cave, to educate others; Zen oxherder entering the marketplace with help-bestowing hands; Christianity's "fruitfulness of the soul"). For Joseph Campbell, this was the hero's return. Toynbee observed that each great contributor had withdrawn and then returned to the world to offer what they had found.

[It is a process of] transforming a peak into plateau experience; an altered state into a trait; stabilized into enduring understanding, and then bringing it back into the world.

Is there evidence for enlightenment? There now is analogical and laboratory support for this. Analogical support is lucid dreaming. Until 20 years ago, Western psychology thought lucid dreaming was impossible, but now LaBerge at Stanford University has shown physiological evidence. We know from every night's experience that we can create worlds and bodies on which our lives seem to depend. The claim of spiritual traditions is that there is a state of consciousness that bears a relationship to the ordinary [waking] state as lucid dreaming has to nonlucid dreaming. The Dalai Lama said they train yogis to be aware during dreams, not to lose awareness 24 hours a day; then to be aware of dreaming while in a waking period. A Tibetan dream yoga aim is the "great realization," that everything in existence is like a dream.

Laboratory studies have been done on enlightened people. The EEG data obtained while they are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality

and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

The implications for our usual state are that normality is not the peak of human development; normality is arrested development. The link between apes and civilization is us! We experience a consensus trance, a collective psychosis, society's hypnosis. We live in the biggest cult of all: CULTURE. The answer is, "Wake up." A most important question is, if it is true that our conventional state of development is suboptimal, how do we develop other states? The classic answer is: take up a discipline, a practice (e.g., meditation, service, being in nature). One problem is that spiritual traditions are usually couched in archaic language, and have accumulated nonsense around them over the years. It is desirable to abstract out the essential elements. That is a recent thrust of transpersonal research.

There are six common elements: 1. Ethics: the moment you sit down to meditate, what emerges is all the unethical stuff you've done and what was done to you. Ethical behavior (not conventional morality) is a tool for mind training. 2. Attentional training: ordinarily we cannot sustain attention. (William James said the maximum is 3 seconds.) The aim is to be able to maintain attention on what one wants. It leads to the stabilization of mind, calming. 3. Emotional training: destroying negative emotions (well developed in Western psychology, maybe better than in the Eastern traditions, because we recognize the problem with repression); cultivating positive emotions (where contemplative practices do well, because they offer tools for unwavering, unconditional, and all-encompassing [positive regard]; what is known as agape in Christianity). 4. Redirection of motivation: changing what you want, etc. 5. Perceptual refinement: we mistake shadows for realities; according to St. Paul we "see through a glass darkly." This enhances sensitivity, accuracy, and subtlety of perception. 6. Wisdom: actually the first element, playing a role all through the path. Initial motivation sees suffering of the world; provides motivation for realizing that there must be another way of living, culminates with deep insight into nature of the world, mind, consciousness, reality (prajna; Christian's gnosis). When the mind is trained, stabilized, and clarified, the mind has a heightened capacity for understanding.

So for the first time we can recognize the common elements in religions; we can see that the contemplative core contain practices and road maps. This approach recognizes multi-state psychologies and philosophies.

APPLICATION. Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25 years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

For a fuller account of transpersonal psychology, see R. Walsh & F. Vaughan (Eds). (1993) *\_Paths Beyond Ego: The Transpersonal Vision.\_* New York: Tarcher/Putnam.

**Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag**

## **NOTES**

**Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.**

**"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).**

**"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).**

**"The concept of a stratified cognition is central to the notion of a mental state ... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.**

**He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).**

**"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) ... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).**

**The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to**

movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co..

## NOTES

Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.

The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites

contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209).

Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action.

The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a 'distributed society of specialists that is equipped with a working memory, called a global workspace, whose contents can be broadcast to the system as a whole (p. 42)'" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

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Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each

human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

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Zika, William (1991, January). Hidden observer in psychotherapy. [Lecture] Seminar in the UCLA Department of Psychiatry and Biobehavioral Sciences.

#### NOTES

Author has explored use of a "hidden observer" metaphor in psychotherapy. He distinguishes between two types of dissociation--that resulting from involvement in fantasy and imagery (separation from the Generalized Reality Orientation described by R. Shor) and that between the "I" and the Observer. He calls the latter nonattachment instead of dissociation, aligning it with meditation concepts. The observer, in the hypnotized patient, is objective and even more in touch with reality than the patient in the waking state. He likens the Observer to Erickson's Inner Self, noting that just as patients learn to allow the therapist to care for them, they can come to allow the Observer to care for them. During inductions he speaks of the Hidden Observer (H.O.) that always knows what is going on, giving a suggestion that the H.O. can be helpful. (This concept seemingly relates also to the observer in Multiple Personality Disorder, and to John Kihlstrom's discussion of William James and the self, as well as to amnesia/duality in age regression or duality (HO) in pain control.)

1987

Jana, Hrishikesh (1987). History and present state of hypnosis in India. [Lecture] Presented at the Department of Psychiatry, UCLA.

Hypnosis is discussed in relationship to traditional Indian medical and psychological treatments. The following Table illustrates some of the relationships among Asian approaches, which also include philosophical and religious elements.

1985

**Moon, T. (1985). Idiographic as well as nomothetic? Problems for Naish's 'Trance' described in signal detection terms. [Comment/Discussion] .**

**NOTES**

**1:**

**"Naish ... hypothesises that in an unselected sample, the more hypnotisable subjects will make larger criterion shifts in response to signal detection task conditions. In nomothetic/idiographic terms this hypothesis is ambiguous. Should the statement 'the more hypnotisable subjects will make larger criterion shifts' be taken as describing a generalised, group effect? Or should it be interpreted as saying something about each more hypnotisable subject? Both versions are consistent with the theory, but the latter is clearly the more fallible one, most sensitive to falsification" (pp. 144-145). The commentator concludes that "The proposition that the essence of hypnosis is perceptual distortion engendered by criterion shift remains untested by the experiments" (pp. 145-146).**

-tested by the experiments" (pp. 145-146).

1979

Senk, M. (1979). Neuropsychology, bioethics and hypnosis. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 239-246). Amsterdam: Elsevier/North-Holland Biomedical Press.

NOTES

1:

Most of the chapter deals with brain neurology and the developmental psychology of morality (e.g. L. Kohlberg). The last part treats of hypnotherapy:

"Hypnopsychotherapy ... is a suggestion treatment and suggestion is a process of adopting a proposition in the absence of critical thought which would normally occur. This is achieved in hypnosis by gradual reduction of the tone of the central nervous system. This triggers off a chain reaction composed of four basic steps:

1. Inhibition of muscle tone leading to akinesia;
2. Reduction of autonomic activity seen in slowing down of pulse, lowering of blood pressure and so on;
3. Inhibition of cortical activity with diminished degree of alertness and therefore, volition;
4. Reduction of affective response characterized by detachment from emotional involvement;

The brain as a whole is involved in the induction of hypnotic trance and as a whole it must be involved in the therapeutic endeavour. Simple symptom removal without wholistic approach will have doubtful results" (0. 243).

1961

Farber, S. M.; Wilson, R. H. L. (1961). Control of the mind. New York: McGraw-Hill. (Reviewed in American Journal of Clinical Hypnosis, 1964, 7, 2)

NOTES: Contains papers presented by multidisciplinary group at a symposium. Covers broad areas of: 1. The mind and its integration. 2. The influence of drugs on the individual. 3. The mind and society 4. The effect of technology on the mind 5. Restrictions and freedom of the mind.

1948

MacCorquodale, Kenneth; Meehl, Paul E. (1948). On a distinction between hypothetical constructs and intervening variables. Psychological Review, 55, 95-107.

NOTES

Among other things, the authors distinguish between intervening variables and hypothetical constructs. Intervening variable is used for abstractions from a set of data that are not assumed to have existential status, whereas hypothetical construct pertains to entities that are assumed to have existential status. The description of hypothetical constructs consists of both data statements and "surplus meaning" which incorporates information about the way the hypothetical construct

exists. Generally, hypothetical constructs are portrayed as existing only in the sense of physiological entities.

## **Phobia**

**2002**

**Ginandes, Carol (2002). Extended, strategic therapy for recalcitrant mind/body healing: An integrative model.. American Journal of Clinical Hypnosis, 45 (2), 91-102.**

The development of the power therapies, behavioral medicine, and short term interventions have reported such success even with trauma cases that it is relevant to question the justification for lengthy psychotherapy. Yet some patients with complex mind/body conditions impervious to medical treatment/hypnosis may require extended, multi-modal, integrative therapy. This paper details a single complex case of paruresis as a prototype for illustrating a holographic treatment model for recalcitrant conditions: Component features of the proposed model presented include: 1) the sequential utilization of hypnbehavioral and analytic approaches; 2) uncovering work providing access to the somatic ego state associated with the illness condition; 3) the extended treatment time frame required for deep psycho-physiological change; and 4) the stages of counter-transference expectably evoked by such patients (e.g. urgency, exuberant optimism, frustration, discouragement), and the transformation of such reactions to achieve maximum therapeutic efficacy.

## **NOTES**

**1:**

Paruresis is a social phobia involving urinary retention and "thought to affect some 17 million or 7% of the American population" (p. 92). Also known as "bashful bladder."

**1997**

**Van Dyck, R.; Spinhoven, P. (1997). Depersonalization and derealization during panic and hypnosis in low and highly hypnotizable agoraphobics. International Journal of Clinical and Experimental Hypnosis, 45 (1), 41-54.**

The primary aim of the present study was to investigate the association between spontaneous experiences of depersonalization or derealization (D-D) during panic states and hypnosis in low and highly hypnotizable phobic individuals. Secondly, the association among level of hypnotizability, capacity for imaginative involvement, and severity of phobic complaints was also assessed. Sixty-four patients with panic disorder with agoraphobia according to the DSM-III-R (American Psychiatric Association, 1987) criteria participated in the study. Proneness to experience D-D during hypnosis was positively related to hypnotizability, but only for agoraphobic patients who had already experienced these perceptual distortions during panic episodes. Correlations of level of hypnotizability and capacity for imaginative involvement with severity of agoraphobic complaints were not significant. These

findings suggest that hypnotizability may be a mediating variable between two different, although phenotypically similar, perceptual distortions experienced during panic states and hypnosis. Implications for both theory and clinical practice are discussed. -- Journal Abstract

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

& Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403

NOTES

1:

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1994

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

NOTES: Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the

branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in a an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

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**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

Culbert, Timothy P.; Reany, Judson B.; Kohen, Daniel P. (1994). Cyberphysiologic strategies for children: The clinical hypnosis/biofeedback interface. International Journal of Clinical and Experimental Hypnosis, 42 (2), 97-117

This article presents an in-depth discussion of the integrated use of self-hypnosis and biofeedback in the treatment of pediatric biobehavioral disorders. The rationale for integrating these techniques and their similarities and differences are discussed. The concepts of children's imaginative abilities, mastery, and self-regulation are examined as they pertain to these therapeutic strategies. Three case studies are presented that illustrate the integrated use of self-hypnosis and biofeedback in the treatment of children with psychophysiological disorders. The authors speculate on the specific aspects of these self-regulation or "cyberphysiologic" techniques that appear particularly relevant to positive therapeutic outcomes.

Stanton, Harry E. (1994). Self-hypnosis: One path to reduced test anxiety. Contemporary Hypnosis, 11, 14-18.

Describes a self-hypnosis technique and its efficacy in reducing test anxiety. Forty high school students were matched on sex and anxiety scores and randomly allocated to an experimental group (receiving two 50-minute sessions, a week apart, to learn the self-hypnosis technique), and a control group (receiving two 50-minute sessions focused on ways of reducing test anxiety). Students were retested after the two sessions, and 6 months later. Results showed a significant reduction in anxiety scores only for the hypnosis group, which was maintained at 6-month follow-up.

Wormnes, Bjorn (1994, October). Hypnosis in integrated treatment of dental fear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

Research reports from different countries estimate the proportion of adult dental phobic patients to be between 5% to 10%. It represents a large health problem. Helping patients to continue regular treatment by their local dentist and experience it as tolerable is the main treatment goal in our program. The main treatment method is a flexible and integrated exposure training. The psychotherapist works in cotherapy with the dentist. Using hypnosis in the dental chair is of great help, and patients are normally found to be very susceptible and easily hypnotized. Hypnosis helps the patient to experience increased tolerance of treatment and also to perform better than expected in the treatment situation.

1993

LaGrone, Randy G. (1993). Hypnobehavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. American Journal of Clinical Hypnosis, 36, 132-136.

A 10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnobehavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's

parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress. Distress.

1992

Somerville, Wayne R.; Jupp, James J. (1992). Experimental evaluation of a brief 'ideodynamic' hypnotherapy applied to phobias. Contemporary Hypnosis, 9, 85-96.

This study used a test-retest design to investigate the effectiveness of a brief 'ideodynamic' hypnotherapy which notionally located and reformulated memories in the treatment of simple phobia disorder. Subjects were 19 phobics randomly assigned to treatment (n = 10) and waiting control groups (n = 9). Rapid, significant, and sustained relief from phobic fear and avoidance was reported by 50% of treatment subjects. A number of symptoms and therapy process variables were correlated with treatment outcome. These included a negative association with hypnotizability and a positive association with hypnotic depth estimates. The ramifications of these and other associations are discussed and it is concluded that the 'ideodynamic approach' investigated may have contributed a therapeutic effect beyond the operation of treatment non-specific factors.

#### NOTES

Treatment consisted of: 1. Hypnotic induction. 2. Establishment of ideomotor signals described to clients as a means of communicating with the 'inner unconscious mind'. 3. Beyond the first therapy session, a review of work done in previous sessions. 4. Gaining signaled permission from clients to work on their problem and for the 'inner mind' to review relevant memories. 5. Location of the 'earliest critical event' by the 'inner mind'. 6. Review of the located memory by the 'inner mind'. 7. Establishing age at the occurrence of the 'critical' event. 8. Ideomotor signaling indicating suitability of a visual imagoic processing of the event.

If visual processing was chosen, the dissociated viewing procedure (step 9A) was used next, otherwise the ego-state procedure (step 9B) was employed.

The authors describe each treatment step in detail. Each subject received at least two sessions of therapy, or a maximum of three sessions if signaling indicated the presence of further unresolved memories after two sessions.

They present a case illustrating that the approach is possible with minimally hypnotizable subjects, in the apparent absence of imagoic experience, 'desensitization', catharsis, unpleasant affect, talking through or 'insight'.

"There was a positive correlation between changes in phobic fear and capacity for mental imagery which suggests that this may be one relevant variable in predicting response to memory reformulating therapy.

"There was a negative correlation between changes in fear and hypnotic responsiveness. So, successful therapeutic outcome was obviously not limited to highly hypnotizable subjects. Hypnotizability was assessed in a careful and standardized manner but testing was conducted 10 weeks following therapy. This

meant that subjects had a substantial experience in hypnotherapy at assessment. Furthermore, at the time of assessment subjects were aware of the outcome of therapy and of the kinds of memories located during therapy. It has been suggested that an association between level of hypnotizedness achieved during treatment and outcome rather than an association between degree of hypnotizability possible during therapy and outcome, taps an hypnotic effect (Spiegel & Spiegel, 1978).

"All therapy sessions were of equal duration and, as the inductions were standardized, all subjects had an approximately equal opportunity to engage in memory reformulation. However, there were individual differences in the number of memories located and a strong significant association was found between reduced fear and the number of these critical memories that were dealt with. This result suggests that the therapeutic effect may have derived either from factors specific to the therapy cycle or from differing levels of motivation among subjects to undertake the necessary 'work'.

"Maximum discomfort experienced during session two of treatment was negatively correlated with relief from phobic fears. This relationship may again reflect the influence of unresolved problematic memories on subjects who had not achieved relief by that time. It is clearly consistent with relief not being associated with painful abreaction.

"The therapy permitted a pervading privacy through the options of non-imaginative processing of recalled material (which was used by a substantial minority of subjects) and conscious withholding of the content of memories from the therapist (which was employed to a large extent by all subjects). Their reports indicated that this 'privacy' was seen as attractive by both successfully and unsuccessfully treated subjects. Taken with other results mentioned above these process findings suggest that the treatment studied stood up quite well against other brief but highly stressful exposure treatments for phobia currently in use (e.g. Ost, 1989).

"Further research needs to address the complex question as to what are the necessary and sufficient features of this procedure in producing therapeutic change. Unsolicited comments by subjects about their experience during treatment suggested that some of them were surprised by the 'involuntary' nature of their ideomotor signaling while others said that signaling was under their voluntary control. Some expressed surprise at the nature of the memories that came to them 'suddenly' during therapy. Some memories were of traumatic childhood experiences that were unexpected and considered to have 'nothing to do with my phobia'" (pp 93-94).

Stanton, Harry E. (1992). Brief therapy and the diagnostic trance: Three case studies. Contemporary Hypnosis, 9, 130-135.

## NOTES

He reviews very brief hypnotherapy, then writes, "A systematic way of encouraging people in the use of their inner resources to solve problems, the 'diagnostic trance', has been outlined by Havens and Walters (1989). People sit quietly, eyes closed, physically relaxed, concentrating upon the unpleasant sensations or feelings

associated with their problem. By turning inward in order to focus upon these internal events, they tend to drift into a trance state.

"While mentally observing these unpleasant sensations, they describe, in a somewhat detached manner, the thoughts and images which are present in their minds. They make no effort to control these in any way, simply allowing associated memories to surface quite spontaneously. Usually they reveal a pattern of thinking, a series of images, or even a specific memory which is creating the problem. Sometimes these are in the form of visual images of previously forgotten incidents, usually of a traumatic nature. On other occasions they may take the form of a voice repeating a particular negative statement.

"Once people have been able to identify the source or sources of their unpleasant feelings, they attempt to find a thought or image which is sufficiently powerful to remove or displace the negative material. On many occasions, people find that they have the inner resources needed to solve their problem but, until given the opportunity provided by the diagnostic trance, they were unaware that they possessed these resources. However, the diagnostic trance procedure appears to encourage the spontaneous emergence of creative solutions" (p. 131).

unaware that they possessed these resources. However, the diagnostic trance procedure appears to encourage the spontaneous emergence of creative solutions" (p. 131).

Of the 103 patients with whom he used the procedure, "approximately 70% reported that it had helped them resolve the specific problem for which they had sought therapeutic assistance. ... In addition to being effective, the diagnostic trance is enjoyable, even when used to process past experience of an unpleasant nature. In its simplicity lies its strength. Patients find it easy to learn and, once they have gained confidence in its value as a problem-solving tool, often teach it to family members and friends" (p. 134).

1991

Bodden, Jack L. (1991). Accessing state-bound memories in the treatment of phobias: Two case studies. American Journal of Clinical Hypnosis, 34, 24-28.

Two cases of simple phobia demonstrate the inadequacies of both behavioral and psychodynamic theories. These cases and their treatment outcomes provide support for the state-dependent memory and learning theory. Hypnosis and ideomotor signaling proved to be not only effective treatments but also useful means of illuminating the role and nature of symptom function. Issues of symptom removal and substitution are also discussed in relation to these cases

## NOTES

The authors state that Rossi and Cheek (1988) summarize a number of experimental studies on animal memory that demonstrate that different information substances are involved in different learning situations. For example, ACTH and cortisol are involved in avoidance learning while angiotensin is involved in operant conditioning. In hypnosis, state dependent memory seems to be implicated. "Hilgard (1977)

interpreted the state-dependent memory studies by Overton and others as entirely consistent with and supportive of his theory of hypnosis. Milton Erickson (1948) has also strongly suggested that it is the altered levels of arousal and affect that are responsible for the encoding and recall of stress-related problems with hypnosis" (p. 26).

"Affective experiences are apparently stored independently from their intellectual counterparts, or the emotional unit from one set may attach itself to a constellation of cues that make up a totally different cognitive set. Hypnosis may facilitate recall by providing relevant cues during an altered state of consciousness" (p. 27).

"In commenting upon [one of Erickson's cases], Rossi (1986) states that Erickson was effective because he helped the patient access state-bound memories by reviewing the context and sensory-perceptual cues that surrounded their original acquisition" (p. 27).

"When traditional behavior therapy fails it may be because the original fear stimulus is state bound or unconscious. What is conscious to the patient are those stimuli that are similar in some important respect to the original phobic stimulus and are acquired by stimulus generalization. Desensitization may reduce the patient's reactivity to the associated or acquired stimuli but cannot desensitize the original stimulus until it can be accessed consciously" (p. 27).

"The two main psychological explanations of phobic behavior are psychodynamic and behavioral. The psychodynamic approach is built upon the early writings of Freud (1956) on the traumatic basis of neurosis. Freud speculated that the intense anxiety (psychic pain) associated with the emotional trauma lead to dissociation, repression, and amnesia. Symptoms represented a dissociated or symbolic vestige of the repressed ('forgotten') trauma.

"Behavioral explanations (e.g., Rimm & Masters, 1974) are built upon classical and operant conditioning models of learning. Classical conditioning explains how a neutral stimulus (e.g., a bridge) can acquire reactivity and elicit a fear response. Avoidant behavior, which preserves the phobia, is acquired and maintained by operant conditioning. Treatment apparently involves gradual extinction of the fear response.

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"These two divergent explanations have spawned quite different therapeutic approaches, with the behavioral approach (systematic desensitization) demonstrating greater empirical support for its effectiveness (Kaplan & Sadock, 1986). The problem is made complex theoretically by the fact that desensitization doesn't always work, even when applied in a competent fashion" (p. 25).

"Freud's early work on the traumatic basis of neurosis pointed to but offered an incorrect explanation of phobias whose origins were unconscious or state bound (i.e., not available to recall during the normal conscious state)" (p. 25).

Migaly, Peter, M. D. (1991). Hypnotic pain control and patient management in dentistry. Hypnos, 18 (3), 127-32.

#### NOTES

The value of brief psychological and hypnotic techniques in dentistry is discussed from the point of view of an anesthesiologist. The paper deals with three important areas in general and pediatric dentistry, namely the hypnotic pain control, the management of dental anxiety and phobia and the use of hypnosis as adjunct to chemoanesthesia. Two cases are also presented.

#### 1990

Clark, Duncan B.; Agras, W. Stewart (1990). The assessment and treatment of performance anxiety in musicians. American Journal of Psychiatry, 148 (5), 598-605.

94 adults with a performance anxiety problem were recruited by mass media announcements and were seen in a university-based outpatient psychiatric clinic. Assessments were questionnaires for all 94 ss, diagnostic interview of 50 ss, and laboratory performance of 34 ss. Treatment conditions were 6 weeks of buspirone, 6 weeks of placebo, a five-session group cognitive-behavior therapy program (CBTP) with buspirone, or the CBTP with placebo. All Ss fulfilled criteria for Diagnostic and Statistical Manual of Mental Disorders-III-Revised (DSM-III-R) social phobia. Of the 15 full-time professional musicians, 10 had tried propranolol and 3 had stopped performing. Most Ss had substantial anxiety and heart rate increases during lab speech and musical performances. CBTP resulted in significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence.

#### 1989

Abelson, James L.; Curtis, George C. (1989). Cardiac and neuroendocrine responses to exposure therapy in height phobics: Desynchrony within the 'physiological response system'. Behaviour Research and Therapy, 27 (5), 561-567.

Monitored subjective, behavioral, cardiovascular and neuroendocrine responses in 2 men (aged 19 and 34 yrs) with height phobias over a full course of exposure therapy and at 6 and 8 month follow-up. Both Ss showed rising cortisol responses and stable, nonextinguishing norepinephrine responses to height exposure over the course of treatment, while

-rine responses to height exposure over the course of treatment, while improvement occurred in subjective and behavioral response systems. They had differing heart rate responses. Despite desynchrony among anxiety response systems and within the physiological system at treatment conclusion, Ss had successful outcomes with general measures of change (phobia rating scales, the Fear Survey Schedule, and the SCL-90) showing substantial improvement for both Ss. These outcomes were preserved at follow-up.

Owens, Mark E.; Bliss, Eugene L.; Koester, Peri; Jeppsen, E. Alan (1989). Phobias and hypnotizability: A reexamination. International Journal of Clinical and Experimental Hypnosis, 37 (3), 207-216.

25 phobic Ss were administered the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and E. R. Hilgard (1962). The mean SHSS:C score was 3.5 (S.D. = 2.6), which was lower than that obtained by comparison groups. The results are in direct opposition to previous results and the predictions of Frankel (1974; Frankel & M. T. Orne, 1976). Potential explanations for the discrepancy in results are discussed, including the possibility that previous studies used unrepresentative samples of phobics. It is suggested that hypnosis may sometimes play a role in the production of phobic symptoms but that other processes must be considered as well.

1986

LeBoeuf, Alan (1986). Relaxation-induced anxiety in an agoraphobic population. Perceptual and Motor Skills, 62, 910.

Two groups of 14 agoraphobic patients with anxiety attacks were randomly assigned to suggestion-imagery (like hypnosis) and progressive relaxation (with muscle tensing and release). The progressive relaxation group showed greater drop in subjective anxiety, but there was no different between groups with regard to heart rate. Following the experience, the suggestion-imagery group had more negative responses to : Did you experience anxiety? Did you ever fear losing control? Did you experience any strange sensations during the session? Was the session aversive?

1985

Domangue, Barbara B. (1985). Hypnotic regression and reframing in the treatment of insect phobias. American Journal of Psychotherapy, 39 (2), 206-214.

Presents the case histories of 2 women (aged 30 and 38 yrs) with insect phobias, who were treated with therapies that combined constructs and strategies from psychodynamic, cognitive, and behavioral approaches with hypnotic interventions. In one case, hypnotic regression to the original trauma resulted in reframing. In the other case, hypnotic regression was indirectly introduced through a childish story.

1984

Kelly, S. F. (1984). Measured hypnotic response and phobic behavior: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (1), 1-5.

A prospective replication of Frankel and M. T. Orne's (1976) finding that phobic patients scored higher on measures of hypnotic response than did patients wishing to use hypnosis to control smoking was carried out. 112 patients with a variety of

complaints were compared to 22 phobics. The latter scored significantly higher on hypnotizability.

**Nugent, William R.; Carden, Nick A.; Montgomery, Daniel J. (1984). Utilizing the creative unconscious in the treatment of hypodermic phobias and sleep disturbance. American Journal of Clinical Hypnosis, 26 (3), 201-205.**

An Ericksonian hypnotherapeutic procedure is designed to access and direct creative unconscious processes toward the creation and implementation of satisfactory solutions to recurrent problem behaviors. The use of the procedure is described in 3 cases. Two of the cases involve treatment of severe hypodermic needle phobias. The third case involves use of the procedure in treatment of a somnambulistic sleep disturbance. Possible curative forces tapped by the procedure, suggestions for its continued use, and suggestions for further investigation of the procedure are also discussed.

#### **NOTES**

The procedure involved: 1. Pretrance discussion of unconscious mental processes 2. Hypnosis, followed by "Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that [desired therapeutic outcome], and as soon as your unconscious knows that you will [desired therapeutic outcome] it can signal by [appropriate ideomotor signal]" 3. Post-ratification.

Example: "Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that you remain comfortably awake and alert anytime you receive an injection in the future, and as soon as your unconscious knows you will remain comfortably awake and alert when receiving an injection it can signal by lifting your right hand into the air off the chair.' This suggestion was [their] communicative effort to access and direct unconscious processes to the creation and implementation of altered behavioral responses to injections. Three minutes after the suggestion, B's right hand lifted jerkily into the air. She was then awakened and experienced a complete amnesia for the trance period" (p. 203).

"[They] then carried out a procedure to ratify the therapeutic change. This process presumably further develops expectancy of change, confirms change at the unconscious level, and puts doubt into any conscious beliefs contrary to positive change. This step is standardly carried out as was done with B. [They] had B sit with her hands resting on the arms of the chair. [They] told her they would ask her unconscious mind a question that only it would know the answer to. It could answer 'yes' to the question by lifting her left hand, 'no' by lifting her right hand, and 'I don't know' or 'I don't want to answer' by lifting both hands. Then the question was asked, 'In the future, will B remain comfortably awake and alert anytime she receives an injection or a blood test?' After a few minutes her left hand jerked momentarily into the air. After some discussion about the ideomotor response and her trance experience they dismissed her with the prescription to 'await the surprising results'" (p. 203).

The authors cite as a source for their work two books: Erickson, Rossi, and Rossi, *Hypnotic Realities*, 1976, pp. 226-230; also Erickson & Rossi, *Hypnotherapy*, 1979.

1983

Baker, S. R; Boaz, D. (1983). The partial reformulation of a traumatic memory of a dental phobia during trance: A case study. *International Journal of Clinical and Experimental Hypnosis*, 31 (1), 14-18.

A dental patient undertook hypnosis for the modification of a dental phobia. While she was in trance, the disturbing memory was replaced by a nontraumatic memory. After 2 sessions, the dental phobia was significantly reduced.

Flatt, Jennifer R. (1983). What makes therapy work? Thoughts provoked by a case study. *Australian Journal of Clinical and Experimental Hypnosis*, 11 (2), 63-72.

The case described is offered as illustrating the doubt common to introspective therapists: what did cure the patient? "Francesca's" presenting problem and the object of the short-term psychological intervention described here, was a fairly circumscribed set of fears related to enclosed spaces. The therapeutic approach adopted was primarily hypnobehavioural, with hypnotically-assisted systematic desensitization and "in vivo" exposure being the main components of the planned programme. However, at the client's suggestion, one hypnotic session with content planned by the therapist as age regression produced rather dramatic and unexpected results claimed by the patient to effect complete cure.

NOTES

1:

The therapist suggested that "her mind would take her back to a time that was important in understanding her fears and that she would be able to stay calm and relaxed while this past event was revealed to her" (p. 69). She subsequently imagined being in a cave, peaceful and calm. "On being roused from hypnosis, Francesca eagerly described her cave image. She was enthusiastic about the significance of this experience, claiming that it was evidence that in a previous life she had died from being locked into a cave as some sort of punishment and that this experience made her fear of enclosed places rational and comprehensible to her" (p. 69).

John, Rodney; Hollander, Barbara; Perry, Campbell (1983). Hypnotizability and phobic behavior: Further supporting data. *Journal of Abnormal Psychology*, 92 (3), 390-392.

Twenty women who were phobic to snakes, spiders, or rats were individually evaluated for hypnotic susceptibility using the standard audiotaped version of the Harvard Group Scale of Hypnotic Susceptibility, Form A. Consistent with the findings of three earlier studies using the Hypnotic Induction Profile (HIP), 55% of the present sample was found to be highly responsive to hypnosis. An item analysis comparing item pass percentages for the phobic subjects with item difficulties obtained from a normative sample of 357 female college students indicated that the

two samples were significantly correlated. The discrepancy between the findings of studies using standard measures of hypnotizability and studies using HIP is discussed.

1981

Epstein, S. J.; Deyoub, P. L. (1981). Hypnotherapy for fear of choking: Treatment implications of a case report. International Journal of Clinical and Experimental Hypnosis, 29 (2), 117-127.

An eclectic hypnotherapeutic approach consistent with Sacerdote's treatment model was utilized for overcoming the swallowing difficulty of an adult male. Traumatic onset followed an active fellatio experience. Cognitive restructuring preceded symptomatic improvement, and the client was nearly asymptomatic after 56 sessions. Further improvement was evidenced posttherapy on a 3-year follow-up study. The process of change is emphasized, highlighting the broader case management implications of this single case study. Clinical observations are supplemented with psychological test data, providing a richer framework for understanding client and therapy process.

Frutiger, A. Dewane (1981). Treatment of penetration phobia through the combined use of systematic desensitization and hypnosis: A case study. American Journal of Clinical Hypnosis, 23, 269-273.

Systematic desensitization and hypnosis were used in a client with long-standing penetration phobia. Glass test tubes were used in dilation exercises and masturbation instead of more expensive metal catheters. The client was able to have intercourse and adequate sexual adjustment.

Gustavson, John L.; Weight, David G. (1981). Hypnotherapy for a phobia of slugs. American Journal of Clinical Hypnosis, 23, 258-262.

Hypnotic procedures for treating phobias are reviewed. A case of a 21-year-old female with a long-standing phobia of slugs involved hypnotic techniques of dream elicitation, age regression, and directed imagery in therapy. The patient successfully overcame her fear of slugs as well as related problems.

O'Brien, Richard M.; Cooley, Lewis E.; Ciotti, Joseph; Henninger, Kathleen M. (1981). Augmentation of systematic desensitization of snake phobia through posthypnotic dream suggestion. American Journal of Clinical Hypnosis, 23, 231-238.

Nine snake phobics who had scored above eight on the SHSS (Form A) were given four desensitization sessions and five sessions in which a pleasant posthypnotic dream of the phobic object was suggested. These subjects were significantly superior to a desensitization-only control group on a behavioral avoidance test. Seven of the nine hypnosis subjects were able to touch a real snake. The two subjects who did not touch the snake reported dreams in which the snake was either absent or

threatening. Although conclusions are limited by differential attention and susceptibility, the technique seems promising.

Scrignar, C. B. (1981). Rapid treatment of contamination phobia with hand-washing compulsion by flooding with hypnosis. American Journal of Clinical Hypnosis, 23, 252-257.

Two obsessive-compulsive patients with contamination phobias and hand-washing compulsions are presented. Psychoanalytic psychotherapy had resulted in little change. Behavior therapy techniques of thought-stopping, systematic desensitization, progressive muscle relaxation, cognitive restructuring and self-imposed response prevention were first used, resulting in some subjective improvement, but no change in the hand-washing rate. Hypnosis, emphasizing relaxation, positive suggestion and corrective information provided further temporary subjective improvement but little change in compulsive rituals. Hypnosis, combined with the behavioral technique of flooding, produced rapid improvement. The patients maintained improvement at seven years and two years. Flooding under hypnosis may afford obsessive-compulsive patients a rapid and economical therapeutic procedure

Spiegel, David; Frischholz, Edward J.; Maruffi, Brian; Spiegel, Herbert (1981). Hypnotic responsivity and the treatment of flying phobia. American Journal of Clinical Hypnosis, 23, 239-247.

Systematic follow-up data are reported for 178 consecutive flying phobia patients treated with a single 45-minute session involving hypnosis and a problem restructuring strategy. One hundred fifty-eight (89%) of the patients completed follow-up questionnaires between six months and ten and one half years after treatment. Results showed that hypnotizable patients were over two and one half times more likely to report some positive treatment impact than those who were found to be nonhypnotizable on the Hypnotic Induction Profile. In addition, the patients' previous experiences with psychotherapy were found to be significantly associated with treatment outcome. The clinical implications of these findings are discussed.

1980

Kelly, S. F. (1980). Hypnotizability and the inadvertent experience of pain: A brief communication. International Journal of Clinical and Experimental Hypnosis, 28 (3), 189-191.

A clinical case of dental phobia similar to that reported by Frankel (1974, 1975) is presented that suggests a relationship between high hypnotizability and the genesis of phobic behavior. Further, the experience of pain despite anesthesia is speculatively linked to hypnosis and the mechanism for the development of the phobia.

1978

Dyckman, John M.; Cowan, Philip A. (1978). Imaging vividness and the outcome of in vivo and imagined scene desensitization. Journal of Consulting and Clinical Psychology, 46 (5), 1155-1156.

This study reexamined the role of imaging vividness in desensitization success. Scores on the Betts Questionnaire on Mental Imagery were used to divide 48 snake-phobic subjects into high, medium, and low vivid groups, who were assigned to imagined scene or in vivo desensitization treatments. Imaging vividness was assessed at scheduled points during therapy. Significant decreases in behavioral and self-reported fear were observed after both treatments, though in vivo desensitization produced significantly greater fear reduction. In therapy imaging vividness scores were significantly correlated with therapeutic success and were superior to pretherapy ratings as predictors of outcome.

Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables. The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

Weerts, Theodore C.; Lang, Peter J. (1978). Psychophysiology of fear imagery: Differences between focal phobia and social performance anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 1157-1159.

Spider phobics and speech anxious subjects imaged fear scenes with spider and public-speaking content and a series of standard scenes that were constructed to vary in degree of emotional arousal and movement. Heart rate, skin conductance, and ocular activity were recorded. Spider phobics rated all imagery contents as more vivid and reported more scene movement than speech anxious subjects. Both groups responded to their own fear scenes with higher ratings of emotion and a greater physiological response than to the other group's fear scenes. The arousal response of spider phobics to relevant fear scenes was greater than that of speech

anxious subjects. The data suggest that the outcome of imagery-based therapies may be partly determined by type of fear.

1976

Lawlor, E. D. (1976). Hypnotic intervention with 'school phobic' children. International Journal of Clinical and Experimental Hypnosis, 24, 74-86.

Case studies are used to illustrate the use of hypnosis in working with children who exhibit symptoms of "school phobia." Responses obtained during and after hypnosis are utilized to uncover underlying conflicts and fears.

The literature (Ansbacher, 1956; Friedman, 1959; Johnson, 1957; Johnson, Falstein, Szurek, & Svendsen, 1941; Kessler, 1966; Waldfogel & Gardner, 1961) confirms the findings that a child through his symptoms has fears which he is unable to bring to consciousness and talk about. Typical are fears of abandonment by parents; fears of disaster befalling parents, especially the mother; fears based on destructive wishes toward siblings due to severe rivalry for the mother's love and attention; fears that exhibiting angry feelings will be punished by the parents; and fears of annihilation and starvation.

Hypnosis has aided in restoring these children to a school environment more quickly than more traditional methods. One case is reported with excerpts from a session. The perceptions uncovered through the use of hypnosis can be utilized with children in various school settings.

traditional methods. One case is reported with excerpts from a session. The perceptions uncovered through the use of hypnosis can be utilized with children in various school settings.

1975

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear. The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed.

1973

**Tori, Christopher; Worell, Leonard (1973). Reduction of human avoidant behavior: A comparison of counterconditioning, expectancy, and cognitive information approaches. Journal of Consulting and Clinical Psychology, 41 (2), 269-278.**

**This study was designed to compare the fear-reducing efficacy of procedures based on three major theories that have been proposed to account for the success of systematic desensitization therapy: (a) cognitive information storage and retrieval, (b) cognitive expectancy, and (c) counterconditioning. Predictions were confirmed in that the outcome measures of the high-expectancy placebo group and the two cognitive-coping groups were significantly superior to those of the counterconditioning and no-treatment groups. Thus, this experiment supports the supposition that changes in human avoidant behavior may be attributed to demand and expectancy variables rather than the conditioning of "antagonistic responses" as has been previously suggested.**

**1971**

**McAmmond, D. M.; Davidson, P. O.; Kovitz, D. M. (1971). A comparison of the effects of hypnosis and relaxation training on stress reactions in a dental situation. American Journal of Clinical Hypnosis, 13, 233-242.**

#### **NOTES**

**Compared the effectiveness of relaxation, hypnosis, and a control condition in reducing in dental phobics the reaction to pressure-algometer stimulation and the injection of anesthesia. For subjects with high baseline skin-conductance levels, relaxation was most effective in reducing stress reactions. Hypnosis did not differ from the control condition. For subjects with a medium or low skin-conductance baseline, relaxation was not effective. The hypnosis group rated their treatment as most effective, and the controls rated their treatment as least effective. Five-month follow-up indicated that all subjects in the hypnosis group returned for dental treatment and that 5 of 10 in the control group and only 1 of the relaxation group returned for care.**

**month follow-up indicated that all subjects in the hypnosis group returned for dental treatment and that 5 of 10 in the control group and only 1 of the relaxation group returned for care.**

**1970**

**Davis, Daniel; McLemore, Clinton W.; London, Perry (1970). The role of visual imagery in desensitization. Behaviour Research and Therapy, 8 (1), 11-13.**

#### **NOTES**

**Summary: a measure of visual imagery ability was obtained for 33 females who and participated in desensitization therapy for snake phobia. Visual imagery was positively related to pretherapy performance (closeness of approach to a live snake), but not to improvement. On the basis of these results and the results of two other**

studies, it was hypothesized that the fear of good imagers tends to be based on imagination while that of poor imagers tends to be based on sensory experience. Most psychologists now recognize behavior therapy as effective in alleviating a wide variety of fears, but the nature of the processes underlying the various methods remains an open issue. Imagery has been of particular interest as a possible common denominator among various desensitization techniques. Lazarus (1961), for example, asserts that a "prerequisite for effective application of desensitization is the ability to conjure up reasonably vivid images," and Wolpe (1961) claims, "it is essential for visualizing to be at least moderately clear." London suggests that theoretically opposed treatments such as reciprocal inhibition (Wolpe, 1958) and implosion (Stampfl and Levis, 1967) may both be facilitated by repeated imagery which "produces a discrimination set such that the patient learns to distinguish between the imaginative, cognitive, affective aspects of experience, and the sensory and overt muscular aspects" (1964, p. 130). However, no systematic studies linking visual imagery to desensitization have been reported. This study examined the relationship between visual imagery and success in desensitization therapy.

Owens, Herbert E. (1970). Hypnosis and psychotherapy in dentistry: Five case histories. International Journal of Clinical and Experimental Hypnosis, 18, 181-193. (Abstracted in Current Contents, 2, 35, 21)

Used hypnosis to facilitate dental psychotherapy in resolving problems specific to the dental situation. Case histories illustrate the use of hypnosis in alleviating dentophobia and in the care and control of allergic responses. Formal induction procedures are not always necessary in achieving the desired result. Through the appropriate use of hypnosis, observable benefits can accrue to some dental patients in their ability to approach the dental situation and receive proper care. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Marcia, James E.; Rubin, Barry M. (1969). Systematic desensitization: Expectancy change or counterconditioning?. Journal of Abnormal Psychology, 74 (3), 382-387. Forty-four snake and spider phobic Ss, selected from a large pool of undergraduates were exposed to either (a) a form of systematic desensitization treatment, (b) a technique, called T-scope therapy, which embodies most of the expectancy-manipulating features of desensitization, but does not contain the technical elements of the procedure (i.e., relaxation, visualization, and the construction of an anxiety hierarchy), (c) T-scope therapy, presented as an "incomplete" and probably ineffective form of treatment, or (d) no treatment. There were no significant differences (on self-rating, runway, or interview measures) between the effects of the systematic desensitization procedure and T-scope therapy, although Ss receiving either of these treatments improved significantly more than those who received no treatment or T-scope therapy administered under the "low-expectancy" condition.

1969

**Marmer, Milton J. (1969). Unusual applications of hypnosis in anesthesiology. International Journal of Clinical and Experimental Hypnosis, 17 (4), 199-208.**

**Describes 6 cases which illustrate the successful application and use of hypnosis in treating malignant anxiety, preparing "patient substitution" for surgery, maintaining a nasogastric tube, treating narcotic addiction and aiding in surgical diagnosis, caring for a patient with intense claustrophobia, and anesthetizing a former narcotic addict for surgery. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved**

**1967**

**Schubot, Errol David (1967). The influence of hypnotic and muscular relaxation in systematic desensitization of phobias (Dissertation). Dissertation Abstracts, 27 (n10-B), 3681-3682.**

**"15 snake phobic subjects had desensitization treatment and 15 matched subjects had desensitization treatment with a hypnotic and muscular relaxation induction. Rate of moving through the fear hierarchy was based on three variables fear report, report of body tension, and time of signaling anxiety. Analysis of results took into consideration initial approach (to snake) level of subjects. Both treatments were effective. However, hypnotic relaxation was significantly important in desensitization for the most phobic subjects (those who couldn't approach closer than 5 feet, initially) though not for less fearful subjects. In fact, the most fearful subjects did not show improved approach behavior if they did not get the hypnosis relaxation treatment, though bodily tension and fear were reported as less while working on early items in the hierarchy. The Waking group, compared to the Relaxation hypnosis group, manifested significantly less improvement in approach and slower progress in desensitization. Hypnotizability was significantly correlated with improvement for the Relaxation subjects, as was vividness of imagery. In summary, hypnosis (a relaxation induction) facilitated desensitization treatment of highly anxiety snake-phobic subjects with the hypnotic relaxation induction, treatment outcome was related both to hypnotizability and to imagery vividness" (p. 3681- 3682).**

**1966**

**Schneck, Jerome M. (1966). Hypnoanalytic elucidation of a childhood germ phobia. International Journal of Clinical and Experimental Hypnosis, 14, 305-307.**

**A PATIENT IN HYPNOANALYSIS WAS ABLE TO BECOME AWARE OF THE RELATIONSHIP BETWEEN HER CHILDHOOD GERM PHOBIA AND HER EARLIER FEAR AND FANTASY OF PREGNANCY. THIS REPORT TOUCHES ON THE ROLE OF HYPNOSIS IN FACILITATING THE CONNECTION OF ISOLATED MEMORIES. (SPANISH + FRENCH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

Levendula, Dezso (1961). Two case presentations: Treatment of central pain with reconstruction of the body-image -- hypnoanalysis of a travel phobia. International Journal of Clinical and Experimental Hypnosis, 9, 283-289.

## NOTES

Uses analogy of phantom limb (hallucinated pain which is a central pain) with a multiple sclerosis patient who had "excruciating" pain between her thighs despite paralysis from waist down due to multiple sclerosis. She valued her sex life though she couldn't feel sexual response, and felt that she "didn't have any legs" and her husband "had to carry her."

In giving her history the patient noted an increasing numbness and weakness in her legs five years earlier. At that time she also entered menopause and developed severe vaginitis. She became depressed when she became increasingly unable control her excretory functions. As the pain in the genital region increased, her ability to feel pleasant vaginal sensations diminished. Ultimately the pain was continually present.

The therapist attributed her problem to a faulty body image because she "denied the existence of her legs which were actually physically present, although, she could neither feel, nor see, nor move them" (p. 285). Secondly, it was most necessary for her to hold on to the myth [sic], that her vagina existed, because it made her feel wanted and needed by her husband. She was unconsciously afraid that by giving up her vagina she would lose the most important bond between herself and her husband" (p. 285).

The therapist speculated that "the pain, which was the last sensation perceived before the total sensory loss occurred, was fixated centrally. This "pain-image" served to maintain the pretense, unconsciously of course, that there was still feeling in the vagina even though it was only pain and not pleasure. The pain permitted her to avoid facing reality, just as in the case of an amputee who develops the fantasy of a phantom limb, because he cannot readjust his pre-existing body-image to the acceptance of mutilation" (p. 285). He offered the patient "the rather simple explanation... that because she really did not feel where her lower body ended or began, the pain served her need to know where the body halves were separated. If she could learn to imagine and to accept herself as a full, whole person, the pain probably would leave her. This theory seemed very logical and acceptable to the patient" (p. 285).

"Hypnosis was extensively utilized in the following sessions to regress the patient toward her youth. She went again for long walks with her boyfriend, now her husband. It was fun to re-experience the feeling of walking in her father's apple orchard and stretch up for a red apple. Autohypnosis was taught and [he] told her to exercise "walking" while hypnotized twice daily" (p. 285-286). He also tapped on the soles of her feet repeatedly, until she could localize the vibrations. "She finally learned that she did have legs and also that other sensations besides pain could originate below the waist... Gradually with the acceptance of her "wholeness and tallness" the pain became less and less. She was able to "forget" the pain for a longer

period of time. ... Occasionally she does call. She tells [the therapist] that in a stressful situation, such as moving into a new house and not knowing where things are, the pain comes back temporarily, but it is much less and after [they] talk an hour she is relieved" (p. 287). The patient had a total of 20 visits.

The author describes a second case, which is not described in these notes.

**1960**

**Moss, C. Scott (1960). Brief successful psychotherapy of a chronic phobic reaction. Journal of Abnormal and Social Psychology, 60, 266-270. (Abstracted in Psychological Abstracts, 60: 7901)**

A report demonstrating the use of hypnosis in the therapy of a phobic reaction. Hypnotic and posthypnotic suggestions were used to help uncover the affectively-laden but forgotten experiences which elucidated the meaning of the phobia, as well as to help the patient relive, work through, and accept the insights gleaned therefrom, both during the therapeutic hour, between therapeutic hours, and after termination. It was felt the use of hypnosis in this case helped shorten the duration of the therapy. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1959**

**Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.**

## **NOTES**

On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.

Note: Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.

"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal, there is also a functional dissociation of the two signal systems and within the second signal system. 2. The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new cortical dynamic structures under the verbal influences of the hypnotist, these

structures representing the physiological basis for effectuating the suggested actions and states.

"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).

"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.

"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.

"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).

"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after waking. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions. During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal

system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

1954

Schneck, Jerome M. (1954). Hypnotherapy in a case of claustrophobia and its implications for psychotherapy in general. Journal of Clinical and Experimental Hypnosis, 2 (4), 251-260. (Abstracted in Psychological Abstracts, 55: 6064)

#### NOTES

"Summary. This report presents the hypnotherapy of a patient with claustrophobia. The crucial event responsible for symptom formation occurred in military service when the patient was trapped in a trench by a tank which stopped over the patient before proceeding, and at which time the sides of the trench began to cave in. Subsequent traumatic events served as reinforcement. It is likely that a low threshold for the development of anxiety predisposed this patient to the development of the claustrophobia, although the major trauma sustained was undoubtedly of tremendous impact and a distinct threat to life. Emotional experiences were sealed and free expression was permitted through hypnotic revivification. The dynamics, further elaborated in the report, suggest that similar occurrences not necessarily in military settings may be approached therapeutically in this way. Aside from the reliving technique, recall stimulation through a dream induction approach was employed. Other hypnotic methods were described and further implications for psychotherapy in general were elaborated. Hypnotherapeutic and hypnoanalytic approaches to phobic reactions have been described at length elsewhere" (p. 260).

#### Physiology

1995

De Pascalis, Vilfredo (1995, November). Psychophysiological correlates of hypnosis and hypnotic susceptibility. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

##### STUDY 1 and STUDY 2.

They recorded 40-Hz EEG temporal density (35-45 Hz band) from the left and right temporo-parietal-occipital scalp regions in four emotional conditions (gladness, happiness, fear, and anger). When measures were made in the waking state, for Highs, during positive emotions they found increase in left and right hemisphere activity compared with resting condition. During fear and anger there was reduction in the left hemisphere and an increase in the right, but for some subjects no left hemisphere change.

Low hypnotizables did not show large or reliable differences across emotions. With the hypnotic state, they found the trend was even greater for Highs.

1993

Forbes, E. J.; Pekala, R. J. (1993). Psychophysiological effects of several stress management techniques. Psychological Reports, 72, 19-27.

Progressive muscle relaxation and hypnosis both increased skin temperature and reduced pulse rate, and deep abdominal breathing reduced skin temperature. Hypnotic susceptibility had no effect on the psychophysiological measures.

**1992**

Chantler, Lisa J. (1992). The treatment of irritable bowel syndrome using hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 20, 39-47.

A single case is reported of the hypnobeavioural treatment of a patient with chronic irritable bowel syndrome. The success of this treatment suggests that it has potential over and above relaxation and other behavioural techniques alone.

**1990**

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

#### NOTES

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each \_cell\_ is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're \_both\_ going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

**1989**

Abelson, James L.; Curtis, George C. (1989). Cardiac and neuroendocrine responses to exposure therapy in height phobics: Desynchrony within the 'physiological response system'. Behaviour Research and Therapy, 27 (5), 561-567.

Monitored subjective, behavioral, cardiovascular and neuroendocrine responses in 2 men (aged 19 and 34 yrs) with height phobias over a full course of exposure therapy and at 6 and 8 month follow-up. Both Ss showed rising cortisol responses and stable, nonextinguishing norepinephrine responses to height exposure over the course of treatment, while improvement occurred in subjective and behavioral response systems. They had differing heart rate responses. Despite desynchrony among anxiety response systems and within the physiological system at treatment conclusion, Ss had successful outcomes with general measures of change (phobia rating scales, the Fear Survey Schedule, and the SCL-90) showing substantial improvement for both Ss. These outcomes were preserved at follow-up.

Alvarado, C. S. (1989). Dissociation and state-specific psychophysiology during the nineteenth century. Dissociation, 2, 160-168.

Reviews examples of state-specific psychophysiology in nineteenth century reports of dissociative disorders. These cases occurred in the context of rapid developments both in neurology and in the understanding of phenomena suggesting the possible influence of the mind, emotions, or psychological states on general health and

specific bodily functions (e.g., the study of hypnosis and hysteria). It is argued that interest in such cases was part of a general concern with mind/body interactions. The explanations offered to account for these cases reflected different orientations to the mind/body problem prevalent during this era.

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. Cognition and Emotion, 3 (1), 1-26.

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

1988

Anderson, Edgar L.; Frischholz, Edward J.; Trentalange, Mark J. (1988). Hypnotic and nonhypnotic control of ventilation. American Journal of Clinical Hypnosis, 31, 118-128.

The present study examined the effects of: 1) breathing air versus breathing 5% CO<sub>2</sub>; 2) waking versus self-hypnotic conditions; and 3) neutral versus reduced respiratory rate instructions on four measures of ventilatory functioning (respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Twelve high-hypnotizable normal volunteer subjects were studied in a repeated-measures, multivariate analysis of variance design; Significant main effects were observed

observed for each experimental condition, whereas none of the two or three way interactions proved noteworthy. Breathing 5% CO<sub>2</sub> produced increased ventilatory functions (e.g., increased respiratory rate, tidal volume, expired minute ventilation, and end-tidal Pco<sub>2</sub>). Being in a state of self-hypnosis is associated with reduced respiratory rate, with a significant increase in expired minute ventilation and end-tidal Pco<sub>2</sub>, but with no significant increase in tidal volume. Finally, reduced respiratory rate instructions were effective in significantly reducing respiratory rate and expired minute ventilation when breathing 5% CO<sub>2</sub> as evidenced by increases in end-tidal Pco<sub>2</sub> levels that were used to monitor ventilation outcomes.

Colgan, S. M.; Faragher, E. B.; Whorwell, P. J. (1988, June 11). Controlled trial of hypnotherapy in relapse prevention of duodenal ulceration. Lancet, 1299-1300.

30 patients with rapidly relapsing duodenal ulceration were studied to assess the possible benefit of hypnotherapy in relapse prevention. After the ulcer had healed on treatment with ranitidine, the drug was continued for a further 10 weeks during which time patients received either hypnotherapy or no hypnotherapy. The two

randomly selected groups were comparable in terms of age, sex, smoking habits, and alcohol consumption. Follow-up of both groups of patients was continued for 12 months after the cessation of ranitidine. After 1 year, 8 (53%) of the hypnotherapy patients and 15 (100%) of the control subjects had relapsed. The results of this study suggest that hypnotherapy may be a useful therapeutic adjunct for some patients with chronic recurrent duodenal ulceration.

#### NOTES

"The aetiology of duodenal ulceration is poorly understood but it is probably multifactorial. ... Stress, both psychological and physical, has since been shown to affect gastric emptying and the secretion of acid and pepsin, but attempts to causally link stress and peptic ulcer disease have produced conflicting results.

"Hypnotherapy can modify the response to betazole-stimulated gastric acid secretion, although the mechanism by which this is mediated remains unclear" (p. 1299).

"The active [treatment] group received 7 sessions of hypnotherapy and were given an audio tape for daily autohypnosis; the other group were seen as often, but did not receive any hypnotherapy. The ranitidine was then stopped and both groups were reviewed every 3 months for a further year, with the active group receiving hypnotherapy at their follow-up visits. All subjects had an endoscopy at the end of the study, or sooner if a symptomatic relapse occurred.

"Hypnosis was induced as previously described, with attention focused on the abdomen by the use of the patient's hand. They were asked to imagine warmth beneath the hand and to relate this to the control of gastric secretion. Reinforcement by visualization was used if the patient had this ability" (p. 1299).

At the end of a year, on follow up, the patient relapse rate was 53% and controls relapse was 100%, a difference significant at  $p = 0.01$ .

In their Discussion, the authors state, "This study shows that hypnotherapy is helpful in maintaining remission in those patients with duodenal ulceration who are particularly prone to relapse. ... In this model, hypnotherapy might operate at a variety of levels in the disease process: it could act in a nonspecific psychotherapeutic sense increasing 'coping' capacities and decreasing perceived stress. Alternatively, hypnotically induced relaxation may affect gastric acid secretion, and there is some experimental evidence for this.

"The early relapse rate in the hypnotherapy subjects was similar to that of controls, but subsequently the curves showed a much greater separation. This finding could indicate that there is a subgroup of subjects who are particularly responsive to therapy. However, a detailed review of psychological and clinical parameters did not reveal any specific feature that could be used to predict a response to this form of treatment" (pp. 1299-1300).

#### NOTES

2:

Current etiology of duodenal ulcers includes the presence of bacteria *Helicobacter pylori* which is important in relapse. In order to compare treatments we must know what is the status of each group regarding the presence of this bacteria. Current treatment of duodenal ulcer includes metronidazole, amoxicillin and tetracycline to

kill it. [Editor's Note: This appears to be a critique of the research methodology rather than notes on the article itself.]

Davies, Peter (1988). Some considerations of the physiological effects of hypnosis. In Heap, Michael (Ed.), Hypnosis: Current clinical, experimental and forensic practices (pp. 61-67). London: Croom Helm Ltd.

#### NOTES

This chapter reviews literature on physiological correlates of hypnosis, but these notes are limited to only one fact reported in the review. The author writes, 'A recently completed, and as yet unpublished study by C. Gillett and H. D. Griffiths at Bradford University investigated the relation between hypnosis and classical conditioning of psychophysiological responses. In a complex design involving both normal conditioning and normal test trials and a repetition of both acquisition and test trials under hypnosis, they found not only suppression of the conditioned response but also suppression of skin conductance responses to the half-second bursts of a 115-dB tone used as the unconditioned stimulus. Not to produce a significant autonomic response to such an intrinsically aversive stimulus is a remarkable feat which is probably outside the repertoire of simulators. However, even such results are not conclusive as the design did not include simulator control groups nor even neutrally instructed non-hypnotized group' (pp. 64-65 ).

1986

Chertok, Leon (1986). Psychotherapeutic transference, suggestibility. Psychotherapy, 23 (4), 563-569.

Discusses suggestion in psychotherapy and defines it as a body-affective process, an indissociable psychosociobiological entity that acts at an archaic unconscious level far beyond that of transference, mediates the influence of one individual on another, and is capable of producing manifest psychological and physiological changes. Present in all types of therapy, indirect (nondeliberate, nonintentional) suggestion is the element that plays an important role in change and can be observed in hypnotic experimentation. It is further argued that transference and suggestion are phenomena that do not altogether overlap. Suggestion is the condition of transference without which transference could not be established.

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

1984

**Bakker, Dirk J. (1984). The brain as a dependent variable. Journal of Clinical Neuropsychology, 6, 1-16.**

The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical, neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

#### **NOTES**

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

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with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right-hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P-type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12).

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention.

#### NOTES

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho-physiological responses -fect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho-physiological responses.

1981

Benson, Herbert; Arns, Patricia A.; Hoffman, John W. (1981). The relaxation response and hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 259-270.

Procedures for self- and hetero-hypnotic induction and for the elicitation of the relaxation response appear to be similar. Further, before experiencing hypnotic phenomena, either during a traditional or an active induction, a physiological state exists which is comparable to the relaxation response. This state is characterized, in part, by decreased heart rate, respiratory rate, and blood pressure. After the physiological changes of the relaxation response occur, the individual proceeds to experience other exclusively hypnotic phenomena, such as perceptual distortions, age regression, posthypnotic suggestion, and amnesia.

Elkind, Leonard (1981). Effects of hypnosis on the aging process. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (4), 132-137. (Also presented at the annual meeting of the Am Soc of Psychosomatic Dentistry and Medicine in San Francisco, CA)

This study investigated the possibility of altering physiological measures associated with aging through the use of posthypnotic suggestions of increased youthfulness and vitality. Subjects were 20 women ranging in age from 39 to 56 years old. They were tested individually on Morgan's Adult Growth Examination, the AGE. Test-retest scores of the Control group were not significantly different, the median change being zero. The Experimental group, however, showed a decrease in Body Age for all of the subjects, the range of change from -3 to -18 years with a median change of -11 years.

1980

Barabasz, Arreed F. (1980). EEG alpha, skin conductance and hypnotizability in Antarctica. International Journal of Clinical and Experimental Hypnosis, 63-74.

On the basis of alternative hypotheses in the literature, 9 invited Ss undergoing wintering-over isolation at Scott Base, Antarctica, were tested for EEG alpha and hypnotizability. 8-channels of EEG, bipolar skin conductance (SC) and hypnotizability data were collected at Scott Base prior to and following the wintering-over isolation. Significant increases in alpha density and hypnotizability were found in Ss following isolation. The previously reported relationship between simple eyes closed alpha density and hypnotizability was not found prior to isolation; however, this correlation approached significance following isolation. The possible influence of psychophysiological arousability on baseline EEG alpha records was considered. Correction of EEG records using SC indices of arousal resulted in a significant correlation between EEG alpha and hypnotizability following isolation. A tendency toward significance was evident in the pre-isolation, SC corrected, correlation. The significant influence of environment on EEG alpha and hypnotizability is discussed as is the use of SC arousal indices to enhance EEG alpha/hypnotizability correlations.

1979

Barmark, Susanne M.; Gaunitz, Samuel C. B. (1979). Transcendental meditation and heterohypnosis as altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 27 (3), 227-239

The effects of transcendental meditation and relaxation-heterohypnosis on subjective phenomena and physiological arousal were examined. One group of Ss, who were experienced meditators, participated in meditation, and a second group of Ss, who were highly susceptible to hypnosis but with little hypnotic experience, were exposed to hypnosis. A period of quiet sitting served as control for Ss in each group. Neither heterohypnosis nor transcendental meditation were identified as low-arousal states. They were assumed to be similar phenomenologically altered states of consciousness, mainly characterized by changes in the distribution of attention and in body image.

1978

Barber, Theodore Xenophon (1978). 'Hypnosis,' suggestions, and psychosomatic phenomena: A new look from the standpoint of recent experimental studies. In Fosshage, J. L.; Olsen, P. (Ed.), Healing: Implications for psychotherapy (pp. 269-297). New York: Human Sciences Press.

#### NOTES

"The first part of this chapter summarizes recent experiments that indicated that suggestions (1) can prevent the skin reaction (contagious dermatitis) that is produced by plants such as poison ivy, (2) can give rise to a localized inflammation of the skin, (3) can stimulate the remission of warts, (4) can ameliorate congenital

ichthyosis (fish skin disease), and (5) can stimulate additional growth of the mammary glands in adult women. The underlying theme throughout the first part of the paper is that "suggestions" (statements that something is occurring or will occur) affect cutaneous and glandular functions when subjects accept the suggestions and incorporate them into their own ongoing cognitions (their ongoing thoughts, images, and feelings). The second part of the paper (1) summarizes recent psychophysiological experiments and biofeedback studies that indicated that our thoughts, images, and feelings affect blood flow to the skin and other organs, and (2) postulates that the aforementioned phenomena produced by suggestions (e.g., the prevention of dermatitis, the production of inflammation, and the remission of warts) may be partly due to the localized alterations in blood flow that occur when the suggestions are accepted and become part of ongoing cognitions" (pp 269-270).

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard (1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. Psychotherapy and Psychosomatics, 30, 229-242.

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two

-nosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made,

such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating questionnaires. The meditational and self-hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

**1977**

**Cauthen, Nelson R.; Prymak, Carole A. (1977). Meditation versus relaxation: An examination of the physiological effects of relaxation training and of different levels of experience with transcendental meditation. Journal of Consulting and Clinical Psychology, 45 (3), 496-497.**

Three groups of meditators with varying amounts of experience, a group trained in relaxation, and a pseudomeditation group were tested for changes in heart rate, respiration, skin temperature, and skin conductance during meditation or relaxation. The two more experienced groups of meditators showed decreases in heart rate during meditation while the relaxation group showed decreases after relaxing. The group trained in relaxation and the least experienced meditators showed increases in skin temperature. There were no significant changes in skin conductance or respiration before, during, or after the meditation or relaxation periods.

**Crosson, B.; Meinz, R.; Laur, E.; Williams, D.; Andreychuk, T. (1977). EEG alpha training, hypnotic susceptibility, and baseline techniques. International Journal of Clinical and Experimental Hypnosis, 25, 348-360.**

3 alpha feedback sessions of 40 minutes were administered after a similar baseline period without feedback to 12 Ss high in hypnotic susceptibility and 12 Ss low in hypnotic susceptibility. Hypnotic susceptibility was not a significant dimension in alpha feedback training and previously reported relationship between alpha density and hypnotic susceptibility were not generally found. Evidence did support the efficacy of the current baseline procedure over others more commonly used. The possibility under certain conditions of there being a relationship between hypnotic susceptibility and alpha density and theoretical considerations in recording baseline are discussed.

**Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.**

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasies and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences. Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused perception-meditation continuum.

Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

1976

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

#### NOTES

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

Goleman, Daniel J.; Schwartz, Gary E. (1976). Meditation as an intervention in stress reactivity. Journal of Consulting and Clinical Psychology, 44 (3), 456-466.

Meditation and relaxation were compared for ability to reduce stress reactions in a laboratory threat situation. Thirty experienced meditators and 30 controls either meditated or relaxed with eyes closed or with eyes open and then watched a stressor film. Stress response was assessed by phasic skin conductance, heart rate, self-report, and personality scales. Meditators and the meditation condition habituated heart rate and phasic skin conductance responses more quickly to the stressor impact and experienced less subjective anxiety. Meditation can produce a psychophysiological configuration in stress situations opposite to that seen in stress-related syndromes. Research is indicated on clinical applications and on the process whereby meditation state effects may become meditator traits.

1975

Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. Experimental Neurology, 49, 272-280.

The reactions of 14 volunteers to electrical stimulation near the supra-orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

Bender, V. L.; Navarett, F. J.; Nuttman, D. (1975). Effects of neutral hypnosis on a conditioned physiological response. Psychological Reports, 37, 1155-1160.

The objective of the present experiment was to determine whether hypnosis without explicit suggestion of analgesia would diminish physiological responses to an operationally defined painful shock stimulus. Muscle tension (EMG) was significantly lower during hypnosis than pre- or posthypnosis. Pulse rate remained stable throughout all conditions. Also, the question of whether a tone paired with shock might acquire some unique property because of that association was investigated. It was found that EMG response to the tone alone was significantly greater than to the tone-shock combination, in prehypnosis and posthypnosis, but not during hypnosis.

Clawson, T. A.; Swade, R. H. (1975). The hypnotic control of blood flow and pain: The cure of warts and the potential for the use of hypnosis in the treatment of cancer. American Journal of Clinical Hypnosis, 17 (3), 160-169.

Case histories show that hypnosis can control massive bleeding and pain, and it can remove warts, probably by stopping blood flow to them. We propose that blood flow to cancerous tumors can likewise be controlled, which could destroy them outright, or which control could be a useful adjunct to chemo- or radio-therapy.

1970

Evans, Michael B.; Paul, Gordon L. (1970). Effects of hypnotically suggested analgesia on physiological and subjective responses to cold stress. Journal of Consulting and Clinical Psychology, 35 (3), 362-371.

Relative effects of suggested analgesia and hypnotic induction were evaluated with regard to reduction of stress responses (self-report, heart rate, pulse volume) to the physical application of ice-water stress. Four groups (N = 16 each) of undergraduate female Ss, equated on hypnotic susceptibility, were run individually, receiving (a) hypnotic induction plus analgesic suggestion, (b) hypnotic induction alone, (c) waking self-relaxation plus analgesic suggestion, or (d) waking self-relaxation alone. The major findings were that suggestion, not hypnotic induction procedures, produced reductions in the self-report of distress, and that the degree of reduction was related to hypnotic susceptibility in both "hypnotic and "waking" conditions. Neither suggestion nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of hypnotic phenomena, results are related to other literature, suggesting that an adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of hypnotic phenomena, results are related to other literature, suggesting that an

adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

1969

Baykushev, S. (1969). Hyperventilation as an accelerated hypnotic induction technique. International Journal of Clinical and Experimental Hypnosis, 17, 20-24.

Describes a rationale and procedure for the use of hyperventilation as a facilitator of hypnotic trance induction. Results with 56 neurotic patients are reported. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Dittborn, Julio M.; Shor, Ronald E. (1968). A test of the effectiveness of intermittent photic stimulation on hypnotic performance. International Journal of Clinical and Experimental Hypnosis, 16, 165-178.

ATTEMPTED TO CONFIRM THE FINDINGS OF A. G. HAMMER AND W. J. ARKINS (SEE 39:1) OF SIGNIFICANTLY GREATER IMPROVEMENT IN HYPNOTIC PERFORMANCE AS A RESULT OF 11-CPS INTERMITTENT PHOTIC STIMULATION THAN WITH FREQUENCIES OUTSIDE THE RANGE OF EEG ALPHA ACTIVITY. USING THE BRAIN WAVE SYNCHRONIZER, 3 GROUPS OF SS WERE GIVEN STIMULATION AT 5, 11, AND 30 CPS. TESTS OF HYPNOTIC PERFORMANCE WERE MADE DURING AND IMMEDIATELY AFTER STIMULATION, AND A WEEK OR MORE LATER. NO EVIDENCE OF FREQUENCY-SPECIFIC EFFECT WAS OBTAINED, AND THE ORIGINAL FINDING WAS NOT CONFIRMED. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1997

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Dittborn, J. M.; O'Connell, D. N. (1967). Behavioral sleep, physiological sleep and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 15, 181-188.

A SLEEP-INDUCTION PROCEDURE REQUIRING MANUAL RESPONSE TO A REPETITIVE AUDITORY SIGNAL WAS ADMINISTERED TO 52 SS WHO HAD CLEAR ALPHA ACTIVITY IN THEIR WAKING EEG AND WHOSE HYPNOTIZABILITY WAS KNOWN. THE OCCURRENCE OF SLEEP WAS DEFINED BY PHYSIOLOGICAL, BEHAVIORAL, AND SUBJECTIVE CRITERIA. NEITHER THE TENDENCY TO DEVELOP EEG SLEEP NOR THE ABILITY OF SOME SS TO RESPOND WHILE IN EEG SLEEP WAS RELATED TO HYPNOTIZABILITY. HYPNOTIZABILITY WAS RELATED TO A TYPE OF DISSOCIATION BETWEEN EEG SLEEP AND BOTH BEHAVIORAL AND SUBJECTIVE SLEEP SHOWN BY 5 SS, ALL HIGHLY HYPNOTIZABLE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Agosti, E.; Camerota, G. (1965). Some effects of hypnotic suggestion on respiratory function. International Journal of Clinical and Experimental Hypnosis, 13 (3), 149-157.

Several respiratory indices were measured in 10 Ss in 3 states: at rest, with hypnotic suggestion of relaxation, and with hypnotic instructions to imagine muscular work. The same suggestions were given to 10 control Ss in the waking state. The suggestion of relaxation produced a decrease in pulmonary ventilation in both groups, although it was substantial only in the hypnotic group which started from a higher baseline level. The imagined work produced an increase in ventilation, especially in the hypnotic group. However, in both instances because of compensatory changes in respiratory efficiency the actual uptake of oxygen remained almost unaffected. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Black, Stephen (1964). Mind and body. London: Kimber.

#### NOTES

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaeval mechanisms" (p. 133). "Primaeval mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of

verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

Brady, J. P.; Levitt, E. E. (1964). Hypnotically-induced 'anosmia' to ammonia. International Journal of Clinical and Experimental Hypnosis, 12, 18-20.

The procedure to demonstrate anosmia by the inhalation of ammonia is discussed. Deeply hypnotized Ss who are not knowledgeable of the relevant facts of physiology may fail to respond to ammonia fumes when it is suggested that they have no sense of smell (anosmia). However, persons who, in fact, are anosmic do respond to ammonia fumes because they are a powerful stimulus to the pain fibers in the nasal mucosa. This procedure illustrates that the crucial factor in the response of the hypnotized S is not the actual facts of anatomy and physiology, but the S's concept of them. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furieux, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Black, Stephen; Edholm, O. G.; Fox, R. H.; Kidd, D. J. (1963). The effect of suggestion under hypnosis on the peripheral circulation in man. Clinical Science, 26, 223-230.

#### NOTES

"Summary. 1. The effects on the circulation in the forearm and hand of both direct and indirect suggestion under hypnosis of thermal stimuli have been studied. 2. The induction of hypnosis did not significantly alter the forearm blood flow, but a small reduction in hand blood flow was usually observed. Pulse rate in general slowed slightly as did respiration rate. 3. The effect of body heating on forearm and hand blood flow was not modified by hypnosis. 4. Direct suggestion under hypnosis of body heating or body cooling, with and without body heating, produced only small changes. 5. The changes associated with suggestion were not related to the thermal suggestion. Whatever the suggestion, the usual response was a reduction in hand blood flow and an increase in forearm blood flow. 6. The rise of body temperature with heating was not modified by direct suggestion, under hypnosis, of body cooling. 7. No change in body temperature could be elicited by suggestion. 8. In a few experiments marked changes in forearm blood flow occurred. These appeared to resemble the changes in the circulation produced by emotional stimuli. 9. The smaller changes more frequently observed were also similar to those produced by

mild emotional stimuli" (p. 229). [N.B. The Subjects were normal, healthy adults, N = 9, between 21-45 years old; highly hypnotizable, amnesic for trance.]

Damaser, E. C.; Shor, R. E.; Orne, M. T. (1963). Physiological effects during hypnotically requested emotions. Psychosomatic Medicine, 25, 334-343.

4 emotional states were used: fear, calmness, happiness, and depression. The Ss were 17 college undergrads divided into 2 groups (8 hypnotized Ss, 9 simulators). "It was demonstrated that consistent physiological changes occur in response to hypnotically requested emotions, but that similar changes occur just as readily during waking control conditions and can be produced just as clearly by Ss simulating hypnosis." (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Farber, S. M.; Wilson, R. H. L. (1961). Control of the mind. New York: McGraw-Hill. (Reviewed in American Journal of Clinical Hypnosis, 1964, 7, 2)

#### NOTES

Contains papers presented by multidisciplinary group at a symposium. Covers broad areas of: 1. The mind and its integration. 2. The influence of drugs on the individual. 3. The mind and society 4. The effect of technology on the mind 5. Restrictions and freedom of the mind

1960

Diamant, J.; Dufek, M.; Hoskovec, J.; Kristof, M.; Pekarek, V.; Roth, B.; Velek, M. (1960). An electroencephalographic study of the waking state and hypnosis with particular reference to subclinical manifestations of sleep activity. International Journal of Clinical and Experimental Hypnosis, 8, 199-212.

(Author's Conclusions) EEG records have been investigated in 10 patients in a waking state and under hypnosis. It was shown that no differences existed between these two states in terms of EEG. EEG signs of decreased wakefulness can be demonstrated in some of the patients, but these were also present without hypnosis. This latter effect appears to be subclinical sleep activity (Roth), frequently seen particularly in neurosis. Reactibility to external stimuli under hypnosis was also, in most cases, equivalent to reactions in the waking state. The authors incline to the view that EEG data does not support the concept that the nature of hypnosis and sleep is qualitatively the same.

1959

Barber, Theodore Xenophon; Coules, John (1959). Electrical skin conductance and galvanic skin response during 'Hypnosis'. International Journal of Clinical and Experimental Hypnosis, 7 (2), 79-92.

## NOTES

1

### "Summary and Conclusions

"Six 'good' hypnotic Ss were given a ten-minute 'hypnotic induction' and a series of 'hypnotic tests.' Both basic skin conductance and momentary variations in skin conductance (GSR) were recorded during the experiment.

"The results were as follows:

1. There was no significant variation in skin conductance during the 'hypnotic induction procedure.'
  2. Skin conductance generally increased throughout the remainder of the experiment, i.e., when the Ss were given suggestions of 'sensory hallucinations,' 'age-regression,' 'analgesia,' 'negative hallucinations,' and 'post'-hypnotic behavior.
  3. The Ss usually showed a GSR when they were given 'hallucinatory' suggestions, i.e., when they were told that they were becoming 'itchy,' 'thirsty,' and 'very hot.'
  4. The GSR to a pinprick was essentially the same before the experiment and during 'hypnotic analgesia.' Also, the GSR was essentially the same, during 'hypnotic analgesia,' (a) when three Ss were told they would receive a pinprick but did not receive the pinprick, (b) when they were told they would receive a pinprick and did receive the pinprick, and (c) when they received a pinprick without being told they would receive it.
  5. Four Ss showed a GSR each time they were asked to look at a 'negatively hallucinated' object and person. Two Ss did not show a GSR when they were asked to look at the 'negatively hallucinated' object (or person). The four Ss who showed a GSR stated, during or after the experiment, that they were by no means convinced that the person or object was no longer in the room. The two Ss who did not show GSR stated, after the experiment, that they had been 'certain' that the object (or person) was not present in the room.
  6. Although the Ss stated that they did not 'remember' the 'post'-hypnotic suggestion (or anything else about the experiment), they usually showed a GSR when the E made the preliminary movements to give the signal for the 'post'-hypnotic behavior. (They also showed a GSR when E gave the signal for the 'post'-hypnotic behavior.)
- "Since skin conductance is an index of the S's level of 'activation,' 'arousal,' or 'excitation,' these results indicate the following:

1958

Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

## NOTES

1

### "Summary

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

**"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).**

state while the biochemical indices suggest a relaxed state" (pp. 106-107).

1956

Bigelow, Newton; Cameron, G. H.; Koroljow, S. A. (1956). Two cases of deep hypnotic sleep investigated by the strain gauge plethysmograph. Journal of Clinical and Experimental Hypnosis, 4 (4), 160-164.

NOTES

1

"Summary.

"Two subjects, studied by means of a strain gauge plethysmograph, have shown greater changes in the peripheral pulse and the finger volume during deep hypnosis than they did immediately before or after. In the absence of external stimuli, the presence and the degree of such changes reflect the activity of the autonomic nervous system. This result suggests that in hypnosis the inhibiting tendency of the cortex on the autonomic nervous system is reduced or nullified" (p. 164).

Placebo

2000

Rossi, Ernest L. (2000). In search of a deep psychobiology of hypnosis: Visionary hypotheses for a new millennium. American Journal of Clinical Hypnosis, 42 (3/4), 178-207.

This search for the deep psychobiological foundations of hypnosis begins with a review of some of the paradoxes of historical hypnosis and the impasse of current theory. It is proposed that further progress requires a deeper investigation of how psychosocial cues can modulate the mechanisms of healing at the CNS, autonomic, neuroendocrine and cellular-genetic levels. The dynamics of hypnotic communication and healing from the cognitive-behavior level to the cellular-genetic are outlined in 4 stages: (1) information transduction between the experiences of consciousness and the limbic-hypothalamic-pituitary system; (2) the psychosomatic network of messenger molecules and their receptors; (3) the immediate early gene protein cascade; and (4) state dependent memory, learning and behavior. Neuroscience research is outlined for its contributions to a mathematical model of how a psychobiological approach to the therapeutic applications of hypnosis and the placebo response could facilitate neurogenesis in the human hippocampus and healing at the cellular-genetic-protein level throughout the body. A series of 10 hypotheses is proposed as a guide for theory and research in therapeutic hypnosis. (PscINFO Database Record (c) 2002 APA, all rights reserved)

1999

De Pascalis, V.; Magurano, M. D.; Bellusci, A. (1999). Pain perception, somatosensory event-related potentials and skin conductance responses to painful stimuli in high, mid, and low hypnotizable subjects: Effects of differential pain reduction strategies. Pain, 83 (3), 499-508.

In this study, pain perception, somatosensory event-related potential (SERP) and skin conductance response (SCR) changes during hypnotic suggestions of Deep Relaxation, Dissociated Imagery, Focused Analgesia, and Placebo, compared with a Waking baseline condition, were investigated. SERPs were recorded from frontal, temporal, central, and parietal scalp sites. Ten high, 9 mid, and 10 low hypnotizable right-handed women participated in the experiment. The following measures were obtained: (1) pain and distress tolerance ratings; (2) sensory and pain thresholds to biphasic electrical stimulation delivered to the right wrist; (3) reaction time and number of omitted responses; (4) N2 (280+/-11 ms) and P3 (405+/-19 ms) peak amplitudes of SERPs to target stimuli delivered using an odd-ball paradigm; (5) number of evoked SCRs and SCR amplitudes as a function of stimulus repetition. Results showed, high, mid and low hypnotizables exhibited significant reductions of reported pain and distress ratings during conditions of Deep Relaxation/Suggestion of Analgesia, Dissociated Imagery and Focused Analgesia. High hypnotizable subjects displayed significant reductions in pain and distress levels compared to mid and low hypnotizables during Dissociated Imagery, Focused Analgesia and, to a lesser degree, during Deep Relaxation. Placebo condition did not display significant differences among hypnotizability groups. High hypnotizables, compared to mid and low hypnotizables, also showed significant increases in sensory and pain thresholds during Dissociated Imagery and Focused Analgesia. High, mid, and low groups showed significant reductions in P3 peak amplitudes across all hypnosis conditions and, to a lesser degree, during Placebo. The temporal cortical region was the most sensitive in differentiating SERP responses among hypnotizability groups. On this recording area the subjects highly susceptible to hypnosis displayed significantly smaller P3 and greater N2 peaks during Focused Analgesia than did the other hypnotizable groups. In this condition highly susceptible subjects also reported the highest number of omitted responses and the shortest Reaction Times. These subjects also showed faster habituation of SCRs when compared with mid and low hypnotizables. During Dissociated Imagery and Focused Analgesia, highly hypnotizable subjects also disclosed a smaller total number of evoked SCRs than did mid and low hypnotizable subjects. The results are discussed considering possible common and different mechanisms to account for the effects of different hypnotic suggestions.

Abstract from National Library of Medicine, PubMed

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Abstract from National Library of Medicine, PubMed

1999

Kirsch, Irving; Lynn, Steven Jay (1999). Automaticity in clinical psychology. American Psychologist, 54 (7), 504-515.

The authors provide an overview of the literature on the ability of response expectancies to elicit automatic responses in the form of self-fulfilling prophecies and link it to the broader psychological investigation of automatic processes. The authors review 3 areas of research in which response expectancies have been shown to affect experience, behavior, and physiology: placebo effects, the effects of false biofeedback on sexual arousal, and the alteration of perceptual and cognitive functions by hypnotic and nonhypnotic suggestion. Also reviewed are data suggesting that all behavior, including novel and intentional behavior, is initiated automatically. Following this review, the authors summarize some of the ways in which knowledge of response expectancy effects and other automatic processes that influence experience and behavior can enhance clinical practice.

#### NOTES

1

Although expectancy accounts for some variance in the development of classical hypnosis effects, it is also true that "experimental data suggest that faking accounts for relatively few of these effects" (p. 507). "The best predictors of hypnotic suggestibility are waking suggestibility and response expectancy, and expectancy remains a significant predictor of hypnotic response even with waking suggestibility controlled (Braffman & Kirsch, in press; Kirsch, 1997)" (p. 508). The authors theorize that automatisms (like Chevreul pendulum) are "responses that are primed for automatic activation by two response sets: an intention and an expectancy for their occurrence" (p. 508). They suggest that most behavior is routine, virtually automatic, because cognitive structures like schemas, scripts, or plans that are outside immediate awareness trigger the behavior. They cite research by Libet (1985) and hypotheses developed by Nisbett & Wilson (1977) and Dennett (1991), concluding that "the feeling of will is a judgment, rather than an introspected content" (p. 509). The authors discuss the Chevreul pendulum phenomenon in terms of expectancy theory and explore how their theory would apply to psychotherapy

Price, D. D.; Milling, L. S.; Kirsch, I.; Duff, A.; Montgomery, G. H.; Nicholls, S. S. (1999). An analysis of factors that contribute to the magnitude of placebo analgesia in an experimental paradigm. Pain, 83 (2), 147-156.

Placebo analgesia was produced by conditioning trials wherein heat induced experimental pain was surreptitiously reduced in order to test psychological factors of expectancy and desire for pain reduction as possible mediators of placebo analgesia. The magnitudes of placebo effects were assessed after these conditioning trials and during trials wherein stimulus intensities were reestablished to original baseline levels. In addition, analyses were made of the influence of these psychological factors on concurrently assessed pain and remembered pain

intensities. Statistically reliable placebo effects on sensory and affective measures of pain were graded according to the extent of surreptitious lowering of stimulus strength during the manipulation trials, consistent with conditioning. However, all of these effects were strongly associated with expectancy but not desire for relief. These results show that although conditioning may be sufficient for placebo analgesia, it is likely to be mediated by expectancy. The results further demonstrated that placebo effects based on remembered pain were 3 to 4 times greater than those based on concurrently assessed placebo effects, primarily because baseline pain was remembered as being much more intense than it actually was. However, similar to concurrent placebo effects, remembered placebo effects were strongly associated with expected pain levels that occurred just after conditioning. Taken together, these results suggest that magnitudes of placebo effect are dependent on multiple factors, including conditioning, expectancy, and whether analgesia is assessed concurrently or retrospectively.

Abstract from National Library of Medicine, PubMed

Wickramasekera, Ian (1999). How does biofeedback reduce clinical symptoms and do memories and beliefs have biological consequences? Toward a model of mind-body healing. Applied Psychophysiology and Biofeedback, 24 (2), 91-105.

Changes in the magnitude and direction of physiological measures (EMG, EEG, temperature, etc.) are not strongly related to the reduction of clinical symptoms in biofeedback therapy. Previously, nonspecified perceptual, cognitive, and emotional factors related to threat perception (Wickramasekera, 1979, 1988, 1998) may account for the bulk of the variance in the reduction of clinical symptoms. The mean magnitude of these previously nonspecified or placebo factors is closer to 70% when both the therapist and patient believe in the efficacy of the therapy. This powerful placebo effect is hypothesized to be an elicited conditioned response (Wickramasekera, 1977a, 1977c, 1980, 1985) based on the memory of prior healing. These memories of healing are more resistant to extinction if originally acquired on a partial rather than continuous reinforcement schedule. High and low hypnotic ability in interaction with threat perception (negative affect) is hypothesized to contribute to both the production and reduction of clinical symptoms. High and low hypnotic ability respectively are hypothesized to be related to dysregulation of the sympathetic and parasympathetic arms of the autonomic nervous system. Biofeedback is hypothesized to be the most effective for reducing clinical symptoms in people of low to moderate hypnotic ability. For people high in trait hypnotic ability, training in self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

self-hypnosis or other instructional procedures (e.g., autogenic training, progressive muscle relaxation, meditation, CBT, etc.) will produce the most rapid reduction in clinical symptoms.

1996

**Kirsch, Irving (1996). Hypnosis in psychotherapy: Efficacy and mechanisms. Contemporary Hypnosis, 13 (2), 109-114.**

Meta-analyses have established that different psychotherapies have different outcomes. Cognitive-behavioural therapies are significantly more effective than psychodynamic therapies, and their superiority increases when long-term follow-up is assessed. Hypnosis enhances the efficacy of both psychodynamic and cognitive-behavioural psychotherapy, and this effect is especially strong in long-term outcome of treatment for obesity. The paucity of procedural differences between hypnotic and non-hypnotic treatments in many of the studies demonstrating a substantial advantage for hypnosis suggests that the effect depends on the use of the word 'hypnosis'. Hypnosis can be regarded as an empirically-validated, non-deceptive placebo, the effects of which are mediated by response expectancies.

**Montgomery, Guy H.; Kirsch, Irving (1996, August). Conditioned placebo effects: Stimulus substitution or expectancy change. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.**

Stimulus substitution models posit that placebo responses are due to pairings of conditional and unconditional stimuli. Expectancy theory maintains that conditioning trials produce placebo response expectancies, rather than placebo responses, and that the expectancies elicit the responses. I tested these opposing models by providing some participants with information intended to impede the formation of placebo expectancies during conditioning trials and by assessing placebo expectancies. Although conditioning trials significantly enhanced placebo responding, this effect was eliminated by adding expectancies to the regression equation, indicating that the effect of pairing trials on placebo response was mediated completely by expectancy. Verbal information reversed the effect of conditioning trials on both placebo expectancies and placebo responses, and the magnitude of the placebo effect increased significantly over 10 extinction trials. These data disconfirm stimulus substitution models and provide strong support for an expectancy interpretation of conditioned placebo effects. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

**1995**

**Montgomery, Guy H. (1995). Mechanisms of placebo analgesia: Expectancy theory and classical conditioning (Dissertation, University of Connecticut). Bulletin of Division 30, Psychological Hypnosis, APA, 5 (3), 2.**

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1994

Amigo, S. (1994). Self-regulation therapy and the voluntary reproduction of stimulant effects of ephedrine: Possible therapeutic applications. Contemporary Hypnosis, 11 (3), 108-120.

NOTES

1

"Emotional self-regulation therapy is comprised of three phases. In the first phase, several sensory recall exercises are used to teach subjects how to voluntarily reproduce various physical sensations (hand numbness and heaviness, smell and taste) that are initially provoked by real stimuli (cold water, a heavy book, cigarette ashes, and lemon juice). Subjects are asked to associate these sensations with images, words, or other cues that will help them to later reproduce the sensations without the physical stimuli.

"In the second phase, subjects reproduce these sensations without the physical stimuli and are asked to generate them in response to various cues suggested by the therapist (e.g., touching a pencil, pen, book, etc.) ....

"In the last phase ... a demand of any kind generates the suggested effects. In the beginning of this phase, subjects are told that because of previously performed exercises, their minds are highly activated and receptive, so that they can respond to the therapist's verbal suggestions, without needing training for each new sensation. At this point, therapeutic suggestions are given to the patient" (p. 109).

Kirsch, Irving (1994). Clinical hypnosis as a nondeceptive placebo: Empirically derived techniques. American Journal of Clinical Hypnosis, 37 (2), 95-106.

Many psychological problems are maintained, in part, by dysfunctional response expectancies, and changing those expectations is an essential part of treatment. Hypnotic inductions alter response expectancies and have been shown empirically to substantially enhance the effects of psychotherapy. Therefore, hypnosis can be used therapeutically as a nondeceptive placebo. Expectancy plays a major role in hypnotic inductions and their effects. Clinical procedures suggested by these data are explored.

Zachariae, Robert; Bjerring, Peter (1994). Laser-induced pain-related brain potentials and sensory pain ratings in high and low hypnotizable subjects during hypnotic suggestions of relaxation, dissociated imagery, focused analgesia, and placebo. International Journal of Clinical and Experimental Hypnosis, 42 (1), 56-80

Pain reports and amplitudes of painful argon laser-induced brain potentials were obtained for 10 high and 10 low hypnotizable volunteers following placebo and a randomized sequence of four hypnotically induced conditions of (a) neutral hypnosis, (b) deep relaxation, (c) pleasant dissociated "out of body" imagery, and (d) focused analgesia of the hand. Both high and low hypnotizable subjects exhibited significant reductions of reported pain during conditions of neutral hypnosis, relaxation, dissociated imagery, and focused analgesia. High hypnotizable subjects displayed significantly greater reductions than low hypnotizables in all conditions except placebo. Both high and low hypnotizables exhibited significant reductions of reported pain in all five conditions as well as in the posthypnotic condition, when amplitudes of evoked potentials were compared to the prehypnotic baseline. Only the high hypnotizable group showed significant reductions in amplitudes when the data were recalculated to reflect relative changes compared to the average amplitude of the pre- and postconditions to compensate for a possible habituation effect indicated by the significantly lowered amplitudes in the posthypnotic condition. The results are discussed in light of a number of hypotheses concerning mechanisms of hypnotic analgesia.

1993

Baker, Sharon L.; Kirsch, Irving (1993). Hypnotic and placebo analgesia: Order effects and the placebo label. Contemporary Hypnosis, 10 (3), 117-126.

Hypnotic and placebo pain reduction were compared in a sample of subjects whose hypnotic susceptibility was broadly representative of the general population. Replicating the order effect reported by Stam and Spanos in 1987 for highly hypnotizable subjects, hypnosis produced more pain relief than a 'pain-reducing analgesic' placebo only when the hypnosis trial followed the placebo trial. When the placebo was described to subjects as a 'hypnotic drug' that 'increases suggestibility', no differences were found regardless of order of presentation. Both hypnotizability and pain reduction were correlated with subjects' expectancies, and the partial correlation between hypnotizability and pain reduction, with expectancy controlled, was non-significant. These data suggest that, for most subjects, hypnotic analgesia is analogous to a placebo effect, although it may be more useful than a placebo because its administration does not require deception.

1992

Garssen, Bert; de Ruiter, Corine; Van Dyck, Richard (1992). Breathing retraining: A rational placebo?. Clinical Psychology Review, 12, 141-153.

Breathing retraining of patients with Hyperventilation Syndrome (HVS) and/or panic disorder is discussed to evaluate its clinical effectiveness and to examine the mechanism that mediates its effect. In relation to this theoretical question, the validity of HVS as a scientific model is discussed and is deemed insufficient. It is concluded that breathing retraining and related procedures are therapeutically effective, but probably due to principles other than originally proposed, namely

decreasing the tendency to hyperventilate. An alternative principle is the induction of a relaxation response, presenting a credible explanation for the threatening symptoms, giving a distracting task to practice when panic may occur, and promoting a feeling of control.

-posed, namely decreasing the tendency to hyperventilate. An alternative principle is the induction of a relaxation response, presenting a credible explanation for the threatening symptoms, giving a distracting task to practice when panic may occur, and promoting a feeling of control.

#### NOTES

Goal of treatment is to (1) reduce respiratory rate, and (2) cognitive reattribution of physical symptoms to hyperventilation instead of other more catastrophic causes. Reviews a number of studies, mostly small sample, including panic disorder studies, and concludes that the majority point to a therapeutic effect of breathing retraining and cognitive reattribution of physical symptoms to hyperventilation for patients suffering HVS and the closely related panic disorder with or without agoraphobia. However, the specificity of these techniques for HVS is questionable. Vlaender-van der Giessen (1986) found relaxation training just as effective as breathing retraining; and Hibbert & Chan (1989) found breathing retraining equally effective as a placebo treatment, and not more effective with patients who had recognized symptoms at a hyperventilation provocation test than with those who had not.

Tosi, D. J.; Rudy, D. R.; Lewis, J.; Murphy, M. A. (1992). The psychobiological effects of cognitive experiential therapy, hypnosis, cognitive restructuring, and attention placebo control in the treatment of essential hypertension. Psychotherapy, 29, 274-284.

Evaluated the effects of cognitive experiential hypnotherapy (CEH), which includes hypnosis, cognitive restructuring, and developmental staging, on essential hypertension. CEH, Hypnosis alone, cognitive restructuring, and attention-placebo control conditions were randomly assigned to 39 subjects. There was a significant interaction effect with the nine psychobiological outcome measures. Discriminant analysis found a stronger overall effect over time for CEH when compared with its components

Wall, Patrick D. (1992). The placebo effect: An unpopular topic [Editorial]. Pain, 51, 1-3.

#### NOTES

The author presents a useful, brief review of the placebo effect. He suggests three hypotheses about the placebo response mechanism: 1. The effect is attributable to a decrease in anxiety (Evans, 1974). This view has not been validated (White, Tursky, & Schwartz, 1985). 2. Expectation, cognitively mediated, leads to behavioral effects. Certain personalities, described as placebo responders, report a stronger analgesia with a fixed dose of morphine than do people who are placebo non-responders (Beecher, 1968). White et al. (1985) proposed that simply asking what is expected of

a medicine will identify who the placebo responders will be. Also, the placebo response to morphine is stronger than the placebo response to aspirin. Physician or nurse expectancy is influential as well as patient expectancy, and that means that 'blind' experimental trials are not truly blind. Kanto et al. (1966) found that the placebo effect is stronger when the placebo is given second than when it is given first in a crossover design. 3. The effect is due to a classical conditioned Pavlovian response (Wickramasekera 1980). Support for this comes from experiments on normal subjects whose pain and tolerance threshold had been established (Voudouris et al. 1989, 1990). For example, in one experiment in which electric current was the stimulus, a purportedly anesthetic ointment was applied to the locus of stimulation; some of the subjects showed a placebo response of diminished pain. A second group, treated in the same manner, had the pain producing electric current secretly reduced by the Experimenter. This second group, who had experienced reduction in pain that suggested the cream was truly analgesic, A second group, treated in the same manner, had the pain producing electric current secretly reduced by the Experimenter. This second group, who had experienced reduction in pain that suggested the cream was truly analgesic, subsequently became strong placebo responders to the originally painful current and cream.

The author views the expectancy hypothesis and the conditioning hypothesis as not necessarily incompatible. Unlike the cognitively mediated expectation hypothesis, conditioning does not necessarily require cognition. But there is little support for the idea that human conditioning does not involve cognition [See Brewer, W. F. (1974). There is no convincing evidence for operant or classical conditioning in adult humans. In W. B. Weimer and D. S. Palermo (Eds.) *Cognition and the Symbolic Processes*. N.Y.: Wiley, pp 1-42.]

"If then the expectation and conditioning hypotheses are not clearly separate, it may be relevant to add an apparently unrelated group of phenomena. Humans and animals frequently show no signs of pain in the presence of overt injury (Wall 1979). It seems that pain appears only when reaction to injury is biologically appropriate. Could it be that expectation-conditioning is one of the factors which determines which item of our behavioural repertoire with its associated sensation is appropriate?" (p. 3).

**1991**

Moret, V.; Forster, A.; Laverriere, M. C.; Lambert, H.; Gaillard, R. C.; Bourgeois, P.; Haynal, A.; Gemperle, M.; Buchser, E. (1991). Mechanism of analgesia induced by hypnosis and acupuncture: Is there a difference?. *Pain*, 45, 135-140.

Hypnosis and acupuncture can alleviate experimentally induced pain but the mechanism of analgesia remains unclear for both techniques. Experimental pain was induced by cold pressor test (CPT) in 8 male volunteers. Analgesic effect of hypnosis (HA) and acupuncture (AA) was assessed before and after double-blind administration of placebo or naloxone, in a prospective, cross-over study. We found that pain intensity was significantly lower with HA as compared with AA, both with naloxone ( $P < 0.001$ ) and placebo ( $P < 0.001$ ). Within HA or AA groups, pain scores

did not differ significantly when naloxone or placebo was administered. During AA, however, pain scores were similar to control values when naloxone was given ( $P = 0.05$ ) but decreased significantly with placebo ( $P < 0.002$ ). Analog scales for pain intensity and pain relief showed a good correlation ( $r = 0.94$ ). Plasma levels of B-endorphins did not change significantly in any combination. Heart rate, peripheral arterial blood pressure and skin conductance were very insensitive indices to assess pain intensity or relief, as well as intensity of acupuncture stimulation or depth of hypnotic trance. We conclude: (1) HA and AA can significantly reduce pain from CPT, and HA is more effective than AA; (2) HA and AA are not primarily mediated by the opiate endorphin system; and (3) plasmatic levels of B-endorphins are not significantly affected by HA or AA nor by naloxone or placebo administration.

## NOTES

The authors measured blood pressure, heart rate, skin conductance, mood (Clyde Mood Scale), beta endorphin levels, and hypnotizability.

Before the experimental sessions they obtained Ss' opinions about the analgesia effectiveness of hypnosis and acupuncture. For each Subject they established a value for 'intolerable' pain (the longest duration of arm immersion in cold water). Efficacy of treatment was defined as none (0% on the efficacy scale) for this Control session..

During the experimental sessions they gave hypnosis or acupuncture analgesia for 20 minutes, then an injection of either naloxone or placebo. Double-blind controls were used. Five minutes after the injection they began CPT and the Subject was told to maintain their hand in the water for the same amount of time as in the control session. Pain intensity and treatment efficacy were scored, then the S completed a mood scale. Five blood samples were collected over the course of the procedure: (a) first rest period, (b) treatment period, (c) after injection, (d) after CPT, (e) second rest period.

Results (see Abstract). "When naloxone was administered, HA was no more effective than AA in alleviating pain ( $P = 0.109$ ). However HA was significantly more effective than AA when placebo was administered ( $P < 0.05$ ). Whichever technique was used there was no significant alteration in pain relief by either naloxone or placebo ( $P = 0.426$  within the HA group and  $P = 0.519$  within the AA group)" (p. 137).

"Compared to the control session, the pain relief was significantly better with HA, both when placebo (62.53%,  $P < 0.001$ ) and when naloxone (49.3%,  $P < 0.001$ ) was administered. This was not true with AA and placebo (15.21%,  $P = 0.1$ ) nor with AA and naloxone (13.38%,  $P = 0.5$ )" (p. 137).

"When naloxone or placebo was administered, the mean pain relief scores did not differ significantly with HA ( $P = 0.56$ ) or with AA ( $P = 0.852$ ). There was a good correlation ( $r = .94$ ) between ratings of pain and treatment efficacy" (pp. 137-138). Outcome was not related to Subjects pre-experimental beliefs about efficacy of hypnosis or of acupuncture. During the experimental sessions, all Ss reported that hypnosis was more effective than acupuncture.

Neither hypnosis nor acupuncture affected beta endorphin plasma levels; neither naloxone nor placebo affected beta endorphin plasma levels.

Mood was somewhat affected by treatments. "When compared with the baseline value (i.e., before each session), mean scores for happiness were significantly lower after AA with placebo than after AA with naloxone ( $P = 0.05$ ). The other evaluated categories of mood (friendliness, aggressiveness, clear thought, sleepiness and dizziness) were not affected by either session" (p. 139).

In the Discussion, authors indicated that "variables such as heart rate, arterial blood pressure and skin conductance were very insensitive indices for assessing pain or pain relief as well as intensity of acupuncture stimulation or depth of hypnotic trance" (p. 139).

Why was hypnoanalgesia better than acupuncture analgesia? "Firstly, a preconceived opinion could favor hypnosis; this was not the case amongst these subjects. Secondly, the influence of what was felt to be a more pleasant experience (HA) might help to lower pain ratings. Subjective preference for hypnosis was frequently expressed informally; however, scores from the Clyde Mood Scale did not suggest mood enhancement after HA. Thirdly, the intensity of analgesia might have been more uniform with HA than with AA. ... Interestingly, we found no difference in pain ratings between good and poor hypnotic subjects, even if theoretically poor hypnotic subjects could be expected to experience less pain relief with HA" (p. 139).

Effect of naloxone. "Although the failure to achieve statistical significance may be due to the small number of subjects, our results suggest that, if opiate receptors play a role in HA or AA, it is not of primary importance" (p. 139). The authors go on to state that the data on plasma beta-endorphin and CSF beta-endorphin are confusing, and elaborate the discussion of that variable on p. 139.

1990

Clark, Duncan B.; Agras, W. Stewart (1990). The assessment and treatment of performance anxiety in musicians. American Journal of Psychiatry, 148 (5), 598-605.

94 adults with a performance anxiety problem were recruited by mass media announcements and were seen in a university-based outpatient psychiatric clinic. Assessments were questionnaires for all 94 ss, diagnostic interview of 50 ss, and laboratory performance of 34 ss. Treatment conditions were 6 weeks of buspirone, 6 weeks of placebo, a five-session group cognitive-behavior therapy program (CBTP) with buspirone, or the CBTP with placebo. All Ss fulfilled criteria for Diagnostic and Statistical Manual of Mental Disorders-III-Revised (DSM-III-R) social phobia. Of the 15 full-time professional musicians, 10 had tried propranolol and 3 had stopped performing. Most Ss had substantial anxiety and heart rate increases during lab speech and musical performances. CBTP resulted in significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence.

**Kirsch, Irving (1990). Changing expectations: A key to effective psychotherapy. Pacific Grove, CA: Brooks/Cole. (Reviewed in *American Journal of Clinical Hypnosis*, 34, 138)**

#### **NOTES**

**This is a clinical hypnosis textbook written from the perspective of a cognitive therapist, and based on response-expectancy theory. The author discusses how expectancy theory can account for results obtained with hypnosis, cognitive behavioral, and psychodynamic psychotherapy, as well as with psychopharmacology. The book draws heavily upon psychological research in psychotherapy as well as hypnosis, and discusses how therapists can mobilize patient positive expectations for change. Hypnotic responses are viewed as 'genuine' responses that subjectively are not perceived to be under voluntary control (similar to other classes of response behavior).**

**Rokke, Paul D.; Carter, Alice S.; Rehm, Lynn P. (1990). Comparative credibility of current treatments for depression. Psychotherapy, 27, 235-242.**

**Current treatments of depression were evaluated for credibility. Interpersonal, communication, self-control, cognitive, social skills, and relaxation placebo therapies were rated significantly more credible and efficacious than psychodynamic and activity-change therapies, which were rated significantly more credible than biological (drug) therapy. Implications were addressed.**

#### **NOTES**

**The authors presented the basic theoretical rationale and procedures associated with the nine therapies. They used the Beck Depression Inventory and the Eysenck Personality Inventory to investigate individual differences.**

**Subjects were 252 psychology students, 128 male and 124 female; 22% had previously sought counseling and 34% had previously been clinically depressed.**

**Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.**

**Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls. Theoretical implications are discussed.**

#### **NOTES**

**Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's**

1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8)

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

of these variables to wart regression" (pp. 113-114).

Van Dyck, R.; Hoogduin, K. (1990). Hypnosis: Placebo or nonplacebo?. American Journal of Psychotherapy, 44, 396-404.

Examines experimental evidence for the view that hypnosis is a placebo in light of A. Grunbaum's (see PA, Vol 74:10891) reconceptualization. According to Grunbaum's definition of placebo, a therapeutic procedure is a non-placebo if it can be demonstrated that its effects are produced according to the theory on which the therapy is based. Evidence suggests that placebo effects are not related to hypnotizability. Clinical outcome studies show that results of hypnotherapy are related to hypnotizability in some disorders (e.g., anxiety, pain), but not in the treating addiction or habit disorders. An example is given in which hypnosis is usefully applied for its placebo value as a method to generate positive expectancies.

1989

Joubert, P. H.; Van Os, B. E. (1989). The effect of hypnosis, placebo, paracetamol, and naloxone on the response to dental pulp stimulation. Current Therapeutic Research - Clinical and Experimental, 46, 774-781

Healthy volunteers with varying degrees of hypnotic susceptibility, as measured by the Stanford Clinical Hypnotic Scale [sic] (SCHS), participated in a trial to evaluate analgesia induced by an indirect hypnotic technique, rapid induction analgesia (RIA). RIA produced increases in the pain threshold, as measured by dental pulp stimulation, in nine of ten subjects. The magnitude of the response was unrelated to SCHS scores. Neither placebo nor paracetamol capsules affected pain threshold measured by this technique. The effect of RIA on pain threshold was not reversed by naloxone, mitigating the possible involvement of endorphins in this phenomenon.

#### NOTES

Rapid Induction Analgesia, developed by Joseph Barber, was employed in this study of pain that was generated with dental pulp stimulation. RIA involves an induction followed by several kinds of suggestion, e.g. "Nothing is going to be done to you and you are free to respond and to experience what is acceptable to you. ... You have the ability to notice things. ... The way things are noticed might change. ... Memory is changeable and you may choose to remember or forget things. ... The comfortable feelings you are experiencing can be experienced easily and quickly again and again. ....To the latter was coupled the idea that this could happen again if the hypnotist put his hand on the subject's arm" (p. 776).

The lowest electrical current that produces slight discomfort was used as the measure of pain threshold.. RIA produced increases in pain threshold for 9 of 10 Ss. The 10th Subject was not used in the rest of the experiment, and one other Subject withdrew due to scheduling problems. The remaining 8 Ss experienced the following sequence of events in the experiment: --Rest 15 minutes --Pain threshold measure --Two 500-mg capsules of paracetamol or two of placebo --Wait 2 hours; then pain threshold measure --RIA (10 minutes); aroused from hypnosis; pain threshold measure with E's hand on arm --Insert IV; give 8 mg naloxone or 0.9% saline --Pain threshold measure with E's hand on arm

The four possible combinations (placebo-saline, placebo-naloxone, paracetamol-saline, and paracetamol-naloxone) were administered to each S on four occasions, in randomized order, with at least one week in between visits.

Whereas pain threshold was elevated by RIA above both the first ( $p < .025$ ) and the second ( $p < .05$ ) baselines, neither placebo nor paracetamol (like Tylenol) raised the threshold. Naloxone did not reverse the RIA effect of elevated threshold; in fact, there was a tendency for RIA pain threshold to increase even more after injections of either Naloxone or saline.

The Experimenters noted that the baselines apparently changed over time. They were significantly lower than the RIA threshold during visits 1 and 2, but during visits 3 and 4 the baselines seemed to approach RIA values.

In their Discussion, the authors wrote, "This study appears to have raised more questions than it answered. There is no doubt that RIA, as used in this study,

produced a significant shift in pain threshold as assessed by means of dental pulp stimulation. The fact that we were unable to detect an effect with paracetamol or placebo [N.B. which were given before the hypnosis procedures] means either that we were not really measuring something that was relevant to clinical pain or that the measurements were not sensitive enough for the detection of placebo effects or the analgesic effects of paracetamol.

"It furthermore appears that the success of RIA does not depend on the hypnotic susceptibility of the subjects. This is contrary to the findings of Van Gorb [sic] et al but agrees with the studies of Barber and Fricton and Roth.

"The temporal effects are also quite interesting. Firstly, it appears that the RIA was potentiated by the injection of either saline or naloxone. This could have been a placebo manifestation of the intravenous injection, but this appears unlikely in terms of the prior explanation given to the subjects. Subjects were told that the injections were to see whether the analgesic effects of RIA, if present, could be reversed. At no time was it suggested that the injections could have an analgesic effect. Another explanation might be that RIA is potentiated by repetition and that the second employment of the technique is more effective than the first. The other temporal effect seen was the tendency for baseline values to increase at later visits (Figure 4). This might mean progressive relaxation of the subject as he/she became more accustomed to the experimental situation with each subsequent visit or that the RIA state induced at the initial visits became associated with the experimental situation and that the posthypnotic suggestion became operative without the cue of the hypnotist's hand on the subject's arm. It does, however, appear that the maximum RIA effect was reached at the first visit and remained constant throughout.

"From our findings several conclusions may be made. Firstly, that RIA appears to be an effective method for producing analgesia in the majority of subjects and does not appear to depend on hypnotic susceptibility. Secondly, endorphins do not appear to be involved in the analgesia produced by this method. Thirdly, dental pulp stimulation using a standard apparatus commonly used in dental practice does not appear to be appropriate for demonstrating placebo effects or for assessing analgesic efficacy of simple analgesics. Pain thresholds determined in this way would therefore not be of use in clinical pharmacology in comparing different simple analgesics. Finally, trial designs should take the temporal shift in baseline values into consideration" pp 779-780.

Kirsch, Irving; Silva, C. E.; Carone, J. E.; Johnston, J. D.; Simon, B. (1989). The surreptitious observation design: An experimental paradigm for distinguishing artifact from essence in hypnosis. Journal of Abnormal Psychology, 98, 132-136.

Administered a hypnotic induction and five standard hypnotic suggestions twice via audiotape to a group of high- hypnotizable subjects and a group of low- hypnotizable simulators. During the first administration, Ss were led to believe that they were alone. However, their behavior was surreptitiously recorded on videotape and observed on a video monitor. The second administration occurred in the presence of an experimenter who had not been informed of group assignment.

When unaware that they were being observed, simulators were significantly less responsive to suggestions than they were when openly observed. In contrast, the behavior of nonsimulating subjects was not affected by the presence of an experimenter. These data indicate that the responses of high- hypnotizable Ss to standard hypnotic suggestions cannot be accounted for in terms of simple compliance with experimental demand.

Spanos, Nicholas P.; Perlini, Arthur; Robertson, Lynda (1989). Hypnosis, suggestion, and placebo in the reduction of experimental pain. Journal of Abnormal Psychology, 98 (3), 285-293.

Two experiments compared placebo and hypnotic analgesia in high and low hypnotizable subjects. Experiment 1 demonstrated that hypnotic and placebo analgesia were equally ineffective in low hypnotizables, but that hypnotic analgesia was much more effective than placebo analgesia in high hypnotizables. Experiment 2 replicated these results, but also included low and high hypnotizables who were given a nonhypnotic suggestion for analgesia. Both the low and high hypnotizables in this group reported greater suggested than placebo analgesia and as much suggested analgesia as high hypnotizable hypnotic subjects. Both experiments found substantial discrepancies between the amount of pain reduction subjects expected from the various treatments and the amount of pain reduction they actually reported following exposure to those treatments. In Experiment 2, subjects in all treatments who reduced reported pain engaged in more cognitive coping and less catastrophizing than those who did not reduce pain. Theoretical implications are discussed.

Stanton, Harry E. (1989). Hypnotic relaxation and the reduction of sleep onset insomnia. International Journal of Psychosomatics, 36, 64-68.

A hypnotic relaxation technique was compared to stimulus control and placebo conditions as a means of reducing sleep onset latency (SOL). Forty-five subjects were matched on their baseline SOL as measured through sleep diaries. They were randomly assigned to one of the three groups and experienced four weekly sessions of 30- minutes' duration, with demand effects being controlled through the use of counter- demand instructions. Data generated by the study suggested that the particular hypnotic relaxation treatment used was effective in helping Ss sleep more quickly. Neither stimulus control nor placebo groups recorded similar improvement.

Zane, Nolan W. S. (1989). Change mechanisms in placebo procedures: Effects of suggestion, social demand, and contingent success on improvement in treatment. Journal of Counseling Psychology, 36, 234-243.

Investigated the treatment effects of three social influence variables frequently implicated in psychotherapy placebos. Socially anxious male Subjects participated in an experimental treatment for reducing dating anxiety. Subjects were either

given or not given specific suggestions for decreasing social anxiety, placed in conditions of high or low social demand, and received feedback indicating either high or moderate success on the therapy task. Results support the importance of social influence variables in therapeutic change. Contingent success had its greatest impact on personal attributes; suggestion affected skill behaviors; and social demand effects were found in the self- evaluation of heterosocial performance. Various social influences appear to mediate change differently and do not exert the generic effects commonly assumed to be characteristic of therapy placebos. Implications for outcome research are discussed.

1988

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

Malone, M.; Strube, M. (1988). Meta-analysis of non-medical treatment for chronic pain. Pain, 34, 231-234.

Conducted a meta-analysis of 109 published studies which assessed the outcome of various nonmedical treatments for chronic pain, 48 of which had sufficient information to calculate effect sizes. The remainder were examined according to proportion of patients rated as improved. Mood and number of subjective symptoms consistently showed greater responses to treatment than than did pain intensity, pain duration, or frequency of pain, indicating the importance of using a multidimensional framework for pain assessment. Effect sizes for treatments were 2.74 for autogenic training, 2.67 for hypnosis, 2.23 for pill placebo, 1.33 for package treatments that allowed patients to choose from diverse pain management strategies, .95 for biofeedback, .76 for cognitive therapy, .67 for relaxation, .55 for operant conditioning, and .46 for TENS units. However, the largest numbers of studies were in the area of biofeedback, a treatment package, and relaxation, and we must be cautious in interpreting the effect sizes due to the small number of studies in the sample.

Spanos, Nicholas P.; Stenstrom, Robert J.; Johnston, Joseph C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. Psychosomatic Medicine, 50, 245-260.

Two experiments assessed the effects of psychological variables on wart regression. In Experiment 1, subjects given hypnotic suggestion exhibited more wart regression than those given either a placebo treatment or no treatment. In Experiment 2, hypnotic and nonhypnotic subjects given the same suggestions were equally likely to exhibit wart regression and more likely to show this effect than no treatment controls. In both experiments, treated subjects who lost warts reported more vivid suggested imagery than treated subjects who did not lose warts. However, hypnotizability and attribute measures of imagery propensity were unrelated to wart loss. Subjects given the suggestion that they would lose warts on only one side of the body did not show evidence of a side-specific treatment effect.

1987

Evans, Frederick J.; McGlashan, Thomas H. (1987). Specific and non-specific factors in hypnotic analgesia: A reply to Wagstaff. British Journal of Experimental and Clinical Hypnosis, 4, 141-147. (Comment in response to Wagstaff, G. (1987). Is hypnotherapy a placebo? Hypnosis, 4, 135-140.)

#### NOTES

This article is a reply to Wagstaff's (1984) critique of the McGlashan, Evans & Orne (1969) article which was entitled "The nature of hypnotic analgesia and the placebo response to experimental pain," published in Psychosomatic Medicine, 31, 227-246. The paper to which the authors are replying is Wagstaff, G. F. (1984). Is hypnotherapy a placebo? Paper given at the First Annual Conference of the British Society of Experimental and Clinical Hypnosis, University College, London. An abridged version appeared in the British Journal of Experimental and Clinical Hypnosis, 1987, 4, 135-140.

The closing comments of this Evans & McGlashan 1987 paper read as follows: "The strategy in this study [i.e. McGlashan, Evans & Orne, 1969] was quite different from the usual experimental design. Our goal was to maximize all of those non-specific factors that we could build into the experimental procedure. Only by attempting to maximize non-specific effects is it possible to see whether hypnosis in appropriately responsive subjects can exceed that degree of pain control which occurs due to the maximal operation of these non-specific effects. These non-specific components of the hypnotic situation may account for a great deal of clinical change. ... The critical finding was that hypnosis did add a level of pain control that occurred after maximizing clinically related non-specific factors contributing to change in pain tolerance, and that this increased tolerance occurred only in subjects markedly responsive to hypnosis, in contrast to the significant non-specific effects which were uncorrelated with measured hypnotizability" (pp. 143-144).

The principal findings of the McGlashan, Evans & Orne (1969) study were: "(a) The improved ability to tolerate pain following the ingestion of placebo was roughly the same for high hypnotizable and low hypnotizable subjects. (b) The response to the non-specific aspects of taking a 'drug' among low hypnotizable subjects was

identical to, and highly correlated (.76) with, their response to the legitimized expectation that change would occur under hypnosis for low hypnotizable subjects. The placebo component of a believe-in 'drug' ingestion was the same as the placebo component of a believed-in hypnotic experience for these low hypnotizable subjects. (c) The performance of the highly hypnotizable subjects was significantly greater under hypnotic analgesia conditions than it was under placebo conditions.

"This last finding is important conceptually, though of less clinical relevance. It should be noted that not all high hypnotizable subjects showed this result. Even among highly hypnotizable subjects, not all of them had the experience that profound analgesia had occurred! Thus, based on their subjective experience of the relatively small degree of analgesia, 6 of the 12 highly hypnotizable subjects behaved exactly as the low hypnotizable subjects had -- their placebo and hypnotic responses were small, significant, but equal. Only 6 out of 12 carefully screened hypnotizable subjects who subjectively experienced marked analgesia showed dramatic objective changes in pain endurance. Dr. Wagstaff might consider the physiological implications of the observation that we became somewhat frightened about the possibility of tissue damage with two of these six subjects. We had to stop their performance at a point where physiologists had assured us that tissue damage could be expected. They had also assured us, wrongly for these subjects, that we did not have to worry about such a critical point because nobody could endure such a degree of occlusion with this procedure. In fact, for these two subjects, anoxia and muscle cramping were not even apparent!" ( p. 144).

Stam, Henderikus J.; Spanos, Nicholas P. (1987). Hypnotic analgesia, placebo analgesia, and ischemic pain: The effects of contextual variables. Journal of Abnormal Psychology, 96, 313-320.

Two experiments examined the relation between hypnotic and placebo analgesia using ischemic pain. The first experiment examined an artifact in a previously used ischemic-pain stimulus. Experiment 2 investigated the relation between hypnotic and placebo analgesia using a submaximum-effort tourniquet technique to produce ischemic pain. High- and low-susceptible subjects who received placebo analgesia followed on a subsequent trial by hypnotic analgesia showed significant increases in tolerance from placebo to hypnotic analgesia. When presented in the reverse order, however, placebo analgesia and hypnotic analgesia led to equivalent levels of tolerance in both high- and low-susceptible subjects. A similar pattern of findings emerged for Ss' magnitude estimates of pain, but it was not related to hypnotic susceptibility. These findings indicate that both hypnotic and placebo analgesia may be contextually dependent phenomena.

1985

Critelli, Joseph W. (1985). Placebo effects, common factors, and incremental effectiveness. [Comment/Discussion] .

## NOTES

1

This is a comment on Kirsch, Irving (1985). The logical consequences of the common-factor definition of the term placebo. American Psychologist, 40, 239-240.

"It seems apparent that psychologists have underestimated the difficulty of proving incremental effectiveness. Unlike the situation in medicine, placebo controls in psychology rarely if ever attain true double-blind status. They are almost invariably administered by therapists who do not believe in the efficacy of their own procedures. It is hard to believe that this would not affect therapeutic effectiveness. In addition, present measures of credibility-expectancy are rather crude, and they do not control for other placebo variables such as attention, demand for improvement, and emotional investment in being cured. Under these circumstances, it is difficult to maintain the conviction that any current psychological treatment has demonstrated effects beyond those of adequate placebo controls" (p. 851).

Kirsch, Irving (1985, November). Response expectancy as a determinant of experience and behavior. American Psychologist, 40 (11), 1189-1202.

Response expectancies, defined as expectancies of the occurrence of nonvolitional responses, have generally been ignored in theories of learning. Research on placebos, hypnosis, and fear reduction indicates that response expectancies generate corresponding subjective experiences. In many cases, the genuineness of these self-reported effects has been substantiated by corresponding changes in behavior and physiological function. The means by which response expectancies affect experience, physiology, and behavior are hypothesized to vary as a function of response mode. The generation of changes in subjective experience by corresponding response expectancies is hypothesized to be a basic psychological mechanism. Physiological effects are accounted for by the mindbody identity assumption that is common to all nondualist philosophies of psychology. The effects of response expectancies on volitional behavior are due to the reinforcing properties of many nonvolitional responses. Classical conditioning appears to be one method by which response expectancies are acquired, but response expectancy effects that are inconsistent with a conditioning hypothesis are also documented.

Kirsch, Irving (1985). The logical consequences of the common-factor definition of the term placebo. American Psychologist, 40, 237-238.

## NOTES

According to the comments of Critelli (1985 American Psychologist, p. 850), Kirsch "maintained that the common factors definition of placebo is unacceptable because it (a) fails to encompass placebos such as false biofeedback, and it (b) overinclusively identifies as placebos traditional procedures such as contingent reinforcement. He argued that it would be unwise to adopt a definition that 'requires us to conclude that effective ... procedures are placebos' (p. 238). Kirsch suggested that the placebo label be restricted to pharmacologically inert substances and that placebo control groups in psychotherapy be called 'expectancy modification controls' (p. 238). In effect, he suggested formally defining the placebo only within medicine, while

retaining for psychotherapy both the concept of placebo and the use of (relabelled) placebo control groups" (p. 850). Editor's Note: Critelli (1985) is a secondary source.

adopt a definition that 'requires us to conclude that effective ... procedures are placebos' (p. 238). Kirsch suggested that the placebo label be restricted to pharmacologically inert substances and that placebo control groups in psychotherapy be called 'expectancy modification controls' (p. 238). In effect, he suggested formally defining the placebo only within medicine, while retaining for psychotherapy both the concept of placebo and the use of (relabelled) placebo control groups" (p. 850). Editor's Note: Critelli (1985) is a secondary source.

Patterson, C. H. (1985). What is the placebo in psychotherapy?. Psychotherapy, 22 (2), 163-169

Although there is an extensive literature on the placebo effect in psychotherapy, the distinction between the placebo and other elements of the therapeutic process has not been clear. This paper analyzes the therapeutic relationship in terms of separating the placebo elements and the specific factors. The so-called nonspecific elements, often equated with the placebo, are proposed as the specific factors. It is contended that those variables focused upon by those studying the social psychological factors are actually part of the placebo.

1984

Critelli, Joseph W.; Neumann, Karl F. (1984). The placebo: Conceptual analysis of a construct in transition. American Psychologist, 39, 32-39.

The placebo in psychotherapy has unfortunately retained the negative connotation of an inert "nuisance variable," a label that it originally incurred in the field of medicine. In addition, the transition toward more cognitive models of psychotherapy, particularly Bandura's theory of self-efficacy, has led to problems in defining the placebo within psychology. This transition has resulted in an awkward interface between certain preferred cognitive metaphors and the negative connotations of a presumably cognitive placebo construct. As a result, suggestions have recently been made to dismiss the placebo construct from psychology and to do away with the use of true placebo controls in outcome research. The present analysis maintains that (a) the placebo can be adequately defined within psychology, (b) the negative connotation of the placebo label is largely undeserved, (c) the placebo retains a continuing conceptual and empirical utility for evaluating psychotherapy, and (d) the therapeutic efficacy of current therapies is well established even though they have not generally been shown to be more effective than nonspecific treatment.

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than

enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Lewith, G. T.; Kenyon, J. N. (1984). Physiological and psychological explanations for the mechanism of acupuncture as a treatment for chronic pain. Social Science & Medicine, 1367-1378.

Many suggestions have been made about the possible mechanism of acupuncture as an analgesic therapy. This review provides a comprehensive account of the neurological, neurohumoral and psychologically-based hypotheses put forward. Although the exact mechanism of this treatment remains unclear, it is apparent that reproducible neurological and chemical changes occur in response to acupuncture, and that these changes almost certainly modify the response to, and perception of, pain. The mechanism of chronic pain is incompletely understood, but within this framework we understand acupuncture as completely as most other types of analgesic treatment.

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

1983

Boutin, Gerald E.; Tosi, Donald J. (1983). Modification of irrational ideas and test anxiety through rational stage directed hypnotherapy (RSDH). Journal of Clinical Psychology, 39 (3), 382-391.

Examined the effects of four treatment conditions on the modification of Irrational Ideas and test anxiety in female nursing students. The treatments were Rational Stage Directed Hypnotherapy, a cognitive behavioral approach that utilized hypnosis, and vivid emotive imagery, a hypnosis-only treatment, a placebo condition, and a no-treatment control. The 48 Ss were assigned randomly to one of these treatment groups, which met for 1 hour per week for 6 consecutive weeks with

in-vivo homework assignments also utilized. Statistically, significant treatment effects on cognitive, affective, behavioral, and physiological measures were noted for both the RSDH and hypnosis group at the posttest and at a 2-month follow-up. Post-hoc analyses revealed the RSDH treatment group to be significantly more effective than the hypnosis only group on both the post- and follow-up tests. The placebo and control groups showed no significant effects either at posttreatment or at follow-up. Classen, Wilhelm; Feingold, Ernest; Netter, Petra (1983). Influence of sensory suggestibility on treatment outcome in headache patients. Neuropsychobiology, 10, 44-47.

In 45 headache patients the relationship between sensory suggestibility and three measures of treatment effect-ratings on (1) intensity of headaches; (2) efficacy of drugs, and (3) physician's competence - was investigated in a double-blind long-term crossover study. Subjects scoring high on sensory suggestibility clearly showed more relief of headaches upon the analgesic as well as upon the placebo. The physician's competence was rated higher by high-suggestible patients, whereas ratings on drug efficacy were low in all patients. The seemingly controversial behavior of high-suggestible patients was interpreted as a call for continuation of the physician's efforts in spite of the relief the patients already achieved.

O'Connell, Sean (1983). The placebo effect and psychotherapy. Psychotherapy: Theory, Research and Practice, 20 (3), 337-345.

The power of psychotherapy to cure can be comprehended through an investigation into the efficacy of placebo in medical history. The evolution of "placebo" leads to a conceptualization of psychotherapy as a form of placebo. Explanations for the presence of the placebo effect, as well as guidelines for its elicitation, are outlined. "Faith in the gods or in the saints cures one, faith in little pills another, faith in a plain common doctor a third, hypnotic suggestion a fourth. ... Faith in us, faith in our drugs and methods, is the great stock in trade of the profession (paracelsus, 1570)" (p. 337).

Ross, Sherman; Buckalew, L. W. (1983). The placebo as an agent in behavioral manipulation: A review of problems, issues, and affected measures. Clinical Psychology Review, 3, 457-471.

Need for greater recognition and appreciation of placebo effects was stated, and problems hindering their clear conceptualization are noted. Previous reviews of the history and use of placebos are acknowledged. This review provides a summary of research primarily within the last 20 years, and in particular considers studies reflecting on placebos as agents of psychomotor, physiological, cognitive, affective, and clinical manipulations. General conclusions of manipulative efficacy are provided, and issues and problems related to clarification of placebo phenomena are identified. Psychological and medical evidence reflects increasing attention to the placebo and of effects on a wide range of behavioral functions. While important

ethical and methodological questions remain, recent evidence of a physiologic basis for placebo action suggests exciting new insights into placebo phenomena

1982

Frankel, Fred H. (1982). Hypnosis and hypnotizability scales: A reply. International Journal of Clinical and Experimental Hypnosis, 30, 377-392.

The use of the hypnotizability scales in the experimental setting is briefly reviewed, as is the need to separate the effect of hypnosis from the influence of factors such as relaxation and placebo which accompany the use of hypnosis clinically. The clinical relevance of the scales, most of which were developed primarily for experimental work, is affirmed by several studies conducted in the clinical context, in which the scales were used. Levels of hypnotizability have correlated well with patterns of clinical behavior. Although the scales are useful in many instances in helping to plan treatment strategy, their value in investigative studies is emphasized. Sacerdote's (1982) criticisms of the scales are considered. While it is true that the scales are blind to some of the qualitative aspects of the hypnotic experience, the great majority of clinically hypnotizable patients are able to respond to the items on the scales. Sacerdote's reluctance to learn about the value of the scales is evident in his preference for conjecture when he could readily have gathered irrefutable data through the administration of the scales, without the least risk to the treatment of his patients, once the course of treatment was underway or complete.

1982

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

#### NOTES

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements,

**Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.**

**"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...**

**"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).**

**The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.**

**"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).**

**"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).**

**1981**

**Franck, Jerome (1981, August). Therapeutic components shared by all psychotherapies. [Paper] Presented at the annual meeting of the American Psychological Association.**

## **NOTES**

**The author summarizes as follows. 1. Patients who receive any form of psychotherapy do better than controls. 2. Followup studies show most patients who show improvement maintain it; the closing of gap between patients who improve and those who don't is due to those who do less well catching up. Perhaps the main effect is to accelerate improvement which would eventually happen anyway. 3. Determinants of successful treatment are personal qualities of Patient and Therapist. 4. There are a few conditions which have more specific treatment indications. --Behavior therapy - for phobias, obsessive compulsive disorders, sexuality problems --Cognitive therapy - for depression Further advantages of specific treatments for specific conditions may be found.**

**All patients seek treatment not just for symptoms but because of demoralization. The common elements are: Subjective incompetence, loss of self esteem, alienation, hopelessness, helplessness, a feeling others could help but won't, feeling of loss of control. Demoralization plus distress leads to seeking treatment.**

**A small percentage without demoralization seek treatment for specific symptoms (e.g., patients with a simple phobia of height). Anxiety and depression (or loss of self esteem) are most frequent symptoms in Outpatient Departments.**

**Success in treatment often is due to restoration of morale (which removing symptoms can do very well). 1. Citing Doehrenwald research. 2. People seek treatment only 1-2 years after symptoms appear, after trying other ways of dealing with them. 3. Many patients improve rapidly in treatment (Garfield found the Mean = 5 or 6 sessions.) Mean symptom relief is same after 4 sessions and drop-out than after 6 months; also those on waiting list in phone contact improve as much.**

**Shared components in the various therapies combat demoralization: 1. Emotionally charged and vital relationship with the helping person (or group). 2. Healing setting (which increases Therapist's prestige and promotes healing). (a) Therapeutic rituals (which lead to an external reason for abandoning the symptom; the more spectacular the reason, the greater the motivation). (b) Therapeutic bond.**

**Expectation of help is the best predictor of outcome. (Cites his own placebo study.) One problem found was that responsiveness to placebo didn't correlate with response to psychotherapy. (Cites Lieberman's study). Patients receiving psychotherapy role-induction interview improved more. 3. Provision of learning experiences - movement of values toward those of the therapist 4. Emotional arousal. Supplies motivation for change. Cites his experiments on emotional arousal and attitude change, manipulating arousal using ether drip or adrenalin (leads to temporary attitude change). Something else besides arousal may be needed to sustain change. 5. Enhances sense of mastery, control of one's self and internal states. (a) provides conceptual scheme (b) gives experience of success 6. Provision of opportunities (and incentives) to practice**

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Properties of Patient which assure success: 1. Distress 2. Earlier relationship with parent which leads to capacity to relate. (Molly Harrower's predictors) 3. To profit from specific procedures: capacity for insight for psychoanalysis.

Properties of Therapist which contribute to success:

We haven't gotten farther than Rogers' empathy, warmth, and positive regard; Whitehorn & Betz's Type A and B; and [missed reference name] activity level. He thinks success may be related to Therapist's parapsychological ability, healing power.

Physiology of hope: Placebos for dental pain lead to pain relief for some. Endorphin antagonist made pain re-occur for them

1979

Carr-Kaffashan, Lucille; Woolfolk, Robert L. (1979). Active and placebo effects in treatment of moderate and severe insomnia. Journal of Consulting and Clinical Psychology, 47 (6), 1072-1080.

This study examines the efficacy of relaxation training and a highly credible placebo in the treatment of both severe and moderate sleep onset insomnia. The placebo treatment was designed to elicit an expectation for improvement comparable with that of relaxation training. Expectancy of improvement was further controlled by informing subjects to expect improvement only after the third week of therapy, thus allowing comparisons of the treatments to be made during the counterdemand period (first 3 weeks) and the positive demand period (fourth week and beyond). Responses of severe and moderate insomniacs were similar across treatment conditions, over weeks, and in response to the counterdemand/positive demand manipulation. Only subjects trained in relaxation techniques improved significantly during the counterdemand period. The active treatment was significantly more

effective than the placebo in reducing sleep onset latency during the counterdemand period. After the introduction of positive expectancy of therapy outcome, relaxation was no longer superior to placebo. Findings are discussed in terms of the methodological difficulties inherent in controlling for subject expectancy of therapeutic effects in treatment studies of insomnia.

Snow, Lorraine L. (1979). The relationship between 'rapid induction' and placebo analgesia, hypnotic susceptibility, and chronic pain intensity (Dissertation, University of Rhode Island). Dissertation Abstracts International, 40 (n2-B), 937.

## NOTES

Found that the RIA [Rapid Induction Analgesia] was no more effective than oral placebo analgesia in relieving the pain of 30 paraplegics suffering from chronic pain syndrome. Although Snow found that the RIA was unrelated to hypnotizability when the effect of chronic pain experience was controlled, Crowley (1980) did find that hypnotizability was related to multiple chronic pain indices.

## 1978

Karlin, Robert; Mann, David; Carracher, John (1978, September). Placebo considerations in clinical hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada. (Reprinted in part in American Psychological Association Division of Psychological Hypnosis Newsletter, April, 1979)

While the last 20 years have seen great progress in understanding factors underlying hypnotic phenomena in the laboratory, underlying process in clinical settings is much less clear. It is suggested that hypnosis, like most other psychotherapeutic techniques, derives most of its efficacy from its value as a placebo. Its assumed efficacy legitimizes high levels of therapist demand for change and increases the patient's efficacy expectations and perceived control. Conceptual distinctions are made between syndromes that should respond well to hypnotic treatment and those that should not. A rationale for the differing views of clinical and experimental workers in hypnosis is suggested. Finally, the central importance of the patient-therapist relationship is noted.

Parwatikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet-induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro-stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on

subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

Slutsky, Jeffrey; Allen, George J. (1978). Influence of contextual cues on the efficacy of desensitization and a credible placebo in alleviating public speaking anxiety. Journal of Consulting and Clinical Psychology, 46 (1), 119-125.

This investigation was designed to determine the extent to which contextual cues mediated the effectiveness of systematic desensitization and a plausible placebo in alleviating public speaking anxiety. After participating in a public speaking situation that allowed the collection of self-report, physiological, and behavioral manifestations of anxiety, 67 subjects were randomly assigned to receive five sessions of either desensitization, "T scope" therapy, or no treatment. Each of these conditions was conducted in a context that either stressed the clinical relevance of the procedure or presented the procedure as a laboratory investigation of fear without therapeutic implications. Analysis of changes both between groups and within individuals indicated that desensitization reduced public speaking anxiety in both contexts, whereas the placebo was effective only in the therapeutic setting. The superiority of desensitization was most pronounced on the physiological variables. The results are interpreted as indicating support for a counterconditioning, rather than an expectancy, interpretation of desensitization.

1977

Berk, Stephen N.; Moore, Mary E.; Resnick, Jerome H. (1977). Psychosocial factors as mediators of acupuncture therapy. Journal of Consulting and Clinical Psychology, 45 (4), 612-619.

This study investigated a number of psychosocial variables that have been suggested as possible mediating factors in acupuncture therapy. Forty-two volunteers with bursitis and/or tendonitis of the shoulder served as subjects. All were randomly assigned to one of four treatment groups: acupuncture - positive milieu, acupuncture - negative milieu, placebo acupuncture - positive milieu, and placebo acupuncture - negative milieu. Pretreatment and posttreatment subjective pain

reports and shoulder motion studies, as well as pretreatment assessments of hypnotic susceptibility and suggestibility, were determined for each subject. Results indicated that (a) acupuncture and placebo acupuncture were equally effective in producing highly significant ( $p < .001$ ) reductions in subjective pain reports; (b) neither treatment effectively improved objective shoulder motion; (c) subjects treated in the positive milieu reported more improvement than those in the negative milieu ( $p < .053$ ); and (d) hypnotic susceptibility, suggestibility, belief in the treatment, and the satisfaction of expectations showed no relationship to treatment outcome. It is concluded that acupuncture therapy provides a powerful placebo. Treatment milieu variables warrant future study in the attempt to understand the acupuncture phenomena.

Lick, John R.; Heffler, David (1977). Relaxation training and attention placebo in the treatment of severe insomnia. Journal of Consulting and Clinical Psychology, 45 (2), 153-161.

This study compared the effectiveness of progressive relaxation training with and without a supplementary relaxation recording, which the subjects played at home, and an attention placebo manipulation in the modification of severe insomnia in adult volunteers. The results indicated that the relaxation training procedures were significantly more effective than placebo and no-treatment controls in modifying several parameters of sleeping behavior, in reducing consumption of sleep-inducing medication, and in influencing a self-report anxiety measure. The supplementary relaxation tape did not increase the effectiveness of relaxation training conducted in the clinic, and there was no difference in the efficacy of the placebo and no-treatment conditions. Physiological data gathered during the last treatment session indicated few significant correlations between reductions in arousal associated with relaxation training and treatment outcome.

MacMillan, M. B. (1977). The cathartic method and the expectancies of Breuer and Anna O.. International Journal of Clinical and Experimental Hypnosis, 25, 106-118.

Expectancies about the consequences of the suppression of behavior and about the effects of expressing emotions are proposed as sources of the "talking cure" which developed during Breuer's treatment of Anna O. and which later became known as the cathartic method. Although the argument is similar to one proposed by Ellenberger (1970, 1972) it sets out a more rational alternative to his explanation that the method was partly a creation of the mytho-poetic unconscious. The analysis of the interaction between Breuer and Anna O. makes explicit the expectancies underlying each of the steps through which the cathartic method developed and traces these expectancies to the general beliefs and the specific theoretical interests shared by them.

Orne, Martin T. (1977). The construct of hypnosis: Implications of the definition for research and practice. In Edmonston, William E., Jr. (Ed.), Conceptual and

investigative approaches to hypnosis and hypnotic phenomena (296, pp. 14-33). New York: New York Academy of Sciences.

#### NOTES

These notes are concerned with only a small part of the article.

The author discusses various ways of defining hypnosis, and then states, "In its simplest form one would define hypnosis as that state or condition which exists when appropriate suggestions will elicit hypnotic phenomena. Hypnotic phenomena are then defined as positive responses to test suggestions which on analysis all turn out to involve suggested alterations of perception or memory. The construct of hypnosis as a subjective state in which alterations of perception or memory can be elicited by suggestion is operationalized in standardized scales of hypnotic susceptibility..."(pp. 18-19). "Though it is necessary to specify responses in behavioral terms, it should be emphasized that the resulting scores validly reflect the hypnotic process only to the degree that the behavior reflects alterations in the individual's subjective experience" (p. 19).

"We would, however, be loath to conclude that hypnosis would not result in increased performance on some of the many dependent variables that have not yet been rigorously studied. For example, I find it difficult to believe that simulating subjects would calmly tolerate major surgery without benefit of anesthesia, although we have long since learned to be cautious about even such improbable possibilities" (p. 25).

"Perhaps the best clinical evidence for the subjective reality of hypnotic effects derives from the treatment of chronic pain and the use of hypnosis as an anesthetic. Though environmental contingencies certainly affect the expression of pain, the repeated choice of hypnosis as an analgesic when alternatives are readily available is difficult to explain without assuming that the anesthesia suggestions effectively alter the individual's experience" (p. 26).

[[The author also describes the transparent hallucination phenomena, source amnesia, and the disappearing hypnotist phenomena.]

Stern, John A.; Brown, M.; Ulett, George A.; Sletten, Ivan (1977). A comparison of hypnosis, acupuncture, morphine, Valium, aspirin, and placebo in the management of experimentally induced pain. Annals of the New York Academy of Sciences, 296, 175-193.

#### NOTES

1

"What general conclusions can we come to on the basis of these investigations? We conclude that hypnosis and suggestions of analgesia, morphine, and acupuncture stimulation (of LI 4, 14, and 15 on the arm exposed to painful stimulation) are effective in reducing experimentally induced pain. This is true for both a cold pressor pain-induction procedure and an ischemic pain-induction procedure. Hypnotic suggestibility does not account for the effectiveness of acupuncture stimulation, though good hypnotic Ss show better protection against pain with hypnotic suggestion and morphine.

"Good hypnotic Ss experience more pain than is true for Poor hypnotic Ss when exposed to the same pain-induction procedure. The effect is more marked for the cold-pressor than the ischemic pain procedure. Good hypnotic Ss are more responsive -- i.e., show greater reduction in pain perception -- to drugs and intervention procedures that produce significant subjective sensations (morphine and diazepam) than is true of Poor hypnotic Ss. This is not true for aspirin and placebo. Last, but not least, Ss low in hypnotic susceptibility tend to perceive painful stimuli as more painful when under the influence of diazepam as compared to the nondrug condition" (p. 192).

Wickramasekera, Ian (1977). The placebo effect and medical instruments in biofeedback. Journal of Clinical Engineering, 2 (3), 227-230.

This article defines a "placebo effect" and identifies some of its parameters in pain control and in other areas of medicine. It proposes a new model of the placebo effect and advances the hypothesis that biomedical instruments used in biofeedback studies, like drugs, can acquire and generate placebo effects. Such placebo effects can complicate the interpretation of specific experimental treatments in human clinical research in which biomedical instruments are used.

1976

Hemme, Robert; Boor, Myron (1976). Role of expectancy set in the systematic desensitization of speech anxiety: An extension of prior research. Journal of Clinical Psychology, 32 (2), 398-404.

**SUMMARY.** The influence of expectancy set with regard to therapy outcome on the effectiveness of systematic desensitization (SD) for reducing public speaking anxiety was investigated. The 7 Ss given a high expectancy set for favorable therapy outcome were informed about psychological research that indicates that SD is effective to reduce public

The 7 Ss given a high expectancy set for favorable therapy outcome were informed about psychological research that indicates that SD is effective to reduce public speaking fears. SD was administered with the standard instructions to the 11 Ss given a neutral expectancy set. This expectancy manipulation did not require deception and perhaps could be used with actual SD therapy clients. As in previous research by Woy and Efran, the expectancy set manipulation significantly modified Ss' self-report of subjective perceptions of anxiety from pretreatment to posttreatment speeches, but did not affect overt behavioral or physiological indices of anxiety. Since subjective perceptions of anxiety responses are psychologically significant behaviors, these data suggest the importance of conveying a high expectation of improvement to SD and perhaps also to other types of therapy clients. SD sessions administered to small groups of clients on consecutive days, as in this study, appeared to be as effective to reduce speech anxiety as SD sessions

administered to each client individually at 1-week intervals, as in the Woy and Efran study" (pp. 403-404).

Moore, Mary E.; Berk, Stephen N. (1976). Acupuncture for chronic shoulder pain: An experimental study with attention to the role of placebo and hypnotic susceptibility. Annals of Internal Medicine, 84 (4), 381-384.

One half of 42 Ss treated for painful shoulders received classic acupuncture, and one half received a placebo in which the needles did not penetrate the skin. Half of each of these groups was treated in a positive setting to encourage the subject, and half in a negative setting designed to keep encouragement at a minimum. All patients were independently rated for susceptibility to hypnosis. Although range of motion did not improve, the majority of patients reported significant improvement in shoulder discomfort to a blind evaluator after treatment; placebo and acupuncture groups did not differ in this respect, however. The positive and negative settings did not affect treatment outcome. In all groups, those who were not rated as highly susceptible to hypnosis tended to fail to achieve the highest levels of relief, but such differences were not statistically significant.

#### NOTES

There were 42 subjects, and they were tested with the Spiegel Hypnotic Induction Profile. "Both acupuncture and placebo proved to be effective in relieving shoulder discomfort. 69% of the total group made lower assessments of discomfort on the post-treatment rating than on the pretreatment rating" (p. 382).

"Acupuncture was not more effective than placebo in relieving discomfort, however. The average percentage of improvement among those who had acupuncture was not, statistically, significantly different from those who had placebo. Indeed, what little difference there was actually was in the opposite direction, the placebo group improving on the average somewhat more than the acupuncture group" (pp. 382-383).

"In the negative setting, however, where the subject was required to suffer in silence, acupuncture seemed to be less effective than the placebo in relieving discomfort" (p. 383).

"Although the subjects perceived that the treatment relieved their shoulder discomfort, there was no objective evidence of improvement in the shoulder as measured by change in the range of motion scores before and after treatment" (p. 383).

(The placebo was needle pricked against the skin at true site, then rapidly and lightly tapped against the surface of the skin without penetration.)

"Those who were not susceptible to hypnosis failed to experience as much relief from discomfort as those who were" (p. 383).

"The fact that acupuncture was not more successful in relieving shoulder discomfort than a sham procedure suggests that its much publicized success may be merely a powerful placebo effect" (p. 383).

Katz, Kao, Spiegel et al (1974) also found that low hypnotizables did not benefit much in terms of pain relief with acupuncture.

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1975

Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. Experimental Neurology, 49, 272-280.

The reactions of 14 volunteers to electrical stimulation near the supra-orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

Aletky, Patricia J.; Carlin, Albert S. (1975). Sex differences and placebo effects: Motivation as an intervening variable. Journal of Consulting and Clinical Psychology, 43 (2), 278.

NOTES

"... the present findings would suggest that future studies of placebo effects should take into account the nature of the dependent variable and the pertinent differential sex-role expectations" (p. 278). The performance measure was a dynamometer pull task. The placebo was a jelly applied to the forearm "and alleged to relieve muscular fatigue" (p. 278). The motivational instructions were telling Subjects that "individuals in good health and with normal muscle tonus would be expected to show improved performance on the posttreatment trial" (p. 278).

Andrews, Reagan H., Jr. (1975). Placebo effects in EMG biofeedback (Dissertation). Dissertation Abstracts International, 36, 1424.

"Differential instructions were employed in a negative placebo model to alter expectancies of success in achieving criterion frontalis EMG voltage levels in 30 female subjects. The negative placebo model dictated that all subjects receive true feedback during both of two 10-minute experimental trials. On one of the two trials they were informed that feedback would be accurate, and on the other trial, that feedback would be accurate only 50% of the trial period. Data was collected for 20 subjects in a 2 X 2 Latin Square design, while 10 subjects were designated control

subjects and received high-success expectancy instructions on both experimental trials.

Pre-trial measures included administration of a standard hypnotic susceptibility scale and a pre-test subjective questionnaire. Dependent variable was the time from onset of feedback to 70% reduction of resting EMG levels of the frontalis. Significant differences were found between high and low-expectancy trials for experimental subjects. Effects were strongest on the first experimental trial and tended to diminish on the following trial. Correlation of hypnotic susceptibility scores with response latencies was not significant, but subjects' impression of their degree of relaxation during susceptibility scale administration was significantly correlated with criterion latencies. Importance of subject expectancies, instrumentation standards and implications for future studies in the biofeedback area were discussed" (p. 1424).

Berk, S. N. (1975). The mediating effects of hypnosis, suggestibility and placebo in acupuncture therapy (Dissertation). Dissertation Abstracts International, 36, 3020-3021.

"Results strongly support the contention that variables other than physiological mechanisms are involved in acupuncture therapy. It appears as if patient motivation, models, expectations of relief and the quality of the doctor-patient relationship can influence the outcomes of this ancient therapy. However, additional research is needed to confirm these findings. At present, the data seem to suggest that acupuncture therapy may be largely a placebo phenomenon" (p. 3021).

Borkovec, Thomas D.; Kaloupek, D. G.; Slama, Katherine M. (1975). The facilitative effect of muscle tension-release in the relaxation treatment of sleep disturbance. Behavior Therapy, 6, 301-309.

Sleep disturbed subjects were randomly assigned to one of four group therapy conditions: progressive relaxation with muscle tension-release, relaxation without tension-release, placebo, and no treatment. Subjects were instructed not to expect improvement until after the final (fourth) therapy session. Progressive relaxation produced significantly greater improvement in reported latency to sleep onset than the three control conditions prior to the final session and was the only group to display greater improvement than no treatment after the final session. Five month follow-up revealed further gains for the progressive relaxation group. Issues of active mechanisms, demand, and placebo are briefly discussed

Lick, John R. (1975). Expectancy, false galvanic skin response feedback, and systematic desensitization in the modification of phobic behavior. Journal of Consulting and Clinical Psychology, 43 (4), 557-567.

This study compared systematic desensitization and two pseudotherapy manipulations with and without false galvanic skin response feedback after every session suggesting improvement in the modification of intense snake and spider fear.

The results indicated no consistent differences between the three treatment groups, although all treatments were significantly more effective than no treatment in modifying physiological, behavioral, and self-report measures of fear. A 4-month follow-up showed stability in fear reduction on self-report measures for the three treatment groups. Overall, the results of this experiment were interpreted as contradicting a traditional conditioning explanation of systematic desensitization. An alternate explanation for the operation of systematic desensitization emphasizing the motivational as opposed to conditioning aspects of the procedure is discussed. Melzack, Ronald; Perry, Campbell (1975). Self-regulation of pain: The use of alpha-feedback and hypnotic training for the control of chronic pain. Experimental Neurology, 46, 452-469.

Patients suffering chronic pain of pathological origin received alpha- feedback training methods in association with prior hypnotic training. Changes in the intensity and quality of pain were measured with the McGill Pain Questionnaire. The combined procedures produced a substantial decrease in pain (by 33% or greater) in 58% of the patients during the training sessions. Both the sensory and affective dimensions of the pain were diminished. The EEG records indicated that the majority of patients learned to increase their alpha output during the training sessions. In contrast, patients who received the alpha training alone reported no decreases in pain even though they showed increases in alpha output. Patients who received hypnotic training alone also produced increased EEG alpha during the training sessions and showed substantial (though not statistically significant) decreases in pain. The results demonstrate that chronic, pathological pain can be reduced in a significant number of patients by means of a combination of alpha-feedback training, hypnotic training, and placebo effects. It is concluded, however, that the contribution of the alpha training procedure to pain relief is not due to increased EEG alpha as such but, rather, to the distraction of attention, suggestion, relaxation, and sense of control over pain which are an integral part of the procedure.

#### NOTES

The study employed 24 patients with variety of pains, divided into 3 groups randomly:

hypnosis

alpha/biofeedback

combined procedures - the only group which decreased group mean of pain significantly.

Hypnosis - 50% of patients showed decrease in pain Combined Treatment - 50% " "  
" " " " Alpha/biofeedback - None " " " " "

All patients demonstrated higher alpha levels; the authors inferred it was due to relaxation, distraction, a sense of control over pain, or direct suggestion itself.

Russell, Elbert W. (1974). The power of behavior control: A critique of behavior modification methods. Journal of Clinical Psychology, 30 (2), 111-136.

## NOTES

1:

In summarizing the effectiveness of behavior therapy the author states, "At this point there does not appear to be sufficient evidence to demonstrate that all of the effectiveness of various types of behavior therapy is produced by non-specific,

evidence to demonstrate that all of the effectiveness of various types of behavior therapy is produced by non-specific, especially placebo, effects. In fact, it is more probable that many of these techniques will be found to have elements that are not due to non-specific effects and, as such, they will be the treatment of choice for certain limited problems, such as aversive therapy for autistic children or training of the mentally retarded. Nevertheless, concerning the central issue in this monograph, it is increasingly apparent that a very large proportion of the 'power' of behavior methods is due to non-specific, suggestion or placebo effects.

"As such, this 'power' is neither behavioristic, new, nor particularly threatening. It is not new since it has been known to medicine for many decades. As Shapiro states, 'the history of both physiologic and psychologic treatment is largely the history of the placebo effect; those who forget it are destined to repeat it'. In support of the age of this problem, Shapiro also quotes from the compiler of the remedies of the Paris Pharmacologia, a century ago, 'What pledge can be afforded that the boasted remedies of the present-day will not, like their predecessors, fall into disrepute, and in their turn serve only as a humiliating memorial to the credulity and infatuation of the physicians who recommended and prescribed them'" (p. 120-121).

"The large amount of suggestion or placebo effect in behavior therapy does raise at least two vital problems. The first problem involves the ethics of using suggestion or a placebo. Is it ethical to give the patient a false or questionable explanation for the source of the effectiveness of behavior procedures? Such an explanation would be that they are based on proven scientific behavior principles when major people in the field do not believe this and evidence is mounting that the primary source of effect is suggestion. Secondly, what will be the effect on the attitude of the general public toward professional psychology when they realize that the effectiveness of psychological behavior therapy methods is primarily a matter of suggestion? Will they not consider it a modern patent medicine? The damage that could be done to the prestige of psychology might take decades to repair. JH

1973

McReynolds, William T.; Barnes, Allan R.; Brooks, Samuel; Rehagen, Nicholas (1973). The role of attention-placebo influences in the efficacy of systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (1), 86-92.

Systematic desensitization was compared with two attention- placebo control treatments - one taken from Paul and one currently devised as an elaborate, highly impressive "therapeutic" experience - and no treatment. It was hypothesized that (a) fear reductions following desensitization would be no greater than those associated with an equally compelling placebo treatment and (b) fear and control measure changes following the previously used attention-placebo treatment would

be less than those following desensitization and the present placebo control manipulations. Both hypotheses were supported, although support for the first was more consistent than for the second.

**1969**

McGlashan, T. H.; Evans, Frederick J.; Orne, Martin T. (1969). The nature of hypnotic analgesia and placebo response to experimental pain. Psychosomatic Medicine, 31, 227-246.

#### NOTES

They conceptualized low hypnotizables as providing a placebo condition (p. 230). This is essentially the London-Fuhrer design in experimental situations. It is necessary that the subject be convinced s/he is capable of responding to the hypnotic condition for it to be a good control condition.

**1966**

Pollack, S. (1966). Pain control by suggestion. Journal of Oral Medicine, 21, 89-95.

#### NOTES

Studied the effects of a topical anesthetic applied prior to injection of anesthesia. Ss were 500 dental patients. Half the group received a topical and the other half received a placebo. Each half was further subdivided so that one group received suggestion that the topical would be effective and the other group was not told anything. More calm ratings were given to the suggestion group. Found that the hypnotist's suggestion was the most important factor in obtaining or failing to obtain anesthesia.

**1961**

Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

**1959**

Conn, Jacob H. (1959). Cultural and clinical aspects of hypnosis, placebos, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 7 (4), 175-185.

#### NOTES

The author traces the history of hypnosis, suggestion, and placebo, noting that popularity of hypnosis with professionals waxes and wanes over the years. When practitioners lose faith in a drug, it becomes less effective with their patients. The same holds true for hypnosis. Frequently illness is ameliorated or cured by suggestion without hypnosis.

"Hypnosis is nothing more than the suggestive, placebo effect presented in a specific inter-personal setting. It is not just a state of mind, but the end result of various psychologic processes. (2) A patient may be more suggestible when fully awake. ... Another patient may be more suggestible when asleep. There are those who respond best to suggestions in the light stage of hypnosis, while about 10% of subjects are capable of developing the deeper, somnambulistic phase" (p. 181).

#### Polygraph

1990

Wain, Harold J.; Amen, Daniel G.; Jabbari, Bahmann (1990). The effects of hypnosis on a Parkinsonian tremor: Case report with polygraph/EEG recordings. American Journal of Clinical Hypnosis, 33, 94-98.

Although Parkinsonian tremors typically disappear during sleep and are reduced during relaxation periods, the effects of hypnosis on this type of movement disorder have been generally ignored. We observed a patient's severe Parkinsonian tremor under hypnosis and monitored it with EEG and EMG studies. The patient was taught self-hypnosis and performed it three to four times daily in conjunction with taking medication. The results suggest that daily sessions of self-hypnosis can be a useful therapeutic adjunct in the treatment of Parkinsonian tremors

#### NOTES

The patient scored low on the Hypnotic Induction Profile scale of hypnotizability and was unable to experience any classical hypnotic phenomena, but was motivated to learn self-hypnosis. For self hypnosis he visualized a relaxing scene

1989

Schuyler, Bradley A.; Coe, William C. (1989). More on volitional experiences and breaching posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 37, 320-331.

Highly responsive hypnotic subjects, who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia, were compared with each other on four physiological measures (heart rate, electrodermal response, respiration rate, muscle tension)

during posthypnotic recall. Two contextual conditions were employed: One was meant to create pressure to breach posthypnotic amnesia (lie detector instructions); the other, a relax condition, served as a control. The recall data confirmed earlier findings of Howard and Coe and showed that voluntary subjects under the lie detector condition recalled more than the other three samples that did not differ from each other. However, using another measure of voluntariness showed that both voluntary and involuntary subjects breached under lie detector conditions. Electrodermal response supported the subjects' reports of control in this case. Physiological measures were otherwise insignificant. The results are discussed as they relate to (a) studies attempting to breach posthypnotic amnesia, (b) the voluntary/involuntary classification of subjects, and (c) theories of hypnosis.

#### NOTES

The authors suggest that subjects observe themselves not remembering (i.e. not reporting memories) and conclude that they therefore could not remember. Such subjects, they say, are deceiving themselves in so far as they could remember if they were to direct their attention to salient cues.

1985

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects reported their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension.

1982

Schuyler, Bradley A. (1982). Further investigation of volitional and nonvolitional experience during posthypnotic amnesia (Dissertation, California School of Professional Psychology, Fresno). Dissertation Abstracts International, 44 (n6-B), 1977. (Order No. DA 8324472)

"Electrodermal responses were compared between highly responsive hypnotic Ss who were classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia. Three contextual conditions were employed: Two were meant to create pressure to breach posthypnotic amnesia (lie detector instructions alone or with feedback that Ss had

been detected as not having told all they could remember); the other provided feedback, in addition to the lie detector instructions, that Ss had told all they could remember. The recall data confirmed earlier findings of Coe and Yashinski and showed that voluntary and involuntary Ss did not differ in response to the contextual conditions. However, lie detector instructions alone did not create pressure to breach as in previous studies. In addition, electrodermal results were insignificant. The results are discussed as they relate to (a) amnesia, (b) the physiological detection of deception and physiological activation, (c) the voluntary/involuntary classification of Ss, and (d) theories of hypnosis" (p. 1977).

**1974**

**Bloom, Richard F. (1974). Validation of suggestion-induced stress.**

#### **NOTES**

**Technical Memorandum 23-74 (October 1974), US Army Human Engineering Laboratory, Aberdeen Proving Ground, Maryland 21005, AMCMS Code 5910.21.68629, Contract No. DAAD05-73-C-0243, Dunlap and Associates, Inc. (now Stamford, CT), AD002557.**

**Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.**

**1973**

**Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)**

**NOTES**

**1:**

**Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2:**

**This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)**

**1961**

**Germann, A. C. (1961). Hypnosis as related to the scientific detection of deception by polygraph examination: A pilot study. International Journal of Clinical and Experimental Hypnosis, 9, 309-311.**

**Results obtained from 5 college students suggests that hypnotic amnesia does not surreptitiously defeat the polygraphy process, and that hypnotically induced exaggeration of responses may assist the examining process. From Psyc Abstracts 36:04:4II09G. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Post Traumatic Stress Disorder**

**1998**

**Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..**

**NOTES**

**"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy**

techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1997

Duhamel, Katherine N.; Difede, Joan; Foley, Frederick; Greenleaf, Marcia (1997, November). Hypnotizability and posttraumatic symptomatology after burn injury. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Washington, D. C..

#### NOTES

Investigated the relationship between hypnotizability and post traumatic stress disorder (PTSD) symptoms following burn injury, in 43 hospitalized survivors. Authors found an association between these two variables and suggest that assessment of hypnotizability might help identify post-burn patients at risk for PTSD.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should

probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1994

Bloom, Peter B. (1994). Clinical guidelines in using hypnosis in uncovering memories of sexual abuse: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 42 (3), 173-178.

"Joan," a clinical psychologist, requested a psychiatric consultation to determine whether hypnosis could recover accurate memories of suspected child abuse by her still living father. Are there clinical guidelines in using hypnosis in uncovering such possible memories of sexual abuse? We asked Dr. Peter B. Bloom to share his views with us.

#### NOTES

Gives case example and clinical guidelines for using hypnosis in uncovering memories of sexual abuse. 1. In medical practice, "Primum non nocere," i.e. "First do no harm." 2. "No therapist should ever, either directly or indirectly, suggest abuse outside of a specific therapeutic context--certainly not to a client who is on the phone making a first appointment!" 3. "A therapist must not jump quickly to the conclusion that abuse occurred simply because it is plausible." 4. "A therapist should never simply assume that a client who cannot remember much from childhood is repressing traumatic memories or is in denial." 5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'" 6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families." 7. "Therapists should reconsider the 'no pain, no gain' philosophy of treatment." 8. "The context of therapy is as important as the content." 9. "Tolerate ambiguity." (Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."

from childhood is repressing traumatic memories or is in denial." 5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'" 6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families." 7. "Therapists should reconsider the 'no pain, no gain' philosophy of treatment." 8. "The context of therapy is as important as the content." 9. "Tolerate ambiguity." (Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."

**COMMENT:** The tenet that insight is necessary for change and growth is not true. Change can occur without insight, although insight may be helpful in maintaining change once it has occurred.

**SUMMARY:** These guidelines are presented to enhance safe practice, however, clinicians should use their own judgement to determine the best path to follow with each patient.

**NOTE:** Guidelines 1, 8, 9, 10, 11, 12, and 13 are those of Peter B. Bloom. Those labeled as Guidelines 2, 3, 4, 5, 6, and 7 were taken with permission from Yapko, M. (1993 September/October). "The seductions of memory. The false memory debate." *Family Therapy Networker*, 17, pp. 30-37. All discussions, however, are those of Peter B. Bloom.

Cardena, Etzel (1994, August). Domain of dissociation. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### **NOTES**

Dissociation (a French term) exists when two or more mental contents are not integrated. Dissociation includes a wide variety of behaviors and experiences.

Three Concepts: 1. nonconscious or nonintegrated mental models or processes 2. alteration in consciousness when disconnection from self or environment is experienced 3. defense mechanism

Explanation of these three concepts:

1. Within nonconscious or nonintegrated mental models/processes there are three types: (a) absence of conscious awareness of impinging stimuli or ongoing behaviors (broad, vague, not useful, because we are unaware of physiological processes most of the time) (b) co-existence of separate mental systems or identities that should be integrated (Meyers, 1903, said the memorability of an act is better proof of consciousness than its complexity). Examples: dissociative amnesia (Walter Reed Hospital patient); or in hypnosis telling a person that their hand is going to begin raising on its own (c) ongoing behavior that is inconsistent with person's verbal report. May be part of #2. Example: commisurotomy patients - woman who wanted to smoke couldn't get her hand to lift cigarette to her mouth. Example of student, being criticized, breaking out into a rash while saying that she felt calm.

Often repression and dissociation are confused. When dissociation is used as in (c) above, they are indistinct; they are the same. Freud used the terms for the same thing. When we talk about a dissociated memory, it is same as repression.

2. Alteration in consciousness (disconnection from the self or environment is experienced). In this case we talk about an experiential event. Caveats: Some use it to refer to *\*any\** kind of alteration of consciousness. Braun, 1993, reported that mystical experiences are dissociative; I maintain that many people feel most in contact with the self during mystical experience. Same with drugs: it may not involve primarily separation, disengagement, from self or environment. As you listen to me, you may disengage at times. I think the only legitimate use of "dissociation" is a radical alteration of consciousness; like Tart's altered states of consciousness, like out-of-body experiences. In clinical situation, distraction or

dreaminess is usual; but if a patient disengages and starts reliving a situation, it is legitimately regarded as dissociation.

3. Defense mechanism - a theoretical construct, referring to intentional disavowing things that would cause anxiety or pain. Clinical observations of people in traumatic events, rape, people may have out of body experiences; explained as the person sending the ego somewhere else because they can't bear the pain. But, you get this separation in non-traumatic circumstances (in meditation, reverie, etc.)

**Alternative Paradigm:**

Janet's theory which explains cognitively how dissociation occurs, without necessarily proposing an intentional process.

For further elaboration of these comments, see Cardena, E. (1994). The domain of dissociation. In S. J. Lynn & J. W. Rhue (Eds.) *Dissociation: Clinical and Theoretical Perspectives*. New York: Guilford Press

Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual.]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question? Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

Loftus, Elizabeth; Polonsky, Sara; Fullilove, Mindy Thompson (1994). Memories of childhood sexual abuse: Remembering and repressing. Psychology of Women Quarterly, 18, 67-84.

Women involved in out-patient treatment for substance abuse were interviewed to examine their recollections of childhood sexual abuse. Overall, 54% of the 105

women reported a history of childhood sexual abuse. Of these, the majority (81%) remembered all or part of the abuse their whole lives; 19% reported they forgot the abuse for a period of time, and later the memory returned. Women who remembered the abuse their whole lives reported a clearer memory, with a more detailed picture. They also reported greater intensity of feelings at the time the abuse happened. Women who remembered the abuse their whole lives did not differ from others in terms of the violence of the abuse or whether the violence was incestuous. These data bear on current discussions concerning the extent to which repression is a common way of coping with childhood sexual abuse trauma, and also bear on some widely held beliefs about the correlates of repression.

#### NOTES

In previous research, it was reported that violent or incestuous abuse is particularly susceptible to repression. This study differs from previous investigations in the definition of violence. In the present study, 'violence' is defined as any act involving vaginal, oral, or anal sex. Earlier research defined 'violence' as involving sexual assault with physical injury or fear of death.

Depending on the definition of repression, a sizeable minority (31% or almost 1/5) of this sample forgot their earlier abuse for a period of time. The authors state that this suggests there is little 'robust repression' in this sample. They cannot rule out the possibility that some women who were abused still, to this day, do not recall the experience; or that some who continue to have memory loss based on organic causes, including blackouts.

The authors suggest that future research in this area use more specific questions, including assessing whether Subjects respond to statements like: "There was a time when I would not have been able to remember the abuse, even if I had been directly asked about it," or "There was a time when I would not have been able to report the abuse because I had no idea that it had even happened to me." Also, when Subjects report that a memory had emerged after a period in which they had no recall, the Experimenter should enquire about how and when the recovered memory occurred. The authors conclude that remembering abuse is more common than forgetting it.

Marmar, Charles (1994, October). Peritraumatic dissociation and PTSD. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Following trauma there is a tendency to more dissociation and vulnerability. We completed 3 recent studies. In 1991 Spiegel and Cardena presented review that found: 1. Early childhood abuse is associated with profound dissociation. 2. Repeated abuse is more important and profound than single abuse for producing dissociation. 3. Dissociation in childhood and perhaps in adulthood has been viewed as an adaptive attempt to cope, to take distance in time, place, and person; does that confirm long term adaptation, or is it a risk factor? 4. Dissociation is not limited to childhood trauma; it occurs in adults exposed to overwhelming trauma. 5. In adults

with PTSD, there is an increase in hypnotizability, which is interesting because most Axis I disorders are associated with reduced hypnotizability.

Peritraumatic dissociation is defined as an immediate dissociative response to trauma. We developed a scale that robustly captures the phenomena. The scale has both self report and rater versions.

Authors used this measure in many studies: combat trauma, accident trauma, victims of terrorism. The scale predicts who will be a PTSD patient 5 months later, even after controlling for initial response in first week (how many symptoms they had) and for the degree of trauma.

**Study 1 (Am. J. Psychiatry, June 1994)**

Studied 251 male Vietnam Theater Veterans, mean age 41 at time of study. Had high combat exposure and high risk for PTSD. Rater version of Peritraumatic Dissociative Experiences Questionnaire was used. There was a lot of variability in response, but one underlying dimension resulted from the factor analysis (and this factor accounts for 40- 50% of the variance).

Author hypothesized that those who have a greater response to trauma will have more problems later, and would predict stress symptoms but not necessarily psychopathology. The score correlates highly with: Mississippi Scale for PTSD .51; Horowitz's scales; Impact of Events Scale (Intrusion .53, Avoidance .60); MMPI derived PTSD .42; Dissociative Experiences Scale (recall of time of event) .41; and War Zone Stress Exposure .48.

MMPI-2 clinical scales had almost no correlation with this scale (using partial r's, and controlling for MMPI-2 PTSD scores).

Prediction of PTSD case classification from this scale, after taking into consideration other predictors: War Zone Stress War Zone Stress, DES War Zone Stress, DES, PDEQ-RV Kappa is .63

You know much more about who will be a case taking into consideration the DES and DEQ than just knowing the amount of stress. Peritraumatic stress is strongly associated with PTSD but not with psychopathology.

**Study 2**

Replicated Study 1 using 77 female veterans. Females Ss were more highly educated, older, more likely to be in a health profession role (trauma was working with death and dying, exposure to sex abuse and harassment, given even less support than the males). Yet women have had a better course of recovery, though rates were the same (30% developed PTSD after return from war).

Correlation with Impact of Event Scale (Intrusion .41 and Avoidance .40), but correlations with MMPI-2 are low (and with other PTSD scales are lower than with the males). Hierarchical multiple regression models show R squared doesn't increase with DES but does with PDEQ to Intrusion (less so to Avoidance).

This study replicates the same pattern, with peritraumatic dissociation strongly related to PTSD symptoms years later, and not to general psychopathology, even after accounting for the nature of the stress and for the degree of dissociation.

**Study 3**

-trusion (less so to Avoidance).

This study replicates the same pattern, with peritraumatic dissociation strongly related to PTSD symptoms years later, and not to general psychopathology, even after accounting for the nature of the stress and for the degree of dissociation.

### Study 3

After the 1989 Loma Prieta earthquake in Northern California we studied emergency services personnel involved in the collapse of a freeway in Oakland. 1000 rescue workers were involved. The workers (police, fire personnel, paramedics, CALTRANS road workers) involved one I-880 cohort and a replication cohort, with two control groups (smaller scale incidents like attending a child drowned in swimming pool, removing someone from a wrecked auto). In all 3 samples, 90% were male.

What characteristics of the person or their exposure account for which workers go on to cope and which will later have PTSD symptoms? Predictors: IES-I IES-A IES-H M-PTSD SCL-GSI.

Variables most associated with problems 1.5 to 3 years afterward were years of experience, exposure, adjustment (measured by the Hogan Personality Inventory measure of adjustment), social support, DES, and PDEQ. Regression analyses used the best predictors first: forced exposure, adjustment, years experience, locus of control, social support. For Intrusion scores there were modest but significant increments by the DES and PDEQ; for avoidance scores, there were very significant contributions (.072 and .078).

There is a robust relationship between the DES and PDEQ and how much hyperarousal there is afterward (.104 and .110 %). DES measures a trait, PDEQ measures a state; yet the latter continues to contribute even after accounting for variance by the DES.

The PDEQ also has been found to predict among rape victims who will have PTSD. This was replicated in different cultures and different language groups.

**FUTURE DIRECTIONS.** Authors plan to examine people with moderate to high exposure after the L.A. earthquake. They gathered personality and coping style data on the rescue workers to answer the question: what characterizes those who are more vulnerable to dissociative tendencies during trauma?

There are treatment implications: given that those who develop the most profound response are the ones who will have more PTSD later, what are the implications?

Uncovering the trauma that caused the PTSD is often associated with re-dissociation There is a question of how this should be managed.

The authors will attempt to see if they can predict in advance if a person would dissociate if exposed. Do those who dissociate have more childhood abusive environments? Hypothesis: there may be an interaction of childhood trauma and combat trauma that produces PTSD.

Nash, Michael R. (1994). Memory distortion and sexual trauma: The problem of false negatives and false positives. International Journal of Clinical and Experimental Hypnosis, 42 (4), 346-362.

Logically, two broad types of mnemonic errors are possible when adult psychotherapy or hypnosis patients reflect on whether they were sexually abused or

not as a child. They may believe that they were not abused when in fact they were (false negative error), or they may believe they were abused when in fact they were not (false positive error). The author briefly reviews the empirical evidence for the occurrence of each of these types of errors, and illustrates each with a clinical case. Further, in considering the incidence, importance, and clinical implications of these errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea is made for theorists and researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

of these errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea is made for theorists and researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

Spiegel, David (1994, October). Acute stress disorder and dissociation in DSM-IV. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Starting with the theme on hysteria introduced by Frankel (1994), and Cardena (1994) on trance disorder [Spiegel notes that] in the West our problem is of individuality, so fragmentation of personality is our disorder. There is cultural content in the delusions of schizophrenia, and cultural content in dissociative disorders. We have further evidence of trauma being involved in dissociation. Trauma is the experience of being made into an object, and the core problem is helplessness (not anxiety or fear), and discontinuity in experience. Dissociation permits people to retain control of their minds when they have lost control of their bodies. The discontinuity of dissociation reflects the discontinuity of experience.

Spiegel, David (1994, October). On patients not remembering abuse when it in fact may have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

False memories and false non-memories may be two sides of the same coin. What is the evidence for repression?

If people are abducted by extraterrestrials, why don't they just keep them? [Joke!] It seems counter-intuitive that people would forget important, arousing things that happen.

The three main components of hypnosis (suggestibility, absorption, and dissociation) are also aspects of memory: 1. Absorption relates to encoding (narrowing attention); also happens during traumatic events (Loftus' "gun memory" which is so clear, while they don't encode what gunman's face looks like). 2. Dissociation relates to memory storage (compartmentalization of information). Traumatized people have symptoms of dissociation, depersonalization. If you are in an unusual mental state, you may watch the event; the memory is stored without the usual network of

associations. 3. Suggestibility relates to retrieval. The way questions are asked influences one's response. But hypnosis is not an infinite influencer; the main damage to memory contributed by hypnosis is "confident errors" (McConkey).

We did research one week after the Loma Prieta earthquake, and found significant cognitive alterations, memory alterations, etc. In our sample, 1/4 of the people felt detached from their body or from the ground right after the earthquake.

Memory alterations were compared with data from other studies after other traumas. Difficulties with memory occurred in 29% of our sample.

The disorganization of memory can follow even just witnessing trauma (e.g. the recent slaying of 8 people in the law office in San Francisco) And people who witnessed the execution of Harris. They were in no danger themselves, yet the level of dissociative symptoms were as high in the former.

The Briere & Cone and Herman & Shatzow studies are based on self report of earlier trauma, and that is a problem in research. But Williams' study does have the age of people when they were abused as children; see her article in Journal of Consulting and Clinical Psychology.

#### **COMMENTS FROM THE AUDIENCE:**

Dabney Ewin: Sex abuse trauma differs from earthquakes because the abuser says, "If you tell anybody I'll kill you." This is like a post hypnotic suggestion, which is carried out compulsively when given to the victim during fear.

Dale: How do we account for the vigor in the attempts of each side to convince the other. The people who have been real victims of sexual abuse need to be able to talk with the people who are victims of False Memory Syndrome. The impact on a family is just as traumatic as the sexual abuse itself.

1993

Alden, Phyllis A. (1993, October). Hypnosis in the treatment of posttraumatic stress. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

[Author is at Grimsby Hospital in England.] Discussion of practical aspects of treatment of PTSD. Work began with Janoff-Bulman (1985) and Epstein (1990) focuses on cognitive appraisal. Affect and meaning are shunted into unconsciousness. She observes that when patients report intrusions, there are pieces missing from the memory: they recall the horror but not the positive part.

Used the following technique: Ask patient to get comfortable and imagine being in a theater; then go to a projection room where she can control all parameters; then watch herself watching a pleasant film; then the scene; then return to a seat in the theater and watch the upsetting film, freezing it; when uncomfortable, describe associations; then return to projection room where she watched film of what she imagined might have occurred--the image behind the image, that holds the affect; then going back to image and playing it through, with more comfort; then leave the theater and go into the film, into the screen, to go through the scene. Then asked patient to get back the intrusive image and go through it, which she did with comfort.

With another patient she introduced the "current" person into the image to reassure her that everything would be all right--i.e. she would survive. This is called "double dissociation method."

She also has the patient tell people in the scene what they should have done, or express anger verbally toward them, etc. Or she might have them make the intrusive imagery less threatening or amusing by introducing other imagery.

Cardena, Etzel (1993, October). Trance and possession as dissociative disorders: How exotic are they?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

Joke: "What happened to the possessed patient who didn't pay his exorcist?"

Answer: "He got repossessed."

Began with a quotation of Lagerkvist's book describing possession of a Sybil in Greek temple. Possession is part of religious experience worldwide, that he is not discussing here.

The revised diagnostic manual, ICD-10, has included "dissociative trance disorders." To diagnose this one must have either trance (narrowing awareness or focusing and stereotyped movements, behaviors) or possession trance (replacement of sense of personal identity by a new identity, with stereotyped culturally-determined behaviors or movements that are experienced as being controlled by the possessing agent), \*and\* full or partial amnesia for the event. Cardena emphasizes it doesn't need to be full amnesia.

To be diagnosed as dissociative trance disorder, the trance or possession state observed cannot be a normal part of a broadly accepted cultural or religious practice, and it must produce distress or maladjustment.

These are the most common type of dissociative disorders in non-Western cultures, e.g. 90% in India. So this diagnosis in India is not "atypical." "Non-Western" applies to 80% of the World and 1/3 of the USA population. DSM is trying to expand cultural relevance.

Also, even in the Western culture Allison and others have published cases of dissociative trance disorder, and others have described trance disorders:

Spiegel & Spiegel's Grade 5 personality is vulnerable to dissociative disorder. Hartman's chronic nightmare patients have "boundary thinness" (i.e. they are not clear if they are awake or asleep, lack separation from themselves and others). Lynn & Rhue's fantasy prone individuals, 22% of people, are vulnerable to maladjustment.

Cardena's recommended change in diagnosis of dissociation is critiqued in Transcultural Psychiatric Research Review (1992). Criticisms of the new diagnosis, published in that journal, are: 1. Culture-bound syndromes cut across Western diagnostic boundaries. 2. The diagnosis may be insensitive to the cultural context in which phenomena occur (e.g. distress may lead a person to participate in a cult of affliction) and it may require anthropological sophistication of diagnosticians or consultation with someone who has that knowledge. 2a. It may disregard considerations such as who has the power to "authorize" the phenomenon, under what circumstances, etc. [That would be true with any diagnosis however.] 3. Dissociative Trance Disorder may assume greater within and across-culture uniformity for the conditions than is warranted. 4. It may give validity to metaphysical explanations for spirit possession. [But in psychiatry we often use terms that don't take into consideration validating metaphysical explanations, e.g. "phantom limb" pain. 5. The medical model that underlies DSM is inappropriate for ontological considerations on the nature of the self. [But those with this diagnosis give us some understanding, not what the ultimate nature of the self and consciousness are. Diagnoses are pragmatic ways of dealing with problems.]

At the present time, the diagnosis of Dissociative Trance Disorder is included in the Appendix of DSM-IV.

For further elaboration of this material, see Cardena, E. (1992). Trance and possession as dissociative disorders. Transcultural Psychiatric Research Review, 29, 283- 297.

London, Ray William (1993, October). Refreshed adult memories: Abuse survivor or therapeutic victim?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

The author addresses four areas: 1. public policy 2. psychological issues 3. legal issues (evidence) 4. how to properly deal with it

A definition of sexual abuse is being applied to behaviors that for years were not considered out of bounds (e.g. entering a bathroom where someone else is). Furthermore, using the word "survivor" for abused people equates patients with

survivors of concentration camps, who do not present with repressed memories typically. National incidence of child abuse remains unclear estimates are 6 to 60% of females. In Florida, only 13% of cases reported are confirmed.

Some therapists who specialize in this area in surveys indicate that they have false beliefs regarding memory and effects of trauma.

[These represent only partial notes on a lengthy and substantial paper.]

Rhue, Judith W.; Lynn, Steven Jay (1993, October). Dissociation, childhood sexual abuse, and fantasy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL. We are reporting on part of an ongoing study, with results still being analyzed. We are looking at imagination, fantasy, and dissociation in abused and non-abused children. This focuses on the relationship between dissociation and fantasy and imagination.

For Janet, dissociation was the primary defense against trauma. [Quotes D. Spiegel also.] There is a body of research on trauma associated with the development of dissociation. 1. NIH found 97% of multiple personality patients reported trauma in childhood; 83% were sexually abused; 75% were repeatedly physically abused; 68% had both types of abuse. 2. Bliss - studied 70 MPDs and found same results. 3. Ross, Norton, and Noosney [?name] - found same results 4. Coombs & Milstein - same

The incidence of retrospective reports of abuse is much lower in other types of patients.

So, what is going on during child abuse? We wanted to look at children experiencing or who recently experienced abuse. Also looked at a children's scale of dissociation symptoms and validated other studies.

We studied 39 children referred to Ohio University College of Osteopathic Medicine; 12 had primary problem as sexual abuse (8 of whom were female). Non-abused Ss were either behavioral or adjustment disorders. 8 reported severe physical abuse. Parents concurred in presence of abuse. Physical abuse consisted of broken bones, burns, etc. Average age 9-10.

Ss were given the Beck Depression Scale, Children's Fantasy Inventory, Meyers' Children's Creative Imagination Scale, Children's Perception Alteration Scale, Figure Drawings, WISC-R, and 2-3 other measures. Research assistants administering the scales didn't know the children's diagnoses.

We found no support for the hypothesis that sexual abuse in childhood is associated with imagination, fantasy, or dissociative tendencies--not surprising considering that only 4 Ss were abused by their father or stepfather, 2/3 of Ss had fondling as the most severe abuse they had experienced; only 2 had intercourse; 2/3 were abused only 1-3 times. Sexual abuse that is not violent, severe, prolonged, or perpetrated by a parent may not lead to the same problems.

In a sample of women whose assaults were rape, only 25% reported it as rape.

On other hand, physical punishment was more reliably associated with dissociation (.47), imagination and fantasy in absorption scale (.41-.51 with question about using imagination to block awareness of punishment). Physical punishment was associated with increased dissociation.

Sample size is small and the trend is in the predicted direction, so later results may be significant.

**Conclusion:** measures of fantasy, dissociation, and imagination were correlated. Children's Perception Alteration Scale and the measures of fantasy and imagination were validated. Diverse measures of fantasy were highly correlated with one another.

We need a non-abused sample to add to this research.

The clinical sample had a higher dissociation score than Evers, Sanders, and Shostick's cutting score. We use 60 as a cutting score (for an abused sample) while they used 55.

**COMMENTS FROM THE AUDIENCE:**

**Jack Watkins:** the sexual abuse for the most part was not painful. Answer by Rhue: The group of sexual abuse cases includes very wide varieties of experiences; we need to examine that in our research. Also, trauma and the perception of trauma is an individual matter.

**Etzel Cardena:** We presented a paper at APA in which sexual abuse was a predictor of psychogenic seizures, and most important, the duration of the abuse.

**Phyllis Alden:** In a recent study in Germany, it was length of time for the abuse that predicted [dissociative symptoms?].

Spiegel, David; Koopman, Cheryl; Classen, Catherine; Freinkel, Andrew (1993, October). Dissociation, trauma, and DSM-IV Acute Stress Disorder. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

This represents a progress report on the research in our laboratory, which is different from traditional approaches that link childhood trauma to current problems. We say if there is a link between dissociation and trauma, one should find the symptoms in people who have trauma.

**Earthquake Research:**

They examined data from Loma Prieta earthquake; Stanford had \$164 million damage. Oct 1989. [Presents data that he has presented before.] There was a drop in dissociative symptoms over 4 months. McFarlane found that numbing was the best predictor of later PTSD symptoms, and we find that too.

Most trauma researchers have focused on anxiety because that is what they are interested in; they have ignored dissociative experiences, because such symptoms are designed not to be noticed.

Andrew Frankel and Cheryl Koopman studied 15 journalists who saw Robert Alton Harris' execution--volunteers who reported on the execution, to whom the event did not personally threaten. 40% reported depersonalization experiences, 2/3 felt detached or estranged from others, 27% had problems remembering everyday activities, etc. Dissociative symptoms were especially high in TV journalists, lowest in radio journalists, and in the middle range in newspaper reporters.

**Oakland Fire Research:**

Koopman & Classen looked at immediate psychopathology and later problems. They studied people of low, medium, and high exposure as defined by distance from the fire, which related strongly to both dissociative and anxiety symptoms.

There were strong relationships between the Mississippi PTSD scale scores and anxiety and dissociative symptoms (.50 and .59 respectively). People who reported recent life stress in the intervening period had higher PTSD and dissociative symptoms. The combination of initial dissociation and subsequent stress was additive in their relationships to PTSD.

People who had higher dissociation scores tended to do higher risk things (e.g., cross police barriers). This may explain how clinicians see patients who appear to get themselves re-victimized.

#### **Law Office Shooting Research:**

We followed up on the 1993 shooting of 14 people (8 fatally) in a law office in San Francisco. Survivors filled out dissociation questionnaires in the office (N = 36). They had high scores on the Impact of Event Intrusion Scale. The more they thought they or colleagues were in danger, the higher their scores on anxiety and dissociation measures and on Impact of Event scale.

#### **Dissociation Definition:**

These studies led to a project, with Etzel Cardena, in trying to revise DSM-III-R, which doesn't capture the symptoms [of post traumatic dissociation]. In DSM-IV there will be the diagnosis of 308.3 Acute Stress Disorder, characterized as: A. Same as DSMIII-R, except it doesn't require that the trauma be "unusual" B. Requires 3 of 5 dissociative symptoms. C, D, and E are classic dissociative symptoms F, G, and H are delimiting factors (e.g., causes significant impairment, length of time, not due to other factor).

Also, the multiple personality disorder (MPD) diagnosis has been changed to Dissociative Identity Disorder. The problem for these patients is not in having more than one personality, but not having one functioning personality.

Watkins, Helen H. (1993). Ego-State therapy: An overview. American Journal of Clinical Hypnosis, 35, 232-240.

Ego-state therapy is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between the various "ego states" that constitute a "family of self" within a single individual. Although covert ego states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist. Any of the behavioral, cognitive, analytic, or humanistic techniques may then be employed in a kind of internal diplomacy. Some 20 years experience with this approach has demonstrated that complex psychodynamic problems can often be resolved in a relatively short time compared to more traditional analytic therapies.

1992

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. Psychotherapy, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Darken, Rachel (1992). Hypnosis in the treatment of survivors of sexual abuse. Australian Journal of Clinical and Experimental Hypnosis, 20, 105-110.

This paper outlines the problems of child sexual abuse and its long-term sequelae, often reaching down generations. In psychotherapy with survivors of childhood sexual abuse, hypnosis offers a flexible treatment modality and the paper focuses particularly on the use of hypnosis and self-hypnosis for the "reparenting" element of psychotherapy.

Faller, Kathleen Couborn (1992, Summer). Can therapy induce false allegations of sexual abuse?. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 3-6.

NOTES: "Concern about the impact of therapy on children's accounts of sexual abuse should be understood in the context of two phenomena: (1) the adult need to deny that children are sexually abused, and (2) adult identification with the alleged abuser. These phenomena operate at both individual and societal levels" (p. 3).

"Research related to impact of stressful situations on children's ability to recall provides mixed results, some studies finding children are less accurate if the event is traumatic (Peters, 1991) and others finding they are not (Goodman, Reed, & Hepps, 1985).

"Research reveals that it is rare for children to falsely allege that they have been touched in their private parts. In one study, a substantial proportion of children who experienced genital and anal touch during a physical examination by a doctor did not volunteer this information when asked general questions about the examination. The majority of children in the study revealed genital and anal touch only when they were asked specific questions like, "Did the doctor touch you there?" (Saywitz, Goodman, Nicholas, & Moan, 1991)" (pp. 3-4).

"Clarke-Stewart and her colleagues (1989) have demonstrated that children's interpretation of ambiguous events can be manipulated and altered by an authority figure who insists upon a particular interpretation (see also Lindberg, 1991)" (p.4).

"In sum, the research suggests that older children are likely to provide more complete unassisted disclosure than younger children. Younger children may need more memory cues in the form of specific questions than older children. Therapists

are much more likely to find false negatives than false positives. Finally, therapists should be aware of the possibility the child may identify the wrong person. ... Generally, however, the research indicates that concern about the contaminating effects of therapy on children's recollections of sexual abuse is exaggerated" (pp. 4-5).

"Research indicates that the proportion of fabricated reports may be higher in the divorce scenario than in other contexts (Faller, 1990; Jones & Seig, 1988). Studies suggest most false reports are made by adults, not children (Jones & McGraw, 1987; Jones & Seig, 1988)" (p. 5).

"Clinical research (Sorenson & Snow, 1991) and experience (Faller, 1988) indicate that for most children, revealing sexual abuse is a process which occurs over time. A typical pattern is one in which children begin with the least overwhelming experience and gradually disclose more and more as their accounts are accepted and believed" (p. 5).

"[In conclusion]... therapists should be aware of the findings from research on children's memory and suggestibility. This research indicates that there are vulnerabilities which should be taken into account during therapy" (p. 6).

Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.

In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.

## NOTES

The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.

Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure

(modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental or social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76).

"The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

Table 1 Incidence of Pseudomemory Per Group -----

	Group A	Group B	Group C
Accepted	12	6	7
Rejected	3	9	8

----- Note. Group A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports.

"A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be

cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Perry, Nancy W. (1992, Summer). How children remember and why they forget. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 1-2; 13-16.

'My memory is the thing I forget with.' (a child's definition, cited in Grossberg, 1985, p. 60)" (p. 1).

"Unlike the simpler forms of memory retrieval, free recall is strongly age-related... the recall skills of preschool children develop gradually" (p. 2). "...in some cases, younger children can provide more accurate information than adults (Lindberg, 1991). For example, if an event is particularly salient (as sometimes happens in cases of trauma), recall may be exceptionally good (Brainerd & Ornstein, 1991; Lindberg, 1991)" (p. 13).

"Children have limited ability to use memory strategies. For this reason, children often know more than they can freely recall" (p. 13).

"The use of rehearsal as a memory strategy is almost automatic for adults. ... Ten-year-olds also commonly use rehearsal to aid memory. Young children, however, have not mastered rehearsal (Harris & Liebert, 1991).

"Another memory strategy is imagery, which involves (1) mentally picturing a person, place, or object, or (2) visually associating two or more things that are to be remembered. Children develop imagery much later than other memory strategies. Indeed, some people never learn this memory strategy (Flavell, 1977)" (p. 13).

"... stress alone may not impair memory processes. Indeed, stress can lead to arousal, heightened attention, and improved encoding (Deffenbacher, 1983). However, stress that results from intimidation may lead to either impairment in encoding or problems in recalling or reporting memories" (p. 14).

"Because the effect of suggestion on material that has been well encoded tends not to be significantly different across age groups (Cohen & Harnick, 1980), it may be that younger children's inferior performance on suggestive tasks results from inferior encoding" (p. 15).

Putnam, Frank W. (1992). Using hypnosis for therapeutic abreactions. Psychiatric Medicine, 10, 51-65.

Abreaction, the dramatic reliving of traumatic events under hypnosis, is a powerful therapeutic intervention useful in the treatment of victims of trauma. First systematically applied in World War I, abreaction coupled with psychotherapeutic processing of the recovered material is increasingly being used with victims of child abuse and chronic PTSD. Abreactions are helpful in recovering dissociated or repressed traumatic material, reconnecting missing affect with recalled material and for transforming traumatic memories. Although abreactions can be induced with medications, hypnosis is the method of choice except in acute situations where it is not possible to establish rapport. A variety of hypnotic techniques for the induction and management of abreaction are discussed, together with the indications and contraindications for their use.

Summit, Roland C. (1992, Summer). Opinion: Misplaced attention to delayed memory. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 21-25.

"I believe this is the time to cap a century of progress with a monumental achievement in awareness. We must cherish and develop the concept that what we don't know can hurt us. We can establish, for the first time, that our lives and even the nature of our society can be shaped by experiences so terrible that they are, in the words of Josef Breuer a century ago, 'forbidden to consciousness' (1895, p. 225). We may learn that huge chunks of oppositional thought, cruelty, perversity, helplessness, self-destruction and mental illness are derived from this hidden reservoir of suffering, and we could inspire unprecedented achievements in healing, prevention and enlightened peacemaking" (p. 21).

"We have been slow to consider the implications of dissociation for protective awareness of child sexual abuse" (p. 22).

"And we should respect the painful threat that enlightenment poses for our comforting faith in a just and fair society. We would have to consider that we may be capable as a people of hiding our most grotesque activities under the cover of

dissociation, so that we don't know we're doing it, our victims can't say it's happening, and as an outer society we will insist that no such thing could possibly exist" (p. 22).

"While it is urgently important to know that dissociation is real, it is doubly important not to endorse as accurate, in fact, details or encounters that may be part of a still unknown process of distortion" (p. 22).

"The most distinguished clinicians, the people who occupy the platform of authority as scientists and educators, are joining with those who, until now, have been recognized mainly for their adversarial positions. Now those two poles are coming together in aroused opposition to the phenomenon of delayed memory, especially when acquired in therapy with young women in their 30's, especially when those therapists lack an M.D. or a Ph.D. diploma. We face, once again, an ageist, sexist, elitist professional standoff around an issue that deserves to be explored in harmony" (p. 24).

"In California and several other states the statute of limitations has been suspended for individuals who can demonstrate delayed discovery of childhood trauma" (p. 24).

"The rush to judgment is not confined to civil litigation. There is no statute of limitations on murder" (p. 24).

"How many kids have hidden the memory of unspeakable assaults which can be unearthed years later to plunge them into courtroom testimony? How many free citizens could be sued or imprisoned by such remote discoveries? What should we do as scientists in support of or in opposition to those delayed memories?" (P. 24).

"We know that skepticism can quash the emergence of dissociated memories. Can we prove that therapeutic zeal cannot enhance such memories? Survivors who gain a clear picture of sexual assault in the climactic period of discovery tend to fade out the sharp edges as they achieve resolution and healing. The most seasoned survivors may discount the intermediate memories which once provided the impetus for their recovery" (p. 25).

**Vijselaar Joost; Van der Hart, Onno (1992). The first report of hypnotic treatment of traumatic grief: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 1-6.**

In 1813 the Dutch physicians Wolthers, Hendriksz, De Waal, and Bakker reported the hypnotic treatment of a woman suffering from traumatic grief, in which the therapist had to deal directly with the patient's spontaneous reenactments of the circumstances surrounding the death. This report, summarized in the present article, has historical value, as it is probably the first known precursor of the uncovering hypnotic approach. The original authors' views on the case are discussed, and a modern view for understanding the patient's traumatic grief and its treatment is presented.

**1991**

**Friedrich, William N. (1991). Hypnotherapy with traumatized children. International Journal of Clinical and Experimental Hypnosis, 39 (2), 67-81.**

The psychological impact of trauma can include cognitive, affective, and behavioral components. The degree to which a child is either overwhelmed by or unable to access the traumatic event can make the working through of the event in therapy difficult. Hypnotherapy is a useful modality not only for alleviating symptoms but also for uncovering the traumatic event(s) with associated affects, integrating and making sense of the experience. 4 case studies are reported to illustrate the utility of hypnotherapy with young, traumatized children.

Smith, William H. (1991). Antecedents of posttraumatic stress disorder: Wasn't being raped enough? A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 129-133.

Many rape victims, like those traumatized by war, accidents, and natural disasters, are able to recover from their ordeal with supportive, crisis-oriented treatment. For others, however, symptoms may persist and require more intensive treatment. Hypnosis allows a modulated re-experiencing and abreaction of the traumatic event that can help to provide the victim with a relieving sense of mastery, and it fosters a receptive context for reassurance and interpretation regarding the irrational or exaggerated thoughts and feelings involved. 2 case examples are presented in which earlier conflicts appeared to play a role in perpetuating the patients' symptoms. Detecting and addressing these antecedents resulted in complete alleviation of long-standing problems through relatively brief treatment using hypnosis.

Spiegel, David (1991, August). New directions in traumatic stress research. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

Trauma is the experience of being made into an object of someone else's rage. It is a sudden discontinuity in experience: our physical and mental state can be changed radically. The experience of loss of control is what is most horrifying, more than fear of death. Guilt, (blaming oneself) helps deny the loss of control. People who experience trauma distance from the information but the cortex maintains the traumatic memories.

Author reviewed literature on effective interventions with trauma victims. 1. Harbor & Pennebaker: Contrast how earthquake victims can talk about it but rape victims often are isolated. The importance of having someone listen raises the question of usefulness of only writing about the trauma. 2. Greenberg: Studied 103 trauma cases; employed a clever methodology, using 2 control groups (but it is difficult for the imaginary control group to be free of associating to their own traumas). I believe the health findings, but it troubles me that there were intrusions (thoughts); the control group utilization [of health services?] went up. 3. Kilpatrick: It is important not to blame the victim for being traumatized. But there may be some people who for sociological or other reasons do not get out of dangerous situations. 4. Terri Orbach: There is a process of "going public" about the trauma,

like in Alcoholics Anonymous disclosures. Trauma victims create an account and they go to someone else to tell about it.

Summary of what seems important about treatment: There are three means of working with trauma, with thinking, writing, and talking. If you just think but don't talk, assault rate goes up (Pennebaker); and if you don't talk with someone else you feel worse physically. In simply writing about the trauma, there may be an increase of mental intrusions, or avoidance. What seems to be beneficial is not just making sense to oneself about the experience cognitively, but the traumatized person must get feedback from another individual that they are not transformed as a person.

Van Der Kolk, Bessel; Van Der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. American Imago, 48, 425-454.

Describes the work of Janet concerning narrative versus traumatic memory, dissociation, and subconscious fixed ideas. Janet (1904) believed PTSD patients suffer from a phobia for the traumatic memory. Repression and dissociation are distinguished. Contemporary concepts of memory processing and the concept of schemas are then reviewed. Finally, a model is presented about how the mind freezes some memories. Evidence for the involvement of autonomic hyperarousal, triggering, and state dependent learning in PTSD is reviewed. They conclude that helplessness and the inability of the PTSD victim to take action (psychological and physical immobilization) facilitates dissociation. Includes practical ideas for the working through of trauma.

## NOTES

Traumatic memories are triggered by autonomic arousal ... and are thought to be mediated via hyper-potentiated noradrenergic pathways originating in the locus coeruleus of the brain... The locus coeruleus is the 'alarm bell' of the central nervous system, which properly goes off only under situations of threat, but which, in traumatized people, is liable to respond to any number of triggering conditions akin to the saliva in Pavlov's dogs. When the locus coeruleus alarm gets activated, it secretes noradrenaline, and, if rung repeatedly, endogenous opioids. These, in turn, dampen perception of pain, physical as well as psychological (van der Kolk et al. 1989). These neurotransmitters which are activated by alarm affect the hippocampus, the amygdala and the frontal lobes, where stress-induced neurochemical alterations affect the interpretation of incoming stimuli further in the direction of 'emergency' and fight/flight responses" (p. 443).

Wolpe, Joseph; Abrams, Janet (1991). Post-traumatic stress disorder overcome by eye-movement desensitization: A case report. Journal of Behavior Therapy and Experimental Psychiatry, 39-43.

Post-traumatic stress disorder is an exceptionally stressful syndrome that has been extremely difficult to treat. The prognosis was recently dramatically improved by the introduction of eye-movement desensitization. This paper reports, in substantial detail, a case that was precipitated by a rape 10 years earlier, describing its

manifestations and various unsuccessful attempts to treat it: followed by a detailed exposition of the eventual, completely successful treatment by eye-movement desensitization.

**1990**

Somer, E. (1990). Brief simultaneous couple hypnotherapy with a rape victim and her spouse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 1-5.

This paper presents a case involving a rape victim and her emotionally affected spouse. Although the assault occurred before the couple met, the husband was too upset to concentrate when the victim wanted to share her rape-related feelings, nor could he provide the much needed empathy and support. This, apparently, was due to his difficulties in handling his own rage. Simultaneous couple hypnotherapy was used to allow the victim to share her experience under conditions safe for both her and her spouse. As he imagined in trance the rape account described by his age-regressed wife, he learned to identify his emotions and experience them in a controlled manner. During subsequent sessions, the husband was encouraged to include himself in his wife's abreaction and reshape the traumatic scene for both of them. The husband's rescuing behavior and the expressions of violent anger towards the perpetrator had several positive consequences. Not only did they change the abandonment component of the victim's traumatic memory, but they also helped the husband deal in better ways with his own feelings of anger. It also provided the couple with a helpful coping mechanism they later effectively applied under different circumstances.

Spiegel, David; Cardena, Etzel (1990, October). New uses of hypnosis in the treatment of posttraumatic stress disorder. Journal of Clinical Psychiatry (Supplement), 51, 39-43.

Vietnam veterans with PTSD and those abused as children have above average hypnotizability. Hypnosis provides controlled access to memories that may otherwise be kept out of consciousness. New uses of hypnosis with PTSD victims involve coupling access to the dissociated traumatic memories with positive restructuring of those memories. Hypnosis can be used to help patients face and bear a traumatic experience by embedding it in a new context, acknowledging helplessness during the event, and yet linking that experience with remoralizing memories, such as efforts at self-protection, shared affection with friends who were killed, or the ability to control the environment at other times. In this way, hypnosis can be used to provide controlled access to memories that are then placed into a broader perspective. Patients can be taught self-hypnosis techniques that allow them to work through and thereby reduce spontaneous, unbidden, intrusive recollections.

**1989**

Cooper, Nancy A.; Clum, George A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. Behavior Therapy, 20 (3), 381-391.

14 Vietnam veterans suffering from posttraumatic stress disorder (PTSD) were assigned either to standard treatment (control group), or standard treatment plus imaginal flooding (experimental group). The 2 groups were closely matched on medications and combat roles and tours of duty were comparable. Experimental Ss received up to 14 sessions of flooding for a maximum of one and one-half hours per session. Self-report measures were administered at pre-treatment, post-treatment, and at 3-mo follow-up. These measures included the Behavioral Avoidance Test, the Beck Depression Inventory, and a Modified Vietnam Experiences Questionnaire. Results indicate that flooding increased the effectiveness of usual treatment, particularly in such areas as re-experiencing symptoms and sleep disturbances. However, flooding had no effect on level of depression, trait anxiety, and violence-proneness.

Eisen, Marlene R. (1989). Return of the repressed: Hypnoanalysis of a case of total amnesia. International Journal of Clinical and Experimental Hypnosis, 37 (2), 107-119.

A case study is presented of a woman suffering from global amnesia so profound that she had lost all sense of personal identity. Hypnotherapy was used to establish, through imagery, a solid inner core on which to rebuild a sense of self. From the image of a strong column on which rested a book with a golden lock (her history), to reading about other lives, books and stories were utilized to establish a safe external environment in which the reawakening of repressed memories was not longer perceived as dangerous. A discussion of relevant literature on the subjects of global amnesia, loss of personal identity, and post-traumatic stress is offered as a basis for discussing the present case.

Litz, Brett T.; Keane, Terence M. (1989). Information processing in anxiety disorders: Application to the understanding of post-traumatic stress disorder. Clinical Psychology Review, 9, 243-257.

Several of the key defining features of PTSD are symptoms that reflect problems related to perception, attention, and memory processes (hypervigilance, flashbacks, nightmares, psychogenic amnesia, and concentration difficulties). Although there have been several recent attempts to explain such phenomena through facets of cognitive psychology, little empirical work has been completed to confirm or explicate such processes in PTSD. This paper critically reviews the theoretical and empirical work done to date in the area of information processing in anxiety disorders, so as to provide a context for future empirical work to identify the specific psychological mechanisms and controlling variables responsible for symptoms of PTSD. A working theoretical model of information processing variables in PTSD is also proposed to stimulate future research in this area.

**Peebles, M. J. (1989). Through a glass darkly: The psychoanalytic use of hypnosis with post-traumatic stress disorder. International Journal of Clinical and Experimental Hypnosis, 37, 192-206.**

**A severe case of post-traumatic stress disorder stemming from consciousness (with auditory and pain perception) during surgery was treated with 8 sessions of hypnosis. Abreaction and revivification used alone initially retraumatized the patient, and her symptoms worsened. Ego-mastery techniques were then added; emphasis was placed on the role of the therapist as a new object presence to be internalized in restructuring the traumatic memory; memory consolidation and working-through techniques were instituted. The patient's symptoms abated and her condition remitted. The similarities between hypnotic and analytic work are highlighted. In addition, the case material provides a clinical example of the existence and potential traumatic effects of conscious awareness during surgery.**

**Pillemer, D. B.; White, S. H. (1989). Childhood events recalled by children and adults. In Reese, H. W. (Ed.), Advances in child development and behavior. New York: Academic Press.**

#### **NOTES**

**Authors discuss a dual memory theory. The first memory system is prominent in early childhood, and is a system in which are organized and evoked by persons, locations, and emotions. Such memories are not easily "transportable" outside the original experience. These memories are accessed through images of face and place, actions, or feelings. The second memory system begins to develop in early childhood, is verbally mediated, and stores experiences in narrative form. Such memories are accessible through verbal interaction, and can be reviewed and shared with others verbally. For a small child, to access all of a memory one would need to tap into both memory systems. The authors suggest that the first memory system continues to be available throughout one's life, especially when strong emotion was associated so that verbal cues are not attached. [This has implications for retrieval of "lost" memories using imagery-based approaches like hypnosis.]**

**1988**

**Chu, James A. (1988). Ten traps for therapists in the treatment of trauma survivors. Dissociation, 1, 24-32.**

**Patients who have survived trauma, particularly those who have experienced early childhood abuse, stand out in the clinical experience of many therapists as being among the most difficult patients to treat. These patients have particular patterns of relatedness, along with intense neediness and dependency which make them superb testers of the abilities of their therapists. They often push therapists to examine the rationales and limits of their therapeutic abilities, and frequently force therapists to examine their own personal issues and ethical beliefs. A conceptual framework for understanding treatment traps is presented, along with 10 traps which these patients present, consciously and unconsciously, in the course of treatment. Included**

are traps around trust, distance, boundaries, limits, responsibility, control, denial, projection, idealization, and motivation.

**Kingsbury, Steven J. (1988). Hypnosis in the treatment of posttraumatic stress disorder: An isomorphic intervention. American Journal of Clinical Hypnosis, 31, 81-90.**

Reviews literature on hypnosis treatment for PTSD and presents a rationale, based on the type of symptoms presented (blunting vs intrusions). Case presentations are provided.

"Several types of physiological processes may underlie dissociation. State-dependent learning, in which that learned during drug-induced alterations in consciousness may only be recalled during later similar alterations, is believed to be dependent upon hippocampal mechanisms (Gerrien & Chechile, 1977). The relationship of state-dependent learning to hypnosis has remained at the level of theory (Hilgard, 1977; Rossi, 1986). A second possible explanatory construct suggests everyday experience is primarily (but not exclusively) mediated by verbal, dominant hemisphere functioning. The images and sets mediating hypnosis, PTSD, and other forms of dissociation may be mediated by analogic processing and the nondominant hemisphere (Carter, Elkins, & Kraft, 1982; Galin, 1974; Hilgard, 1977; Watzlawick, 1978)" (p.83).

**Loewenstein, R. J.; Putnam, F. W. (1988). A comparison study of dissociative symptoms in patients with complex partial seizures, MPD, and posttraumatic stress disorder. Dissociation, 1, 17-23.**

Depersonalization and dissociative symptoms have been widely reported in chronic seizure disorder patients, especially those with temporal lobe involvement and complex partial seizures (CPS). It has been theorized that development of multiple personality disorder may be related to temporal lobe pathology. We administered the Dissociative Experiences Scale (DES) to 12 male patients with severe chronic epilepsy, primarily of the complex partial type. Patients had epilepsy from 1 to 30 years. Most were being evaluated for intractable seizures occurring several times per week. DES data on the epileptic patients were compared with DES data on 9 male MPD patients and 39 PTSD patients. MPD and PTSD patients were significantly different from CPS patients in median DES scores and all DES subscale scores. MPD and PTSD patients were far more similar on the DES, although MPD patients had a significantly higher score on the dissociation/psychogenic amnesia subscale of the DES. The authors conclude that there is little data to support a relationship between MPD, dissociation, and epilepsy.

**Spiegel, David; Hunt, Thurman; Dondershine, Harvey E. (1988). Dissociation and hypnotizability in posttraumatic stress disorder. American Journal of Psychiatry, 145 (3), 301-305.**

**: The authors compared the hypnotizability of 65 Vietnam veteran patients with posttraumatic stress disorder (PTSD) to that of a normal control group and four patient samples using the Hypnotic Induction Profile. The patients with PTSD had significantly higher hypnotizability scores than patients with diagnoses of schizophrenia (N=23); major depression, bipolar disorder-depressed, and dysthymic disorder (N=56); and generalized anxiety disorder (N=18) and the control sample (N=83). This finding supports the hypothesis that dissociative phenomena are mobilized as defenses both during and after traumatic experiences. The literature suggests that spontaneous dissociation, imagery, and hypnotizability are important components of PTSD symptoms.(Am J Psychiatry 1988; 145:301-305)**

**Terr, Lenore C. (1988). What happens to early memories of trauma? A study of twenty children under age five at the time of documented traumatic events. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 96-104.**

The verbal and behavioral remembrances of 20 children who suffered psychic trauma before age 5 were compared with documentations of the same events. Ages 28 to 36 months, at the time of the trauma, serves as an approximate cutoff point separating those children who can fully verbalize their past experiences from those who can do so in part or not at all. Girls appear better able than boys to verbalize parts of traumas from before ages 28 to 36 months. Short, single traumas are more likely to be remembered in words. At any age, however, behavioral memories of trauma remain quite accurate and true to the events that stimulated them.

**Venn, Jonathan (1988). Hypnotic intervention with accident victims during the acute phase of posttraumatic adjustment. American Journal of Clinical Hypnosis, 31, 114-117.**

Victims of accidents or other trauma often experience acute symptoms of confusion, disorganization, and intrusive memories. Victims can be extremely suggestible during their initial adjustment, and they readily comply with suggestions to enter hypnosis. Reframing and other hypnotic interventions can be useful in managing acute symptoms and may facilitate long-term adjustment. A case is presented in which hypnosis was successfully used with a man who was acutely distressed after accidentally killing a pedestrian. Whether the heightened suggestibility experienced during acute posttraumatic adjustment entails an increase in hypnotizability is an interesting topic for future research, and one which has theoretical import.

**1987**

**Fromm, Erika (1987). Significant developments in clinical hypnosis during the past 25 years. International Journal of Clinical and Experimental Hypnosis, 35 (4), 215-230.**

In the past 25 years, important changes have taken place in clinical hypnosis. It has become scientifically respectable as the field has moved from publishing anecdotal case reports to testing hypotheses on significant samples of patient populations. In

addition, new treatment approaches have been introduced, foremost among them hypnoanalysis of psychotic, borderline, narcissistic, and post-traumatic stress disorders, as well as hypno-behavioral methods for the treatment of habit disorders and somatic and psychosomatic diseases. The former treatment approaches combine hypnotic techniques with the newer psychoanalytic methods derived from object relations and self-theories; the latter combine hypnosis with the methods of behavioral medicine and attempt to teach the patient voluntary control over ordinarily involuntary somatic processes. In general, while formerly the therapeutic use of hypnosis involved mainly direct and indirect suggestion, in the last 25 years hypnotherapists of all persuasions have become more and more convinced of the important role imagery plays in the application of hypnosis for therapeutic purposes. Several areas of clinical application are described.

**1986**

Herman, Judith; Russell, Diana; Trocki, Karen (1986). Long-term effects of incestuous abuse in childhood. American Journal of Psychiatry, 143, 1293-1296.

Studied 2 groups of adult women with histories of incest, a nonclinical sample (n - 152) and an outpatient sample (n - 53) to investigate long-term outcomes of sexual abuse. Results indicate that Ss in the community sample reported a range of long-term effects from the incest. Most said they had recovered well from their trauma. Most Ss who had suffered forceful, prolonged, or highly intrusive sexual abuse, or who had been abused by their father or stepfather, reported long-lasting negative effects. The patient sample reported histories comparable to the most severe traumatic histories in the community sample.

**1985**

MacHovec, Frank J. (1985). Treatment variables and the use of hypnosis in the brief therapy of post-traumatic stress disorders. International Journal of Clinical and Experimental Hypnosis, 33 (1), 6-14.

This paper describes treatment variables in the use of hypnosis in the brief treatment of 4 post-traumatic stress disorder cases. The number of sessions varied with the length of time between trauma and treatment, severity of stressor, and the personality of the patient. Individual differences in response to treatment are reported, as well as considerations for differential diagnosis to prevent misdiagnosis.

Stumpfe, Von Klaus-Dietrich (1985). Psychosomatic reactions of near-death experiences. A state of affective dissociation. Zeitschrift fur Psychosomatische Medizin, 31, 215-225.

The feelings of persons who had encountered life-threatening danger were analyzed and compared with the feelings of persons, who are in hypnoses or trained in autogenic training. The symptoms are widely alike. The result of the comparison is, that there exists a state of affective dissociation, which can be caused by conscious or unconscious actions

**Stutman, Randall K.; Bliss, Eugene L. (1985). Posttraumatic stress disorder, hypnotizability and imagery. American Journal of Psychiatry, 142 (6), 741-743.**

Administered a posttraumatic stress disorder (PTSD) scale, the Stanford Hypnotic Susceptibility Scale--Form C, a vividness of imagery scale, and a self-report of 313 symptoms found in 11 major psychiatric disorders to 26 Vietnam veterans to determine the relationship between posttraumatic stress disorder and hypnotizability. Ss with low or no PTSD scores had normal hypnotizability scores and normal imagery scores, whereas those with high PTSD scores had high hypnotizability scores and high imagery scores. It is concluded that either combat traumas enhanced hypnotic potential in some Ss or that Ss with excellent hypnotic potential to begin with were more susceptible to posttraumatic stress. It is suggested that some humans may revert to spontaneous self-hypnosis as a primitive coping tactic.

**1984**

**Nash, Michael R.; Lynn, Steven Jay; Givens, Deborah L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 6-11.**

Earlier empirical and theoretical work has suggested that there is a relationship between higher hypnotic susceptibility and severity of childhood punishment. Experiment 1 surveyed the parents of 14 extremely high and 11 extremely low susceptible Ss concerning punishment. Low susceptible Ss were found to be more frequently punished than highs; no significant differences were found on the severity measure. Experiment 2 assessed the hypnotizability of 16 adult Ss who reported being physically abused before the age of 10 and compared these scores to those of 300 adult Ss who had not reported being abused. The mean hypnotizability of abused Ss was greater than that of controls, and the distribution of their scores appeared bimodal. Limitations of both experiments are discussed and suggestions are made for future investigations.

**Brende, Joel O. (1982). Electrodermal responses in post-traumatic syndromes: A pilot study of cerebral hemisphere functioning in Vietnam veterans. Journal of Nervous and Mental Disease, 170, 352-361.**

This paper summarizes the findings of a pilot study which found a relationship between the post-traumatic symptoms of a) psychic numbing, b) intrusive recollections of traumatic events, and c) hypervigilance and lateralization of electrodermal response (EDR) measurements in six victims of psychological trauma. Hypnotically induced imagery of past traumatic events was often associated with left-sided EDR increases, psychic numbing with left-sided EDR decreases or bilateral EDR unresponsiveness, and revivifications of hypervigilant states with right-sided EDR lateralization. In several cases control of the experience of fear was associated with left- sided or bilaterally decreased EDR. These pilot study findings

support previously stated hypotheses: a) EDR obtained from an extremity reflects contralateral cerebral hemisphere functioning; b) left hemisphere functioning is associated with hypervigilance; and c) right hemisphere functioning is associated with emotions and imagery. In addition, the pilot study findings suggest additional hypotheses: a) Post- traumatic symptoms are associated with poorly controlled or integrated cerebral hemisphere functioning; b) psychic numbing and intrusive images, flashbacks, and nightmares are associated with abnormal activation, suppression, or integration of right hemisphere functioning in relationship to the left; c) aggressive behavior, hypervigilance, and character pathology are associated with abnormal activation, suppression, or integration of functioning of the left hemisphere function in relationship to the right; and d) "splitting" as a psychological defense in Vietnam veterans with Borderline Personality Disorders is associated with physiologically impaired interhemispheric integration.

#### NOTES

The authors report that previous research suggests that electrodermal asymmetry may be related to emotional factors. They further suggest that electrodermal responsiveness reflects contralateral cerebral hemispheric functioning, with lower GSR associated with higher activation of the opposite cerebral hemisphere (see Lacroix and Comper, 1979). They indicate that the right hemisphere, which is involved in experience of emotion, also is associated with depression (when there is abnormal inhibitory function of right hemisphere) and affective disorders. The left hemisphere is involved in vigilance (Dimond & Beaumont, 1974). "Based on these findings, the post-traumatic symptoms hypervigilance, anxiety, and behavior disorders appear to be associated with atypical left hemisphere activation, intrusive recollections of traumatic memories and disturbing emotional states with atypical right hemisphere activation, and psychic numbing or emotional unresponsiveness with diminished right hemisphere activation, or overactivation of the left hemisphere" (p. 354).

In this pilot study, the therapist, who used hypnosis in all but one case, interviewed the patient for 30-50 minutes, focusing on helping the S to recall experiences of a traumatic nature. The therapist was supportive when disturbing emotions were evoked, responding flexibly by monitoring S's anxiety and moving back and forth between uncovering and supportive techniques.

**SUMMARY:** "There were observably variable changes and bilateral differences in EDR within each of the six subjects in relationship to varying verbal, emotional, and imagery content, postulated to reflect contralateral hemispheric functioning. These observed changes were considered conclusive evidence of such functioning in post-traumatic states" (p. 358). "1. Lateralization of EDR to the left is associated with unpleasant emotions and traumatic imagery. ... "2. Lateralization of EDR to the right is associated with hypervigilance and aggressive outbursts. ... "3. Psychic numbing is associated with inhibition of bilateral EDRs (for example, lack of bilateral EDR activation occurred in every case at times) or with suppression of the left EDR. ... "4. General physiological arousal, a normal response to fear, is associated with increased EDRs bilaterally. ... "5. Relaxation and the subjective experience of safety and well-being, which have been reported to foster

interhemispheric integration in normal subjects ... were observed to be associated with bilaterally decreased EDR in case I, an example of a less severe post-traumatic condition, but not observed during attempts at relaxation in Vietnam veterans with more severe post-traumatic symptoms. "6. Voluntary efforts to cognitively control fear were related to left hemispheric functioning, as observed in case IV when the subject attempted to control intrusive thoughts with cognitive activity and in Case III following the revivification of a frightening event when he made a shift from the hypnotic trance state to waking cognitive activity. In both cases, such cognitive activity was associated with a decreased right-sided EDR" (p. 359).

**DISCUSSION:** "The results of this pilot study, which demonstrated frequent EDR differences between hands during subjects' recollections of or attempts to suppress recollections of prior traumatic experiences, alters the traditional belief that increased skin conductance is always a predictable physiological measurement when the electrode is placed on only one hand, as Lacroix and Comper (46) have pointed out.

"The finding of EDR lateralization is consistent with the findings of deBonis and Baque (10) who reported that the degree of anxiety determines the presence of lateralization of EDR responses, of Gruzelier and Venables (30, 32) and Myslobodsky and Horesh (53) who reported that the presence or absence of psychopathology determines the direction of the lateralized response, and of Lacroix and Comper (46) that activation of one hemisphere may suppress contralateral EDR" (p. 359).

1978

Nichols, Michael P.; Bierenbaum, Howard (1978). Success of cathartic therapy as a function of patient variables. Journal of Clinical Psychology, 34 (3), 726-8.

Treated sample of 42 patients with cathartic psychotherapy and evaluated differential effectiveness on types of patients. Patients without mental disorders experienced more emotional catharsis than all others, and those with obsessive compulsive personality disorders improved more than all others as a result of emotive treatment. Contrary to popular notions, neither women nor hysterics experienced more catharsis or improved more in cathartic therapy. Although women and hysterics may cry more easily in daily life, obsessives are apparently more able to maintain focus on unhappy experiences and are therefore able to express more emotion in cathartic therapy. Furthermore, it seems that cathartic treatment is beneficial by disrupting long-standing defenses against emotional experience, rather than by releasing stored-up affects.

Fisher, R. (1977). On flashback and hypnotic recall. International Journal of Clinical and Experimental Hypnosis, 217-235.

This essay deals with both the intra-individual and inter-individual varieties of arousal state-bound experiences. The former are labelled as "flashbacks" while the latter embrace the great fantasms and repetitive schemes, the ever re-written plots and images of literature, art, and religion.

Flashbacks are both arousal-state and stage (i.e., set and setting) bound experiences.

Flashback and hypnotic recall differ only in the ways by which they are induced. Induction methods should be distinguished from induced states on the hyperaroused perception-hallucination and hypoaroused eprception-meditation continuum. Flashbackers may be characterized by their (a) variability on perceptual-behavioral tasks; (b) tendency to minimize (or reduce) sensory input; (c) high resting heart rates; (d) hypnotizability; and, hence (e) preferential right-cerebral-hemispheric cognition; and (f) a display of EEG-alpha dominance in the resting, waking state.

## Possession

1996

Desmangles, Leslie G.; Cardena, Etzel (1996). Yearbook of Cross-Cultural Medicine and Psychotherapy, 1994. Berlin: Verlag fur Wissenschaft und Bildung. (Theme Issue: Trance, possession, healing rituals, and psychotherapy)

In this paper, we analyze trance possession in its cross-cultural, psychological and religious contexts, and describe its role specifically within Haitian Vodou and society. In contrast with the earlier analysis of spirit possession as a form of psychopathology, more recent scholarships (sic) has emphasized its import as a common and meaningful religious practice. Vodou is a syncretic religion that, for historical reasons, fused African traditions with Catholicism. In Haiti, the possessed individual plays a liminal function that bridges the sacred and the secular, and temporarily transcends the limitations imposed provided by social or economic status.

## NOTES

The article lists the following as Contents. 1. Possession in context 2. Possession and psychotherapy 3. Vodou and Haiti 4. Vodou rituals (A brief history - The many faces of the Lwas) 5. Deutsche Zusammenfassung 6. Literature

1994

Cardena, Etzel (1994, August). Spirit possession in Haiti. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

**THREE DIMENSIONS OF POSSESSION:** 1. Shift from one identity into another (e.g. substituting the everyday identity for that of a spirit) 2. Transitional (you are not having one type of identity substituted for another); involves a transition between states of consciousness (e.g. confusion, dizziness) 3. Transcendent possession - you have a human identity that is not quite there, but another identity has not taken over, like the oracle.

He disagrees with Eliade and Roger Walsh who imply that shamanism is a higher form than possession because possession is "out of control."

Flight of mind - you are able to remember and bring back the information, mostly visual/imaginal.

vs Possession - involves an embodied alteration of consciousness and, frequently, amnesia.

For further information, consult Cardena, E. (1989). The varieties of possession experience. *Association for the Anthropological Study of Consciousness Quarterly*, 5 (2- 3), 1-17.

1993

Cardena, Etzel (1993, October). Trance and possession as dissociative disorders: How exotic are they?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

Joke: "What happened to the possessed patient who didn't pay his exorcist?"  
Answer: "He got repossessed."

Began with a quotation of Lagerkvist's book describing possession of a Sybil in Greek temple. Possession is part of religious experience worldwide, that he is not discussing here.

The revised diagnostic manual, ICD-10, has included "dissociative trance disorders." To diagnose this one must have either trance (narrowing awareness or focusing and stereotyped movements, behaviors) or possession trance (replacement of sense of personal identity by a new identity, with stereotyped culturally-determined behaviors or movements that are experienced as being controlled by the possessing agent), \*and\* full or partial amnesia for the event. Cardena emphasizes it doesn't need to be full amnesia.

To be diagnosed as dissociative trance disorder, the trance or possession state observed cannot be a normal part of a broadly accepted cultural or religious practice, and it must produce distress or maladjustment.

These are the most common type of dissociative disorders in non-Western cultures, e.g. 90% in India. So this diagnosis in India is not "atypical." "Non-Western" applies to 80% of the World and 1/3 of the USA population. DSM is trying to expand cultural relevance.

Also, even in the Western culture Allison and others have published cases of dissociative trance disorder, and others have described trance disorders:

Spiegel & Spiegel's Grade 5 personality is vulnerable to dissociative disorder. Hartman's chronic nightmare patients have "boundary thinness" (i.e. they are not clear if they are awake or asleep, lack separation from themselves and others). Lynn & Rhue's fantasy prone individuals, 22% of people, are vulnerable to maladjustment.

Cardena's recommended change in diagnosis of dissociation is critiqued in *Transcultural Psychiatric Research Review* (1992). Criticisms of the new diagnosis, published in that journal, are: 1. Culture-bound syndromes cut across Western diagnostic boundaries. 2. The diagnosis may be insensitive to the cultural context in which phenomena occur (e.g. distress may lead a person to participate in a cult of affliction) and it may require anthropological sophistication of diagnosticians or consultation with someone who has that knowledge. 2a. It may disregard considerations such as who has the power to "authorize" the phenomenon, under

what circumstances, etc. [That would be true with any diagnosis however.]  
3. Dissociative Trance Disorder may assume greater within and across-culture uniformity for the conditions than is warranted. 4. It may give validity to metaphysical explanations for spirit possession. [But in psychiatry we often use terms that don't take into consideration validating metaphysical explanations, e.g. "phantom limb" pain. 5. The medical model that underlies DSM is inappropriate for ontological considerations on the nature of the self. [But those with this diagnosis give us some understanding, not what the ultimate nature of the self and consciousness are. Diagnoses are pragmatic ways of dealing with problems.]

At the present time, the diagnosis of Dissociative Trance Disorder is included in the Appendix of DSM-IV.

For further elaboration of this material, see Cardena, E. (1992). Trance and possession as dissociative disorders. *Transcultural Psychiatric Research Review*, 29, 283- 297.

1993

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

1992

Ofshe, Richard J. (1992). Inadvertent hypnosis during interrogation: False confession due to dissociative state; mis-identified multiple personality and the satanic cult hypothesis. International Journal of Clinical and Experimental Hypnosis, 40, 125-156.

Induction of a dissociative state followed by suggestion during interrogation caused a suspect to develop pseudo-memories of raping his daughters and of participation in a baby-murdering Satanic cult. The pseudo-memories coupled with influence from authority figures convinced him of his guilt for 6 months. During this time, the suspect, the witnesses, and all the evidence in the case were studied. No evidence supported an inference of guilt and substantial evidence supported the conclusion that no crime had been committed. An experiment demonstrated the suspect's extreme suggestibility. The conclusion reached was that the cult did not exist and the suspect's confessions were coerced- internalized confessions. During the investigation, 2 psychologists diagnosed the suspect as suffering from a dissociative disorder similar to multiple personality. Both psychologists were predisposed to find Satanic cult activity. Each concluded that the disorder was due to "programming" by the non-existent Satanic cult.

Richeport, Madeleine M. (1992). The interface between multiple personality, spirit mediumship, and hypnosis. American Journal of Clinical Hypnosis, 34, 168-177.

#### NOTES

The author draws parallels between multiple personality disorder (dissociative identity disorder), spirit mediumship, and hypnosis. She uses historical, anthropological, and clinical perspectives. According to the author, Milton Erickson's view of multiple personality disorder was that it was not necessarily pathological, and he employed hypnosis to gain access to personalities and to transform their behavior from involuntary to voluntary actions. "Natural trance therapies in other cultures offer a new perspective for viewing the normalcy or pathology of "other selves"" (p. 168).

Spanos, Nicholas P. (1992, October). Multiple identity enactments: A social psychological perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Frequency of reports of multiple personality disorder has varied over the centuries. The diagnosis is limited now to North America; and some therapists see more than others. Contemporary cases report severe child abuse, but this was much less so at the turn of the century. The diagnosis is limited now to North America; and some therapists see more than others. Contemporary cases report severe child abuse, but this was much less so at the turn of the century.

There is an older syndrome, called demonic possession, which shares all of these characteristics. Demonic possession was diagnosed for almost 2000 years and the disorder included: secondary (demonic) selves, and the patient being amnesic during the personality take-over by a demon. The diagnosis was more prevalent during some periods (when Christianity was proselytizing but not when it was a state religion; then again in the 16th Century when Christianity was breaking up and both Catholics and Protestants had interest in it--each inspired by the other group). Demonic possession was more often found by some experts than others; and often was diagnosed as something else initially-- e.g. psychosomatic problems. Symptoms that were ambiguous were more definitive when patients were then seen by expert.

Some symptoms--convulsions, increased strength, and insensitivity to pain--were common across Europe. But in Catholic countries the possessed manifested a secondary personality: the demon, with a different voice, spoke through the person. This rarely happened in Protestant countries, where there were convulsions, amnesias, extra strength, etc. but no alter personality.

Why were there such different symptoms in Catholic and Protestant countries? The main difference was that Catholic countries used exorcism--getting information from the demon (name, when the demon entered the body, why, how long demon planned to stay). The exorcist didn't address the possessed person directly; he would

say "I'm not talking to Mary; I'm talking to the demon." If the demon didn't reply, they would use brimstone, etc. to elicit a reply.

In Protestant countries it was believed that exorcism was inappropriate, because that would mean going to the Devil for help. They used prayer and fasting, but no attempt to communicate with the Demon. Hence, in France 20 nuns had secondary personalities, whereas in Protestant Salem, none of them had secondary personalities.

Often demon possession would occur to several people, with one person saying an image is attacking someone else, and then that second person would be possessed--so people would respond to social context, experience being possessed in terms of what that meant to them. Demonic possession was maintained by the community, so it was a social phenomenon.

Reports of ritual abuse then occurred, with witches talking about mockery of the Catholic mass, etc. Modern historians say these were fantasies, and that there were no witches' Sabbaths or ritual abuse of children.

One could infer that a therapist may be carrying out a secularized exorcism when he diagnoses multiple personality disorder.

To examine the contribution of social context to the reports of alternate personalities, we conducted a series of experiments.

We experimentally studied people instructed to simulate "an accused murderer remanded for psychiatric evaluation," and to behave as a criminal would. [They were hypnotized?] We used the interview employed with hypnotized Ss calling for a different part of themselves to speak. Of these simulators, 80% reported a secondary personality, and almost 100% claimed amnesia.

We took the people who displayed a secondary personality and amnesia and gave them psychological tests. They gave different pictures on the semantic differential [for the different personalities?].

A second experiment looked at how students would develop an alter personality. They were hypnotized and age regressed "to a past life," and were told about reincarnation. We then studied those who reported a past life. For half we told them

studied those who reported a past life. For half we told them people with a past life were likely to be born of a different race, etc. (because that is rarely reported spontaneously). Those who were told this were more likely to incorporate that information in their report of a past life experience.

In a third study, we told them that people in past eras, being less enlightened, tended to punish their children more. Those given this information were more likely to report abuse than those who were uninstructed.

A fourth study looked at how a hypnotist could influence the belief that it is a real past life rather than fantasy. They varied what Ss were told: Group 1 was told reincarnation is real. Group 2 was told reincarnation is fantasy. Group 3 was not told anything.

The first group reported a stronger belief that it was real than fantasy. (Oddly, the neutral group was nearly as high.) The Fantasy group had lower mean rating for credibility.

Hughes, Dureen J.; Melville, Norbert T. (1990). Changes in brainwave activity during trance channeling: A pilot study. Journal of Transpersonal Psychology, 22, 175-189.

## NOTES

Authors studied 10 people known trance channels--all had been channeling for more than one year. Used an anthropological field method. Electrode was placed only on left occipital (O1) area, referenced to left ear. Calculated difference between each S's pre- trance and trance EEG beta percentages, for alpha and theta percentages also.

Basically, the pre-trance versus trance sums of differences scores were greater than the post-trance versus trance sums of different scores for each of the three frequency bands--indicating a residual of the trance state. There were large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity, and some suggestion of a pattern. The large amount of beta differentiates these Ss from what has been observed with meditators (increases in alpha and theta). Among the Subjects, large amounts of beta activity were recorded continuously throughout the trance period and were coupled with large amounts of high amplitude alpha and theta (relative to the pre- and post-trance states).

The authors compare these results to older hypnosis literature. They conclude that the trance channeling state may be a distinctive state characterized by a particular EEG profile that differs from that found in certain meditative states, hypnotic states, various pathological states, or the waking states of the trance channel Subjects who participated in the study. Authors also liken the differences seen between trance and non-trance states of these Subjects to the differences seen for different alter personalities among people diagnosed with Multiple Personality Disorder.

**DISCUSSION.** The foregoing research suggests that the trance channeling state, as measured in the current study, is characterized by large, statistically significant increases in amount and percentage of beta, alpha and theta brainwave activity. There appear to be definite neurophysiological correlates to the trance channeling state, and furthermore there is some evidence that these correlates may be patterned. This pattern might be provisionally compared to those associated with other altered states of consciousness.

## R RESEARCH

### RAPPORT

2001

Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.

### NOTES

1:

Preface: Definition of Hypnosis

History of Hypnosis in Surgery

Theories of Hypnosis

Chapter:

1. An Introduction to Hypnosis
2. Hypnosis in the Management of Chronic Pain
3. Hypnosis in Conjunction with Chemical Anesthesia
4. Hypnosis in Conjunction with Regional Anesthesia
5. Hypnosis as the Sole Anesthetic
6. Hypnosis in the Intensive Care Unit
7. Hypnosis in the Emergency Unit

- 8. Hypnosis in Pediatric Surgery
  - 9. Hypnosis in Obstetrics and Gynecology
  - 10. Perspectives from Physician-Patients
- 1999

Barnier, Amanda J.; McConkey, Kevin M. (1999). Hypnotic and posthypnotic suggestion: Finding meaning in the message of the hypnotist. International Journal of Clinical and Experimental Hypnosis, 47 (3), 192-208.

High hypnotizable subjects were asked a question before, during, and after hypnosis and were given a suggestion before, during, or after hypnosis to rub their earlobe when they were asked this question. In this way, the experiment placed a question that required a verbal response in contrast with a suggestion that only sometimes required a behavioral response. Subjects were more likely to respond behaviorally when the question was associated with the suggestion but more likely to respond verbally when the question was a social interaction; furthermore, the likelihood of subjects responding behaviorally and/or verbally shifted across the tests with the changing message of the hypnotist. The findings highlight hypnotized subjects' attempts to interpret the hypnotist's communications and their ability to resolve ambiguity in the nexus of those messages in a way that promotes their hypnotic behavior and experience.

Temes, Roberta (Ed.) (1999). Medical hypnosis: An introduction and clinical guide. New York, NY: Harcourt Brace, W. B. Saunders.

#### NOTES

1:

Contributors to text include Dabney Ewin, Melvin Gravitz, Elvira Lang, Dorothy Larkin, Al Levitan, Karen Olness.

1997

Barsby, Michael (1997). Hypnosis in the management of denture intolerance. In Mehrstedt, Mats ; Wikstrom, Per-Olof, (Eds.) (Ed.), Hypnosis international monographs : Number 3 : Hypnosis in dentistry (pp. 71-78). Munich Germany: M.E.G.-Stiftung.

Intolerance of dentures may have dental or psychological causes. It is within the latter group of patients, provided that they are genuinely motivated to wear a denture, that the use of hypnosis may be helpful. The importance of careful patient assessment and exploration of appropriate treatment strategies with the patient is emphasised. Principles of treatment including relaxation, controlled breathing, visual imagery and reframing are described. All of these techniques may be used in conjunction with conditioning / desensitisation and a gradual progression to denture wearing.

1995

Matthews, William J.; Isenberg, Gail L. (1995). A comparison of the hypnotic experience between signing deaf and hearing participants. International Journal of Clinical and Experimental Hypnosis, 43 (4), 375-385.

This study compared the hypnotic responsiveness of 17 hearing and 34 deaf individuals, all of whom received visual induction and hypnotic suggestions via some form of signing. The comparison between deaf and hearing participants was analyzed on five dependent measures: (a) the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C); (b) participants' individual item performance; (c) overall trance depth; (d) a rapport scale; and (e) a resistance scale measuring attitudes of participants toward the hypnotist. Although all participants showed at least a moderate level of hypnotic responsiveness, the data did not indicate a significant main effect between deaf and hearing participants on any of the dependent measures. However, there was a tendency ( $p < .08$ ) for hearing participants to show a greater hypnotic responsiveness than deaf participants. Additionally, there was a significant difference between all the signing participants combined when compared to the norming population on three

items of the SHSS:C. Clinical and theoretical implications of these data are discussed.

1991

Lynn, Steven Jay; Weekes, J. R.; Neufeld, U.; Ziuney, O.; Brentar, J.; Weiss, F. (1991). Interpersonal climate and hypnotizability level: Effects of hypnotic performance, rapport, and archaic involvement. Journal of Personality and Social Psychology, 60, 737-743.

Designed to extend research by McConkey and Sheehan, they tested 24 hypnotizable and 21 un hypnotizable Ss in high interpersonal/high rapport (including education about misconceptions about hypnosis, eye contact, and friendly self-disclosure) and low interpersonal/low rapport testing contexts. Overall, hypnotizable Ss were more responsive to hypnosis, rated the hypnotist more positively, and experienced greater involuntariness and archaic involvement than un hypnotizable subjects. However, results provide support for the hypothesis that low hypnotizable Ss are particularly sensitive to variations of the hypnotist's interpersonal behavior. Only low hypnotizable Ss' objective and subjective hypnotic performance on the SHSS, Form C, was enhanced by hypnotist behavior designed to optimize rapport. Hypnotizable Ss' behavior was stable across testing contexts.

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

NOTES

1:

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model.... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

1990

Coe, William C. (1990). Are the Conclusions Valid? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 237-239.

NOTES

1:

NOTES: The authors confounded variables, e.g. hypnotic susceptibility and monetary incentive (in Study IV), and Study IV was different from the other 3 studies, so that any differences/similarities between these studies can't be attributed to susceptibility level, degree of incentive, or interaction between them.

A simulator design would clarify why 50% of Ss in Study IV did not resist and lost \$100; also, postexperimental interviews focusing on Ss' reasons for resisting or not resisting would be helpful. Did nonresisters actually believe that they would receive \$100 for resisting?

The Subject population was not homogeneous in occupation, and students are financially poorer than others--which would affect incentive strength. Were those who resisted the ones who could use the money the most?

Small sample sizes obviating statistical tests is a problem. Coe nevertheless evaluates 4 variables in terms of the 'power' of their effects on hypnosis: 1. Susceptibility level. Studies I, II, and III all show correlations between hypnotizability and compliance with resistance, suggesting that high

hypnotizables are not as susceptible to resistance manipulation; however across studies, highs in one study seem to comply at the same rate as lows in another study, and as many as 50% of high hypnotizables in the strong incentive (\$100) study were able to resist suggestions. 2. View of the Hypnotist. Coe states that one can't evaluate the question with the data given. One would need an experimental condition that would also create a negative view of the hypnotist, as all samples tended to view the hypnotist positively. 3. View of Resistance Instructor. Again, one would need a research design that separates the effects of hypnotic susceptibility from effects of Ss' views of the resistance instructor. "Nevertheless, Study IV suggests that for high susceptibles the view of the resistance instructor has little effect. Three resisters viewed him as positive, whereas the other three viewed him as negative; further, nearly all of the nonresisters viewed him as neutral" (p. 238). 4. Degree of Incentive. This too was confounded with susceptibility level, as "the higher value was only offered to the very high susceptibles in study IV. Half of them took it, half did not" (pp. 238-239).

Coe also remarks that "the expectational effects on subjects of being in an experiment have not been addressed adequately. It is possible that the experimental paradigm as currently presented is incapable of providing an unambiguous answer to the question of coercion. In naturalistic settings subjects may react quite differently than they do when they know they are participating in an experiment" (p. 239).

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.

## NOTES

1:

This chapter is a reprint of an article published in the American Journal of Clinical Hypnosis in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Smith, Alexander (1990). The hypnotic relationship and the holographic paradigm. American Journal of Clinical Hypnosis, 32 (3), 183-193.

The holographic paradigm is a recently constructed model of consciousness derived from neuropsychology and quantum physics. It views the processing of mental forms as occurring within the context of a part/whole relationship, where the identified part exists within the code of the whole. In this paper I have applied this paradigm to the hypnotic relationships, viewing the hypnotic process as an undulation of form and transitional states and proposing the holographic paradigm as a cutting edge to understand the curative processes in hypnosis.

## NOTES

1:

The proposed model represents a synthesis of neuropsychology and quantum physics.

"Based on precise neuroanatomical and neurophysiological processes, Pribram was able to account for a distribution of memory across the brain in its entirety. This occurs not within each neuron, but between them. Graded waves of neural potentials, rather than neural impulses, accounted for the structure of interference patterns (Pribram, 1982, p. 32)" (p. 185).

"Pribram then set out to answer these implied questions: What if there is no world of objects 'out there?' What if the world as we know it is a hologram itself? This search led him to David Bohm's work on the quantum theory.

"Bohm's (1980) world view, based upon study of light waves, consists of a primary reality that remains enfolded (within the frequency domain) and unfolded reality (the world of 'objects' and images).

Appearances or objects and images are abstractions reconstructed from the frequency domain" (p. 185).

"A holographic interpretation resets the therapy relationship as a shared partnership: 'The sharing emphasizes the whole of which a partner holds a part, but the holographic paradigm makes it clear that each partner holds not just a part, but the whole because each part contains the whole' (Zinkin, 1987, p. 18)" (p. 186).

"Pribram (1983) seems to suggest, in a similar vein, that the unconscious and consciousness are 'opponent processes' of implicate and explicit orderings. Citing Matte Blanco's (1975) concept of unconscious processes as infinite sets (of opponent emotional states, for example), he considers the process relationship between conscious and unconscious: 'Conscious intelligence is manifest when circumscribed sets can be appropriately partitioned into reasonably unambiguous categories. When behavior is guided by sets of variables which cannot be readily partitioned--variables which show opponent characteristics--we are apt to conclude that behavior is based on intention or that unconscious processes are at work' (Pribram, 1983, p. 10)" (p. 187).

"Tart's (1967) procedure of mutual hypnosis resulted in such an overlapping of experiential detail between participants that the startling, consensually derived reality became too much to tolerate" (p. 187).

"It is possible that during hypnosis, at some point the therapist and patient's organizations of consciousness in some way literally and not metaphorically cross into a wave length or plane in which there is neither reality nor fantasy but the enfolded- implicate-primary reality that is mutually shared? If so, how would these wave length resonances be determined? What would this mean for various psychopathological states?

"To answer these questions we may be catapulted into a whole rethinking of just what hypnosis is in connection to repression, to developmental capacities to form self and object images, and to the shifts to more advanced levels of adaptation. In particular, the hologram will become perhaps a means of exploring this challenging advance, if it can bring the hypnotic relationship more squarely into focus.

"The expansion and contraction of conscious awareness, as a holistic process between therapist and patient within the context of the trance, may provide us with more precise clues to understand altered states of consciousness, rather than the other way around" (p. 191).

1989

Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.

NOTES

1:

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGS: A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGS: A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47- item scale designed to demonstrate the existence of five factors of the hypnotic experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General

Depth, was also derived to provide a summary measure of the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

Rønnestad, Michael Helge (1989). Hypnosis and autonomy: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 37, 154-168.

The study focused on autonomy as a moderator variable in the prediction of subjectively reported hypnotic depth. Ss in the experimental part of the study were 56 undergraduate psychology and education majors classified as either high or low in autonomy. Ss who were equated on capacity for absorption were individually administered 1 of 3 hypnotic inductions: an authoritarian induction, a permissive hetero- induction, or a self-hypnosis induction. The study had a double-blind design. The data suggest that situational manipulation has greater impact on low than on high autonomy Ss. Individual-difference variables such as absorption, have greater impact on hypnotic depth for high than for low autonomy Ss. The data indicate that the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. A factor-analytic inquiry of absorption confirmed the importance of affective/regressive capacity for hypnotic functioning for high autonomy Ss. The study supported the alternate-path perspective of hypnosis.

## NOTES

1:

There is very little research on autonomy and hypnosis. The authors cite studies showing only a modest relationship between hypnotizability and locus of control.

In this study, 176 students were assigned to the high autonomy group if they were in the upper 1/3 of two of 3 autonomy scales (Rotter's Locus of Control Scale, the Inner-Directedness Subscale of the Shostrom Personal Orientation Inventory, and the Autonomy subscale of Jackson's Personality Research Form) and not in the lower 1/3 of the third scale. Ss were designated as low autonomy if the obverse obtained. This procedure yielded 27 high and 29 low autonomy Ss.

Ss were hypnotized with one of three inductions: authoritarian with many motor items (Barber Suggestibility Scale), permissive with mostly imagery (Barber & Wilson's Creative Imagination Scale), or guided self-hypnosis with mostly imagery (taken from Fromm et al, 1981). After hypnosis, Ss rated their own hypnotic depth on a 1-10 scale, and their perception of E or the procedure as authoritarian and directive. Ss' attitude, expectations, motivation, and experienced effortlessness were measured. E rated Ss for pre-hypnosis rapport and post-hypnosis rapport.

The results indicated that there was no difference in hypnotizability level between high and low autonomy Ss. The correlation between effortlessness of experience and hypnotic depth was high for low autonomy Ss (.51) but not significant for high autonomy Ss (.12). In general the two groups were very similar in terms of mean scores on most variables. The differences appeared in the correlations between self-reported hypnotic depth and the other variables. For low autonomy Ss correlations were not significant between depth and pre-hypnotic variables (rapport-pre, absorption, expectation) but for highs the same correlations were significant (rapport-pre .47, absorption .54, expectation .48).

But for post-hypnosis variables, low autonomy Ss had significant correlations between depth and the two variables measured from post-hypnosis interviews (perceived authoritarian/directiveness .40, effortlessness .51) and the highs did not have significant correlations. The multiple correlation between these variables and depth was  $R = .28$  for low autonomy Ss (with no contribution from rapport-pre) and  $R = .72$  for high autonomy Ss, with absorption contributing most. The more they perceived the induction as authoritarian or directive, the greater depth reported by low autonomy Ss. Although low and high absorption Ss did not differ on the Absorption Scale, absorption predicted hypnotic depth better for the highs.

The author divided the Absorption Scale into four rational factors: Affective/Regressive, Perceptual/Cognitive, Dissociative, and Mystical. Low and high autonomy Ss scored at approximately the same level on these categories, but correlations between these categories and depth for low and high autonomy Ss were somewhat different. (See Table.)

**Correlations between Categories of Absorption and Hypnotic Depth for Low and High Autonomy Ss**

Absorption Category	Low Autonomy	High Autonomy	All Ss
Affective/Regressive	.14	.56**	.33**
Perceptual/Cognitive	.25	.33*	.29*
Dissociative	.32*	.57**	.47**
"Mystical"	.07	.16	.11

In their discussion, the authors note that one might assume that high autonomy Ss would be less affected by variations in hypnosis procedures than low autonomy Ss. The differences found in depth scores for these two groups were supportive of this expectation. "Fluctuations in subjectively reported depth scores for low autonomy Ss only, clearly suggest autonomy to be a moderator variable" (p. 163). Moreover, the results indicate "that high autonomy Ss in comparison to low autonomy Ss are more likely to express their inner dispositions, such as absorption and expectation, in the hypnotic setting. High autonomy Ss may be more reflective of and attuned to individual predisposing characteristics and less influenced by situational demands. ... the hypnotic behavior of high autonomy Ss is more likely to be self-congruent and less likely to be demand-congruent. Low autonomy Ss, however, are more likely to be demand congruent and less likely to be self-congruent. The latter finding was suggested both by the significant F ratio for low autonomy Ss across treatments, and also by the stronger relationship found for this group between depth and how authoritarian/directive they perceived the procedure to be" (p. 163).

[Paradoxically, among low autonomy Ss an authoritarian approach yields less depth but greater suggestibility (higher hypnotizability scores).] "The tendency for low autonomy Ss to have a higher behavioral score on the authoritarian procedure is consistent with Tellegen's (1979) assumption that there are two pervasive dimensions in current hypnotizability measures--a compliance dimension and a true hypnotic responsiveness dimension. According to Tellegen, motor items may be more saturated with compliance, while cognitive items may be more saturated with true hypnotic responsiveness. The BSS has a motor emphasis, and the higher behavioral scores for the low autonomy group of Ss may be interpreted as an expression of compliance.

"In addition to the inner-directedness and self-congruence hypothesis of why autonomy may be a moderator variable, another possible explanation is related to accuracy of self-perception. The intercorrelational and multiple regression data showed repeatedly that a stronger relationship existed between prehypnotic variables and hypnotic depth for high autonomy than for low autonomy Ss. The relational capacity, as tapped by the rapport-pre variable, absorption, which may be conceptualized as a personality trait; and expectation, a cognitive variable, were all related to depth for high autonomy Ss. For low autonomy Ss, none of these variables were individually related to depth. Differences in Ss' accuracy of self-reporting may explain this. According to ego-psychology theory, highly individuated Ss, with clear self-other differentiation and congruence in self-perception, are better able to make accurate statements about themselves. The self-assessments of Ss with low differentiation capability may be less accurate and possibly more affected by demand characteristics and response set. In other words, their self-assessments have more error. The generally lower correlations for the low autonomy Ss may reflect this" (p. 164).

"A report of subjectively reported hypnotic depth following CIS and the self-hypnosis scales may reflect clarity of imagery, while a report of depth following BSS may reflect experiences of kinesthetic/bodily changes" (p. 165).

1989-1990

Spanos, Nicholas P.; Flynn, Deborah M.; Niles, Judy (1989-90). Rapport and cognitive skill training in the enhancement of hypnotizability. Imagination, Cognition and Personality, 9 (3), 245-262.

The role of interpersonal rapport in facilitating the enhancements in hypnotizability produced by cognitive skill training was examined in two experiments. In Experiment 1 low hypnotizable subjects either received skill training or passively oriented training that was designed to facilitate rapport with the trainer without teaching subjects how to generate the responses called for by test suggestions. Subjects in the two treatments reported equivalently high levels of rapport with their trainer, but only those given skill training attained large gains on two hypnotizability posttests. Subjects given passive training did not differ from untreated controls at posttesting. In Experiment 2 subjects received skill training under conditions designed to either heighten or minimize rapport with the trainer. Those in the high rapport condition showed large hypnotizability gains on both posttests, whereas those in the low rapport condition failed to differ from no treatment controls in the regard. Our findings indicate that high rapport is not sufficient for producing training-induced enhancements in hypnotizability. However, the absence of such rapport may interfere with subjects' learning and applying skills that can enhance hypnotizability.

1988

Lynn, Steven Jay; Weekes, John R.; Matyi, Cindy L.; Neufeld, Victor (1988). Direct versus indirect suggestions, archaic involvement, and hypnotic experience. Journal of Abnormal Psychology, 97 (3), 296-301.

This study examined the effects of direct (Harvard Group Scale of Hypnotic Susceptibility; Shore & Orne, 1962) versus indirect (Alman-Wexler Indirect Hypnotic Susceptibility Scales; Pratt, Wood, & Alman, 1984) suggestions on archaic involvement (Nash & Spinler, in press) with the hypnotists, objective responding, and subjective involvement and involuntariness ratings, when the scales were administered in all possible combinations (direct/indirect, N = 61; indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect suggestions reported a greater emotional bond with the hypnotist and increased fear of negative appraisal than subjects who received direct suggestions. Repeated testing resulted in response decrements on measures of objective responding, subjective involvement, and involuntariness that were paralleled by diminished involvement with the hypnotist. The most stable relation between scales was evident when scales were defined as direct hypnosis across both sessions. Although direct and indirect suggestions produced comparable effects in the first session, in the second session, direct suggestions fostered greater subjective involvement and feelings of involuntariness.

Diamond, Michael Jay (1987). The interactional basis of hypnotic experience: On the relational dimensions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 35, 95-115.

The ubiquitous interactional basis of hypnosis remains neglected and poorly understood. Vignettes from clinical practice are research are presented to illustrate the significance of hypnotic relational factors and their internal representations. A descriptive theoretical framework is formulated enumerating 4 relational dimensions: (a) transference phenomena in which previous object relationships are enacted; (b) a goal-oriented working alliance comprised of "rational" and "irrational" expectations about the efficacy of hypnotic procedure and its participants; (c) a symbiotic or fusional alliance in which the hypnotist is experienced as a purely internal figure; and (d) a realistic contemporary relationship. Each dimension is considered as it subjectively operates within hypnosis, and a case example is employed to compare the psychotherapeutic operation of these dimensions in waking and hypnotic contexts. Implications of the interactional framework are discussed and further empirical and clinical directions suggested.

1987

Gfeller, Jeffrey D.; Lynn, Steven Jay; Pribble, W. Eric (1987). Enhancing hypnotic susceptibility: Interpersonal and rapport factors. Journal of Personality and Social Psychology, 52 (3), 586-595.

This research supported the hypothesis that hypnosis can be thought of as a set of potentially modifiable social-cognitive skills and attitudes. A low-interpersonal- training treatment devised by Gorassini and Spanos (1986) was compared with a treatment designed to modify not only cognitive factors but also to augment rapport with the trainer and diminish resistance to responding (high-interpersonal training). Fifty percent of the initially un hypnotizable subjects in the high-interpersonal condition tested as being highly susceptible to hypnosis (high susceptibles) at posttest on the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962); 25% of the un hypnotizable subjects in the low-interpersonal condition responded comparably. Eighty-three percent of the medium-susceptibility (medium susceptibles) subjects tested as being highly susceptible at posttest in both conditions. Practice-alone control subjects' performance was stable across testings. The study was the first to demonstrate that treatment gains generalize to a battery of novel, demanding, suggestions (generalization index) that have been found to differentiate highly susceptible subjects from un hypnotizable simulating subjects. The importance of rapport was evidenced by the finding that rapport ratings paralleled group differences in hypnotic responding and that rapport correlated substantially with susceptibility scores at posttest and with the generalization index. Whereas initial hypnotizability scores correlated significantly with retest susceptibility scores, initial hypnotizability failed to correlate significantly with the generalization index.

#### NOTES

1:

On p. 593 one could get the impression that S's feelings of rapport may result from success in the hypnotic experience.

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rapport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Diamond, Michael Jay (1986). Hypnotically augmented psychotherapy: The unique contributions of the hypnotically trained clinician. American Journal of Clinical Hypnosis, 28 (4), 238-247.

In the last century, psychotherapists trained in clinical hypnosis have made a number of unique contributions to the psychotherapeutic endeavor, particularly in the areas of psychotherapeutic theory, technique, and practice. Nine factors indexing the contribution of hypnotherapists are discussed. They are: 1) communication focus; 2) maximizing expectation and belief; 3) mind-body emphasis; 4) handling of resistance; 5) employing trance phenomena; 6) using archaic levels of relationship; 7) stressing healthy, adaptive ego functions; 8) using therapist trance; and 9) permitting responsible creativity. Each factor is considered as it pertains to hypnotic technique and phenomena as well as how it is manifested in clinical treatment.

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

1984

Frauman, David C.; Lynn, Steven Jay; Hardaway, Richard; Molteni, Andrew (1984). Effect of subliminal symbiotic activation on hypnotic rapport and susceptibility. Journal of Abnormal Psychology, 93 (4), 481-483.

L. H. Silverman's subliminal symbiotic activation paradigm (Silverman, 1982) was used to manipulate unconscious affective factors in hypnosis to determine whether gratification of symbiotic fantasy would enhance hypnotic susceptibility and rapport with the hypnotist. Seventy-two male undergraduates were divided into two groups matched for susceptibility (high, medium, low). The experimental group received symbiotic, MOMMY AND I ARE ONE, subliminal stimulation via tachistoscope in a double-blind design. The comparison group received a psychodynamically neutral stimulus, PEOPLE ARE WALKING. Following subliminal stimulation, subjects were hypnotized individually. Projective tasks that indexed rapport with the hypnotist and the mother were administered during hypnosis. Rapport was also measured by rated intimacy of self-disclosure topics and by valence of topics selected to disclose to the hypnotist. A significant multivariate group selected more positively valenced topics to disclose on. The effect for symbiotic activation on hypnotic susceptibility was not quite significant ( $p < .056$ , two-tailed).

## NOTES

1:

2350, Frauman, Lynn, Mare, & Kvaal, 1992 NOTES: [Paper presented by Lynn.] A number of observations and conclusions are based on literature reviews done with Brentar (British Journal of Experimental and Clinical Hypnosis; Chapter in Rhue, Lynn, & Kirsch [Eds.] Handbook of Clinical Hypnosis) and 15 years of training students in hypnotherapy. Some of this may seem elementary to some of you.

For half a century there have been reports of negative effects after hypnosis: minor, serious, transient, and chronic. Clinicians need be as wary (but no more wary) of negative effects in hypnosis as in other therapies. There are more negative effects in clinical situations than non clinical situations.

Therapists must be prepared to recognize negative effects and intervene.

Too often hypnosis is seen as a technique divorced from psychotherapy. The hypnotist must be a competent psychotherapist. What makes you a good therapist will make you a good hypnotherapist.

There should be careful assessment of the client for: 1. those with history of unusual experiences following anesthesia or drugs 2. those with a history of dissociation

People may recapitulate a previous bad experience with anesthesia, based on the unusual physiological feelings. The dissociative client must be stabilized before using hypnosis. Depressed clients may also have problems, with the imagery becoming dysphoric. Those vulnerable to psychotic decompensation, with paranoid or borderline character structures, must be evaluated carefully. A lot depends on your comfort zone in therapy.

Life experiences with parents and authority figures may also play into the reaction.

Many clients, and experimental Ss, are ambivalent about hypnosis. This ambivalence must be acknowledged and one must work with the ambivalence before proceeding. One may: - explain hypnosis - reframe in terms of self hypnosis or relaxation - explain as a state of awareness with full consciousness - offer active induction which is just as effective as the passive induction - do induction with eyes open

Research clearly shows that Subjects can monitor events outside the framework of a suggestion--especially if you suggest they can do so with ease.

We do not use ideomotor suggestions because they aren't necessary. We tell them to open their eyes and communicate with us during hypnosis.

We always assess their feelings about hypnosis, have them have a fantasy about what hypnosis would be like, do an informal semantic analysis of the descriptors clients use (and then reframe them), inquire about previous experiences with counseling and psychotherapy, and do a mental status. Don't make assumptions. We want to know about early life experiences to know about transference and form an alliance.

Hypnosis procedures employed must have explicit informed consent (cf MacHovic book), which also provides opportunity to demystify the experience. Our research shows the great majority of Ss find it relaxing, invigorating. Even perceptual distortions can be created without hypnosis. Can create confidence by sharing the research information on hypnosis.

Elicit cooperation with easier suggestions, then use graded suggestions. We want to titrate the demands on clients, move at a pace that keeps anxiety low, promote self efficacy and mastery through ... [missed a few words] and graduated tasks.

Carefully monitor clients for frowns, lack of attention, etc. It is important to ask them what they are experiencing. Rarely, a client appears unable to talk, in which case the therapist can offer hypotheses to the hypnotized client.

Don't terminate hypnosis if there is a problem (Orne also says this); instead, offer reassurance to explore/release the feelings. It is beneficial to work through what is being experienced. There is a somewhat higher risk of emotional reactions with age regression or induced dreams. We simply tell people they can tell us at any time about what they are experiencing, without going through any ritual.

When we give suggestions about amnesia, we ask what they would like to remember and suggest that they forget what they would like to forget. The usual permissive suggestion doesn't work; find out what it is, exactly, that they want to forget and then devise strategies for it. Follow for 2 weeks after any abreactive experience that may have occurred. Let them know they can contact you.

Forceful suggestions to abandon symptoms can promote resistance and the therapist may generate negative transference. (See their chapter in book edited by Rhue, Lynn, and Kirsch, *Handbook of Clinical Hypnosis*, published by the Amer Psychological Association.)

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post- Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

## NOTES

1:

This is an abstract of an unpublished Ph.D. dissertation, University of Waterloo, 1984. It won the American Psychological Association Division 30 award for Best Student Paper at the 1984 APA Convention.

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

: Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

1983

Diamond, Michael Jay (1983). Therapeutic indications in applying an innovative hypnotherapeutic technique: The client-as-hypnotist. American Journal of Clinical Hypnosis, 25 (4), 242-247.

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist willing to enter trance. Indications and contraindications in employing innovative hypnotherapeutic interventions are considered in terms of the therapeutic goals and context, patient-therapist interaction, and patient as well as therapist characteristics. Benefits provided by the technique to the client, client-therapist interaction, and therapist respectively are briefly discussed. The specific methodology of this technique is described according to seven steps: (1) permission request: (2) client observation: (3) session structure: (4) client confidence: (5) therapist trance: (6) feedback: and (7) subsequent utilization. Relevant clinical examples are provided.

Fourie, David P. (1983). Width of the hypnotic relationship: An interactional view of hypnotic susceptibility and hypnotic depth. Australian Journal of Clinical and Experimental Hypnosis, 11 (1), 1-14.

Efforts have been reported in the hypnosis literature to correlate measurements of hypnotic susceptibility with measurements of hypnotic depth. Not only have the findings not been consistent, but recently the whole issue of hypnotic susceptibility and depth and their measurement has become controversial, as evidenced by Weitzenhoffer's (1980) and Hilgard's (1981) statements. This paper offers a different perspective on the issue and introduces the concept of the width of the hypnotic relationship as a useful indication of the degree of hypnotic involvement. The width of the hypnotic (paradoxical) relationship refers to the scope of the relationship within which certain involuntary behaviors can occur. The larger the number of such behaviors that are possible within the bounds of the paradoxical relationship, the wider that relationship shall be considered to be. This is an investigation of the relationship between the width of the relationship and the depth of hypnosis experienced. The SHSS: A, as a measurement of the width of the relationship, was applied to 18 volunteer female subjects. A 10-point self-report scale was applied before and after a procedure to widen the relationship. The correlations between the SHSS: A scores and both sets of self-report scores were positive and significant, as expected. The widening procedure had a definite deepening effect, but it seemed possible that this effect was not uniform.

Silverman, Lloyd H.; Lachmann, Frank M.; Milich, Robert H. (1982). The search for oneness. New York: International Universities Press.

NOTES

1:

This book summarizes research on preconscious activation (subliminal psychodynamic activation) of fantasies of oneness, following tachistoscopic presentation of words like, "Mommy and I are one." It represents an attempt to test and validate, through experimental investigation, psychoanalytic concepts. The authors show how such fantasies can improve psychosocial adaptation for people with varying kinds of psychopathology.

1980

Sheehan, Peter W. (1980). Factors influencing rapport in hypnosis. Journal of Abnormal Psychology, 89 (2), 263-281.

The phenomenon of countering expresses the tendency of some highly susceptible subjects to favor the intent of the hypnotist when placed in a conflict situation where social influences of another kind dictate an alternative response. The present research explored the parameters of this objective index of involvement with the hypnotist to investigate the special relevance of rapport processes to the hypnotic setting. Rapport was manipulated in five different experiments, varying either the warmth or genuineness of the hypnotist. It was predicted from transference theorizing that countering would decrease in the negative context and increase in the positive one. Results confirmed predictions for highly susceptible subjects tested in the former context but not the latter. In the negative setting, subjects were inhibited in their rate of countering, but maintained their previous level of response to the hypnotist when rapport was facilitated. Results highlighted the relevance of interpersonal processes to theorizing about hypnosis.

1976

Hodge, J. R. (1976). The contractual aspects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 391-399.

No generally accepted theory of the essence of hypnosis is currently available, nor are any specific responses uniquely associated with hypnosis. A necessary, though not sufficient, aspect of hypnosis involves the subject's preconceived expectations and selective attention to a series of agreements ("contracts") which are developed between patient and therapist before the induction, during the induction and deepening procedures, and during the operational phase. These contracts may be either implicit or explicit, but they can be identified in all hypnotic interactions. The skillful therapist will make the contracts explicit by defining, at least in general terms, what he expects. If the patient agrees, i.e., "sings the contract," he is likely to comply with suggestions.

1969

Blatt, Sidney J.; Goodman, John T.; Wallington, Sue Ann (1969). Is the hypnotist also being hypnotized?. International Journal of Clinical and Experimental Hypnosis, 17, 160-166.

Noted that 2 hypnotists had cognitive and affective experiences similar to those expected in the S as a function of the hypnotic manipulation when they were conducting hypnotic inductions. Though the hypnotists may have been responding to the mood tone of the Ss or responding on the basis of their expectations about the effect of the hypnotic manipulation, it seemed equally possible that the hypnotists may have experienced mild forms of the trance state they had induced in their Ss. These observations seemed consistent with prior notes of such a phenomenon. This phenomenon has important implications for the clinical and experimental use of hypnosis and for concepts such as transference and countertransference, empathy, demand characteristics, and E bias. Suggestions are

made for the systematic evaluation and study of this phenomenon. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Small, Maurice M.; Kramer, Ernest (1969). Hypnotic susceptibility as a function of the prestige of the hypnotist. International Journal of Clinical and Experimental Hypnosis, 17, 251-256.

Administered 40 undergraduates the Harvard Group Scale of Hypnotic Susceptibility, Form A. On the basis of the scores, Ss were divided into 20 "better" and 20 "poorer" Ss. A wk. later Ss were rehypnotized by a tape recording of the above induction procedure. On the 2nd induction, 1/2 of the Ss were told that the hypnotist on the tape was an expert; the other 1/2 were told the hypnotist was a novice. Results indicate that only the better Ss given novice instructions showed a change (decrement) in hypnotic susceptibility. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Fromm, Erika (1968). Transference and countertransference in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 16, 77-84.

**THE HYPNOTHERAPIST IS OFTEN LOOKED UPON AS AN OMNISCIENT HEALER AND A PARENT FIGURE WITH MAGIC POWERS. HE MAY EVEN TEND TO THINK OF HIMSELF THIS WAY. THESE AND OTHER UNREALISTIC ATTITUDES STEMMING FROM EARLY CHILDHOOD FEELINGS, CHILDHOOD WISHES, AND FEARS ARE DISCUSSED. (SPANISH + GERMAN SUMMARIES)** (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Black, Stephen (1964). Mind and body. London: Kimber.

NOTES

1:

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

1961

Bowers, Margaretta K. (1961). Theoretical considerations in the use of hypnosis in the treatment of schizophrenia. International Journal of Clinical and Experimental Hypnosis, 9, 39-46. (Abstracted in Psychological Abstracts, 62,: 2 II 39B)

The author presents her views on the hypnotic state and its relationship to schizophrenia. She feels that the most effective use of hypnosis in the treatment of schizophrenia is the rapid achievement of rapport with the repressed, healthy self of the patient. Hypnosis is compared with sensory deprivation, with the difference that the hypnotist remains the patient's only contact with outer reality. Schizophrenia is likened to a perpetual state of auto-hypnosis. Hypnosis is of value in teaching the patient healthy uses of his own skill in autohypnosis. From Psyc Abstracts 36:02:2II39B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1955

Meares, Ainslie (1955). A note on the motivation for hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 222-228. (Abstracted in Psychological Abstracts 57: 1129)

NOTES

1:  
"Summary. The logical reasons of the patient for desiring hypnosis, and of the therapist in advising it, operate on a background of unconscious mechanisms. These mechanisms are important factors in determining whether or not the logical reasons become effective. An understanding of such motivation helps the therapist in the selection of cases and the choice of the particular form of hypnotherapy to be used" (p. 228).

Patient motivations for hypnosis include magical expectations, paranoid belief that one is under the control of a malevolent influence, a (paradoxical) belief that hypnosis will be ineffective with neurotic symptoms and therefore justify continuation of the symptoms, latent aggression ("hypnotize me if you can" attitude) or an excess of passivity ("humiliate me"), erotic motivation or a wish for a more

intimate relationship with the therapist, search for new or unusual experiences in life, a last ditch effort to cope with chronic pain and illness, etc.

Patient motivations against hypnosis include fear of being overpowered or the threat of authority, aggressive feelings that would be motivated if the hypnotist seems to be an authority, or association of hypnosis with the erotic. The author has observed "a surprising number of people" with the latter association. "With these people, it is more of an attitude of mind in which any close or intimate relationship is regarded as erotic. They see in hypnosis an intimate relationship with the therapist, and they avoid it without being aware of their reasons for doing so" (p. 226).

Therapist motivations for hypnosis include unconscious mechanisms as well, such as a drive for power (sometimes manifested in desire to demonstrate the technique to a wider audience than simply colleagues in a workshop). When tinged with eroticism the drive can become sadistic. Also, erotic drives can find vicarious expression as "The intensity of the rapport between patient and psychotherapist in waking psychotherapy, is increased many times in hypnosis" (p. 227).

Therapist motivations against hypnosis include fear of failure (which is more obvious when a patient doesn't follow a suggestion than in lack of response to medicine), fear of erotic involvement, fear of one's own aggression, etc.

1954

Meares, Ainslie (1954). History-taking and physical examination in relation to subsequent hypnosis. Journal of Clinical and Experimental Hypnosis, 2 (4), 291-295.

NOTES

1:

"Summary. The history-taking and physical examination of the initial interview can be so structured as to facilitate the subsequent induction of hypnosis. Rapport is established, and negative transference feelings are not allowed to develop. There must be no holding back or hiding of the real complaint with screen symptoms. Physical examination is a symbolic surrender and paves the way for the real surrender of passive hypnosis. If induction by an active method is anticipated, authoritative attitudes are introduced into the history-taking and physical examination" (p. 295).

Watkins, John G. (1954). Trance and transference. Journal of Clinical and Experimental Hypnosis, 2 (4), 284-290.

NOTES

1:

The author proposes that [hypnotic] trance and transference are essentially the same phenomena. "Yet while the hypnotherapist is often unaware he is dealing with transference, the psychoanalyst is often equally oblivious to the fact that he is interacting with his patient in a light trance ego state. ... Perhaps a re-examination of the entire problem of ego states and hypnotic trance is due" (p. 290).

READING

1970

Donk LJ. Vingoe FJ. Hall RA. Doty R. The comparison of three suggestion techniques for increasing reading efficiency utilizing a counterbalanced research paradigm. *International Journal of Clinical & Experimental Hypnosis* 1970;18(2):126-133. Reports an experiment in which both Barber-type and alert-trance procedures significantly increased reading speed while maintaining comprehension when compared to a control group; a traditional hypnotic procedure followed by the specific suggestions failed to obtain these results. 32 volunteer undergraduates were randomly assigned to 4 groups in terms of a counterbalanced design. 2 groups were administered trance inductions (traditional and alert) followed by specific suggestions, a 3rd simply the suggestions, while the 4th served as control.

Reading suggestions were to eliminate specific problems, increase speed, and increase or maintain comprehension. (Spanish & German summaries)

## RECEPTIVITY & OPENNESS

### 2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies; (3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

### 1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

## NOTES

1:  
"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-be patient/client that he or she has something to offer that can help take away pain and bring back more pleasure. This challenge is negotiated through the

therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1997**

Patterson, David R.; Adcock, Rebecca J.; Bombardier, Charles H. (1997). Factors predicting hypnotic analgesia in clinical burn pain. International Journal of Clinical and Experimental Hypnosis, 45 (4), 377-395.

The use of hypnosis for treating pain from severe burn injuries has received strong anecdotal support from case reports. Controlled studies provide less dramatic but empirically sound support for the use of hypnosis with this problem. The mechanisms behind hypnotic analgesia for burn pain are poorly understood with this patient population, as they are with pain in general. It is likely that, whatever the mechanisms are behind hypnotic pain analgesia, patients with burn injuries are more receptive to hypnosis than the general population. This article postulates some variables that may account for this enhanced receptivity, including motivation, hypnotizability, dissociation, and regression.

**1995**

Malinoski, Peter; Martin, Daniel F.; Aronoff, Jodi; Lynn, Steven Jay; Gedeon, Scott (1995, November). Hypnotizability, individual differences, and interpersonal pressure to report early childhood memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:

Infantile amnesia is attributed to developmental issues before 24 months. This study indicates non-hypnotic influences can shape early memories that cross the amnesia barrier.

227 Ss completed Harvard Scale and personality measures in Session 1. In Session 2 182 completed a suggestibility scale. In Session 3 they were selected, as if independent of earlier sessions - 143 [may have misheard number] Ss.

Interviewers told the selected Ss that they were experiencing something like psychotherapy, and they were asked to recall their earliest memory (independent of photos, what people had told them, etc.) Then Experimenters probed for earlier memories; that continued until Ss denied any more memories after 2 consecutive probes. Then Ss were asked to close their eyes and get in touch with more memories. Then they were told most Ss can remember more, including sometimes their second birthday party. After 1 minute, Ss were asked about memories of their second birthday. Then they were asked to focus on even earlier memories, implying it was expected and receiving complements for reporting earlier memories. Finally, Ss completed a post-study questionnaire.

Memory report was a verbal description of an event, person, or object. Initial memory mean age was 3.7; it correlated with Openness to Experience Scale and with Fantasy Proneness. Mean age of the last earliest memory report before the close eyes instruction was 3.2 years. After receiving visualization instructions, 59% reported a memory of their second birthday. Compliance correlated .33 with this. Subjective response, nonvoluntariness, and [missed words] also correlated.

Compliance scores correlated .28 with at least one memory at or before age 24 months. Yielding to leading questions correlated also with memory for an event at or before 24 months.

Clarity of memories decreased between conditions of initial memory, earliest query, birthday, and earliest memory. Mean confidence rating on 5 point scale for second birthday memory was 3.3; mean

confidence rating for earliest memory was 3.6. Mean accuracy rating was 4.0, and 94% said their memory reports were accurate to at least a moderate degree.

The post study questionnaire, totally anonymous, indicated Ss did not feel much pressure to recall (2.9 on scale of 1-5). Only 9.8% indicated they felt a lot of pressure. Subjects also usually denied that they made up memories to satisfy the experimenter. On average, the reports of memory under visualization conditions occurred two years earlier than their first reported memories.

1993

Glisky, Martha L.; Kihlstrom, John F. (1993). Hypnotizability and facets of openness. International Journal of Clinical and Experimental Hypnosis, 41 (2), 112-123.

Absorption, a correlate of hypnotizability, is related to a broader dimension of openness to experience, one construal of the "Big Five" structure of personality. But openness itself is very heterogeneous, and some of its facets may be unrelated to hypnotizability. A total of 651 subjects completed a questionnaire measuring three different aspects of openness -- absorption, intellectance, and liberalism -- before receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A. The three dimensions were only modestly related to each other, and only absorption was significantly related to hypnotizability. Adding intellectance and liberalism to absorption did not enhance the prediction of hypnotizability. The results indicate that the various facets of openness are rather different from each other and that the "Big Five" structure may need to be expanded. Absorption and hypnosis share a kind of imaginative involvement that is not necessarily part of other kinds of openness, such as intellectance and liberalism.

1992

Goodman, Linda; Holroyd, Jean (1992). Ego receptivity and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 40 (2), 63-67.

Ego receptivity has been described as important for the psychotherapy process and as a characteristic of hypnosis (Deikman, 1974; Dosamantes-Alperson, 1979; Fromm, 1979). Receptivity also has been associated with a measure of absorption (Tellegen, 1981). In the first pilot study with 6 dance/movement therapy students, higher observer ratings of receptivity were associated with greater hypnotizability ( $r = .79$ ,  $df = 4$ ,  $p < .05$ , 2-tailed test). In the second pilot study, the correlation was replicated ( $r = .51$ ,  $df = 12$ ,  $p = .06$ , 2-tailed test) with 14 dance/movement therapy students. In the second pilot study, receptivity did not correlate with absorption. Receptivity and absorption, however, accounted for 54% of hypnotizability population variance in a step-wise multiple regression. Receptivity accounted for a unique part of the variance after the effects of absorption were removed. It was concluded that receptivity should be explored as a potential predictor of hypnotizability, and that a reliable scaled measure of receptivity should be developed.

NOTES

1:

Receptivity was rated by dance instructor on the following scale. "TABLE 1 Criteria for Ranking Ss on Receptivity A. Individuals were rated high if they could consistently do the following most of the time:

1. If they moved with emotional involvement.
2. If they could readily verbally describe their movement experience in terms of sensations or feelings.
3. If they were able to image while moving. That is, their movement experience could be transformed into representational visual images.
4. In their describing their movement experience verbally, if they readily alluded to the images which were generated from their body movement.

5. If they could relate their movement experiences to other contexts outside of the therapeutic one.
6. If they could develop a working alliance with the therapist (based on students' capacity to risk experiencing self with increased emotional depth). B. Individuals were rated low, if they were not able to do the above most of the time. C. Individuals were rated in the mid-range if they were able to do the above some of the time" (p. 65).

## 1991

Glisky, M. L.; Tataryn, D. J.; Tobias, B. A.; Kihlstrom, J. F.; McConkey, K. M. (1991). Absorption, openness to experience, and hypnotizability. Journal of Personality and Social Psychology, 60, 263-272.

## NOTES

1:

Balthazard (1993) states that the research suggests that absorption might splinter into a number of subconstructs. Also, different components of "absorption" may be differentially related to different components of hypnotic performance.

Radtke, H. Lorraine; Stam, Henderikus J. (1991). The relationship between absorption, openness to experience, anhedonia, and susceptibility. International Journal of Clinical and Experimental Hypnosis, 39, 39-56.

Examination of the absorption (Tellegen Absorption Scale [TAS] of Tellegen & Atkinson, 1974), openness to experience (OTE Inventory of Costa & McCrae, 1978), and anhedonia (ANH Scales of L. J. Chapman, J. P. Chapman, & Raulin, 1976) scales suggested that they might be conceptually related. Given the reliable relationship between TAS and hypnotic susceptibility, the authors were interested in studying OTE and ANH as possible personality correlates of hypnotic susceptibility. 2 studies, 1 involving a community sample and the other a sample of university students, were conducted to assess the relationships between the TAS, OTE, and ANH scales and hypnotic susceptibility. As predicted, in Study 1 (community sample) the TAS and OTE inventories were positively correlated with one another and both were negatively correlated with the ANH scale. This pattern of correlations was replicated in Study 2 (university sample), but only TAS correlated significantly with hypnotic susceptibility. Factor analyses further confirmed these findings. It was concluded that the conceptual relationship among the TAS and the OTE and ANH scales resides in some dimension other than hypnotic susceptibility.

## NOTES

1:

Two studies used Tellegen Absorption Scale (TAS), Costa & McCrae's (1978) Openness to Experience Inventory (OTE), and Chapman, Chapman, & Raulin's (1976) Anhedonia scales (ANH). One involved a community sample, the other involved university students.

OTE and TAS  $r = .42$  and  $.62$

TAS and HGSHS:A  $r = .22$  ( $p < .10$ ) in one study "Thus, while there is a significant overlap in variability between TAS and the other person variables, the variance shared between TAS and hypnotic susceptibility is unique to those two measures. Further research is needed to determine the role of expectancies in contributing to this pattern of findings and the extent to which item overlap may be responsible for the observed correlations (Nicholls et al., 1982). Inspection of the items included in the three scales indicated that only TAS assesses involvement in experiences; items on the ANH and OTE instruments focus on interest or willingness to engage in various experiences" (p. 51). "Notably, the correlations between TAS and the 2 subjective indices of hypnotic susceptibility, SUB and O-I, were slightly stronger than the correlations between TAS and the two indices reflecting overt behavior (OBJ and HGSHS:A scores). This pattern of relationships is consistent with recent

arguments that objective indices alone do not fully capture the hypnotic experience (e.g., Spanos et al., 1983).

"Interestingly, the correlations among the three personality scales tended to be stronger in Study 1 where a community sample was assessed in a nonhypnotic context than in Study 2 where a sample of university undergraduates was assessed in a hypnotic context. The two samples differed significantly on all three scales both in terms of mean level and variability, indicating possible ceiling effects and restricted range problems in the university sample. Given that almost all of the research on hypnotic susceptibility and its correlates has been conducted on university students, these findings point to the utility of obtaining research participants from a greater cross-section of the population" (pp. 51- 52).

"Of particular importance, these results indicate that the relationships among TAS and the OTE and ANH scales do not depend upon the hypnotic context and are not the product of expectancies generated by the anticipation of being hypnotized. Nevertheless, the conceptual relationship among the three scales resides in some dimension that is unrelated to hypnotic susceptibility. At this point, we can only speculate as to what this dimension might be. One possibility is that TAS and the OTE and ANH scales reflect an openness to various experiences; what absorption and hypnotic susceptibility uniquely share is the willingness to become involved in imaginal and sensory experiences" (p. 52).

## 1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

### NOTES

1:

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each \_cell\_ is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're \_both\_ going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Hoyt, Irene P.; Nadon, Robert; Register, Patricia A.; Chorny, Joseph; Fleeson, William; Grigorian, Ellen M.; Otto, Laura; Kihlstrom, John F. (1989). Daydreaming, absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 332-342.

### NOTES

1:

It appears that the consistent correlation between hypnotizability and positive-constructive daydreaming is carried largely by three subscales--Acceptance of Daydreaming, Positive Reactions to Daydreaming, and Problem-Solving. Number other subscales consistently correlated with hypnotizability.

When absorption was taken into account, daydreaming activity made no independent contribution to the prediction of hypnotizability. "The present results differ from Crawford's (1982) somewhat, however, in terms of the specific aspects of daydreaming activity that are associated with hypnosis. Crawford found that hypnotizability correlated consistently (i.e., in both men and women) with three subscales tapping imagery variables: the presence of visual and auditory imagery in daydreams and the hallucinatory vividness of daydream imagery. In the present study, the imagery subscale, including both visual and auditory items, did not correlate significantly with hypnotizability; unfortunately, the hallucinatory vividness subscale is not represented on the short form (SIPI) of the daydreaming questionnaire used in this study. Crawford (1982) did not find consistent correlations between hypnotizability and scales measuring acceptance, positive reactions, and problem solving--the subscales that consistently yielded significant correlations in the present study. Not too much interpretive weight should be given to any of the correlations between hypnotizability and daydreaming subscales, until a full replication with reliable subscale measurements (such as those

provided by the long, original IPI) has been completed. The important point made by Crawford (1982), and confirmed in the present study, is that hypnotizability is related to positive-constructive rather than guilty-dysphoric daydreaming" (p. 338). The two studies agree that absorption and hypnosis are not correlated with daydreaming scales reflecting poor attentional control. Given the theoretical emphasis in both domains on the narrowing of attention and exclusion of potentially distracting input, negative correlations with this aspect of daydreaming might have been expected.

## **1988-1989**

Cross, W. P.; Spanos, Nicholas P. (1988-89). The effects of imagery vividness and receptivity on skill training induced enhancements in hypnotic susceptibility. Imagination, Cognition and Personality, 8, 89-103.

## **NOTES**

1:

This article is cited by Spanos & Flynn (1989) as indicating that high hypnotizability requires imaginative skills that some people do not possess in sufficient degrees.

Kirmayer, Laurence J. (1988). Word magic and the rhetoric of common sense: Erickson's metaphors for mind. International Journal of Clinical and Experimental Hypnosis, 36 (3), 157-172.

Milton Erickson did not produce a systematic theory of psychotherapy. His talent was as a storyteller, inventing metaphors and more extended healing fictions for his patients. A great many of Erickson's cases did not involve hypnosis in any conventional sense of the term. He used a wide range of persuasive rhetorical forms to encourage behavioral change in his patients. Nevertheless, taken together his work represents a significant shift in paradigm from prevailing schools of psychotherapy. Erickson captured the power of word magic in the language of common sense. This coupling of magical power with folk psychology accounts for much of his current popularity. Attempts to experimentally test his techniques are likely to be unsuccessful because these techniques were unique inventions tailored to the individual idiosyncrasies of patient and context. Although regularities in his work can be found, Erickson's most important contributions are not techniques but changes in the values or ethos under which psychotherapy is conducted.

## **NOTES**

1:

This paper focuses Erickson's implicit models of mind and the values they carry. "It is here that Erickson made his most significant contribution to the general practice of psychotherapy . Erickson avoided systematization. His writing is unusually anecdotal, even for psychotherapy (Erickson, 1980; Vol IV, passim). Erickson's writing format consists of 'thin' case descriptions, freely recycled in parable or homiletic form to serve his immediate rhetorical purpose. ... For Erickson, flexibility and eclecticism were not signs of a lack of coherence but a spirited rejection of rigid dogma that needlessly limited therapeutic possibilities" (pp. 158-59).

Erickson used language of the common man rather than a technical vocabulary, even when speaking of 'hypnosis' or 'trance' or 'the unconscious.' He called his approach 'naturalistic' and viewed hypnotic phenomena as an extension of normal experience and behavior. His common sense descriptions of events and techniques are easily understood in general terms. "Erickson took magic and dressed it in the familiar clothes of common sense. Some of his less critical followers, however, seem intent on taking common sense and dressing it in the cloak of magic" (p. 163).

Erickson used metaphors as a way of actively involving the patient in conceptual, affective, and sensory qualities of experiences, i.e. as a "tool for thought" (p. 164).

In attempting to understand Erickson's psychotherapy, one must note his "elastic use of the word 'hypnosis.' Sometimes Erickson uses the term narrowly with a focus on the elicitation of trance or

dissociative phenomena, but more often he uses it broadly to mean any state of absorption" (p. 165). For him, this was "\_a state of special awareness characterized by a receptiveness to ideas\_" [Erickson, 1985, p. 223, emphasis in original]. By this he does not mean exclusively the classic suggestion effect where motor acts are experienced as involuntary (Evans, 1967). ... The hypnotic subject exhibits a "\_special willingness to examine ideas for their inherent values\_" [p. 224, emphasis in original]. ... For Erickson, any move in the direction of increased absorption is an instance of hypnosis. Dissociation accounts for a great deal but not all of hypnotic behavior" (p. 165). That is why he used the word hypnosis to describe heightened attention that might occur when someone is surprised. But in fact, his published cases include many other kinds of interventions, such as reframing, symptom prescription, etc.--forms of influence and persuasion used by many therapists who do not consider themselves working with hypnosis.

Erickson also emphasized that hypnosis enables one to work with 'the unconscious.' "Ordinarily, we view our consciousness as the causal agent of doing while our unconscious is the place where things just 'happen to us.' Erickson reversed this attribution, emphasizing the unconscious as the agent of active control working for the benefit of the patient while consciousness adopts the attitude of 'wait and see.' This leads consciousness into reverie--the state where images and events move of their own accord, animated by emotion, before the 'passive audience' of consciousness" (p. 167). So Erickson viewed hypnosis as liberating the unconscious. There was healing potential in helping the ego to relinquish "rigid control over the creative and benevolent processes of the unconscious" (p. 168). From this theoretical position, the patient and therapist are seen as allies and psychotherapy is a collaboration; there is no need for the Freudian concepts of resistance and defense.

"Erickson's metaphors for hypnotherapy link it with normal processes of learning and imagining. His image of the unconscious as a storehouse of creative potential supports a non-pathologized view of man amid all his troubles and craziness. In contrast to psychiatry's current preoccupation with nosology, and the emphasis of psychoanalysis on the dimensions of human frailty, Erickson adopted a non-pathologizing attitude. He did not deny his patient's difficulties but neither was he excessively fascinated by them. He recognized that healing depends not on cataloguing deficiency but on fully mobilizing the person's intelligence, imagination, and integrity. This message of therapeutic optimism was balanced by his own example of the benefits and limitations of hypnotherapeutic practice" (p. 170).

1981

Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.

Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

1980

Weitzenhoffer, Andre M. (1980). What did he (Bernheim) say? A postscript and an addendum. International Journal of Clinical and Experimental Hypnosis, 28 (3), 252-260.

When Bernheim (1917) made his pronouncement, "There is no hypnotism, there is only suggestibility" at a scientific congress in London in 1892, he shocked the scientific community, which turned against him for what amounted to heresy. Clearly, his colleagues understood him to deny existence to hypnosis as a state. That he only meant to shock them into viewing suggestion as being the primary agent and hypnosis as being one of its products rather than the other way around, as then held, was made fully clear by him in 1917 in one of his last writings. Recognizing there had been a misunderstanding, Bernheim made this very point and explained further that although hypnosis is sleep, it is only so in an incomplete form, one allowing the subject to be responsive and suggestibility to be elicited. From there he went on to develop the thesis that hypnotic behavior is the result of an integration of elicited automatisms (nonvoluntary acts) and conscious voluntary behavior, and not entirely a pure, non-conscious, nonvoluntary automatism. Bernheim also proposed in this later work that suggested behavior results from automatisms rendered possible by the "credivity," that is, the implicit belief of suggestible persons in the reality of whatever the suggestor states, a belief which is limited to the suggestor. (In contrast, the credulous person believes everyone.) Credivity is a particular outgrowth of the hypnotist-subject relationship. In his final writings, Bernheim thus called attention to the importance of interpersonal factors in hypnotism.

1979

Dosamantes-Alperson, Erma (1979). The intrapsychic and the interpersonal in movement psychotherapy. American Journal of Dance Therapy, 3, 20-31.

The adaptive function of two states of consciousness and corollary movement experiences is described. Movement in which a relaxed state of attention is maintained on inner kinesthetic sensations and imagery is contrasted with movement which is characterized by conscious, active interacting with the external world of people and events. Clinical examples from individual and group psychotherapy

sessions are cited to demonstrate how meaning and conflict resolution may be achieved by clients while moving in either mode.

1976

**King, Dennis R.; McDonald, Roy D. (1976). Hypnotic susceptibility and verbal conditioning. International Journal of Clinical and Experimental Hypnosis, 24, 29-37.**

18 Subjects highly susceptible to hypnosis and 18 Subjects refractory to hypnosis were studied in a verbal conditioning task modeled after the one used by Taffel (1955). Results indicated that the highly susceptible group showed significantly greater conditioning than the low group. Awareness of the reinforcement contingency by S was not related to the learning task nor to hypnotic susceptibility. A measure of S's attitude toward the reinforcement cue during learning showed that the highly susceptible group had a more positive set toward the cue, whereas the low group tended to respond to it in a neutral or negative manner. Results were interpreted in terms of the theoretical nature of hypnotic susceptibility.

## NOTES

1:

They review literature on attempts to correlate hypnotizability with verbal conditioning ability.

Volunteer students participated; screened by HGSHS:A: highs 10-12, lows 0-4.

Verbal conditioning procedure: S viewed 100 3x5 cards on which were a two-syllable, past tense verb, below which typed in upper case letters on one line were the pronouns I, WE, HE, SHE, THEY, and YOU (randomly assigned to different orders). E was blind to hypnotizability. E instructed S to make up a sentence using the verb and a pronoun; gave no response for first 20 trials; said "good" to usage of I or WE during conditioning.

Afterwards, S filled in an Awareness Questionnaire (What was purpose? If E gave cues, what were they? If you noticed cues, what do you think they indicated?) and attitude toward the reinforcement cue (Did you notice that I did anything special? What? Did I say "good" for a special reason? What was the reason for my saying "good"? How did hearing the word "good" affect you during the experiment? IN a positive, negative, or neutral way?

Results. Groups did not differ at baseline but did differ at Blocks 2 (highs 9.7 vs lows 6.3;  $p < .05$ ) and 3 (highs 10.4 vs lows 6.3;  $p < .05$ ). Although the High group continued to maintain a somewhat higher level of responding than the Low group during extinction (9.8 vs 7.6), this difference did not reach statistical significance. (The graph shows an increase for Lows during extinction!)

Using a liberal definition of awareness and a learning index computed for each S by subtracting his operant level of response from the mean number of correct responses shown during the 3 blocks of acquisition trials, Subjects were ordered and a median test applied; contingency coefficient of .28 not significant ( $p < .10$ ).

Attitude significantly differentiated High and Low hypnotizability groups (see Table 2) with Highs more often responding in positive manner to reinforcement cue and Lows giving a neutral rating. Awareness of reinforcement contingency was equally represented in High and Low groups. The Aware High Positive groups learning index differed significantly from Aware Low Neutral group ( $p < .01$ ); the Unaware Low Positive group ( $p < .05$ ); and the Unaware Low Neutral group ( $p < .001$ ).

Thus, the Aware High Positive group's learning index score was significantly higher than that of the 3 Low groups. Also, the Unaware High Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ). No other High groups differed from the Low groups and none of the High groups differed among themselves.

Among the Low groups, only the Unaware Low Positive group differed significantly from the Unaware Low Neutral group ( $p < .05$ ).

**Discussion.** Data show that hypnotizability is important in response to verbal conditioning, extending findings of Das (1958) by showing that primary suggestibility is associated with operant as well as classical conditioning but also those of Weiss et al. (1960) in illustrating that higher hypnotic susceptibility leads to enhanced verbal conditioning, using an improved measure of hypnotic susceptibility.

Awareness of reinforcement contingencies is not sufficient to account for subject differences in verbal conditioning; the characteristics tapped by HGSHS:A produce conditioning which cannot be accounted for by awareness alone.

The fact that high susceptible Subjects here rated E's cue more positively than low susceptible Subjects is further consistent with some of the personological descriptions associated with hypnotic susceptibility which have been offered by Hilgard (1968). In addition, Cairns and Lewis (1962) and Spielberger et al. (1962) found that persons who assigned more positive value to the kind of reinforcement present in verbal conditioning experiments produced greater conditioning than Subjects whose attitudes were less favorable or non-committal toward the reinforcement. This relationship is not clear-cut in the present data in that although the High groups had an overall more positive attitude regarding reinforcement, only the Aware High Positive group learned better than all the Low groups, while the only other High group learning better than a Low group was the Unaware High Positive which had a significantly better learning index score than the Unaware Low Neutral group. Moreover, positive attitude did not differentiate learning within the High groups or the Low groups. Thus, the present data are unclear regarding the role attitude plays in the acquisition of verbally conditioned responses.

The roles of awareness and attitude could probably be better defined in future research using larger experimental groups. The attitude measure employed here was a gross one and a more sophisticated assessment of the valence characteristics of reinforcement cues could reveal more complex relationships in subsequent research. In addition, a more careful assessment than was done here of the role of cooperation and demand characteristics would contribute substantially to understanding more completely the effect of awareness on these phenomena.

The general indications regarding attitude may in part account for the increased interest in production of conditioned responses in Figure 1 shown by the Low group (graph) during the extinction phase of this experiment. Although highly susceptible Subjects show a decrease in the correct response with nonreinforcement, low susceptible Subjects begin to evidence an increase in the correct response. The attitude measure indicates that Subjects in the Low group did not respond positively to the reinforcement cue, and one of these Subjects reported in the interview that he did not like being told what to do by the E. It can be speculated that these Subjects were aware of the reinforcement contingency but did not "cooperate" until the reinforcement was absent. This follows the interpretation of Farber (1963) who found that aware Subjects who conformed to the demand characteristics of the experimental situation showed greater verbal conditioning than those who were aware and nonconforming. It thus appears that a willingness to go along with E's expectations and a positive, cooperative attitude are common features in individuals who make good hypnotic Subjects and who evidence an enhanced propensity for verbal conditioning.

## **REFLEX**

**1998**

Danziger, N.; Fournier, E.; Bouhassira, D.; Michaud, D.; De Broucker, T.; Santarcangelo, E.; Carli, G.; Chertock, L.; Willer, J. C. (1998). Different strategies of modulation can be operative during hypnotic analgesia: A neurophysiological study. Pain, 75 (1), 85-92.

Nociceptive electrical stimuli were applied to the sural nerve during hypnotically-suggested analgesia in the left lower limb of 18 highly susceptible subjects. During this procedure, the verbally reported pain threshold, the nociceptive flexion (RIII) reflex and late somatosensory evoked potentials were investigated in parallel with autonomic responses and the spontaneous electroencephalogram (EEG). The hypnotic suggestion of analgesia induced a significant increase in pain threshold in all the selected subjects. All the subjects showed large changes (i.e., by 20% or more) in the amplitudes of their RIII reflexes during hypnotic analgesia by comparison with control conditions. Although the extent of the increase in pain threshold was similar in all the subjects, two distinct patterns of modulation of the RIII reflex were observed during the hypnotic analgesia: in 11 subjects (subgroup 1), a strong inhibition of the reflex was observed whereas in the other seven subjects (subgroup 2) there was a strong facilitation of the reflex. All the subjects in both subgroups displayed similar decreases in the amplitude of late somatosensory evoked cerebral potentials during the hypnotic analgesia. No modification in the autonomic parameters or the EEG was observed. These data suggest that different strategies of modulation can be operative during effective hypnotic analgesia and that these are subject-dependent. Although all subjects may shift their attention away from the painful stimulus (which could explain the decrease of the late somatosensory evoked potentials), some of them inhibit their motor reaction to the stimulus at the spinal level, while in others, in contrast, this reaction is facilitated.

Abstract from National Library of Medicine, PubMed

1998

Schauble, Paul G.; Werner, William E. F.; Rai, Surekha H.; Martin, Alice (1998). Childbirth preparation through hypnosis: The hypnoreflexogenous protocol. American Journal of Clinical Hypnosis, 40 (4), 273-283.

A verbatim protocol for the "hypnoreflexogenous" method of preparation for childbirth is presented wherein the patient is taught to enter a hypnotic state and then prepared for labor and delivery. The method provides a "conditioned reflex" effect conducive to a positive outcome for labor and delivery by enhancing the patient's sense of readiness and control. Previous applications of the method demonstrate patients have fewer complications, higher frequency of normal and full-term deliveries, and more positive postpartum adjustment. The benefit and ultimate cost effectiveness of the method are discussed.

1993

Lindsay, Suzanne; Kurtz, Richard M.; Stern, John A. (1993). Hypnotic susceptibility and the endogenous eyeblink: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 92-96.

This study investigated the relationship between hypnotic susceptibility, hypnotic state, and the endogenous eyeblink with 36 undergraduates, who were assigned to four independent groups (waking-low, hypnotized-low, waking-high, and hypnotized- high susceptibles) on the basis of combined cutoff scores on both the Creative Imagination Scale and the Stanford Hypnotic Clinical Scale for Adults. The auditory vigilance task required subjects to discriminate between 200 ms and 300 ms tones over a 35-minute period. Hypnotic depth was controlled across trials using the Long Stanford Scale of Hypnotic Depth. As predicted, high-susceptible subjects had a significantly lower blink rate than low-susceptible subjects. The predicted interaction between susceptibility and hypnotic state was also confirmed. High-susceptible subjects showed a significant decrease in blinking for the hypnotized

condition, whereas low-susceptible subjects did not. The need for replication with more adequate measures of susceptibility is discussed.

## NOTES

1:

"In a preliminary study, Weitzenhoffer (1979) found significant differences between high- and low-susceptible subjects following a hypnotic induction. The highs showed a 66% decrease in blink rate from a baseline reading. More recently, Tada, Yamada, and Hariu (1990) reported a series of studies suggesting that blink rate was dramatically reduced during the hypnotic state, as well as finding a relationship between high susceptibility and decreased blink rate. Although these studies tend to support Weitzenhoffer's (1979) research, they are poorly controlled and report no quantitative data" (p. 93).

In the present study, "to assure that subjects kept their eyes open, they were required to maintain their gaze on a dimly lighted box (12" x 12") placed one meter in front of them. Subjects in both conditions were asked to rate their hypnotic depth by using the Long Stanford Scale of Hypnotic Depth (Tart, 1970) before being given a practice trial of 20 tones. Following the practice trial, participants were again asked to rate their hypnotic depth, and the trial period began. Subjects gave subsequent depth ratings every 10 minutes for the remainder of the 35-minute trial. The hypnotic state was maintained across time periods by using deepening instructions when necessary" (p. 94).

In their Discussion, the authors noted that "High-susceptible subjects in the hypnotized state have a significantly lower blink rate and presumably greater attentional focus than lows. Although the interaction was significant and in the predicted direction, it accounted for only a small portion of the overall variance, suggesting that trait differences are more robust than those for state" (p. 95).

1992

Gainer, Michael J. (1992). Hypnotherapy for reflex sympathetic dystrophy. American Journal of Clinical Hypnosis, 34, 227-232.

Reflex sympathetic dystrophy (RSD) is an unusual, debilitating, chronic pain syndrome thought to be the result of a continuous excessive discharge of regional sympathetic nerves. Supportive and stress-reduction psychotherapies are commonly recommended as adjunctive treatments. Biofeedback is a more direct symptomatic treatment. Although hypnotherapy is effective in altering sympathetic reflex and pain responses, there are no reports of its use for the treatment of RSD. This article reviews some promising results of hypnotherapy with three RSD sufferers. I discuss the role of hypnotherapy as a supportive adjunct to medical treatment. I also explore the possible role of hypnotherapy as a complementary treatment.

## NOTES

1:

"Hypothetically, RSD represents a continuous excessive discharge of the regional sympathetic nerves. Such discharge normally occurs in response to an injury. In RSD this reflex response is unremitting despite the cessation or absence of an external stimulus" (p. 227).

The psychosomatic aspects of RSD are highly disputed. Some studies suggest a relationship between RSD and various psychopathological conditions. Also proposed is a predisposing character type, sometimes termed 'Sudeck personality' ... patients who are generally anxious, inactive, and hypertensive. ... Others cite chronic pain as the cause, not the result, of certain 'typical' behavior patterns and emotional responses (Abram, 1990; Ecker, 1984)" (p. 228).

"Reports of four cases described RSD treatment with temperature biofeedback. These studies suggest that the patients learned to warm the affected limb through increasing cutaneous circulation. The temperature change was associated with decreased regional sympathetic activity and decreased pain.

Complete remission of symptoms is reported in three of these cases; significant improvement is reported in the fourth" (p. 228).

"Abram (1990) reported that in two independent studies the incidence of RSD was 6.3% and 10.7% of patients admitted to pain clinics" (p. 228).

"I hypothesized that hypnotic interventions could facilitate a decrease in local sympathetic nervous discharge. This would result in vasodilation and warming of the affected limb, decreased spasticity, and decreased pain. The following is a report of the effective treatment of three RSD cases with hypnotherapy" (p. 228).

Case #1. "The eventual resolution of her RSD symptoms was due, in part, to resolution of psychodynamic conflicts. ... She had a grade-four profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). In later sessions she readily demonstrated superior hypnotic capacity, achieving such phenomena as spontaneous amnesia, negative hallucination, and somnambulism" (p. 229).

Case #2. ... "She had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978) Because of the success with the first patient, I used visualization techniques initially. ... She responded more readily to kinesthetic and tactile suggestions. ... These interventions produced dramatic improvement in the RSD symptoms" (p. 230).

Case #3. ... "He had a grade-three profile on the Hypnotic Induction Profile (Spiegel & Spiegel, 1978). He was readily able to use visualization techniques. He was able to affect dramatic temperature changes (8-10 degrees F) by visualizing 'warm' vacation scenes and imagining the feeling of the 'warm sun' on the affected limb" (p. 231).

DISCUSSION mentioned, "The patients presented in this report were all highly motivated and demonstrated an above-average to superior hypnotic capacity. Despite the obvious limitations of such a selective sample, the actual treatment results support the initial hypothesis. The treatment results of these three cases indicate that hypnotherapy can be an adjunctive treatment to alleviate pain. Moreover, these results indicate that hypnotherapy can be a complementary treatment in RSD.

1991

Kleinhaus, Moris (1991). Prolonged hypnosis with individualized therapy. International Journal of Clinical and Experimental Hypnosis, 39 (2), 82-92.

A therapeutic approach is presented which involves the use of prolonged hypnosis for the treatment of diverse medical and/or psychological conditions, including intractable pain. This approach may be indicated either as a complementary tool used in conjunction with other treatment approaches or as the only method of intervention. The technique is based on achieving a prolonged hypnotic response, during which hypno- relaxation serves as the foundation for the delivery of an individualized therapeutic plan which includes self-hypnosis, suggestive procedures, metaphors, and constructive imagery techniques. In debilitated patients, medical supervision and nursing care are essential, and hospitalization is recommended if necessary. Theoretical assumptions underlying this approach are presented, and clinical implications are discussed. The method is illustrated through case presentations.

NOTES

1:

The general procedure involves: 1. A flexible plan concerning the duration of treatment: days, weeks, or longer. 2. Information is given to the patient, the family and the medical staff if in hospital. Emphasize that while the patient may be in a 'twilight-like' state, most of the time he/she is able to fulfill his or her basic physiological needs, (drinking, eating, taking care of personal cleanliness, etc.). 3. The method of hypnotic induction is individualized. 4. The patient is trained in self- hypnosis, and for using signals for induction and dehypnotization either for self hypnosis or for the hypnotist to use. Thus if there is a physiological or emotional need for self-hypnosis the patient can do it. Suggestions

and training are given and reinforced concerning the patient's capability to fulfill his/her basic physiological needs. 5. The family and/or the medical staff are instructed and trained in induction and dehypnotization, until the patient responds to them satisfactorily. 6. At this stage, therapeutic suggestions aimed at ego-boosting and a change of attitudes and meanings towards the symptom and symptom removal/amelioration/substitution are added. 7. Metaphoric constructive imagery is introduced when indicated. 8. If required, other hypnotic phenomena are elicited and used (e.g. dissociation, time distortion, age regression, rehearsal, hypno/analgesia, change of muscular tonus, displacement of emotions, abreaction, etc.). 9. An audio cassette which contains the wording of the therapeutic intervention is used with some patients. 10. The family and/or the medical staff are instructed to supervise the patient properly and to avoid potential complications. 11. Termination of prolonged hypnosis with individualized therapy is gradual to permit appropriate re-orientation towards reality. 12. Treatment is evaluated and a posttreatment plan is outlined.

They provide case reports and discuss precautions. All the cases reported were treated while the patients were hospitalized for their physical condition (although in Case 3, prolonged hypnosis with individualized therapy was also continued at home after the patient's discharge from the hospital), and the patients were monitored by the medical staff. In very debilitated patients, special care should be taken to avoid potential complications arising from their passivity, mainly the development of decubitus ulcer and of aspiration/choking while drinking or eating. Although precaution is taken routinely with these patients, these measures should be emphasized while the patient is in a state of prolonged hypno-relaxation.

1989

Santarcangelo, E. L.; Busse, K.; Carli, G. (1989). Changes in electromyographically recorded human monosynaptic reflex in relation to hypnotic susceptibility and hypnosis. Neuroscience Letter, 104, 157-160.

The aim of the present experiment was to study how hypnotic susceptibility and hypnosis affect motor neuron excitability. In the first trial, human Ss were selected according to their hypnotic susceptibility. In a second trial, the Hoffman (H) reflex amplitude of the soleus muscle was studied in three groups: (1) highly susceptible subjects during hypnosis with standardized suggestions of simple relaxation, anesthesia, analgesia and paralysis (group I); (2) highly susceptible subjects (group II); and (3) nonsusceptible subjects (group III) during long-lasting control conditions. Surface Ag/AgCl electrodes were used to stimulate the posterior tibial nerve using a constant current stimulator and to record the soleus EMG. The H reflex amplitude decreased significantly during the recording session in groups I and II and there was no change in group III. In group I the effect of the different suggestions could not be distinguished from the effect of hypnotic relaxation. The decrements in H amplitude did not differ between groups I and II, suggesting that the effect was related to personality traits rather than hypnotic induction.

1988

Hawkins, Russell; Le Page, Keith (1988). Hypnotic analgesia and reflex inhibition. Australian Journal of Clinical and Experimental Hypnosis, 16, 133-139.

The major change in thinking about models of analgesia over the last decade or so may be seen as a shift away from the earlier emphasis on a one-way afferent transmission sequence. Analgesia was effected, according to the older models, by a simple blocking of afferent impulses at some level (as achieved by local anaesthesia). Recent models suggest that there are at least two CNS analgesia control systems, each operating via an active mechanism for the inhibition of nociception which includes reciprocal \_efferent\_ impulses able to respond to input from lower centres by sending control signals

which modify their output. One CNS analgesia system has now been quite well described. This "opiate" analgesia system has proved to be naloxone reversible and seems to be mediated by reciprocal pathways between brain stem structures and the dorsal horn and trigeminal caudalis. This is not likely to be the system responsible for all cases of hypnotic analgesia, since the common experience of continued awareness of some elements of a normally painful stimulus, in spite of a freedom from pain, implicates a higher level involvement such as input from the prefrontal cortex.

## NOTES

The authors present a surgery case (of a cystoscopy and urethrotomy performed under hypnotic analgesia, with a highly hypnotizable patient) as an illustration of their position. The patient grimaced when the urethrotome was inserted into the urethra and dilated, but she denied discomfort and did not exhibit a reflex adduction of the thighs that is often observed even under standard general anaesthesia. She had spontaneous amnesia for the entire surgery. Later, under hypnosis, the patient could remember "discomfort and a sharp pain" which lasted for "seconds, if that" (p. 134).

The authors refer to Melzack and Wall's (1965) gate control theory as well as Hilgard's (1973) neodissociation interpretation of pain reduction in hypnosis. They review research by Hardy and Leichnetz (1981) with monkeys, in which they "traced the projections of the periaqueductal gray (PAG) to determine the extent of any possible cortical involvement in the endogenous analgesic system. Their work showed that the prefrontal cortex was the principal source of projections to the PAG" (p. 136). They quote the latter as writing that, "Patients who have had prefrontal lobotomies for relief of chronic pain report that while they still feel the pain they are no longer bothered by it ... the prefrontal cortex by virtue of its projections to the PAG may play a role in modulating nociception at the spinal level" (Hardy & Leichnetz, 1981, p. 99).

"Hardy and Leichnetz have also suggested that there may be more than one analgesic system within the CNS. The first system is a naloxone-reversible mechanism which can be activated by opiates (presumably both endogenous and exogenous) and by acupuncture. Since hypnotic analgesia has shown itself not to be naloxone-reversible (Goldstein & Hilgard, 1975) it may have little to do with the opiate reception analgesia system. Instead the mechanism of hypnotic analgesia may lie in Hardy and Leichnetz's second system which is sensitive to affective and cognitive influences" (pp. 136-137).

The authors include a review of the work by Mayer and Price (1976) which established the importance of brain stem structures in analgesia, especially for eliciting stimulation-produced analgesia. They cite Mayer and Price as drawing a distinction between "analgesia achieved by incapacitating a component in a pain transmission system or by activating a pain inhibition system" (p. 137). They also report that Mayer and Price conclude that stimulation-produced analgesia does not result from a "functional lesion" in the brain stem, but results from stimulation of a pain-inhibiting mechanism, suggesting the dorsal horn and trigeminal nucleus caudalis may be involved. This would be consistent with the inhibition of spinal reflexes (the adductor reflex) observed in their urethrotomy case, and the spinal reflex to nociception has also been reported by Finer (1974).

"The concomitant inhibition of reflexes in humans during hypnotic analgesia can be interpreted as evidence that nociception is probably not ascending to the cerebral cortex and that therefore the source of analgesia can be localized to the brain stem areas. It may be the case, however, that the locus of effect of hypnotic analgesia is not uniform across cases and may be identified by the overall pattern of subjective reports and physiological responses. Hypnotic analgesia may be experienced in more than one way subjectively and these differences may be attributable to differing underlying physiological mechanisms. On some occasions the relevant body part may be experienced as totally anaesthetised and all sensation (not only painful sensation) may be lost. This experience matches well with a brain stem involvement, which presumably inhibits any further afferent action. On other occasions, however, and more commonly, patients are still aware of a variety of sensations, which might include pressure in the case of childbirth or even cutting in the case of surgery, but these sensations are not

described as painful. This is reminiscent of the effect of frontal lobotomy and it is tempting to focus on the frontal lobe as the locus of hypnotic analgesia effects in such instances" (p. 138).

1985

Eli, I.; Kleinhauz, M. (1985). Hypnosis: A tool for an integrative approach in the treatment of the gagging reflex. International Journal of Clinical and Experimental Hypnosis, 33 (2), 99-108.

The extreme exaggerated gag reflex can be an enormous obstacle to routine dental treatment. In some patients, extreme gagging may be a learned avoidance reaction; in others, it may act as a defense mechanism which inadequately compensates for an internal psychodynamic conflict. The most frequent areas of conflict encountered are those concerning the symbolic meaning of the mouth, fear of loss of control, and problems in the dependence/independence vector. In the Consultative Outpatient Clinic for Behavioral Dysfunctions at the School of Dental Medicine of Tel Aviv University, a multidisciplinary team of dentists, psychiatrists, and psychologists has been working on treatment modalities for such patients including hypnorelaxation and other hypnotic techniques. Hypnosis is incorporated in the framework of psychodynamic, behavioral, relaxation, and suggestive approaches that are integrated in the shaping of the therapeutic strategy. Clinical cases are described and treatment philosophies discussed.

1975

Carli, G. (1975). Some evidence of analgesia during animal hypnosis [Abstract]. Experimental Brain Research, 23, 35.

The purpose of this study was to investigate the response to painful stimuli during animal hypnosis. The experiments were performed on unanesthetized, free-moving rabbits carrying implanted electrodes for recording the EEG and EMG activity and nerve stimulation. Injection of formaline into the dorsal region of the foot produced long lasting EEG desynchronization and motor pain reactions. In some rabbits a procedure of habituation was used to reduce hypnosis duration below 45 sec. Hypnosis was induced by inversion. The following results were obtained: 1) Polysynaptic reflexes elicited [sic] by electrical stimulation of cutaneous and muscle afferents were depressed during hypnosis. 2) Hypnosis transitorily suppressed all the painful manifestations due to formaline injection and was characterized by high [sic] voltage slow wave activity in the EEG, 3) In habituated rabbits, a significant increase in hypnotic duration and EEG synchronization was observed when hypnosis was preceded by formaline injection. Hypnosis duration was not potentiated by painful stimuli when Naloxone (5mg/Kg i.v.) was injected before hypnosis induction. 4) In habituated rabbits a recovery in hypnotic duration coupled to EEG synchronization was obtained, in absence of painful stimuli, following subanalgesic injection of Morphine (1mg/Kg). It has been previously shown that in the rabbit administration of 5-20 mg/Kg of Morphine produces EEG synchronization and strong reduction of pain reactions. It is suggested that, during animal hypnosis in a condition of continuous nociceptive stimulation, the pain response is blocked by a mechanism which exhibit [sic] similar effects of Morphine both at spinal cord (polysynaptic reflexes) and at cortical levels (EEG synchronization).

1969

Weitzenhoffer, Andre M. (1969). Eye-blink rate and hypnosis: Preliminary findings. Perceptual and Motor Skills, 28, 671-676.

Tests the validity and reliability of certain features of the outer appearance of hypnotized individuals which have long been popularly and clinically considered good indices of "hypnosis." The present report focuses on eye-blink rate. 19 Ss were administered a slight modification of the Stanford Scale of

Hypnotic Susceptibility, Form A. Samples of their blink rates were obtained prior to the induction of hypnosis and some time after the induction of hypnosis procedure had been terminated, but before the dehypnotization procedures began. The results support the popular and clinical belief that hypnotic-like behavior is accompanied by a decrement in blink rate to the extent that Ss scoring 6 or more points on the Stanford Scale showed a marked and statistically significant mean reduction in blink rate of over 60% following the induction procedure and some testing of their suggestibility. In contrast, Ss scoring 5 or less and presumably not hypnotized but merely suggestible to non-suggestible, did not show a statistically significant decrement. As a possible index of "hypnosis," such a decrease in rate was found to have a test-retest reliability of .86. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Bartlett, Esther E. (1968). A proposed definition of hypnosis with a theory of its mechanism of action. American Journal of Clinical Hypnosis, 11, 69-73.

A definition of hypnosis as a control of the normal control of input (information) for the purpose of controlling output (behavior) is proposed. A theory of the mechanism of action of hypnosis as an increasing integration of the neocortex and the subcortical areas of the brain, with the subcortical areas activated to a greater extent than normally, is postulated.

1965

Angyal, L. (1965). Schaffer Karoly munkai a suggestiorol es a reflexekrol. Ideggyogyaszati Szemle, 18, 144-147. (Abstracted in American Journal of Clinical Hypnosis 1966, 8 (4), 316.)

This article summarizes the works of Charles Schaffer concerning suggestion and reflexology (J.H.)

1961

Mishchenko, M. (1961). The hypnotic condition as a process of nervous excitation. In Proc. Third World Congress of Psychiatry, Montreal, Canada, I. (pp. 704-708). (Abstract in American Journal of Clinical Hypnosis 1964, 7, 101.)

Subjects were selected with certain predispositions for the hypnotic state and studied in the waking, hypnotic and experimental sleep states by motor conditioned reflexes modified to a specific function of the frontal system. Excitable, active students of music and literature were found most excitable as subjects, subjects tending to be passive showed no hypnotic responses. Experimental sleep abolished the motor-conditioned reflexes, quite contrary to hypnotic findings. (M.H.E. abstract in AJCH).

Stolzenberg, Jacob (1961). Technique in conditioning and hypnosis for control of gagging. International Journal of Clinical and Experimental Hypnosis, 9, 97-104.

(Author's Conclusion) "The practitioner who is competently trained in hypnosis will find that there is a diminished need for the use of hypnosis per se, with most of his patients. His understanding of the psychodynamics will aid immeasurably in establishing rapport with his patients, and develop an excellent patient-dentist relationship. His semantics will be a vocabulary of positive words which will not trigger off negative reactions in his patients. The dentist as a rule, who has been exposed to hypnosis indoctrination, usually displays kindness and understanding, and treats his patients with tender loving care.

"The highest achievement in a dentist-patient relationship is attained when the parent says, "You know, doctor, I would almost think you had hypnotized my daughter when I see how nicely she cooperates"" (p. 104).

1960

Hernandez-Peon, R.; Dittborn, J.; Borlone, M.; Davidovich, A. (1960). Changes of spinal excitability during hypnotically induced anesthesia and hyperesthesia. American Journal of Clinical Hypnosis, 3, 64. (From 21st International Congress of Physiology, Buenos Aires, 1959, pg. 124, Abstracts)

Although hypnosis is well established, the physiological mechanisms of the hypnotic state and their related sensory phenomena are far from clear. Hernandez-Peon and Donoso have found that the magnitude of photic evoked potentials in the optic radiations of awake human subjects changed in response to previous verbal suggestions concerning the intensity of the expected photic stimulus. This striking observation led the cited authors to propose that certain hypnotic sensory phenomena might be explained, at least partially, by changes occurring as far down as second-order sensory neurons by centrifugal mechanisms controlling the sensory input to the brain. In the intact subject it is impossible to record uncontaminated electrical indexes of afferent impulses from those lower sensory neurons. However, it is possible to gain indirect evidence of tactile sensory inflow to the spinal cord by recording cutaneous reflexes. In young males, a forearm skin reflex evoked by a single square pulse of 0-.1 msec. duration was recorded with cathode- ray oscilloscope. The amplitude of the evoked potentials was often reduced during the hypnotic state, and it was further reduced by verbally suggesting to the hypnotized subject complete anesthesia of the forearm. Reciprocally, during hypnotically suggested hyperesthesia the cutaneous reflex was enhanced. It is concluded that during hypnotic anesthesia and hyperesthesia excitability changes occur at the spinal level, and it is suggested that these changes probably involve the spinal internuncial system interposed between the dorsal root ganglion cells and the motoneurons. (From Abstracts, 21st Internat. Cong. Physiol., Buenos Aires, 1959, p. 124.)

NOTES

1:

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

1955

Dorcus, Roy M.; Kirkner, Frank J. (1955). The control of hiccoughs by hypnotic therapy. Journal of Clinical and Experimental Hypnosis, 3 (2), 104-108.

NOTES

1:

"The present paper is devoted to a discussion of 18 cases ... of hiccoughs that were treated by hypnosis at the Long Beach Veterans Hospital during the course of the past five years. Aomost all of these cases had received some kind of medical therapy before hypnosis was employed. ...

"The age range of the patients (27-75 years) indicates that age is not a factor either in the onset of the spasm or in the termination of it by hypnosis. ... While there are some differences in the number of patients in the various [age] decile groups, these differences are in all probability due to sampling. The kinds of physical disorders fit into the table of causes abstracted from Samuels' article and it is evident that hiccough may be associated with a wide variety of physical diseases. With respect to the onset of the hiccoughs, the major number of the spasms seem to be initiated after the central nervous system has been depressed by an anesthetic. When the diaphragm is set in reflex action by some other cause such as vomiting, hiccoughs may be initiated and continue. The hypnotic treatment stressed two points in procedure: (a) an attempt to obtain complete muscular relaxation, and (b) an attempt to relieve the patient of anxiety concerning the spasm and his physical disorder. The number of hypnotic sessions required varied from one session to as many as 8 or 10 sessions. The number of sessions required could not be predicted in advance. No criteria of whether hypnosis would be successful have been evolved other than whether the patient is, generally speaking, a good hypnotic subject. Of the eighteen patients treated by this method fourteen were permanently relieved of their symptoms; three received no benefit and one received temporary benefit. Since other therapies had been tried on most of these patients, it is quite apparent that this form of treatment is very useful and should be applied as soon as possible after the advent of the spasm. This statement is not based on the fact that hiccoughs of shorter duration respond more readily to hypnotic therapy. However, hypnosis should be utilized early to control hiccoughs so that the hiccoughs will not add to the distress of otherwise seriously ill patients" (pp. 107-108).

1954

Koster, S. (1954). Experimental investigation of the character of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 42-54.

NOTES

1:

In waking, hypnosis, and sleep states 6 subjects were tested for knee-jerk height, key pressing to metronome signal, doing sums, recalling a story, etc. The Summary states:

"1. The height of the knee-jerk of all 6 subjects both in T and in "S" was much lower than in (W), the average height of all knee-jerks computed of the 6 subjects was both in T and in "S" only 39% of the average height in (W).

2. The [arm] catalepsy in T and in "S" continually existed.

3. The subjects in T and in "S" could hear well and perform active movements, though they reacted somewhat more slowly, and less forcibly than in (W) and sometimes only after some provocations.

4. The subjects both in T and in "S" could not only hear well, but could also present more or less complicated psychic impressions, reproducing them later again in "S" and also after the end of the experiment" (p. 50).

The author concluded, "Hypnosis is a sleeping-condition, but a special one. The specific difference consists of the fact that the subject's many impressions, which he would observe in a waking-condition, he does not observe now, and does not react to, aside from impressions coming to him through the hypnotist. It can then be said that there is not an absence but a decrease of the active relation with the outer world. This is exactly the same state as the one during sleepwalking and the writer must repeat after all his investigations, what has already been stated: Essentially there is no difference between the condition of a hypnotized person and that of a sleepwalker" (p. 51).

1953

Guze, Henry (1953). The phylogeny of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 41-46.

NOTES

1:

"The continuity of hypnotic phenomena from infrahuman through human organisms has created an array of problems in interpretation" (p. 41). "Unfortunately, most investigators in animal hypnosis

have concerned themselves mainly with states of immobility. Because of this, they have neglected to recognize that hierarchical and group reactions of animals are just as fit in the category of hypnotic behavior" (pp. 41-42). "It is postulated in this paper that hypnosis or hypnotizability is a phylogenetically derived characteristic strongly akin to emotional readiness. It differs in expression from organism to organism within a species and from species to species" (p. 45).

## **REGRESSION**

**2002**

**Edwards, Lynn; Sapp, Marty (2002). Reoperationalizing adaptive regression during hypnosis. Australian Journal of Clinical Hypnotherapy and Hypnosis, 23 (3), 115-129.**

Employing a non-randomized two-group pre-test post-test design, this study found that a regression hypnotic transcript produced a greater reduction in conflict responses than a relaxation transcript. Finally, this study re-operationalized the concept of regression.

**GOW, MICHAEL (2002). Treating dental needle phobia using hypnosis. [Paper] Presented at IFDAS/SAAD 10th International Dental Congress on Modern Pain Control, Edinburgh, June 2003, also at BSMDH (Scot) meeting December 2003.**

"This case illustrates the effectiveness of short-term hypnosis treatment for a dental needle phobia. What is significant is the dental history of the patient and the longstanding effect of her dental phobias and how quickly hypnosis was able to remove this problem.

**Aim:** To manage dental needle phobia using hypnosis integrated into an anxiety management treatment plan."

**Case History:** Female, 48, had traumatic and painful experience at the dentist when 5, developed phobia of dental injections and treatment. Has had a dozen General Anaesthetics for dental treatment. Experiences psychosomatic pain prior to treatment.

**Methods:** Medical, dental and phobia history explored. Pre-treatment questionnaire assessed dental anxiety, reasons for anxiety, and ascertained management options. Post-treatment questionnaire assessed changes in dental anxiety and attitudes.

**Anxiety management techniques:** Needle Desensitisation, Relaxation, and Hypnosis (Regression, Progressive Muscular Relaxation, Glove Anaesthesia, Future Rehearsal etc.).

**Results:** Pre-treatment questionnaire revealed high level anxiety (26 out of high of 30 modified Corah score; and high anticipation of future pain during dental treatment (10 out of high of 10 on a Visual Analogue Scale. Post-treatment questionnaire revealed low level anxiety (12/30) and low anticipation of future pain (4/10).

**Conclusion:** Hypnosis was an effective adjunct to anxiety management in this case, demonstrating how a non pharmacological approach can find long term solutions by addressing the causes of the anxiety. Previous pharmacological approach had only addressed the symptoms of the immediate anxiety. Successful completion of prescribed dental treatment plan and changes in patient's attitudes highlight positive outcome.

**2001**

**Fredericks, Lillian E. (2001). The use of hypnosis in surgery and anesthesiology. Springfield IL USA: Charles C Thomas.**

**Preface: Definition of Hypnosis**

**History of Hypnosis in Surgery**

**Theories of Hypnosis**

## Chapter:

1. An Introduction to Hypnosis
2. Hypnosis in the Management of Chronic Pain
3. Hypnosis in Conjunction with Chemical Anesthesia
4. Hypnosis in Conjunction with Regional Anesthesia
5. Hypnosis as the Sole Anesthetic
6. Hypnosis in the Intensive Care Unit
7. Hypnosis in the Emergency Unit
8. Hypnosis in Pediatric Surgery
9. Hypnosis in Obstetrics and Gynecology
10. Perspectives from Physician-Patients

2000

Eimer, Bruce. N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies;

(3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

Elter-Nodvin, Edeltraud (2000). Computerized content analysis: A comparison of the verbal productions of high hypnotizable, low hypnotizable and simulating subjects (Dissertation). (<http://www.televid.com/elternodvin/dissertation/>)

This research was designed to investigate the domain of hypnosis and to explore how the "'state"' of hypnosis, along with the susceptibility to hypnosis relate to lexical choice in verbal productions as well as to primary/secondary process mentation. ... College students were screened for level of hypnotic susceptibility ... [yielding] 32 high hypnotizable subjects and 57 low hypnotizable subjects [randomly assigned to two groups] ... 29 low hypnotizable subjects and 28 low hypnotizable simulating subjects.

Responses to six Thematic Apperception Test (TAT) cards and responses to five free speech story-openings were collected and tape-recorded during [counterbalanced waking and hypnosis conditions].... verbal productions were transcribed and [computer] analyzed by ... the Dartmouth Adaptation of The General Inquirer ... and COUNT with the Regressive Imagery Dictionary ... .

To summarize, findings suggest that the changes in SECONDARY PROCESS and THOUGHT, as well as the DAGI-III-variable EMOTION and the COUNT-RID-variable EMOTION, may be a result [sic] other than hypnotic ability or the hypnotic experience. The possibility has been raised, that subjects who had been instructed to simulate hypnosis were successful in discerning the experimental, implicit

demands to respond with decreased SECONDARY PROCESS and THOUGHT as measured by the DAGI-III and COUNT-RID respectively and to present the appearance of a genuinely hypnotized subject. The same was true for the increase in EMOTION as measured by the DAGI-III as well as by the COUNT-RID. The interaction between the condition (baseline vs. hypnosis) and the group (level of hypnotic susceptibility) would have provided the strongest support for the assertion that hypnosis changes a dimension (e.g. enhances primary process responding or decreases secondary process mentation) in highly hypnotizable subjects.

The likelihood that the hypnotic main-effect can be attributed at least to some extent to demand characteristics has been supported by the current results. The hypnotic state, even though it can be measured through behavioral measures such as the HGSHS and the CAH, cannot be measured by content measures of verbal productions.

Findings are discussed in regard to previous literature suggesting a link between primary process and hypnosis and suggestions for future research are made. In addition, theoretical and practical implications are discussed. - From dissertation at web site <http://www.televid.com/elternodvin/dissertation/>

1997

Patterson, David R.; Adcock, Rebecca J.; Bombardier, Charles H. (1997). Factors predicting hypnotic analgesia in clinical burn pain. International Journal of Clinical and Experimental Hypnosis, 45 (4), 377-395.

The use of hypnosis for treating pain from severe burn injuries has received strong anecdotal support from case reports. Controlled studies provide less dramatic but empirically sound support for the use of hypnosis with this problem. The mechanisms behind hypnotic analgesia for burn pain are poorly understood with this patient population, as they are with pain in general. It is likely that, whatever the mechanisms are behind hypnotic pain analgesia, patients with burn injuries are more receptive to hypnosis than the general population. This article postulates some variables that may account for this enhanced receptivity, including motivation, hypnotizability, dissociation, and regression.

1993

Watkins, Helen H. (1993). Ego-State therapy: An overview. American Journal of Clinical Hypnosis, 35, 232-240.

Ego-state therapy is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between the various "ego states" that constitute a "family of self" within a single individual. Although covert ego states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist. Any of the behavioral, cognitive, analytic, or humanistic techniques may then be employed in a kind of internal diplomacy. Some 20 years experience with this approach has demonstrated that complex psychodynamic problems can often be resolved in a relatively short time compared to more traditional analytic therapies.

1989

Zamore, Neal; Barrett, Deirdre (1989). Hypnotic susceptibility and dream characteristics. Psychiatry Journal of the University of Ottawa, 14 (4).

This study examined the relationship of hypnotic susceptibility to a variety of dream characteristics and types of dream content. A Dream Questionnaire was constructed synthesizing Gibson's dream inventory and Hilgard's theoretical conceptions of hypnosis. Several dream dimensions correlated significantly with hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility and the Field Inventory. For Ss as a whole, the strongest correlates were the frequency of dreams

which they believed to be precognitive and out-of-body dreams. Ability to dream on a chosen topic also correlated significantly with hypnotic susceptibility for both genders. For females only, there was a negative correlation of hypnotizability to flying dreams. Absorption correlated positively with dream recall, ability to dream on a chosen topic, reports of conflict resolution in dreams, creative ideas occurring in dreams, amount of color in dreams, pleasantness of dreams, bizarreness of dreams, flying dreams, and precognitive dreams.

1988

Nash, Michael R. (1988). Hypnosis as a window on regression. Bulletin of the Menninger Clinic, 52, 383-403.

Examines the empirical evidence for temporal and topographic regression during hypnosis--which Freud explicitly defined as regressive. A review of more than 100 studies spanning 60 years of research found no convincing evidence that developmentally previous psychological structures are reinstated during hypnosis (temporal regression). In contrast, there is evidence that hypnosis enables subjects to elicit more imagistic, primary process, and affect-laden material (topographic regression). The author recommends a careful reexamination of two core assumptions underlying the concept of temporal regression: (1) that early structures in human development are imperishable, and (2) that regression necessarily involves reinstatement of infantile psychological structures.

1983

Eisen, Marlene R.; Fromm, Erika (1983). The clinical use of self-hypnosis in hypnotherapy: Tapping the functions of imagery and adaptive regression. International Journal of Clinical and Experimental Hypnosis, 31 (4), 243-255.

The authors present a new method of interweaving hetero-hypnotic psychotherapy and self-hypnosis. In the hetero-hypnotic sessions, the hypnotherapist acts as a dependable parent figure who is supporting and available when that is desirable, but who also encourages and fosters the patient's efforts to develop his/her inner resources and ability to function autonomously. Self-hypnosis is utilized for its rich idiosyncratic imagery. The hypnotherapist uses and elaborates on this rich, affect-loaded imagery. At other times the therapist takes a guiding role in producing therapeutic metaphors of positive valence. The patient uses and enlarges on these during self-hypnosis between the weekly therapeutic hours. In addition, the hypnotist may counteract any negative strong self-hypnotic images during hetero-hypnosis. Self-directed self-hypnosis allows patients to experience openness and receptivity to internal and unconscious processes against which they may defend themselves in the dyadic relationship with the therapist. For patients struggling with issues of control and for patients fighting their own regressive pull towards dependency, this mode of therapy appears to be particularly effective. The emphasis in this paper is on imagery and on the inter-twining of the two modalities, hetero-hypnosis and self-hypnosis.

1976

Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. International Journal of Clinical and Experimental Hypnosis, 24, 215-227.

The purpose of the study was to clarify the frequency of appearance of a hypnotically induced secondary personality and to compare Ss who were able to create secondary personalities in hypnosis to control Ss who could enter a deep hypnotic trance but were unable to produce secondary personalities.

The sample of 1,200 pupils was made up of the 3 highest grades of the secondary schools in the city of Oulu, Finland. A total of 450 students volunteered to participate in the study. All those who could enter a deep hypnotic state, 78 in all, were selected for closer study. 32 Ss were able and 43 were unable to create multiple personalities in hypnosis.

Ss also underwent a psychiatric interview. In addition, the identity of Ss was measured.

Both the psychiatric interview and identity examination gave parallel results to the effect that Ss capable of producing secondary personalities were clinically healthier and more adaptive than the group without secondary personalities. This finding is at variance with results presented in previous studies.

Procedure for induction of multiple personalities involved re-hypnotizing Ss, suggesting, "You go back to an age preceding your birth, you are somebody else, somewhere else," and repeating the suggestion many times. Other suggestions were given that everything was completely normal, nothing miraculous was happening. A multiple personality was counted if the S then said he was a human being, was able to give his name and where he lived, could describe the social environment and his own personality.

Lavoie, Germain; Sabourin, Michel; Ally, Gilles; Langlois, Jacques (1976). Hypnotizability as a function of adaptive regression among chronic psychotic patients. International Journal of Clinical and Experimental Hypnosis, 24, 238-257.

The Rorschach and the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) were administered to a sample of 56 chronic psychotic patients, mainly schizophrenics (N = 48). Verbatim transcriptions of tape-recorded Rorschach protocols were scored according to the Holt system (Holt et al., 1963), which provides an index of adaptive regression. Experimental procedures were conducted single blind. With one exception, all the patients high on SHSS:A were among those obtaining a higher adaptive regression index, while 50% of those obtaining higher adaptive regression index were high on SHSS:A. A systematic investigation of ego functions was proposed for a better understanding of this asymmetry, although the results already gave ostensible positive support to the Gill and Brenman (1959) theory, and to the theory of ego autonomy.

Levin, L. A.; Harrison, R. H. (1976). Hypnosis and regression in the service of the ego. International Journal of Clinical and Experimental Hypnosis, 24, 400-418.

28 highly hypnotizable female Ss were selected to test the hypothesis that hypnosis is characterized by regression in the service of the ego (adaptive regression). 2 tasks, producing a hypnotic dream and telling a TAT story, were administered individually under hypnotic and normal waking conditions. Scoring for adaptive regression yielded 2 factors, one for the regressive aspects of the fantasies produced, the other for cognitive mastery of those fantasies. An increase in primary process thinking was found in hypnosis, particularly in the hypnotic dream. There was a relationship between S's capacity for adaptive regression and the amount of adaptive regression found in hypnosis. Although facilitating regression from secondary to more primary process thinking, hypnosis does not inherently provide mechanisms by which primary process manifestations can be utilized adaptively by the ego. Such mechanisms are ego functions which tend to be amplified by hypnosis only in Ss who demonstrate good capacity for adaptive regression.

1973

Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)

Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703

## NOTES

2:

This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

1970

Shor, Ronald E. (1970). The three-factor theory of hypnosis as applied to the book-reading fantasy and to the concept of suggestion. International Journal of Clinical and Experimental Hypnosis, 18, 89-98. Maintained that many of the conflicting viewpoints in theories of hypnosis parallel the descriptive complexity of the phenomena. A 3-factor theory of hypnosis is surveyed in which hypnotic depth is conceived as a complex of 3 separate but complementary processes or dimensions. The theory is used to illuminate the book-reading fantasy and the concept of suggestion. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Meares, Ainslie (1968). Hypnotherapy without the phenomena of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 211-214.

A clear distinction must be drawn between the phenomena of hypnosis and the hypnotic state itself. Hypnosis is a state of mind characterized by regression to atavistic mental functioning. The phenomena are produced as a result of this regression. The production of phenomena in either the induction or the therapeutic process is generally undesirable. Hypnosis may be used for reduction of anxiety or as a therapeutic experience without the production of any hypnotic phenomena. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Raginsky, Bernard B. (1967). Rapid regression to the oral and anal levels through sensory hypnoplasty. International Journal of Clinical and Experimental Hypnosis, 15 (1), 19-30.

THE MAJORITY OF PATIENTS TREATED THROUGH SENSORY HYPNOPLASTY BY THE USE OF SUITABLY TREATED MODELING CLAY TENDS TO REGRESS WITH STRIKING RAPIDITY TO THE ORAL AND ANAL STAGES OF THEIR DEVELOPMENT. 2 SENSORY HYPNOPLASTY SESSIONS ARE REPORTED VERBATIM AS TAKEN FROM THE TAPE-RECORDINGS OF THESE SESSIONS. 1 DEALS WITH REGRESSION TO THE ORAL LEVEL IN A MALE AND THE OTHER DEALS WITH REGRESSION TO THE ANAL LEVEL OF DEVELOPMENT IN A FEMALE. THE PSYCHODYNAMICS INVOLVED IN THIS PROCEDURE ARE DISCUSSED BRIEFLY. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Schneck, Jerome M. (1960). Comment on a theory of hypnosis. International Journal of Clinical and Experimental Hypnosis, 8 (4), 231-236.

(Author's Summary) I presented, in previous reports, a holistic, biological theory of hypnosis which emphasized the core element in the nature of hypnosis, to which other theoretical propositions appear to serve as embellishments and secondary detail, valid as the various observations may be. The proposed theory states, "The hypnotic state, in terms of its basic ingredient, is that condition represented by the most primitive form of psychophysiological awareness of individual-environmental differentiation attainable among living organisms." An explanation of the theory, its ramifications, and the ontogenetic and phylogenetic implications have been disclosed elsewhere. Meares regarded the theoretical proposal as too complex, with clarity obscured. A review of the material tends to affirm the opposite, I believe. Meares presents his own ideas regarding the nature of hypnosis as a regression to the archaic mental function of suggestion. Suggestion is recognized as verbal and non-verbal. The ontogenetic and phylogenetic features of this concept are included among other ramifications of his discussion. I have offered the opinion that Meares' ideas about hypnosis do not contradict my theory. On the contrary, his experience is quite consistent with the theoretical concepts I have offered, and his understanding of the nature of hypnosis fits in quite easily with my own. His stress on archaic mental function is not, however, as far reaching as the proposals I have made, but it does constitute one proper aspect of the broader spectrum of hypnosis. Of this there is a definite core as outlined. Secondarily, there are manifold, complex, superimposed ingredients and embellishments with psychological, physiological, and sociological determinants.

1957

Schneck, Jerome M. (1957). Hypnoanalytic observations on the psychopathology of fainting. Journal of Clinical and Experimental Hypnosis, 5 (4), 167-171. (Abstracted in Psychological Abstracts 62: 3 II 67S)

Varieties of fainting have been described as hysterical syncope, vasodepressor syncope, and carotid sinus reactions, among others. Fainting has been linked in general with personality problems, emotional instability, and immaturity. It has been called a mechanism for blocking of ego functions in its role of primitive defense against overwhelming stimuli. The present paper gives in greater detail the specific dynamics in a patient with fainting episodes. A crucial event incorporating major dynamic ingredients was an operative procedure in childhood. The psychological impact of this trauma was revived during a spontaneous hypnotic regression. The personality matrix significant for this patient in relation to the fainting episodes consisted of passive, masochistic submission to a dominant, highly influential mother whose pressure was felt by the patient as pervasive and stifling. Circumstances associated psychologically with this feeling apparently triggered the fainting reactions. As he matured through the years and cast off increasingly this type of maternal influence, the tendency toward fainting reactions diminished" (p. 170).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the induction of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 5 (2), 82-98.

## NOTES

1:  
The hypnotic state has four attributes: "an effect of emotional stabilization, a retrogression to an infantile psychological functioning, suggestibility, and transmissibility of the hypnotic relationship" (p. 82). "SUGGESTIBILITY is a special motivation to accept, incorporate within one's self, and execute direct or implicit propositions, which is equivalent to the motivation of a child to accept, assimilate and carry out the propositions of its parents" (p. 84). The authors propose that verbal and non-verbal suggestions are incorporated during the course of education, lasting years and thus becoming in effect

post-hypnotic suggestions. "The person will have in the future a special responsiveness, that may be more or less pronounced according to the circumstances, for those data (coming from books, movies, conversations, etc.) which agree with his emotionally-incorporated post-hypnotic suggestions" (p. 85). If while in an auto-hypnotic condition he comes in contact with someone "who appears to be the embodiment of the convictions or prejudices that on being stimulated started the process of emotional activation that led to the development of the hypnotic state, there may be a transformation of the auto-hypnotic condition into an interpersonal hypnotic relationship" (p. 86).

According to the authors, this theory can explain post-hypnotic (negative) sequellae. It also accomodates explanations of both Natural or Direct Orientation inductions and Indirect Orientation inductons, and explains phenomena such as patients entering hypnosis rather automatically while awaiting the appearance of Mesmer in his waiting room.

"To conclude, we will stress that the psychological mechanism of hypnotic induction is exactly the same in everyday life and in the experimental environment. The apparent differences like [sic] in the behavior of the subject in the hypnotic state, and are due to the motivation that arises from the circumstances and to the convictions, capacities, psychological maturity, and degree of retrogression of the individual" (p. 96).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the nature of hypnotic phenomena. Journal of Clinical and Experimental Hypnosis, 5 (2), 67-76.

## NOTES

1:

The authors write about the place of the hypnotic state in general psychology: "the study of the psychological mechanisms that make the appearance of the phenomenon possible, which need not be different from the normal and current psychological mechanisms in everyday life\_" (p. 67). They classify hypnotic phenomena into three groups:

"I. Phenomena which are a function of the state of psychological retrogression (hypnotic depth), appearing in spontaneously [sic] or when proposed by the operator.

II. Phenomena which appear without any specific suggestion, as a side issue of other suggestions, capable of originating emotional states in the subject.

III. Phenomena which are independent of all suggestion, being a constituent part of the hypnotic state itself, in its 'positive' or 'negative' forms" (p. 68).

Using this framework, the authors describe several aspects of hypnosis: catalepsy, anesthesia, retrogression, the taking of a role, negativism and resistance, visceral changes, emotional stabilization, psychotherapeutic benefits (indirect). They observe that direct suggestions are often not necessary for therapeutic benefit, and give as an example the tendency for less bleeding when dentists suggest that patients will not feel less pain.

"For the elucidation of this point, the authors carried out an experiment in a dental clinic, taking six easily hypnotizable subjects in whom dental extractions were to be performed. They were given only the suggestions that they would feel the doctor working, but not experience pain ... that they would pay no attention to it ... or even if they felt a little pain, this would not trouble them and they would bear it perfectly ... Nothing was said about the loss of blood. As a result, in all the cases the loss of blood was slight, practically insignificant, though technically difficult extractions of roots were included" (p. 74).

"The explanation of hypnotic phenomena as natural and normal consequences of the hypnotic emotional state, and of the state of psychological retrogression, eliminates the supposed mysterious powers of suggestion. Suggestion is thus relegated to the modest role of a litmus paper which reveals the psychological functioning of the individual in an experimental environment. On the other hand, in everyday-life hypnosis, in the principal hypnotic relationships of parents with their children, of teachers with their pupils, etc. (11), suggestibility plays an important role in education or re-education" (p. 75).

1956

Guze, Henry (1956). Kline, M. V. A scientific report on 'The Search for Bridey Murphy' [Review]. Journal of Clinical and Experimental Hypnosis, 4 (3), 127-130.

This book contains chapters by scientists who are critical of the book on Bridey Murphy written by Morey Bernstein. The critiques discuss the following phenomena in relationship to reports of 'past lives':

idea of traveling back in time, glossolalia or speaking in tongues, ecstatic states in certain religious sects, physiological regression (Babinski), medical hypnosis, mysticism, reincarnation theories in religion and philosophy, miraculous healing, and supernatural phenomena.

Kline describes a parallel case described by Professor Flourney (Helene Smith) in which previous life on other planets and use of Martian language was claimed.

Solovey, Galina; Milechnin, Anatol (1956). Concerning a theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 4, 37-45.

#### NOTES

1:

"The essential attributes of the hypnotic condition may be understood to derive from three sources:

- 1) The hypnotic emotional state per se
- 2) The resultant motivation of the 'subject' to comply with the desires of the 'operator' (reinstating a child-like responsiveness).
- 3) The RETROGRESSION to an earlier form of psychological functioning that takes place under a hypnotic state of growing intensity" (p. 43).

"Although the retrogressive process is a general response to emotions and probably exists in some toxic states as well, it has a remarkable feature in the hypnotic state: THE COALESCENCE OF MOTIVATION AND RETROGRESSION, which exists in hypnotized people, permits a peculiar manipulation of the retrogressed condition. The peculiar responsiveness of the subject may be tested and molded by means of propositions which act as suggestions. In this manner, the so-called HYPNOTIC PHENOMENA are elicited" (p. 44).

Solovey de Milechnin, Galina (1956). Concerning the attributes of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 4 (3), 115-126.

#### NOTES

1:

This article considers four areas:

- "1) The essential attributes of the 'positive' ('empathetically-induced') hypnotic emotional state.
- 2) The distinguishing features of the 'negative' ('authoritarian') hypnotic emotional state.
- 3) 'Suggestibility' -- as a motivation to comply with the desires of the person who has induced either of these emotional conditions.
- 4) The retrogression to a more primitive form of psychological functioning: a phenomenon which is common to all sufficiently intense emotions.
- 5) 'Hyper-suggestibility' -- as the peculiar behavior that is made by the coalescence of the motivation to comply with the operator's desires and the retrogressed condition" (p. 115).

Wagner, Frederik F. (1956). A dynamic approach to the problem of hypnotic induction. Journal of Clinical and Experimental Hypnosis, 4, 93-98.

#### NOTES

1:

The author discusses inductions in a broadly psychoanalytic framework. "In keeping with the terminology, hypnotic induction can be defined as a deliberate attempt to disturb the psychic [sic] equilibrium leading to a reorganization on a regressed level. This process takes place in a structured,

goal directed interpersonal relationship to which the subject attempts to adjust himself. The outcome of this potential conflict determines whether or not the subject can be hypnotized. Hypnotizability can consequently be formulated as the degree of motivation to regress in this transference-like relationships with the hypnotist" (p. 95). He suggests that the thoughts and fantasies about the hypnotist are very important, as well as the kind of physical setting the subject would prefer, to assure adequate induction.

"With such information at hand the hypnotist would probably, to a greater extent, be able to phrase his suggestions in the patient's lingo and assume a proper attitude according to the patient's needs. By avoiding suggestions which stir up fearful fantasies about hypnosis he will try to keep anxiety at a minimum. By assuming a protective parental role he may stimulate infantile needs and give the patient a maximum of security; anxiety, and consequently, defenses may thereby be minimized. He may even assume an authoritarian role, deliberately stirring up anxiety, if he expects the subject will respond with regression" (p. 97).

1955

Rosen, Harold (1955). Regression hypnotherapeutically induced as an emergency measure in a suicidally depressed patient. Journal of Clinical and Experimental Hypnosis, 3 (1), 58-70.

#### NOTES

1:

After cautioning that regressive techniques are only to be undertaken by very experienced therapists, the author states in conclusion, "However, if the therapist have a thorough grounding in dynamic psychiatry, he may as an emergency measure, through the adjunctive use of hypnotic techniques of the type described in this article even induce regressive phenomena in the potentially homicidal or suicidal psychotic patient, in order that they may be integrated and utilized in the service of the ego, at first by blotting out ego-boundaries between patient and therapist, so that later on during the course of the therapeutic process these self-same ego-boundaries may be re-defined and re-constituted on a more mature emotional level and with much healthier personality functioning.

de Milechnin, Galina Solovey (1955). Concerning the concept of hypnotic depth. Journal of Clinical and Experimental Hypnosis, 3 (4), 243-252.

#### NOTES

1:

The author discusses the following:

A. "Two basic aspects of hypnosis which do not appear to be in a direct relationship to the traditional concept of hypnotic depth:

1) the effectivity of suggestions

2) the psycho-therapeutic (or psycho-prophylactic effects of hypnosis)" (p. 243)

B. "the problem about the nature of the hypnotic state and its levels of 'depth,' ...

1. What is the hypnotic state?

2. What is the meaning of the traditional levels of 'hypnotic depth?'" (p. 244).

C. Three hypothetically 'pure' points of reference:

1. The waking state as it is seen in the normally developed adult person in our present civilization.

2. The 'deep' somnambulistic hypnotic state in its most characteristic aspect.

3. The still 'deeper' stuporous hypnotic state" (p. 245).

D. "three periods from the continuum of a normal person's maturation:

1. The hypothetically 'psychologically completely mature' adult

2. The normal child from 1 to 3 years of age

### 3. The newborn infant" (p. 247).

She relates C and D. "If we compare: 1) the 'somnambulistic' hypnotic behavior of the adult to the normal behavior of the child from 1 to 3 years of age approximately, and 2) the 'stuporous' behavior under hypnosis to the normal behavior of the neonate, their general mechanisms appear to coincide" (p. 250). "The so-called light and medium stages of hypnosis can be understood as an overlapping of the 'adult' and 'childhood' psychological mechanisms with a progressive reduction of the former and increase of the latter, in a reversion of the progress of normal psychological maturation" (p. 250).

"Summary.

1. The hypnotic state is a special emotional state, the intensity of which varies similarly to that of other emotional states and cannot be graduated.

2. The traditional 'hypnotic depth' is nothing else than a 'retrogression' to a more primitive psychological mechanism. This retrogression constitutes one of the basic phenomena of the hypnotic state" (p. 251).

### 1953

Conn, Jacob H. (1953). Hypnosynthesis III. Hypnotherapy of chronic war neuroses with a discussion of the value of abreaction, regression and revivication. Journal of Clinical and Experimental Hypnosis, 1, 29-43. (Abstracted in Psychological Abstracts, 53: 6687)

Author's Summary - Three examples of chronic war neuroses which were successfully treated by hypnotherapy are presented. The clinical material would seem to indicate that the patient in the trance state is greatly influenced by the attitude and goal of the therapist and tends to produce the type of material which is expected of him. The protocols reveal that the hypnotized patient responds to a permissive, calm, attitude with relatively little emotional display, and by talking about harrowing war experiences in a matter-of-fact manner.

It would appear that merely to recall the traumatic experience without a personalized, constructive, emotional relation to a supporting, understanding therapist is of little therapeutic value. The crux of the therapeutic problem in every approach, whether it be narcosynthesis, narco-analysis, hypnosynthesis, or the hypnotic intensification of an emotion is to bring about the integration of unbearable experiences which previously had been dissociated and obliterated from memory or which automatically reappear and disrupt smooth ego functioning.

It is postulated that the hypnotic trance state provides a unifying, integrating inter-personal experience which is of value in the treatment of chronic war neuroses.

Schneck, Jerome M. (1953). A theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 16-17.

"This theory of hypnosis proposes then, that the hypnotic state, in terms of its basic ingredient, is that condition represented by the most primitive form of psychophysiological awareness of individual-environmental differentiation attainable among living organisms. The capacity to move in the direction of functioning which would bring to the fore this most primitive state to the greatest degree possible probably varies among different organisms. The retention of some degree of such capacity probably obtains among all biological forms" (p. 17).

## REHABILITATION

### 2000

Breuer, William C. (2000). Physically focused hypnotherapy: A practical guide to medical hypnosis in everyday practice. Louisville, KY: SPRF Inc., 1810 Sils Avenue, Louisville, Kentucky, 40205.

**NOTES****Table of Contents****Contents and topics:****Psychoneuroimmunology.****Harnessing the placebo effect to your advantage.****Individualizing the Therapeutic Pathology-based Model.****Patient Clues.****Physical Approaches and Factors in Inducting Hypnosis.****History, Screening and Assessment.****Pre-induction and Induction Methods.****Hypnotherapy Equipment, Accessories, Mechanical Aids.****The Hypnotherapy Station or Treatment Room in a clinic.****Daily Abuse of suggestion/Covert Suggestion.****Treating common Physical conditions.****Litigation Stress Syndrome****Addressing Body Mind & Spirit in a medical setting.****Techniques Connecting to the physical.****Useful Forms For Patient/Client Documentation.****A listing of physical conditions & situations that are addressed:****ADD/ADHD****Allergy****Amenorrhea/Dysmennorhea****Anosmia****Asthma****Blood sugar disorders****Enuresis****Epilepsy****Essential Hypertension****Cancer/Oncology****Chronic Fatigue Syndrome****Chronic Fibromyalgia****Claustrophobia****Dysphonia****Gagging****Headaches (Tension/Migraine/Histamine)****Indigestion/GERD from Hiatus****Hernia****Immune System Disorders****Insomnia****I.B.S./Chronic Disease****Litigation Stress Syndrome****Menstrual Disorders****Memory Problems****Multiple Sclerosis****Muscle Spasm or Tension****Nausea & vomiting****Needlephobia****Neurodermatitis****Panic Attacks**

Pain Management  
Shy Bladder  
Sleeping Disorders  
Stress  
Tinnitus  
TMJ Cranio-facial Pain Syndrome  
Torticollis  
Vertigo

1999

Mauer, Magaly H.; Burnett, Kent F.; Ouellette, Elizabeth Anne; Ironson, Gail H.; Dandes, Herbert M. (1999). Medical hypnosis and orthopedic hand surgery: Pain perception, postoperative recovery, and therapeutic comfort. International Journal of Clinical and Experimental Hypnosis, 47 (2), 144-161.

Orthopedic hand-surgery patients experience severe pain postoperatively, yet they must engage in painful exercises and wound care shortly after surgery; poor patient involvement may result in loss of function and disfigurement. This study tested a hypnosis intervention designed to reduce pain perception, enhance postsurgical recovery, and facilitate rehabilitation. Using a quasi-experimental research design, 60 hand-surgery patients received either usual treatment or usual treatment plus hypnosis. After controlling for gender, race, and pretreatment scores, the hypnosis group showed significant decreases in measures of perceived pain intensity (PPI), perceived pain affect (PPA), and state anxiety. In addition, physician's ratings of progress were significantly higher for experimental subjects than for controls, and the experimental group had significantly fewer medical complications. These results suggest that a brief hypnosis intervention may reduce orthopedic hand-surgery patients' postsurgical PPI, PPA, and anxiety; decrease comorbidity; and enhance postsurgical recovery and rehabilitation. However, true experimental research designs with other types of controls must be employed to determine more fully the contribution of hypnosis to improved outcome.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that

can help take away pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

**1997**

Sapp, Marty; Farrell, Walter C. Jr.; Johnson, James Jr.; Kirby, Renee Sartin; Pumphrey, Khyana K. (1997). Hypnosis: Applications for rehabilitation counselors. Journal of Applied Rehabilitation Counseling, 28 (2), 43-49.

This article describes how the rehabilitation counselor can employ hypnosis. Hypnosis can be employed as a useful tool in working with individuals who have experienced a disability. It can be used to reduce anxiety and stress related to returning to work; it can help clients learn to reduce stress and to modify themselves, even if their environments cannot change; and it can be used to increase the self-esteem of clients with disabilities.

**1996**

Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning treatment with hypnosis. Evidence regarding efficacy of hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

**1993**

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger

number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

1992

Alden, Phyllis (1992, October). The use of hypnosis in the management of pain on a spinal injuries unit. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

[Author is at Royal National Hospital in England]

To have a spinal injury is one of the most devastating injuries that can happen, reducing you suddenly from a normal life to situation of loss of control, helplessness, etc.- -with nothing to say about what is being done in surgery or other aspects of treatment.

In UK patients come for acute care and rehabilitation all in one place. Over 2 1/2 yrs we had 46 referrals. 7 refused hypnosis ("witch doctoring"). 30 benefitted.

Appel, Philip R. (1992). Performance enhancement in physical medicine and rehabilitation. American Journal of Clinical Hypnosis, 35, 11-19.

Performance enhancement or mental practice is the "symbolic rehearsal of a physical activity without any gross muscular movements" to facilitate skill acquisition and to increase performance in the production of that physical activity. Performance- enhancement interventions have been well known in the area of sports psychology and medicine. However, clinical applications in physical medicine and rehabilitation have not flourished to the same extent, though the demand for improved physical performance and the acquisition of various motor skills are as important. In this paper I will describe how hypnosis can potentiate mental practice, present a model of mental practice to enhance performance, and describe how to help patients access an ideal performance state of consciousness.

Weber, Alison Mary (1992, October). Hypnosis with brain-injured patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

1:

INTRODUCTION. The purpose of this paper is a consciousness-raising one. The use of hypnosis with brain-injured people has been relatively neglected with respect to its potential benefit for the patients themselves and also for increasing our knowledge of hypnotic ability. Occasional reports concerning the use of hypnosis with brain-injured patients have appeared (e.g., Crasilneck & Hall, 1970 & 1975; LaClave & Blix, 1989; Manganiello, 1986). However, clinicians often assume that such patients are not able to utilise hypnotic techniques. This assumption appears to derive from three mistaken beliefs: 1. The belief that hypnotic trance ability requires an intact brain. Actually, a fully intact brain is not necessary for entering a hypnotic trance. 2. The belief that brain damage means that the person is totally mentally incompetent, a "vegetable." In reality there are degrees of brain injury that vary from coma or vegetative state through to relatively mild changes in ability that may not be immediately obvious yet significantly impact the person's functioning in everyday life. 3. The belief that brain-damaged individuals are identical with respect to their type of cognitive disability. In actual fact, the cognitive and other effects of brain injury vary according to location within the brain's functional systems.

CASE EXAMPLES. All four cases are people of apparently average or better ability prior to injury as judged from their educational and vocational history. Before discussing these examples, I should point out that the basic induction technique used has generally been the same one that I use with non-brain-

injured people. This technique is one that encourages mental and physical relaxation and a mental attitude of passivity and dissociation (Weber, 1981). All were taught to use self-hypnosis as a means of making the benefits available as needed. No hypnotizability scales were used and the issue of using such scales with brain-injured people will be commented upon later.

CASE 1 is a 39 year-old man who fell hitting his head and sustaining a closed head injury. The main effect of that injury was severe slowing of information processing speed. This problem is a common one in cases of closed head injury, is thought to be related to diffuse microscopic axonal injury, and causes experiences of mental fatigue, overload, and stress. The mentally passive, relaxed dissociative state offered through hypnosis helps prevent and reduce these overload problems. In this patient's case, his use of the hypnotic technique enabled him to increase his daily activity level from one of mainly sleeping and resting in darkened rooms to one that included a live-in relationship with his former wife and engaging in hobbies and social activities.

CASE 2 is a 22 year-old man who had a malformation of blood vessels in the left temporoparietal area of the brain. He was undergoing surgical correction of this malformation when it hemorrhaged and he was left aphasic and paralysed down the right side of his body. At the time of hypnotic treatment, he had switched to using his left hand for writing, was able to walk though with a limp, and was able to converse intelligibly but with some underlying language difficulties. He particularly complained of right-sided pain and general numbness of his body. Post-hypnotic suggestions about his body feeling normal and solid together with imagery related to swimming were effective in eliminating the pain and reducing the numbness so that he experienced his body as comfortable and "more normal." He was so comfortable physically that he started earning a living by mowing lawns.

CASE 3 is a 40 year-old man who fell at work, sustained a closed head injury, was unconscious for 1.5 hours, and had no recall of events for 2.5 days after injury. Five years later he still showed a very disorganised and fragmented memory that was suggestive of frontal system dysfunction. He was also able to recall very little of his life prior to injury and this lack of autobiographical memory was very disconcerting to himself and to his family. He was able to benefit from post-hypnotic suggestions concerning his ability to form associations to pictures in the family photo album. These associations were then used as a basis for his making a written autobiographical outline to which he could refer as needed.

CASE 4 is a 47 year-old man who was showing subtle changes in personality over about 10 years, suddenly had a severe grand mal seizure during which he stopped breathing, and was found to have a large meningioma arising from the falx and extending bilaterally over the top of his brain. There was also evidence of recent hemorrhage within the tumor. The tumor was surgically removed but due to its previous pressure on the brain and to possible anoxia when he stopped breathing, he was left with cognitive problems of poor planning and organizing, slowed mental processing, and memory problems secondary to these other problems. He also showed emotional lability and disinhibition and physical problems that at first involved paralysis but later improved to leg weakness and spasticity and arm weakness and incoordination. Hypnotic techniques helped this patient in several ways: (a) Mental relaxation and dissociation resulted in better emotional control and some relief of the painful knotting of his leg muscles. (b) Age regression was successful in improving his manual coordination for the purpose of accordion playing, an activity of great emotional significance to this patient and his wife. During regression to age 15 years, he reported a twitching of his arm muscles (also observed by the therapist), a feeling that his arms and hands could "move more freely and flexibly as if a resistant force had been removed," and a feeling like "electrical recharging and reconnecting." His accordion playing noticeably improved from about 15 percent to about 90 percent competency and he was able to play again from memory for the first time since his surgery. (c) Post-hypnotic suggestions about his brain connecting to his leg muscles and these muscles working smoothly resulted in his being able to walk around the block without cramping for the first time since his surgery and a few weeks later he was able to walk for four or five hours in the mall instead of being limited to 30 minutes. (d) The

patient also reported generally improved well-being as "having more energy, like another veil has been taken off so that things look sharper and more in focus."

These four cases represent just a few of the ways brain-injured people can be helped by hypnosis. There are sure to be more ways just as there are for people with normal brains. In order to adapt hypnotic techniques to the needs of brain-injured people, some understanding of their particular brain-function problems is important.

**HYPNOSIS AND BRAIN FUNCTION.** Because of time limits only a very quick and simplified overview of brain function can be provided but it should serve to give a general "feel" for a neuropsychological orientation to hypnosis with brain-injured people. It is based partly on Luria's model of brain function (Luria, 1973).

**1. Arousal and Some Physiological Functions.** These functions involve the brain stem. Arousal functions include sleeping/waking, consciousness/coma, and level of general alertness. The brainstem also controls various physiological functions such as breathing, heart rate, and blood pressure.

**2. Knowledge.** Information from auditory, visual, and somesthetic path ways generally goes to the posterior half of the brain on the side opposite that of stimulus presentation. There are three levels of processing: (a) Primary processing involving initial registration and consciousness of stimuli; (b) Secondary perceptual elaboration of sensory input so that it makes perceptual sense. For example, in the visual modality the lines and colors registered in the primary area are organized into cohesive shapes in the secondary area. (c) Tertiary processing involves integration of input across modalities, for example, the ability to associate an auditorally heard word with the visually presented object it symbolizes.

**3. Action.** This aspect of brain function includes both motor and mental performance and embraces physical action, speech, and active thinking such as generating ideas and problem-solving. It is located in the anterior half of the brain and also has three levels: (a) Primary control of discrete muscle groups which mainly involves one side of the brain controlling the opposite side of the body; (b) Secondary areas underlie the ability to organize discrete muscle groups into a sequence such as brushing one's teeth; (c) Tertiary executive areas which are critical to the generation of purposive behaviour, goals, plans, self-monitoring and adaptation.

**4. Lateralization of Cognitive Function.** The two cerebral hemispheres are usually specialized in the following way for most right-handed people: (a) Left Hemisphere language; symbolic, analytic, sequential type thinking; and probably motor planning. (b) Right Hemisphere visuospatial, melodic, holistic, synthetic thinking.

**5. Information Processing Speed.** This aspect of mental function seems to depend on the axonal connections that form the white matter of the brain. Speed of information processing refers to the amount of information that can be attended to and processed within a given amount of time and includes both external stimuli like sights and sounds and also internal ones such as thoughts and memories.

**6. New Learning and Memory.** This feature of our abilities involves moving initially registered information into long term storage. The hippocampus is particularly critical in this process. The thalamus is thought to play a part in cued recall. General strategies for encoding and retrieval are probably influenced by frontal system function.

**7. Emotional and Motivational Function.** These functions appear to relate to the limbic system and basomedial frontal areas of the brain. These areas influence emotional intensity, emotional and social self-control, and motivation to initiate action.

**8. Attention.** Attentional function involves several brain areas. The brainstem is responsible for general arousal and level of alertness, white matter connections contribute to how much information a person can attend to and process within a given time, and the frontal cortex and its connections direct and organize the purposive focus of attention.

Any given mental or behavioral ability depends upon a complex system of brain areas and levels of processing. The effects of brain injury vary according to location and severity of damage, and also the person's pre-injury condition and life style.

Obviously, the induction and suggestion techniques of hypnosis need to be based upon a neuropsychological understanding of the patient's cognitive strengths and weaknesses. These factors also need to be considered when interpreting hypnotizability scores on standard scales and perhaps special scales need to be devised for work with such patients. The most common cognitive deficits encountered when working with brain-injured patients in the post-acute rehabilitation programs with which I have been associated have been those impacting memory, information processing speed, and executive function. Specific comments about these areas of deficit as they impact hypnosis are now given

**Memory.** A person with a defective ability to store new information (related to hippocampal dysfunction) is going to do well with post-hypnotic suggestions of amnesia but is probably not going to recall the items even when the amnesic suggestion is removed or if positive post-hypnotic suggestions are given. The patient with thalamic based memory difficulty may later be able to recall information but only provided a cuing structure of prompts or reminders is built into the suggestions. Whether or not memory ability in those with organically based memory deficit can be enhanced through hypnosis remains unclear. The patient presented earlier whose autobiographical memory difficulties were helped by hypnotic techniques did not have a storage problem per se but rather a very disorganized memory that probably stemmed from frontal type problems.

**Information Processing Speed.** Reduced speed of processing may necessitate giving instructions more slowly or in such a repetitive and redundant manner that some gaps in the patient's registering what is said don't matter. It is also important for such patients not to mentally overload them. For example, case #1 benefitted from the mental relaxation/ dissociation aspects of hypnosis and was able to mentally block out noise to which he was hypersensitive but the mental effort involved in such blocking-out resulted in his feeling mentally exhausted and stressed.

**Executive Function.** Patients with frontal system dysfunction show some deficits that are similar to hypnotic phenomena in people without brain dysfunction. From this point of view, they may be the most promising group to work with to clarify the nature of hypnosis. The hypnotized patient's responses in conforming to suggestion resemble the stimulus-bound and concrete focus and time-distortive aspects of frontally dysfunctional behavior and perhaps also its confabulatory tendencies. The frontal patient may also show a dissociation between knowing and doing that is similar to the split reported by some people in being aware of and observing their own behavior at the same time as they respond to hypnotic suggestions. There is a sense in which the hypnotist acts as the "frontal lobes" of the hypnotized person, giving direction to their perceptions and behavior. The similarities between the two groups certainly invite further exploration and research.

#### References:

Crasilneck, H. B., & Hall, J. A. (1970) The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. *International Journal of Clinical and Experimental Hypnosis*, 18, 145-159.

Crasilneck, H. B., & Hall, J. A. (1975) Hypnosis in neurological problems and rehabilitation. In H. B. Crasilneck & J. A. Hall, *Clinical hypnosis: Principles and applications*. New York: Grune & Stratton, pp. 203-222.

LaClave, L. J., & Blix, S. (1989) Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. *International Journal of Clinical and Experimental Hypnosis*, 37, 6-14.

Luria, A. R. (1973) *The Working Brain: An introduction to neuropsychology*. Harmondsworth (UK): Penguin.

Manganiello, A. J. Hypnotherapy in the rehabilitation of a stroke victim. A case study. *American Journal of Clinical Hypnosis*, 29, 64-68.

Weber, A.M. (1981) Facilitation of dissociation in relation to mental relaxation and hypnosis. *Australian Journal of Clinical and Experimental Hypnosis*, 9, 101-102.

Hinshaw, Karin E. (1991). The effects of mental practice on motor skill performance: Critical evaluation and meta-analysis. *Imagination, Cognition and Personality*, 11, 3-35.

21 studies that met the criteria of having both an adequate control and a mental practice alone group were included. The 44 separate effect sizes resulted in an overall average effect size of .68 (SD = .11) indicating that there is a significant benefit to performance of using mental practice over no practice. A series of General Linear Models revealed that the use of "internal" imagery produced a larger average effect size than the use of "external" imagery, and that mental practice sessions of less than one minute or between ten and fifteen minutes in length produced a larger average effect size than sessions of three to five minutes in length. These findings suggest the complexity of the relationship between variables that influence mental practice.

1991

Sapp, Marty (1991, August). The effects of hypnosis in reducing anxiety and stress in adults with neurogenic impairment. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

A repeated measures design was utilized to investigate the effects of hypnosis in reducing anxiety and stress in 16 adults with neurogenic impairment. Seven sessions were used to measure the efficacy of hypnosis. Session one was used to obtain a baseline level of anxiety and stress and to initiate hypnosis. Sessions three and six were used to obtain repeated measures of these emotions. Sessions two, four, and five were the treatment sessions. Session seven was used to conduct a four week follow-up on the effects of hypnosis. Levels of anxiety were measured by the State-Trait Anxiety Inventory, while stress was measured by the State-Trait Anger Expression Inventory. The results indicated a statistically significant decrease in anxiety and stress. Hypnosis also significantly increased levels of self-esteem. Finally, follow-up data demonstrated that the treatment gains were maintained.

NOTES

1:

Hypnotizability was not related to treatment outcome. The average Barber Susceptibility Scale score was 3, which indicates that the subjects were fairly low in hypnotizability level.

1990

Appel, Philip R. (1990). Clinical applications of hypnosis in the physical medicine and rehabilitation setting: Three case reports. *American Journal of Clinical Hypnosis*, 33 (2), 85-93.

Hypnosis is useful in the rehabilitation setting to help patients master skills, to increase their sense of self-efficacy and self-esteem and, in general, to facilitate and accelerate their rehabilitation program. I used hypnosis with three patients where patient behaviors and beliefs were interfering with the rehabilitation treatment goals set by the patient and the health care team. Collectively, these cases demonstrate the use of hypnotic techniques in diagnosing and treating problems with patient compliance and assisting patients to gain greater benefit from their rehabilitation regimen. - Journal Abstract

1990

Macfarlane, F. K.; Duckworth, M. (1990). The use of hypnosis in speech therapy: A questionnaire study. *British Journal of Disorders of Communication*, 25, 227-246.

## NOTES

1:

Reports results of a survey of speech therapists trained in the use of hypnosis. The majority use hypnosis in treating voice or fluency disorders to achieve relaxation and encourage self-esteem and also in the treatment of acquired neurological disorders. Respondents were less inclined to use hypnosis with children. Problems encountered in the use of hypnosis are explored.

Holroyd, Jean; Hill, Alexis (1989). Pushing the limits of recovery: Hypnotherapy with a stroke patient. International Journal of Clinical and Experimental Hypnosis, 37, 189-191.

Hypnotherapy was used to assist recovery of left arm function following stroke in a 66-year-old woman. Treatment protocol is described, and results are discussed in terms of how hypnosis may facilitate voluntary motor movement. Recent literature on cortical changes in hypnosis and motor improvement during hypnosis is discussed in relation to the present results.

The patient was 6 months post-stroke and physicians did not expect much additional improvement. She improved despite the fact that she measured as a low hypnotizable on the Stanford Scale, Form C. However, she appeared very absorbed in the hypnotic imagery, and she was highly motivated and exhibited much hope or positive expectation. Also, the author notes that "remarkable improvements in brain functioning have been reported through the use of sophisticated behavioral technology," (p. 124), as in the use of EEG biofeedback to treat untractable seizures (Sterman & Lanz, 1981).

In rehabilitation cases, hypnotic dissociation may enhance pain control during the performance of exercises; more vivid hypnotic imagery may facilitate mental rehearsal of movements; attitudes may be reframed using hypnotic suggestion; and focusing attention on bodily sensations may be enhanced with hypnosis. Hypnosis also may improve expectancy, reduce anxiety, increase hope, provide general relaxation (reducing involuntary spasticity), increase cerebral blood flow, or in other ways promote healing.

Research by Pajntar, Roskar, & Vodovnik (1985) has demonstrated improved motor response during hypnosis for patients with hemiparesis. They attributed EMG changes under hypnosis "to a facilitory influx from supraspinal motor centers. They hypothesized that new motor units of paretic muscles were being activated or that there was an increased recruitment of the motor units already active, and they suggested that relaxation of the spastic antagonist muscle permits the paralyzed muscle to move" (p. 125).

## 1988

Borgens, Richard B. (1988). Stimulation of neuronal regeneration and development by steady electrical fields. In Waxman, S. G. (Ed.), Functional recovery in neurological disease (47, pp. 547-564). New York: Raven Press.

At the end of the review, author notes that a combination of electromyography and computer modeling of agonist-antagonist, flexor-extensor muscle contraction patterns in the functional body parts of hemiparetic patients, artificially imposed on the paralyzed portions of the body using repetitive electrical stimulation to effect more normal movement, sometimes leads to functional recovery. Such recovery has been observed in some chronic cases of paralysis associated with head injury, stroke, and cerebral palsy. These clinical observations challenge the way we should view paralysis in general. Perhaps there are many redundant pathways in the CNS that will support certain kinds of functional return in the absence of the original pathways destroyed by trauma. Perhaps CNS-associated paralysis is a problem, at least in part, of too much competing signal in spared pathways, not one of impoverished signal. Can use of these neuronal pathways be entrained or retrained? Is the return of function in patients who experience repetitive functional electrical stimulation due to a reorganization

within the CNS? These are exciting questions whose answers will possibly lead to our ability to further modify the plasticity of the brain and spinal cord.

[This would fit with the inhibition model of hypnosis, and with the high theta power findings during hypnosis, the implication being that hypnosis facilitates filtering out non-essential competing stimuli.]

Houge, Donald R.; Hunter, Robert E. (1988). The use of hypnosis in orthopaedic surgery. Contemporary Orthopaedics, 16, 65-68.

Some patients postpone or refuse indicated orthopaedic surgery because of fear or a medical contraindication to anesthesia. Clinical hypnosis previously has been used mainly as an adjunct to chemical anesthesia. However, hypnosis was shown to be entirely effective when used as the sole anesthesia in three of four orthopaedic cases. These four procedures included a radical head resection, the removal of a sideplate and Richard's screw from the hip, and two cases of arthroscopic knee surgery. The preparation required for the surgery and the experiences of the patients during these procedures are described, and the kinds of patients most likely to benefit from the use of hypnosis in orthopaedic surgery are reviewed.

1983

Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal

1980

Erickson, Milton H. (1980). Innovative hypnotherapy. New York, NY: Irvington Publishers, Inc..

## NOTES

1:

This fourth volume of four has 9 sections, with chapters as follows. I. General Introductions to Hypnotherapy

1. The applications of hypnosis to psychiatry
2. Hypnosis in medicine
3. Hypnotic techniques for the therapy of acute psychiatric disturbances in war
4. Hypnotic psychotherapy
5. Hypnosis in general practice
6. Hypnosis: Its renaissance as a treatment modality
7. Hypnotic approaches to therapy II. Indirect Approaches to Symptom Resolution
8. A clinical note on indirect hypnotic therapy
9. The hypnotic and hypnotherapeutic investigation and determination of symptom- function
10. Experimental hypnotherapy in Tourette's Disease
11. Hypnotherapy: The patient's right to both success and failure
12. Successful hypnotherapy that failed

13. Visual hallucination as a rehearsal for symptom resolution III. Utilization Approaches to Hypnotherapy
14. Special techniques of brief hypnotherapy
15. Pediatric hypnotherapy
16. The utilization of patient behavior in the hypnotherapy of obesity: Three case reports
17. Hypnosis and examination panics
18. Experiential knowledge of hypnotic phenomena employed for hypnotherapy
19. The burden of responsibility in effective psychotherapy
20. The use of symptoms as an integral part of hypnotherapy
21. Hypnosis in obstetrics: Utilizing experimental learnings
22. A therapeutic double bind utilizing resistance
23. Utilizing the patient's own personality and ideas: 'Doing it his own way' IV. Hypnotherapeutic Approaches to Pain
24. An introduction to the study and application of hypnosis for pain control
25. The therapy of a psychosomatic headache
26. Migraine headache in a resistant patient
27. Hypnosis in painful terminal illness
28. The interspersal hypnotic technique for symptom correction and pain control
29. Hypnotic training for transforming the experience of chronic pain V. Hypnotherapeutic Approaches in Rehabilitation
30. Hypnotically oriented psychotherapy in organic brain damage
31. Hypnotically oriented psychotherapy in organic brain disease: An addendum
32. An application of implications of Lashley's researches in a circumscribed arteriosclerotic brain condition
33. Experimental hypnotherapy in a speech problem: A case report
34. Provocation as a means of motivating recovery from a cerebrovascular accident VI. Hypnotherapy with Psychotics
35. Hypnotherapy with a psychotic
36. Symptom prescription for expanding the psychotic's world view VII. Sexual Problems Hypnotherapeutic Reorientations to Emotional Satisfaction
37. Posthypnotic suggestion for ejaculatio praecox
38. Psychotherapy achieved by a reversal of the neurotic processes in a case of ejaculatio praecox
39. Modesty: An authoritarian approach permitting reconditioning via fantasy
40. Sterility: A therapeutic reorientation to sexual satisfaction
41. The abortion issue: Facilitating unconscious dynamics permitting real choice
42. Impotence: Facilitating unconscious reconditioning
43. Latent homosexuality: Identity exploration in hypnosis
44. Vasectomy: A detailed illustration of a therapeutic reorientation VII. Self-Exploration in the Hypnotic State: Facilitating Unconscious Processes and Objective Thinking
45. Pseudo-orientation in time as a hypnotherapeutic procedure
46. Facilitating objective thinking and new frames of reference with pseudo-orientation in time
47. Self-exploration in the hypnotic state
48. Self-exploration in trance following a surprise handshake induction
49. The reorganization of unconscious thinking without conscious awareness: Two cases of intellectualized resistance against hypnosis IX. Facilitating New Identity
50. Psychological shocks and creative moments in psychotherapy
51. Facilitating a new cosmetic frame of reference
52. The ugly duckling: Transforming the self-image
53. A shocking breakout of a mother domination

54. Shock and surprise facilitating a new self-image
55. Correcting an inferiority complex
56. The hypnotherapy of two psychosomatic dental problems
57. The identification of a secure reality
58. The hypnotic corrective emotional experience
59. The February man: Facilitating new identity in hypnotherapy

Hart, R. (1980). The influence of a taped hypnotic induction treatment procedure on the recovery of surgery patients. International Journal of Clinical and Experimental Hypnosis, 28, 324-331.

A study of 40 open heart surgery patients assigned to 1 of 2 equal size treatment groups sought to evaluate the efficacy and utility of a tape-recorded hypnotic induction procedure that preoperatively prepared patients for surgery. The dependent variables included daily blood pressure measurements and postsurgical outcome data pertaining to postoperative units of blood required, state/trait anxiety, and locus of control dimensions. Results of the study tended to provide some support for the tape-recorded hypnotic induction procedure in lessening state anxiety and in promoting a more self-directed attitude toward surgical recovery.

Pajntar, Marjan; Jeglic, Anton; Stefancic, Martin; Vodovnik, Lojze (1980). Improvements of motor response by means of hypnosis in patients with peripheral nerve lesions. International Journal of Clinical and Experimental Hypnosis, 28 (1), 16-26.

In order to accelerate rehabilitation of patients with peripheral nerve lesions, hypnosis was employed to encourage them voluntarily to move those muscles with weak re-innervation and to achieve the best possible activity of the affected muscle groups. By measuring muscle force and endurance and by observing the electrical activity of the affected muscles, it was found that the activity of the affected muscles was much better while patients were in hypnosis than when they were in the waking state. The patients were able to contract even paretic muscles having only weak re-innervation with such strength, that clinically perceptible contraction of the muscles and movement of paretic extremities occurred. Such early and improved activation is very important for prevention of much permanent damage.

1970

Crasilneck, Harold B.; Hall, James A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. International Journal of Clinical and Experimental Hypnosis, 18 (3), 152-158.

Hypnotherapy has been found of value in rehabilitation of many patients experiencing difficulty in the usual procedures which follow cerebrovascular or traumatic brain injury. 3 cases are reported to illustrate the approach taken. Of 25 similar cases seen over a 9-year period, 4 were unresponsive to hypnosis. Although an increase in motivation for recovery seemed to be the major change elicited by hypnotherapy, other theoretical possibilities are mentioned. Hypnosis may be a useful way of approaching motivational problems in rehabilitating patients who manifest negativism toward conventional treatment.

1968

Nuland, William (1968). The use of hypnotherapy in the treatment of the postmyocardial infarction invalid. International Journal of Clinical and Experimental Hypnosis, 16 (3), 139-150.

**DEALS WITH THE PSYCHOLOGICAL ASPECTS OF CONVALESCENCE AND REHABILITATION OF PATIENTS FOLLOWING CORONARY INFARCTION. THE FOCUS IS ON THE SITUATIONAL FACTORS WHICH THE PATIENT ENCOUNTERS DURING CONVALESCENCE THAT SERVE TO PROLONG AND REINFORCE THE INVALIDISM. IT IS CONCERNED ESPECIALLY WITH THE VALUE OF HYPNOTHERAPY AS COMPARED WITH OTHER PSYCHOTHERAPEUTIC METHODS IN TREATING THESE CASES. THE ANXIETY AND EMOTIONAL STRESS WHICH CAN BE RELIEVED THROUGH THE USE OF HYPNOSIS IS DIRECTED PRIMARILY TOWARD REDUCING EMOTIONAL TURMOIL WHICH RESULTS FROM THE CORONARY ATTACK WITH THE CONSEQUENT FEAR OF PHYSICAL ACTIVITY AND OF SUDDEN DEATH. SPECIFICALLY, HYPNOSIS IS USED EFFECTIVELY IN REASSURANCE, REEDUCATION, DESENSITIZATION, GUIDANCE, AND OTHER DIRECT SUPPORT TECHNIQUES IN ACCORDANCE WITH THE PATIENT'S SYMPTOMS AND NEEDS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1953**

**Kirkner, Frank J.; Dorcus, R. M.; Seacat, Gloria (1953). Hypnotic motivation of vocalization in an organic motor aphasic case. Journal of Clinical and Experimental Hypnosis, 1 (3), 47-49.**

**Authors' Summary - A 41 year old male patient with a history of mutism on an organic basis for a year and a half failed to respond to speech retraining efforts. Comprehension was good and motivation poor. With the aid of hypnosis, he was induced to vocalize. Following vocalization, oral speech retraining progress was steady. Retraining efforts in writing met with repeated failure.**

**The patient had suffered a cerebral vascular accident, attributed at the time to an embolism.**

## **RELATIONSHIPS**

**1994**

**Adrian, Cheri (1994, August). Sexual feelings in hypnosis: Managing therapeutic boundaries in hypnotic work. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

**Therapist countertransference has been little addressed in discussions of hypnosis, particularly the sexual feelings that may be evoked in therapists in the hypnotic context. These are some of the most disturbing and problematic feelings therapists can experience toward patients, and they are little addressed in training. This issue is important both because of our increasing efforts to prevent sexual boundary violations in therapy and because therapist sexual feelings, like other countertransference feelings, can have important clinical meanings that are often avoided or ignored. This discussion defines the nature and purposes of patient-therapist boundaries. It describes the various dynamics which have been identified in therapists who become confused about sexual boundaries and proceed to mismanage them. It then elaborates the ways that using hypnosis may create special vulnerability for the therapist, not only to experiencing sexual feelings toward patients, but to becoming confused about their meaning and relevance to treatment. The discussion focuses attention on the origins and clinical significance of therapist sexual feelings, and acknowledges that such feelings may serve both awareness enhancing and defensive functions in the therapeutic process. A clinical case example illustrates various kinds of sexual feelings therapists may experience, the many meanings therapist sexual feelings may have, the various discomforts they typically generate, and the impulses to avoidance or acting out**

they may provoke. Further discussion addresses both clinically appropriate and inappropriate ways of managing boundaries in the presence of sexual arousal, and of utilizing sexual feelings as a means of deepening clinical understanding and of directing treatment. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

Grant, Carolyn (1994). The Computer-Assisted Hypnosis Scale: Standardization and norming of a computer-administered measure of hypnotic ability (Dissertation). Dissertation Abstracts International, 54 (10/B), 5387.

"In a counterbalanced, within-subjects, repeated measures design, 130 subjects were administered both the Computerized Assisted Hypnosis Scale (CAHS) and the Stanford Hypnotic Susceptibility Scale, Form C (Stanford Hypnotic Susceptibility Scale: C). For each hypnotic procedure responsiveness was assessed along three dimensions: behavioral (CAHS, Stanford Hypnotic Susceptibility Scale: C), subjective depth (Field Depth Inventory), and relational involvement (Archaic Involvement Measure). Subjects also completed a Stanford Hypnotic Susceptibility Scale: C self scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the Stanford Hypnotic Susceptibility Scale: C across the three dimensions assessed. Results are discussed in terms of the theory and practice of clinical assessment, noting directions for future research" (p. 5387).

1993

Diamond, Michael J. (1993). A question of filling in the gaps: A master class commentary. [Comment/Discussion] .

This is a response to a clinical vignette described as follows: "'Judy,' a professional writer, asked me to use hypnosis to help her 'fill in the gaps' in her knowledge of certain periods in her youth. As she was so keen, getting her into trance was relatively easy. I asked a few questions and she answered in a slurred voice. Then, after a few minutes, she said that she wasn't hypnotized. 'Not to worry, Judy, I'll bring you out' was my reply. With that, a flood of memories, absolutely unstoppable for approximately 4 minutes, came pouring forth. Thereafter, I asked questions relating to an earlier period in her life. Again came the statement that she wasn't hypnotized, and I replied as before. With that, a second flood of unstoppable experiences poured forth. later, on coming out of trance, she was able to recall all she'd spoken about while in trance and often punctuated her recollections with 'I didn't know that they punished me at y by locking me in the cupboard under the stairs!'" (p. 261).

1992

Diamond, Michael Jay (1992). The interactive nature of hypnotic experience. [Lecture] UCLA Hypnosis Seminar.

NOTES

1:

Relationship is the area where healing occurs. The basis of the relationship in hypnosis is poorly understood scientifically.

1983 - Freud's hypnosis of a conversion hysteric led him to postulate a "mysterious element" (i.e. sexualized transference) which occurred when the patient threw her arms around his neck. He, and many other analysts, abandoned hypnosis - which was nevertheless continued by some doctors who were working with war neurosis or PTSD.

Freud equated hypnosis to direct suggestion and saw it as a definitive therapy. Today clinicians think it is the context of using hypnosis (not just the hypnotic state) that makes hypnosis useful for psychotherapy.

Example: A borderline patient may become more comfortable, not just because of an altered state (which they may be experiencing all the time anyway) but because of the [containing, comforting] context.

Shor's paper on the "Three dimensions of hypnotic depth" is a useful way to begin a conceptualization of the relationship between hypnotist and patient. See also Michael Diamond (1984), It takes two to tango. *AJCH*, 27, 3-13. The most capable hypnotherapists are able to enter empathic bonds with patients, comforting the patient. This represents the "courage to not understand" (Reik). The therapist should be comfortable with the disintegrated material that is evoked, helping the patient to metabolize the material.

Orne's (1962) concept of "folie a deux" is a precursor to the concept of projective identification: the patient projects onto the therapist an idea that the therapist is all-powerful, and the therapist must buy into that (while at the same time realizing it is a fantasy - using it for the purposes of therapy, but not believing it.)

Spinhoven, Philip; van Wijk, Jorrit (1992). Hypnotic age regression in an experimental and clinical context. *American Journal of Clinical Hypnosis*, 35, 40-46.

Investigated role of a clinical context in the experience of hypnotic age regression. 25 patients experienced hypnotic age regression in an experimental and clinical context in counterbalanced order. Patients obtained significantly lower scores for experimental age regression than for clinical age regression, in particular when the experimental assessment preceded the clinical assessment of age regression. Moreover, scores for clinical and experimental age regression were only significantly and positively correlated when the clinical assessment of age regression preceded the experience assessment. These findings give a tentative indication that more patients are able to experience clinical age regression than can be predicted from their responses to an experimental suggestion for hypnotic age regression where almost no opportunities for patient contact or maximizing of hypnotic responsiveness are provided.

1991

Lynn, Steven Jay; Weekes, J. R.; Neufeld, U.; Ziuney, O.; Brentar, J.; Weiss, F. (1991). Interpersonal climate and hypnotizability level: Effects of hypnotic performance, rapport, and archaic involvement. *Journal of Personality and Social Psychology*, 60, 737-743.

Designed to extend research by McConkey and Sheehan, they tested 24 hypnotizable and 21 un hypnotizable Ss in high interpersonal/high rapport (including education about misconceptions about hypnosis, eye contact, and friendly self-disclosure) and low interpersonal/low rapport testing contexts. Overall, hypnotizable Ss were more responsive to hypnosis, rated the hypnotist more positively, and experienced greater involuntariness and archaic involvement than un hypnotizable subjects. However, results provide support for the hypothesis that low hypnotizable Ss are particularly sensitive to variations of the hypnotist's interpersonal behavior. Only low hypnotizable Ss' objective and subjective hypnotic performance on the SHSS, Form C, was enhanced by hypnotist behavior designed to optimize rapport. Hypnotizable Ss' behavior was stable across testing contexts.

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), *Theories of hypnosis: Current models and perspectives* (pp. 520-541). New York: Guilford Press.

## NOTES

1:

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model.... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

## NOTES

1:

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each cell is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're both going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Coe, William C. (1990). Are the Conclusions Valid? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 237-239.

## NOTES

1:

The authors confounded variables, e.g. hypnotic susceptibility and monetary incentive (in Study IV), and Study IV was different from the other 3 studies, so that any differences/similarities between these studies can't be attributed to susceptibility level, degree of incentive, or interaction between them.

A simulator design would clarify why 50% of Ss in Study IV did not resist and lost \$100; also, postexperimental interviews focusing on Ss' reasons for resisting or not resisting would be helpful. Did nonresisters actually believe that they would receive \$100 for resisting?

The Subject population was not homogeneous in occupation, and students are financially poorer than others--which would affect incentive strength. Were those who resisted the ones who could use the money the most?

Small sample sizes obviating statistical tests is a problem. Coe nevertheless evaluates 4 variables in terms of the 'power' of their effects on hypnosis: 1. Susceptibility level. Studies I, II, and III all show correlations between hypnotizability and compliance with resistance, suggesting that high hypnotizables are not as susceptible to resistance manipulation; however across studies, highs in one study seem to comply at the same rate as lows in another study, and as many as 50% of high hypnotizables in the strong incentive (\$100) study were able to resist suggestions. 2. View of the Hypnotist. Coe states that one can't evaluate the question with the data given. One would need an experimental condition that would also create a negative view of the hypnotist, as all samples tended to view the hypnotist positively. 3. View of Resistance Instructor. Again, one would need a research design that separates the effects of hypnotic susceptibility from effects of Ss' views of the resistance instructor. "Nevertheless, Study IV suggests that for high susceptibles the view of the resistance instructor has little effect. Three resisters viewed him as positive, whereas the other three viewed him as negative; further, nearly all of the nonresisters viewed him as neutral" (p. 238). 4. Degree of

Incentive. This too was confounded with susceptibility level, as "the higher value was only offered to the very high susceptibles in study IV. Half of them took it, half did not" (pp. 238-239).

Coe also remarks that "the expectational effects on subjects of being in an experiment have not been addressed adequately. It is possible that the experimental paradigm as currently presented is incapable of providing an unambiguous answer to the question of coercion. In naturalistic settings subjects may react quite differently than they do when they know they are participating in an experiment" (p. 239).

**Hoencamp, Erik (1990). Sexual abuse and the abuse of hypnosis in the therapeutic relationship. International Journal of Clinical and Experimental Hypnosis, 38, 283-297.**

In the Netherlands, individuals charged with rape may be prosecuted only in instances in which the suspect could have known that the victim was unconscious or in a state of powerlessness. Hypnosis might be looked upon as a method by which an unscrupulous person could sustain such a state of powerlessness in a victim. As an expert witness, the present author participated in a court case against a lay hypnotist who was accused of abusing 9 women. The methods and strategy used by the lay hypnotist are presented as well as are the diverse reactions of the women involved in the case. Feelings of nonvolition appear to have been a relevant factor in the coercion, especially in women who demonstrated hypnotic phenomena such as arm levitation, catalepsy, etc. The basis for sexual coercion was established only after the interpersonal relationship had been redefined as a therapeutic relationship. Introduction within the pseudotherapeutic relationship of a sexual rationale for the presented complaints helped to provide a framework for actual sexual acts to occur. With certain individual patients, the introduction of hypnosis enhanced the subjective experience of nonvolition and with it the vulnerability for abuse. It may be hypothesized that patients with a tendency for external attribution and high hypnotizability are specifically at risk for this kind of abuse when hypnosis is used in the context of a therapeutic relationship.

**Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.**

## NOTES

1:

This chapter is a reprint of an article published in the *American Journal of Clinical Hypnosis* in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

**Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 225-236.**

Five experimental approaches to the resolution of the century-old Bernheim/Janet dispute and the issue of involuntariness or coercion (the classical suggestion effect) are presented. Four experiments are reported that follow one of the approaches: attempts to induce hypnotic subjects to resist suggestions made in trance. The design is one in which a "resistance instructor" proposes a reward for the resisting subject. Tentative inferences from the results are that the classical suggestion effect is found with a small number of subjects; for a larger number of subjects there is no classical suggestion

effect, and for many subjects the outcome is equivocal. Relational factors in the hypnotic dyad influence responsiveness in the subject, the effect being least for those whose susceptibility is high.

## NOTES

1:

**Study I.** Used a \$5 bribe, two suggestions, and Ss resisted average of 1.2 suggestions. 9 Ss resisted both, 5 resisted neither, and 6 (30% of Ss) resisted one test suggestion. Resistance appeared to be related to impression of the resistance instructor, suggesting that "neither the monetary bribe nor hypnotic responsiveness was as important to the resistance/compliance dimension as relational factors" (p. 228).  
**Study II.** Used only one suggestion, obtained quantitative ratings of the two instructors, and offered \$10 to resist one suggestion. 19/40 Ss (48%) resisted. The authors wondered whether the difference in impressions of hypnotist and resistance instructor might be due to very limited contact with the latter.  
**Study III.** Ss were greeted by the resistance instructor, who accompanied Ss to the experimental room, discussed the information under 'Establishing Rapport Prior to the Initial Induction' in the SHSS:A and a condensed version of the introduction to the Eye Closure item (10 minutes). Then he left, the hypnotist entered and administered the same 9-item SHSS:A that had been employed in Studies I and II. The resistance instructor then entered and offered \$10 if the S could successfully resist the hypnotist's suggestion on the second try [of an item just passed successfully]. The hypnotist re-entered, repeated SHSS:A instructions for the selected item, brought S out of hypnosis, and then a different experimenter did a structured interview--to give impressions of the hypnotist and the resistance instructor on an Adjective Rating Form (ARF), to estimate depth of their trance on 0-8 scale before and after contact by the resistance instructor. Then S was paid if he/she had resisted. The resisters obtained a mean on the SHSS:A of 4.8 compared to 7.9 for the nonresisters, significant t-test for the difference ( $p < .01$ ).

**Table 1 A Comparison of Interview Ratings of Hypnotists and Resistance Instructors in Two Studies**  
Hypnotist\* Resistance Instructors\*\* Study N Pos Neutral Neg Pos Neutral Neg II 39 69% 31% 0% 5% 72% 23% III 30 63% 20% 17% 43% 27% 30%

\* Chi square (2) = 7.71,  $p < .05$  \*\* Chi square (2) = 24.3,  $p < .001$  [N.B. Figures were rounded to nearest whole number by JH.]

The correlation between hypnotizability on the SHSS and Resistance may be found in Table 2, along with the percentage of nonresisters in each of the four studies.

## Table 2

Correlation SHSS Percent Study N R-NR/SHSS Mean Nonresisters I 20 -.37\* 7.1 40 II 40 -.44 6.2 52 III 30 -.54 5.8 33 IV 12 -- 8.8 50

\* Not significant

In Table 1 it may be seen that perceptions of the hypnotist and the resistance instructor changed from Study II to Study III. "In summary, the manipulation of time spent in the second experiment increased the proportion of resisters and dramatically improved the impression of the resistance instructor. Nevertheless, the evidence suggests that the hypnotist continued to be perceived positively and, according to our best measure, was still perceived more positively than the resistance instructor" (p. 232).

Because they suspected that the impressions of the experimenters might be confounded by hypnotic susceptibility, and \$10 might not be enough reward for behavior shaping, the experimenters designed Study IV. Study IV used 12 high hypnotizables (scoring 11 or 12 on Harvard Scale; with a group mean of 8.8 on a 9-item version of the SHSS:A). The same procedure as in Study II was carried out, except that four experimenters other than the authors were the hypnotists and resistance instructors; each experimenter worked with three subjects. The incentive was \$100 to resist.

The results of this procedure were that six Subjects resisted and six complied; each group scored 8.8 on the SHSS:A 9-item scale; resisters had 5.7 mean and nonresisters 5.1 mean depth (nonsignificant).

Resisters and compliers were exactly alike in their perceptions of the hypnotist, but appeared different in perception of the resistance instructor (and the N was too small to test statistically).

Table 3

Rated Impression of Hypnotist (%)

Resisters	Nonresisters	Overall	Study	Pos	Neut	Neg	Pos	Neut	Neg	Pos	Neut	Neg	II	68	32	0	76	24	0	73	28
0	III	55	25	20	80	10	10	63	20	17	IV	83	17	0	83	17	0	83	17	0	

Table 4

Rated Impression of Resistance Instructor (%)

Resisters	Nonresisters	Overall	Study	Pos	Neut	Neg	Pos	Neut	Neg	Pos	Neut	Neg	II	11	79	11	0	67	33	5	73
23	III	45	30	25	40	20	40	43	27	30	IV	50	0	50	17	83	0	33	42	25	

Table 5

Adjective Rating Form Means*	Study	Resisters	Nonresisters	Overall	Resisters	Nonresisters	Overall	II												
46	38	42	65	74	68	III	54	40	50	61	63	62	IV	41	54	48	50	65	57	

\*Lower score is more favorable.

Summary of the Four Studies:

The data in Tables 2-5 reflect a critical finding. "There was a sharp drop in the number of Ss who did not resist, or it may be clearer to put it as a sharp increase in the number of resisters. The change is nearly 40%.

"However, when only responsive subjects were used as in Study IV, the percentage of nonresisters is much the same as it was in Study II" (p. 233). The authors conclude that "relational factors are more important in hypnotic behavior among less responsive subjects" (p. 233).

"The data contrasting resisters and nonresisters are somewhat confusing. There were more positive and negative impressions among subjects who resisted and more neutral impressions and no negative impressions among the nonresisters," (pp. 233-234) though the number of cases involved is quite small. Using the ratings, the nonresisters had a more favorable impression of the hypnotist than did the resisters, which is in accord with the interviewers' ratings.

"A striking finding is that nonresister Ss in Study IV had a less favorable impression of both hypnotist and resistance instructor ... a clear reversal from Study III for the hypnotist, not quite so clear for the resistance instructor" (p.234).

Levitt, Baker, & Fish draw the following inferences: "1. Hypnotic influence is truly coercive for a very small number of what Register & Kihlstrom (1986) have called the 'hypnotic virtuoso,' the most responsive individuals; for them, the classical suggestion effect is a reality; 2. Hypnotic influence, though perhaps not truly coercive, is manifestly strong for a somewhat larger group of highly responsive individuals; the classical suggestion effect may exist for them; 3. For many individuals who behave in accordance with hypnotic suggestions, the classical suggestion effect does not exist; 4. Relational factors in the hypnotic dyad influence hypnotic responsiveness. The influence is strongest among individuals of low-to-moderate hypnotic responsiveness; 5. The more positive the impression of the hypnotist, the greater will be his influence on the hypnotized individual; 6. A subject's impression of a hypnotist will tend to be favorable even though the sole interaction between the two is the induction of the trance; 7. Preliminary efforts to build rapport with the subject will tend to improve the already positive impression created by the hypnotist" (pp. 234-235).

Levitt, Eugene E.; Baker, Elgan L., Jr.; Fish, Ronald C. (1990). Some conditions of compliance and resistance among hypnotic subjects: A rejoinder to invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 246-249.

NOTES

1:

"We cannot see how Lynn can allege that in three of the studies there was no relationship between

resistance-nonresistance and perception of the hypnotist. The appropriate correlation coefficients are reported in Studies II and III.

"Coe's point about the confounding of incentive and susceptibility might be valid if we had no prior knowledge of the relationship between resistance and susceptibility. But we already knew that the most susceptible Ss were likely to be the nonresisters. In Study IV, we abandoned susceptibility as an independent variable and made it a sample descriptor. ... [However] we resonate to Coe's suggestion of simulators" (p. 247).

"In our first three studies, we reported no relationship between occupation and resistance, an admittedly crude but unobtrusive approach to the question of whether the most financially needy subjects were the resisters. We usually compared the students in the sample with the employed subjects. We did not report this lack of relationship in Study IV in which only three subjects were students. Two resisted, one did not.

We must accept responsibility for provoking Coe's question about the credibility of the financial incentive in Study IV, by poor reporting. In a postexperimental inquiry, one subject (a resister) was mildly suspicious of the offer. All other Ss found the resistance instructor credible" (pp. 247-248).

"Our own more recent research suggests that offering undergraduate students additional points toward the final class grade can yield more resisters than the money incentive in Study IV (Levitt, Baker, Hacker, Klion, Krause, Lytle, & Vanderwater- Piercy, 1990 in press)" (p. 248).

"We have suggested that the hypnotic phenomenon is apparently experienced differently among subjects, and the critical factors are thus also likely to vary from subject to subject. We would be quite willing to accept Bernheim's estimate that 17% are incapable of resisting hypnotic suggestions, as cited by Weitzenhoffer. We agree with Spiegel that the issue of the coercive potential of hypnosis is 'not really settled by mean differences across groups.' Measures of central tendency are apt to obscure the minority of Ss who may experience coercion in experiments with designs different from ours" (p. 248).

[The study referred to above is Levitt, E. E., Baker, E. L., Hacker, T., Klion, R., Krause, A. A., Lytle, R., & Vanderwater-Piercy, J. (1990 in press). Compliance and resistance in the hypnotic state: the effect of a social or an academic countermotivation. In R. van Dyck, P. Spinhoven, . J. W. van der Does, Y. R. van Rood, & W. De Moor (Eds.), *Hypnosis: Current theory, research, and practice.* Amsterdam: Free University Press.]

Lynn, Steven Jay (1990). Is hypnotic influence coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. *American Journal of Clinical Hypnosis*, 32 (4), 239-241.

## NOTES

1:

Unlike Levitt, Baker, & Fish (1990), Lynn, Rhue, & Weekes (Psychological Review, 1990 in press) concluded that nonvoluntary behaviors in hypnosis are similar to other spontaneous social behaviors (like conversational response to social stimuli). "Hypnotized subjects, like nonhypnotized subjects, act in terms of their aims, according to their point of view, and in relation to their interpretation of appropriate behavior and feelings" (p. 239).

"Research shows that hypnotizable subjects resist and even oppose suggestions as a function of their expectancies and perceptions about appropriate hypnotic behavior (Lynn, Nash, Rhue, Frauman, & Sweeney, 1984; Lynn, Snodgrass, Rhue, & Hardaway, 1987; Lynn, Weekes, Snodgrass, Abrams, Weiss, & Rhue, 1986; Spanos, Cobb, & Gorassini, 1985). In one study (Spanos et al., 1985), when subjects were informed that deeply hypnotized subjects were capable of becoming involved in suggestions and simultaneously resisting them, subjects resisted 95% of the suggestions. When subjects were told that deeply hypnotized subjects were incapable of resisting suggestions, they passed the majority of suggestions. Thus, knowledge about what constitutes appropriate hypnotic role behavior is a reliable determinant of resistance, apparently more reliable than the monetary lures used by Levitt et al." (P. 240).

These studies by Levitt et al. only used behavioral measures of resistance and hypnotizability, and Ss' perceptions of the resistance instructor and hypnotist. "The ratings of global perceptions are, however, no substitute for measures of subjects' perception of the relationship. ... The failure to measure important variables relevant to the central dimensions of concern--coercion, compliance, involuntariness, and relational factors--precludes meaningful interpretation of the nonresisters' motivation and behavior" (p. 240).

As Orne (1959) has suggested, we should not attribute behavior in the hypnosis context to something unique to hypnosis (such as coercive influence), because other kinds of social context also constrain behavior, e.g. psychotherapy and psychology experiments, with coercive features. Therefore, it seems important in the future to compare the responses of hypnotized subjects with those of subjects in waking-imagination and hypnosis-simulating conditions. In addition to looking at their behavior, it is important to examine their own perceptions of their actions, given the complexity of the social situation entailed in hypnosis.

"Finally, there are statistical grounds to be wary of the authors' conclusions. They assert that 'relational factors in the hypnotic dyad influence hypnotic responsiveness,' yet in three of the studies (I, II, and IV), subjects' ratings of the hypnotist failed to discriminate whether they resisted or responded to the suggestion" (p. 241). Even where Study III was compared with Study II, the difference in the percentage of Ss who resisted failed to reach statistical significance. "In fact, across all studies, differences in overall resistance rates were not documented by statistical tests--despite procedural variations and differing monetary incentives. So contrary to authors' assertion, relational factors in the hypnotic dyad generally had little bearing on resistance behavior. If anything, ratings of the resistance instructor had greater weight" (p. 241).

Mason, Albert A. (1990, January). A psychoanalyst looks at a hypnotist; or, where the elephant skinned boy took me. [Paper] Presented at the Psychoanalytic Center of California Scientific Meeting.

#### NOTES

1:

"The results of working with hypnotism experimentally in the production of anaesthesia for surgery, dentistry and obstetrics; in controlled series of treatments of asthmatics, skin disorders, and allergic manifestations; as well as its clinical use, have convinced me that it is a delusional state akin to mania which depends on the omnipotent denial of mental pain. The mania is stimulated by the hypnotized subject having phantasies of an omnipotent object that it fuses with and shares in the omnipotence. The hypnotist has similar unconscious phantasies about himself. Both subject and hypnotist projectively identify with each others' phantasies, and together produce phenomena like anaesthesia which can be likened to delusional states. In fact, true hallucinations can also be deliberately produced. "I believe that similar psychotic mechanisms can also occur in life between parents and children and in other relationships, and produce delusional states. These form a continuum from intractable narcissism on the one side, through Christian Science and the denial of evolution in the center, to frank folie a deux and transexualism on the other side. The therapeutic course of these states seems quite dissimilar from that of psychosis arising without the encouragement of external objects."

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

#### NOTES

1:

"A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these

investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

Smith, Alexander (1990). The hypnotic relationship and the holographic paradigm. American Journal of Clinical Hypnosis, 32 (3), 183-193.

The holographic paradigm is a recently constructed model of consciousness derived from neuropsychology and quantum physics. It views the processing of mental forms as occurring within the context of a part/whole relationship, where the identified part exists within the code of the whole. In this paper I have applied this paradigm to the hypnotic relationships, viewing the hypnotic process as an undulation of form and transitional states and proposing the holographic paradigm as a cutting edge to understand the curative processes in hypnosis.

## NOTES

1:

The proposed model represents a synthesis of neuropsychology and quantum physics.

"Based on precise neuroanatomical and neurophysiological processes, Pribram was able to account for a distribution of memory across the brain in its entirety. This occurs not within each neuron, but between them. Graded waves of neural potentials, rather than neural impulses, accounted for the structure of interference patterns (Pribram, 1982, p. 32)" (p. 185).

"Pribram then set out to answer these implied questions: What if there is no world of objects 'out there?' What if the world as we know it is a hologram itself? This search led him to David Bohm's work on the quantum theory.

"Bohm's (1980) world view, based upon study of light waves, consists of a primary reality that remains enfolded (within the frequency domain) and unfolded reality (the world of 'objects' and images). Appearances or objects and images are abstractions reconstructed from the frequency domain" (p. 185).

"A holographic interpretation resets the therapy relationship as a shared partnership: 'The sharing emphasizes the whole of which a partner holds a part, but the holographic paradigm makes it clear that each partner holds not just a part, but the whole because each part contains the whole' (Zinkin, 1987, p. 18)" (p. 186).

"Pribram (1983) seems to suggest, in a similar vein, that the unconscious and consciousness are 'opponent processes' of implicate and explicit orderings. Citing Matte Blanco's (1975) concept of unconscious processes as infinite sets (of opponent emotional states, for example), he considers the process relationship between conscious and unconscious: 'Conscious intelligence is manifest when circumscribed sets can be appropriately partitioned into reasonably unambiguous categories. When behavior is guided by sets of variables which cannot be readily partitioned--variables which show

opponent characteristics--we are apt to conclude that behavior is based on intention or that unconscious processes are at work' (Pribram, 1983, p. 10)" (p. 187).

"Tart's (1967) procedure of mutual hypnosis resulted in such an overlapping of experiential detail between participants that the startling, consensually derived reality became too much to tolerate" (p. 187).

"It is possible that during hypnosis, at some point the therapist and patient's organizations of consciousness in some way literally and not metaphorically cross into a wave length or plane in which there is neither reality nor fantasy but the enfolded- implicate-primary reality that is mutually shared? If so, how would these wave length resonances be determined? What would this mean for various psychopathological states?

"To answer these questions we may be catapulted into a whole rethinking of just what hypnosis is in connection to repression, to developmental capacities to form self and object images, and to the shifts to more advanced levels of adaptation. In particular, the hologram will become perhaps a means of exploring this challenging advance, if it can bring the hypnotic relationship more squarely into focus.

"The expansion and contraction of conscious awareness, as a holistic process between therapist and patient within the context of the trance, may provide us with more precise clues to understand altered states of consciousness, rather than the other way around" (p. 191).

Spiegel, David (1990). Theoretical and empirical resistance to hypnotic compliance. Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 243-245.

## NOTES

1:

Does hypnosis bypass the will, facilitate coercion? The hardest thing for trauma victims to do is to admit helplessness. Furthermore, it is interesting that these same dissociative phenomena seem to be elicited by traumatic experience, the stark imposition of involuntariness (Stutman & Bliss, 1985; Spiegel, Hunt, & Dondershine, 1988). What, then, are we to make of experiments that purport to show that hypnotizable and hypnotized individuals comply with hypnotic instructions irrationally? At some level this challenges our comfortable belief that we always act in our enlightened self-interest, unaffected by unwanted influence. If that can happen even once, our pride of self- ownership is reduced.

Taken as a whole, the studies show that high hypnotizables comply with hypnotic instructions, even in the face of resistance instructions, whereas low hypnotizables are less likely to, especially when conditions foster a relatively less negative view of the resistance instructor. As the authors note, subjects always viewed the hypnotist more positively than the resistance instructor, which in itself suggests the nonrational influence intrinsic to hypnosis. Free will is not abrogated, it is simply not exercised. The Ss are fundamentally choosing whether or not to comply. Half of the highs in Study IV resisted the hypnotic instruction. However, hypnotized individuals tend to narrow the focus of attention, thereby reducing their ability to consider alternatives such as the resistance instruction.

William James (1890) believed that all ideas were invitations to action. Why, then, do we not act on every idea we have, he pondered on a snowy morning while lying in bed. He observed that he would try to get himself to arise by picturing himself doing so. "Why, then, am I still in bed?" He realized that he was editing the primary idea, reflecting on how cold it was, how long it would take to light a fire, and how much time he had until his classes. In a state characterized by a narrowing of the focus of attention, we are less likely to edit the primary idea, and therefore more likely to act. In the experiments presented, the resistance instructor attempts to act as an external editor on the primary hypnotic instruction. Those capable of focusing attention sufficiently disattend to the editing and

comply. These studies show that, thankfully, hypnosis is less than automatic submission to instruction but, interestingly, more than simple conscious response to new information.

Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100.

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to- easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions. Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

Weitzenhoffer, Andre M. (1990). Are induced automatisms necessarily coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 245-246.

## NOTES

1:  
"For the sake of maintaining historical accuracy, I would like first to remark that the ability of hypnotized Ss to resist suggestions was probably never a central issue in the Nancy-Salpetriere controversy. The main quarrel was about other fundamental matters (Crocq, 1900; Barrucand, 1967). It also needs to be said that Pierre Janet should not be seen as representing the Salpetriere in the above controversy. Very little of his extensive writings reflect the ideas of Charcot with whom he was associated for only 4 years (1889- 1893) (Barrucand, 1967; Ellenberger, 1970). Lastly, let it be noted that the association of automatism with hypnotic behavior antedates Bernheim. Despine wrote about it at length as early as 1868, and Charcot (1882) clearly stated before Bernheim that automatic responses to suggestions were characteristic of induced somnambulism. This was at least one view they shared. Referring to the material quoted from my 1978 paper, the authors assert Bernheim's definition of automatism implies a subject responding to a suggestion qua suggestion is "unable to resist" it. But all the definition says is that the will does not directly enter into the production of automatisms. It does not say the will cannot effectively intrude at some point or other. This definition, quoted out of context, was part of a more extensive discussion of \_what the nature\_ of an automatism was for Bernheim. The discussion also went into details regarding \_the conditions\_ under which Bernheim understood automatisms can occur and hold sway. In this greater context, Bernheim (1888a, 1888b) viewed the occurrence of automatisms as normally subject to control by the ego processes responsible for volitional activities. He saw the degree to which a person's behavior can be controlled by automatisms initiated by suggestions to be a function of the extent to which certain ego processes become inactive, ineffective, or cooperatively permit the automatisms to occur. Bernheim recognized that both cognitive and relational factors played an important part in the latter case. Bernheim (1888a, 1888b) also stated that data he had collected showed subjects \_could\_ resist suggestions to varying degrees, with only 17%, who made up the class of somnambules, being \_totally incapable\_ of resisting" (pp. 245-246).  
"Stating the matter more concretely, I doubt many people would speak of an individual having been 'coerced' into producing a knee-jerk reflex under appropriate stimulation. Should the situation be any

different in the case of other reflexes and, more particularly, the reflex ideodynamic action presumed to underlay suggested acts (Weitzenhoffer 1978, 1989)? I do not think so. It seems to me that what the authors have really and directly examined in their article is the extent to which the classical suggestion effect can be countered by conscious, voluntary control" (p. 246).

1989

Baker, Elgan L.; Levitt, Eugene E. (1989). The hypnotic relationship: An investigation of compliance and resistance. International Journal of Clinical and Experimental Hypnosis, 37, 145-153.

: The purpose of this investigation was to assess the ability of hypnotic Ss to voluntarily resist a neutral suggestion when a monetary reward was offered for resistance. 19 of 40 Ss (47.5%) successfully resisted after money was offered by the "resistance instructor." The correlation between resistance/compliance and hypnotizability was -.44 (high hypnotizables were more likely to comply). Ss' impressions of the hypnotist tended to be positive; impressions of the resistance instructor tended to be neutral. There was a tendency for nonresistors to have a more positive view of the hypnotist but it is not as marked as was found in an earlier study (Levitt & Baker, 1983).

#### NOTES

1:

Twelve (75%) of the high hypnotizables did not resist; two (16.7%) of the low hypnotizable Ss did not resist.

In their discussion, they state that "these data support the conclusion that hypnotizability or talent accounts for a significant portion of the variance in determining compliance with suggestions during trance. ... [Further], this research may be conceptualized as examining the contributions of a trait variable (hypnotizability) as compared with a variety of situational or state variables (motivation, social perception, environmental contingencies) in determining compliance and suggestibility. Inherent in this model of research is the assumption that many observed hypnotic phenomena (such as suggestibility) are interactive in nature, representing the outcome of the interplay between trait and state variables and between historically determined and contemporary forces. Such a perspective is consistent with the emerging view of trance behavior and experience and validly parallels the phenomenology of experimental and clinical hypnosis which describe both consistency and variability in hypnotic responsiveness for a specific subject or patient across varying conditions and time" (p. 151).

"This study also serves to clarify the important role of positive social perception and a positive sense of alliance with the hypnotist as a correlate of compliance with suggestion. It is clear that Ss who complied despite inducements to resist reported a more positive perception of the hypnotist and a more gratifying sense of relatedness with him than did their counterparts who resisted in response to financial inducement. These data do not indicate whether the positive perceptions contributed to compliance, as transference theories of trance involvement would predict, or whether they were consolidated after the fact due to other variables such as management of potential cognitive dissonance. It does seem reasonable to conclude, however, that the relationship is influential in the process of suggestibility and compliance" (p. 151).

Fine, C. G. (1989). Treatment errors and iatrogenesis across therapeutic modalities in MPD and allied dissociative disorders. Dissociation, 2, 77-82.

Reviews basic transferences and countertransferences that can be monitored in the treatment of MPD and which can, if unchecked, lead to the creation of new alters. It appears that these phenomena rather

than treatment modalities per se provide the major impetus to iatrogenic increases in the complexity of MPD cases. Boundaries violations associated with nurturant transferences, angry transferences, and eroticized transferences are discussed, and boundary violations by the therapist associated with countertransference are elaborated.

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**Johnson, Blair; Eagly, Alice H. (1989). Effects of involvement on persuasion: A meta-analysis. Psychological Bulletin, 106 (2), 290-314.**

Defines involvement as a motivational state induced by an association between an activated attitude and the self-concept. Integration of the available research suggests that the effects of involvement on attitude change depended on the aspect of message recipients' self-concept that was activated to create involvement: (a) their enduring values (value-relevant involvement), (b) their ability to attain desirable outcomes (outcome-relevant involvement), or (c) the impression they make on others (impression-relevant involvement). Findings showed that (a) with value-relevant involvement, high- involvement subjects were less persuaded than low-involvement subjects;

**Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.**

Attempted to construct and validate a questionnaire measure of hypnotic- like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

**Nash, Michael R.; Spinler, Dwayne (1989). Hypnosis and transference: A measure of archaic involvement. International Journal of Clinical and Experimental Hypnosis, 37, 129-144.**

20 Likert-type items were derived directly from Shor's theoretical propositions concerning the occurrence of transference-like experiences among hypnotic Ss. In 3 separate experiments, this 20-item Archaic Involvement Measure (AIM) was administered to 452 Ss following termination of both group and individually administered hypnosis procedures. Results suggest that: (a) AIM is internally consistent, and is significantly correlated with hypnotizability; (b) among high hypnotizable Ss, AIM scores assess an important aspect of hypnotic experience which is relatively unrelated to behavioral response to hypnotic suggestions; (c) there is no change in AIM scores associated with the sex of the hypnotist or S; and (d) there are 3 clusters of AIM items; perceived power of the hypnotist, positive

emotional bond to the hypnotist, and fear of negative appraisal. Possible validation and clinical research applications of AIM are presented, along with a plea for further empirical examination of the relational dimensions of hypnosis.

## NOTES

1:

Relates these findings to 'countering' (Sheehan, P., *Countering preconceptions about hypnosis: An objective index of involvement with the hypnotist. Journal of Abnormal Psychology, 1971, 78, 299-322*). "Countering is the tendency of some highly hypnotizable Subjects to comply with the intent of the hypnotist, even when there are strong nonhypnotic influences (e.g., social influences, expectations derived from previous lectures, perceptual constraints) to perform otherwise. ... Sheehan and Dolby (1979) found that hypnotic Subjects' dreams about the hypnotist were different than nonhypnotic Subjects' dreams, by being more positive and more often containing themes of protection, care, and authority. Interestingly, these themes were especially evident in the dreams of hypnotic Subjects who countered" (p. 130).

The several experiments in this study investigate reliability, concurrent validity, and factor structure of the AIM. In their discussion, Nash and Spinler make the following points. As is the case with hypnotizability, AIM scores may have a bi-modal distribution, at least when administered in the same context as a hypnosis measure. It is possible that these two modes define qualitatively different kinds of involvement with the hypnotist. "For high hypnotizable Ss, behavioral response to hypnotic suggestions appeared unrelated to the extent of archaic involvement with the hypnotist across both Experiments 2 and 3. Considering only the overall correlation between AIM and hypnotic responsiveness, one might argue that both scales measure general behavioral compliance and conformity, and that this explains their degree of association. It may indeed be correct to associate AIM scores with an overall conformity to respond, but only among low hypnotizable Subjects. For high hypnotizable Subjects, behavioral compliance (task performance) was not associated with AIM scores. Just as Sheehan's (1971, 1980) 'countering' studies suggest, among high hypnotizable Ss there appears to be no clear-cut relationship between the ability to perform hypnotic tasks and the special, motivated commitment to the hypnotist evidenced in some Ss. The theory of Shor (1979) and the empirical work of Sheehan and Dolby (1979) strongly suggest that an intense involvement with the hypnotist (archaic involvement) is a distinctive feature of the hypnotizable S's experience. The present work corroborates Sheehan and Dolby's (1979) finding that, among high hypnotizable Ss, this involvement is not equivalent to overt response to the demands of standard test suggestions.

"Three findings further suggest that AIM scores assess an important aspect of the hypnotic S's experience which is relatively unrelated to behavioral task performance. First, AIM scores correlated significantly with a measure of subjective depth during hypnosis (Hypnotic Depth Inventory, Field, 1966). Second, the correlation between hypnotic depth and AIM scores was substantial for both low and high hypnotizable Ss. Thus, for high hypnotizable Ss, AIM scores were significantly correlated with hypnotic depth, even though they were unrelated to behavioral task performance. Finally, regression analysis suggested that AIM scores accounted for variance in hypnotic depth which was not explained by task performance scores. These findings, then, conform to Shor's proposition and Sheehan's (1971, 1980) later observations that archaic involvement with the hypnotist is a fundamental dimension of hypnotic experience which may not be directly related to the extent of behavioral response to hypnotic suggestions (see Shor, 1979, p. 119)."

"It is of some interest that the mean AIM score for low hypnotizable Ss was roughly equivalent to that of control Ss who had listened to a lecture prior to AIM administration. Only Ss who were exposed to hypnosis and who were behaviorally responsive to hypnotic suggestions evidenced elevated AIM scores" (pp. 140).

1989-1990

Spanos, Nicholas P.; Flynn, Deborah M.; Niles, Judy (1989-90). Rapport and cognitive skill training in the enhancement of hypnotizability. Imagination, Cognition and Personality, 9 (3), 245-262.

The role of interpersonal rapport in facilitating the enhancements in hypnotizability produced by cognitive skill training was examined in two experiments. In Experiment 1 low hypnotizable subjects either received skill training or passively oriented training that was designed to facilitate rapport with the trainer without teaching subjects how to generate the responses called for by test suggestions. Subjects in the two treatments reported equivalently high levels of rapport with their trainer, but only those given skill training attained large gains on two hypnotizability posttests. Subjects given passive training did not differ from untreated controls at posttesting. In Experiment 2 subjects received skill training under conditions designed to either heighten or minimize rapport with the trainer. Those in the high rapport condition showed large hypnotizability gains on both posttests, whereas those in the low rapport condition failed to differ from no treatment controls in the regard. Our findings indicate that high rapport is not sufficient for producing training-induced enhancements in hypnotizability. However, the absence of such rapport may interfere with subjects' learning and applying skills that can enhance hypnotizability.

1988

Diamond, Michael Jay (1988). Accessing archaic involvement: Toward unraveling the mystery of Erickson's hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 141-156.

The "essence" underlying Milton Erickson's unique style and uncommon technical maneuvers inheres in his uncommon skill at eliciting patients' archaic involvement. Archaic involvement, as characterized by perspectiveless overevaluation, is explicated and America's beloved tale, The Wonderful Wizard of Oz, is used to evoke further perspectives. The importance of such regressive object-representations are noted. Erickson's uncanny ability to access archaic involvement and thereby profoundly influence his client is analyzed in terms of his: (a) relationship style; (b) therapeutic "persona"; (c) theoretical orientation; and (d) specific micro-techniques and interventions. Clinical findings derived from a case transcript and videotaped work are employed throughout to substantiate the argument that Erickson fosters regressive interpersonal shifts. Implications of this skill are discussed, and further avenues for investigation are suggested.

NOTES

1:

Shor (1959, 1962, 1979) introduced the concepts of archaic involvement, trance (fading of the generalized reality orientation or altered state of consciousness) and nonconscious involvement (or fulfillment of the role of hypnotic subject, dissociated role taking) to account for experienced hypnotic depth. Shor (1979) defined archaic involvement as "'the extent to which at any given moment in time there are archaic, primitive modes of relating to the hypnotist that echo back to the love relationships of early life [p. 126]' (p. 143)."

Archaic involvement develops as a hypnotist actively encourages the subject to regard the hypnotist with the role of parent, teacher, guru. Charismatic authority, protector, etc. Erickson fostered these attitudes in his patients, and his apparent magical expertise can be attributed to his ability to tap into these archaic ties, which are 'ubiquitous.' "Freud (1919/1955) long ago noted that human beings' irresolution and craving for authority should never be underestimated. Fenichel (1945) stressed the universal yearning for 'omnipotent beings whose help, comfort, and protection he could depend on [ p. 491].' Kaiser (1965) considered the 'universal psychopathology' of attempting to create in real life the fantasy of fusion. Still others (Kohut, 1971, 1977; Kriegman & Solomon, 1985; Newman, 1983) suggested that the motivation to yield to or to create such charismatic leaders stems from the desire to

lose all boundaries and become lost within a greater whole--an experience elsewhere termed a fusional or symbiotic alliance (Diamond, 1987). This 'search for oneness' (cf. Silverman, Lachman, & Milich,, 1982) is engaged by charismatic leaders as we become enticed by our own archaic wishes to avoid uncertainty, ambivalence, and the complexities of maturation, perhaps even creating such leaders to save us from ourselves" (p. 145). There remains the question of how archaic involvement facilitates or impedes psychotherapy.

In addition to archaic involvement, Erickson's behavior as a hypnotherapist during the later years of his career stressed the evocation of nonconscious role-playing, while underplaying the evocation of the trance dimension. He relied on his reputation and interventional skills, stressing 'naturally occurring trance' of everyday life. (In his earlier years he spent more time on developing profoundly altered states of consciousness.)

"Erickson's \_therapeutic 'persona'\_ and style of engaging were consistently parental and authoritative, albeit frequently permissive, supportive, flexible, and benevolent. He always remained in control and typically insisted that his orders be carried out strictly and without question (Hilgard, 1984). ... Archaic wishes are further gratified by Erickson's gentle and soothing parental tone and stance, while control is maintained as he invites his patient to 'enjoy being irritable with me'" (pp. 147-148). To further psychotherapeutic goals, he sometimes assumed the role of surrogate parent, in hypnosis, to supply the patient with needed (childhood) experiences, as in the famous case referred to as the 'February Man.'

Erickson's implicit theory of an autonomous and omnipotent unconscious further encouraged "more primitive modes of perceiving and construing consensual and historical reality" (p. 148). "For example, he tells his patient in the Lustig (1975) videotape that: 'Your unconscious knows all about it; it will inform the conscious mind when it is ready to know'" (p. 149).

Regarding his technical maneuvers (intonation, wording, nonverbal communication, indirect suggestion, metaphor, and anecdote), "contrary to popular belief, he frequently spent long periods of time thinking about and planning his interventions (Hammond, 1986). In addition to using these patterns to evoke both patient resources and archaic alliances, he adopted an exceptionally confident manner, even when prescribing unusual assignments (McCue, 1984). Thus, patient faith and positive expectation in the efficacy of his interventions were maximized" (p. 149).

Erickson's pacing of his speech was slow, at the same rate as President Reagan's speeches. He was tone deaf, which may have contributed to the arrhythmia and unusual intonation observed in his speech. He used the patient's language, typically, which "undoubtedly provides a narcissistically gratifying identification with a hypnotist felt to be inside one's own psychic system (Diamond, 1987)" (p. 150). When he would say to patients, "My voice will go with you," he was inviting a "bodily-level incorporation" (p. 150). When he created mental confusion through his maneuvers, he increased the likelihood that the patient would "respond to subsequent direction in order to bind anxiety" (p. 150). "Thus, an archaic object relationship is recapitulated by an invoked regression to earlier, primary phases of cognitive processing, and in turn, Erickson provides a safe, 'holding environment' (cf. Winnicott, 1965) for his now regressed patient" (p. 150).

Erickson used what Watzlawick (1978) has called 'the language of change'--puns, metaphors, indirect communication, analogies. He finessed the defensive functions of secondary processes (Kalt, 1986) by allying himself with the patient's secondary processes, as when he used anecdotes and teaching tales in the role of a 'Dutch uncle' giving advice. The teaching tales usually affirmed basic American values (common sense, pragmatism, self-sufficiency, resiliency, achievement; Diamond, 1983). However, this kindly grandfather approach "recreates an archaic relational situation wherein adult-level defenses and secondary processes are realigned while Erickson the storyteller permits expression and oftentimes symbolic gratification of instinctual drives. This archaic recapitulation occurs as a result of the relaxing of defenses through metaphorical communication (cf. Schafer, 1983), in addition to the

revival of opportunities for mastery within this safe and often enchanting context (cf. Bettelheim, 1977)" (p. 151).

The author concludes by addressing clinical issues pertaining to an Ericksonian approach that relies on archaic involvement. "An essential question for clinicians concerns the long-term effects on the patient of the therapist's fostering such regressive involvement. There are both pluses and minuses of therapeutic relationships which maximize archaic involvement. Consequently, we need to empirically determine the efficacy of Ericksonian interventions both in offering short-term relief from suffering, and in potentiating developmental maturation in the long run. Not only must we ascertain how much archaic involvement is required for lasting change, but what is done with the regressive involvement (i.e., is it merely evoked, managed, utilized, or ultimately worked through?) is critical in assessing the value of Erickson's contribution" (p. 152).

Greaves, G. B. (1988). Common errors in the treatment of multiple personality disorder. Dissociation, 1, 61-66.

Psychotherapists report widely different experiences in their attempts at treating multiple personality disorder (MPD) patients. Some have deepened their interests and developed full-time specialized practices with this clinical population. Others have declined to have any further contact with them at all, referring possible MPD patients to colleagues when they first suspect that this disorder may be present. Still others have decided against treating more than one or two MPD patients. These diverse decisions are examined with a focus upon the effects of therapists' uneven attention to the formal properties of the dyadic psychotherapeutic experiences as a possible influence upon their future work with MPD. Problems concerning the framework of psychotherapy and the countertransference conflicts which often move the therapist unconsciously and irrationally to alter the canons of psychotherapy in mutually detrimental ways appear to be crucial determinants.

#### NOTES

1:

Discusses countertransference conflicts that often move the therapist unconsciously and irrationally to alter the canons of psychotherapy in mutually detrimental ways.

Lynn, Steven Jay; Weekes, John R.; Matyi, Cindy L.; Neufeld, Victor (1988). Direct versus indirect suggestions, archaic involvement, and hypnotic experience. Journal of Abnormal Psychology, 97 (3), 296-301.

This study examined the effects of direct (Harvard Group Scale of Hypnotic Susceptibility; Shore & Orne, 1962) versus indirect (Alman-Wexler Indirect Hypnotic Susceptibility Scales; Pratt, Wood, & Alman, 1984) suggestions on archaic involvement (Nash & Spinler, in press) with the hypnotists, objective responding, and subjective involvement and involuntariness ratings, when the scales were administered in all possible combinations (direct/indirect, N = 61; indirect/direct, N = 61, direct/direct, N = 57; indirect/direct, N = 95), across two sessions. At the initial testing, subjects who received indirect suggestions reported a greater emotional bond with the hypnotist and increased fear of negative appraisal than subjects who received direct suggestions. Repeated testing resulted in response decrements on measures of objective responding, subjective involvement, and involuntariness that were paralleled by diminished involvement with the hypnotist. The most stable relation between scales was evident when scales were defined as direct hypnosis across both sessions. Although direct and indirect suggestions produced comparable effects in the first session, in the second session, direct suggestions fostered greater subjective involvement and feelings of involuntariness.

Nathanson, Donald L. (1988). Affect, affective resonance and a new theory for hypnosis. Psychopathology, 21, 126-137.

**Suggests new theory of hypnosis based on recent experimental and theoretical work on emotion that shows neurological systems (including structural effectors and chemical mediators affecting specific sites of action). Tomkins' nine innate affects are organizers of the other moieties, genetically determined prewritten subcortical programs that convert quantitative stimuli into qualitative experience. Emotion in the adult involves subtle and complex combinations of innate affect with associations to previous experiences of affect provided by neocortical mechanisms. The infant initially expresses affect in an all-or-none fashion, while the caregiver, usually mother, acts as an external modulator of infantile affect display. All the techniques by which the mother learns to achieve affect mutualization and interaffectivity are analogues of what later may be seen as the techniques of hypnotic induction. Hypnosis may be viewed as the intentional alteration of neocortical cognition made possible by the state of primitive interaffectivity achieved when the hypnotic operator enters the central assembly system of the adult by techniques reminiscent of maternal modulation of infantile affect display.**

**Wilbur, C. B. (1988). Multiple personality disorder and transference. Dissociation, 1, 73-76.**

#### **NOTES**

**1:**

**Discusses the importance of appreciating, interpreting, and managing transference in treating patients with multiple personality disorder. The most commonly encountered problematic transferences in work with multiple personality disorder, the hostile, erotic, and dependent, are illustrated and discussed.**

**1987**

**Baker, Elgan L. (1987). The state of the art of clinical hypnosis. International Journal of Clinical and Experimental Hypnosis, 35 (4), 203-214.**

**This paper reviews the contemporary status of clinical hypnosis in light of the current emphasis on briefer, pragmatic forms of therapy and consumer demands to demonstrate effectiveness. Conceptual shifts and an expansion of clinical applications are related to changes in hypnotic strategies and technique. Suggestions for future avenues of clinical research are outlined and the importance of the continued integration of scientific rigor, empirical clarity, and clinical acumen and sensitivity is emphasized.**

**Diamond, Michael Jay (1987). The interactional basis of hypnotic experience: On the relational dimensions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 35, 95-115.**

**The ubiquitous interactional basis of hypnosis remains neglected and poorly understood. Vignettes from clinical practice are research are presented to illustrate the significance of hypnotic relational factors and their internal representations. A descriptive theoretical framework is formulated enumerating 4 relational dimensions: (a) transference phenomena in which previous object relationships are enacted; (b) a goal-oriented working alliance comprised of "rational" and "irrational" expectations about the efficacy of hypnotic procedure and its participants; (c) a symbiotic or fusional alliance in which the hypnotist is experienced as a purely internal figure; and (d) a realistic contemporary relationship. Each dimension is considered as it subjectively operates within hypnosis, and a case example is employed to compare the psychotherapeutic operation of these dimensions in waking and hypnotic contexts. Implications of the interactional framework are discussed and further empirical and clinical directions suggested.**

Gfeller, Jeffrey (1987, August). The enhancement of hypnotic susceptibility: Interpersonal and rapport factors. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

#### NOTES

Includes training materials for improving hypnotizability.

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rapport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Jana, Hrishikesh (1987). History and present state of hypnosis in India. [Lecture] Presented at the Department of Psychiatry, UCLA.

#### NOTES

Hypnosis is discussed in relationship to traditional Indian medical and psychological treatments. The following Table illustrates some of the relationships among Asian approaches, which also include philosophical and religious elements.

1:

1986

Chertok, Leon (1986). Psychotherapeutic transference, suggestibility. Psychotherapy, 23 (4), 563-569.

Discusses suggestion in psychotherapy and defines it as a body-affective process, an indissociable psychosociobiological entity that acts at an archaic unconscious level far beyond that of transference, mediates the influence of one individual on another, and is capable of producing manifest psychological and physiological changes. Present in all types of therapy, indirect (nondeliberate, nonintentional) suggestion is the element that plays an important role in change and can be observed in hypnotic experimentation. It is further argued that transference and suggestion are phenomena that do not altogether overlap. Suggestion is the condition of transference without which transference could not be established.

Diamond, Michael Jay (1986). Hypnotically augmented psychotherapy: The unique contributions of the hypnotically trained clinician. American Journal of Clinical Hypnosis, 28 (4), 238-247.

In the last century, psychotherapists trained in clinical hypnosis have made a number of unique contributions to the psychotherapeutic endeavor, particularly in the areas of psychotherapeutic theory, technique, and practice. Nine factors indexing the contribution of hypnotherapists are

discussed. They are: 1) communication focus; 2) maximizing expectation and belief; 3) mind-body emphasis; 4) handling of resistance; 5) employing trance phenomena; 6) using archaic levels of relationship; 7) stressing healthy, adaptive ego functions; 8) using therapist trance; and 9) permitting responsible creativity. Each factor is considered as it pertains to hypnotic technique and phenomena as well as how it is manifested in clinical treatment.

Diamond, Michael Jay (1986). When the knight regains his armor: An indirect, psychodynamically based brief hypnotherapy of an ego-dystonic sexual impulse disorder. In Dowd, E. Thomas; Healy, James M. (Ed.), Case studies in hypnotherapy.

#### NOTES

1:

This is a case study demonstrating successful treatment of an ego-dystonic sexual disorder, using brief hypnotherapeutic treatment.

Holroyd, Jean (1986). Hypnosis applications in psychological research. Imagination, Cognition and Personality, 5, 103-115.

It is proposed that hypnosis leads to altered cognition, affect, or motivation as reflected by changes in 1) reality orientation, 2) attention and awareness, 3) imagery, 4) dissociation, 5) suggestibility, and 6) mind-body interaction. Hypnosis may be used as an experimental method to effect such cognitive, affective and motivational changes in order to pursue research in learning, personality, physiological, and social psychology. Examples of possible applications of hypnosis are provided. The influence of individual differences in hypnotic responsivity on research also is discussed.

#### NOTES

1:

The author concludes, "Contributions of hypnosis to research in psychology may have been diminished by the confusion inherent in searching for main effects while giving insufficient attention to interaction effects between personality variables and experimental manipulations. As psychology becomes more cognitive in orientation, the phenomena of hypnosis may seem less bizarre and more amenable to inclusion in psychological research. However great care must be taken not to confuse the contributions of hypnosis with the contributions of the hypnotically responsive personality" (p. 109).

#### 1985

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-

imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Frauman, David; Rhue, Judith (1985). Hypnotic age regression and the importance of assessing interpersonally relevant affect. International Journal of Clinical and Experimental Hypnosis, 33, 224-235.

The present study was undertaken to replicate an earlier experiment and to clarify which factors in this previous experiment (Nash, Johnson, & Tipton, 1979) were responsible for the obtained child-like behaviors of hypnotically regressed Ss. As in the previous study, 3 characteristics of the transitional object relationship (spontaneity, specificity, and intensity) were used as the primary criteria to investigate the effects of hypnotic age regression when Ss were regressed to age 3 and placed in 3 home situations. While in the previous study E suggested separation anxiety and isolation during the 3 home situations (mother-absent condition), the present study deleted all references to anxiety and isolation, and replaced them with suggestions of security and maternal proximity (mother-present condition). As expected, the mother-present versus mother-absent conditions led to similar hypnotized- simulating differences. In further accord with predictions, hypnotized Ss and simulating Ss requested a transitional object infrequently in the presence of mother. The importance of using dependent measures which index affective processes germane to interpersonal affect-laden experience is discussed.

1984

Diamond, Michael Jay (1984). It takes two to tango: Some thoughts on the neglected importance of the hypnotist in an interactive hypnotherapeutic relationship. American Journal of Clinical Hypnosis, 27, 3-13.

Hypnotists can vary in their ability to produce meaningful trance experiences. Certain hypnotists produce more meaningful trance experiences than do others. Therapeutic hypnosis is regarded as a "dual phenomenon" occurring within an intense interpersonal relationship. This interactive dimension is important as is the unique contribution made by the hypnotist. A brief historical survey demonstrates the causal attribution of hypnotic effects. The theoretical literature on the reciprocal nature of hypnotic experience emphasizes the importance of the interpersonal functions of hypnosis, the hypnotic relationship per se, and the impact of the hypnotist. Recent research investigating interactional parameters supports these conclusions and suggests future empirical directions. Finally, an emergent interactional theoretical framework is presented which views hypnotherapeutic skill primarily as a function of the hypnotherapeutic ability to create a facilitating "holding" environment for the patient's internal experience.

**Frauman, David C.; Lynn, Steven Jay; Hardaway, Richard; Molteni, Andrew (1984). Effect of subliminal symbiotic activation on hypnotic rapport and susceptibility. Journal of Abnormal Psychology, 93 (4), 481-483.**

**L. H. Silverman's subliminal symbiotic activation paradigm (Silverman, 1982) was used to manipulate unconscious affective factors in hypnosis to determine whether gratification of symbiotic fantasy would enhance hypnotic susceptibility and rapport with the hypnotist. Seventy-two male undergraduates were divided into two groups matched for susceptibility (high, medium, low). The experimental group received symbiotic, MOMMY AND I ARE ONE, subliminal stimulation via tachistoscope in a double-blind design. The comparison group received a psychodynamically neutral stimulus, PEOPLE ARE WALKING. Following subliminal stimulation, subjects were hypnotized individually. Projective tasks that indexed rapport with the hypnotist and the mother were administered during hypnosis. Rapport was also measured by rated intimacy of self-disclosure topics and by valence of topics selected to disclose to the hypnotist. A significant multivariate group selected more positively valenced topics to disclose on. The effect for symbiotic activation on hypnotic susceptibility was not quite significant ( $p < .056$ , two-tailed).**

**2350, Frauman, Lynn, Mare, & Kvaal, 1992 NOTES: [Paper presented by Lynn.] A number of observations and conclusions are based on literature reviews done with Brentar (British Journal of Experimental and Clinical Hypnosis; Chapter in Rhue, Lynn, & Kirsch [Eds.] Handbook of Clinical Hypnosis) and 15 years of training students in hypnotherapy. Some of this may seem elementary to some of you.**

**For half a century there have been reports of negative effects after hypnosis: minor, serious, transient, and chronic. Clinicians need be as wary (but no more wary) of negative effects in hypnosis as in other therapies. There are more negative effects in clinical situations than non clinical situations.**

**Therapists must be prepared to recognize negative effects and intervene.**

**Too often hypnosis is seen as a technique divorced from psychotherapy. The hypnotist must be a competent psychotherapist. What makes you a good therapist will make you a good hypnotherapist.**

**There should be careful assessment of the client for: 1. those with history of unusual experiences following anesthesia or drugs 2. those with a history of dissociation**

**People may recapitulate a previous bad experience with anesthesia, based on the unusual physiological feelings. The dissociative client must be stabilized before using hypnosis. Depressed clients may also have problems, with the imagery becoming dysphoric. Those vulnerable to psychotic decompensation, with paranoid or borderline character structures, must be evaluated carefully. A lot depends on your comfort zone in therapy.**

**Life experiences with parents and authority figures may also play into the reaction.**

**Many clients, and experimental Ss, are ambivalent about hypnosis. This ambivalence must be acknowledged and one must work with the ambivalence before proceeding. One may: - explain hypnosis - reframe in terms of self hypnosis or relaxation - explain as a state of awareness with full consciousness - offer active induction which is just as effective as the passive induction - do induction with eyes open**

**Research clearly shows that Subjects can monitor events outside the framework of a suggestion--especially if you suggest they can do so with ease.**

**We do not use ideomotor suggestions because they aren't necessary. We tell them to open their eyes and communicate with us during hypnosis.**

**We always assess their feelings about hypnosis, have them have a fantasy about what hypnosis would be like, do an informal semantic analysis of the descriptors clients use (and then reframe them), inquire about previous experiences with counseling and psychotherapy, and do a mental status. Don't**

make assumptions. We want to know about early life experiences to know about transference and form an alliance.

Hypnosis procedures employed must have explicit informed consent (cf MacHovic book), which also provides opportunity to demystify the experience. Our research shows the great majority of Ss find it relaxing, invigorating. Even perceptual distortions can be created without hypnosis. Can create confidence by sharing the research information on hypnosis.

Elicit cooperation with easier suggestions, then use graded suggestions. We want to titrate the demands on clients, move at a pace that keeps anxiety low, promote self efficacy and mastery through ... [missed a few words] and graduated tasks.

Carefully monitor clients for frowns, lack of attention, etc. It is important to ask them what they are experiencing. Rarely, a client appears unable to talk, in which case the therapist can offer hypotheses to the hypnotized client.

Don't terminate hypnosis if there is a problem (Orne also says this); instead, offer reassurance to explore/release the feelings. It is beneficial to work through what is being experienced. There is a somewhat higher risk of emotional reactions with age regression or induced dreams. We simply tell people they can tell us at any time about what they are experiencing, without going through any ritual. When we give suggestions about amnesia, we ask what they would like to remember and suggest that they forget what they would like to forget. The usual permissive suggestion doesn't work; find out what it is, exactly, that they want to forget and then devise strategies for it. Follow for 2 weeks after any abreactive experience that may have occurred. Let them know they can contact you.

Forceful suggestions to abandon symptoms can promote resistance and the therapist may generate negative transference. (See their chapter in book edited by Rhue, Lynn, and Kirsch, *Handbook of Clinical Hypnosis*, published by the American Psychological Association.)

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post-Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these

two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

## NOTES

1:

This is an abstract of an unpublished Ph.D. dissertation, University of Waterloo, 1984. It won the American Psychological Association Division 30 award for Best Student Paper at the 1984 APA Convention.

Lindner, H. (1984). Therapist and patient reactions to life-threatening crises in the therapist's life. International Journal of Clinical and Experimental Hypnosis, 32 (1), 12-27.

This paper presents an analysis of the transference and the counter-transference factors in both the patient and the therapist arising from the occurrence of a life-threatening crisis in the life of the therapist. Evaluation of these factors includes a description of the role of hypnosis in the elicitation of repressed feelings of denial and hostility in both members of the therapeutic dyad.

## 1983

Diamond, Michael Jay (1983). Therapeutic indications in applying an innovative hypnotherapeutic technique: The client-as-hypnotist. American Journal of Clinical Hypnosis, 25 (4), 242-247.

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist willing to enter trance. Indications and contraindications in employing innovative hypnotherapeutic interventions are considered in terms of the therapeutic goals and context, patient-therapist interaction, and patient as well as therapist characteristics. Benefits provided by the technique to the client, client-therapist interaction, and therapist respectively are briefly discussed. The specific methodology of this technique is described according to seven steps: (1) permission request: (2) client observation: (3) session structure: (4) client confidence: (5) therapist trance: (6) feedback: and (7) subsequent utilization. Relevant clinical examples are provided.

Fourie, David P. (1983). Width of the hypnotic relationship: An interactional view of hypnotic susceptibility and hypnotic depth. Australian Journal of Clinical and Experimental Hypnosis, 11 (1), 1-14.

Efforts have been reported in the hypnosis literature to correlate measurements of hypnotic susceptibility with measurements of hypnotic depth. Not only have the findings not been consistent, but recently the whole issue of hypnotic susceptibility and depth and their measurement has become controversial, as evidenced by Weitzenhoffer's (1980) and Hilgard's (1981) statements. This paper offers a different perspective on the issue and introduces the concept of the width of the hypnotic relationship as a useful indication of the degree of hypnotic involvement. The width of the hypnotic (paradoxical) relationship refers to the scope of the relationship within which certain involuntary behaviors can occur. The larger the number of such behaviors that are possible within the bounds of the paradoxical relationship, the wider that relationship shall be considered to be. This is an investigation of the relationship between the width of the relationship and the depth of hypnosis experienced. The SHSS: A, as a measurement of the width of the relationship, was applied to 18

volunteer female subjects. A 10-point self-report scale was applied before and after a procedure to widen the relationship. The correlations between the SHSS: A scores and both sets of self-report scores were positive and significant, as expected. The widening procedure had a definite deepening effect, but it seemed possible that this effect was not uniform.

Levitt, Eugene E.; Baker, Elgan L. (1983). The hypnotic relationship--another look at coercion, compliance and resistance: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 125-131.

The purpose of the present investigation was to assess the ability of hypnotic Ss to voluntarily resist neutral suggestions on a monetary reward incentive. The results were ambiguous; Ss resisted with a mean of 1.2 of 2 suggestions each. Postexperimental interviews disclosed that all Ss felt that the instructions to resist were asking them to be disloyal to the hypnotist or to betray him. Ability to resist was positively correlated with Ss' impressions of the "resistance instructor" and tended to be negatively correlated with the impression of the hypnotist. These findings are interpreted to suggest support for an interactional conception of the hypnotic state.

1982

Chertok, Leon (1982). The unconscious and hypnosis. International Journal of Clinical and Experimental Hypnosis, 30 (2), 95-107.

This paper reviews Soviet approaches to the unconscious and to hypnotic phenomena, before examining psychoanalytic theories of hypnosis which are generally based on transference. The author believes the existing theories are inadequate, arguing that there is a psychophysiological dimension to hypnosis; but what unconscious processes does this conceal? Psychoanalysis opened one road to the unconscious, but affect, nonverbal communication, and psychophysiological process are still uncharted territories towards which hypnosis may yet prove to be another royal road.

NOTES

1:

The author concludes, "hypnosis and the unconscious ... are closely linked. Historically, experiments on posthypnotic suggestion were in fact the starting point for the discovery of the unconscious. Posthypnotic suggestion is in effect one of the most irrefutable proofs that psychical contents can influence behavior, albeit eluding the subject's consciousness.

"In this paper, the present author provides a description of Soviet researchers' conceptions of the unconscious, and of the point of view from which they approach hypnotic phenomena. Psychoanalytic theories of hypnosis are then presented, which are essentially based on transference. It is shown why this notion seems to the present author powerless to account for the specific nature of the hypnotic relationship. There is, in effect, a psychophysiological dimension to hypnosis. It lies at the crossroads between the instrumental and the relational dimension. But nothing is known about what unconscious processes hide at the psychophysiological level. Psychoanalysis has brought to light the laws governing the functioning of unconscious representations. But the realm of the affect, the nonverbal communication, and bodily processes still remain beyond our knowledge. This is a hidden side of the unconscious, in relation to which hypnosis may serve as another 'royal road'" (pp. 104-105).

Hong, G. K.; Skiba, A. H.; Yepes, E.; O'Brien, R. M. (1982). Effects of ethnicity of hypnotist and subject on hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 30 (1), 23-31.

The effect of ethnic similarity of hypnotist and hypnotic S on hypnotic susceptibility was examined in a 2-part study. The first part of the study compared the performance of Anglo versus Chinese hypnotists on Anglo versus Chinese Ss. In the second half of the study, Anglo and Hispanic Ss and hypnotists were compared using the same Anglo hypnotist-S control group. In total, 112 volunteers were administered the Stanford Hypnotic Susceptibility Scale, Form A, of A. M. Weitzenhoffer and Hilgard (1959), with 16 Ss (8 males and 8 females) in each condition. A 2 x 2 ANOVA was performed on the data for each part of the study. Ethnic similarity of hypnotist and S was found not to enhance hypnotic susceptibility. The implications of these results are discussed in relation to the assumed superiority of homoethnicity in psychotherapy.

Silverman, Lloyd H.; Lachmann, Frank M.; Milich, Robert H. (1982). The search for oneness. New York: International Universities Press.

#### NOTES

1:

This book summarizes research on preconscious activation (subliminal psychodynamic activation) of fantasies of oneness, following tachistoscopic presentation of words like, "Mommy and I are one." It represents an attempt to test and validate, through experimental investigation, psychoanalytic concepts. The authors show how such fantasies can improve psychosocial adaptation for people with varying kinds of psychopathology.

1981

Franck, Jerome (1981, August). Therapeutic components shared by all psychotherapies. [Paper] Presented at the annual meeting of the American Psychological Association.

#### NOTES

1:

The author summarizes as follows. 1. Patients who receive any form of psychotherapy do better than controls. 2. Followup studies show most patients who show improvement maintain it; the closing of gap between patients who improve and those who don't is due to those who do less well catching up. Perhaps the main effect is to accelerate improvement which would eventually happen anyway. 3. Determinants of successful treatment are personal qualities of Patient and Therapist. 4. There are a few conditions which have more specific treatment indications. --Behavior therapy - for phobias, obsessive compulsive disorders, sexuality problems --Cognitive therapy - for depression Further advantages of specific treatments for specific conditions may be found.

All patients seek treatment not just for symptoms but because of demoralization. The common elements are: Subjective incompetence, loss of self esteem, alienation, hopelessness, helplessness, a feeling others could help but won't, feeling of loss of control. Demoralization plus distress leads to seeking treatment.

A small percentage without demoralization seek treatment for specific symptoms (e.g., patients with a simple phobia of height). Anxiety and depression (or loss of self esteem) are most frequent symptoms in Outpatient Departments.

Success in treatment often is due to restoration of morale (which removing symptoms can do very well). 1. Citing Doehrenwald research. 2. People seek treatment only 1-2 years after symptoms appear, after trying other ways of dealing with them. 3. Many patients improve rapidly in treatment (Garfield found the Mean = 5 or 6 sessions.) Mean symptom relief is same after 4 sessions and drop-out than after 6 months; also those on waiting list in phone contact improve as much.

Shared components in the various therapies combat demoralization: 1. Emotionally charged and vital relationship with the helping person (or group). 2. Healing setting (which increases Therapist's prestige and promotes healing). (a) Therapeutic rituals (which lead to an external reason for

abandoning the symptom; the more spectacular the reason, the greater the motivation). (b) Therapeutic bond.

Expectation of help is the best predictor of outcome. (Cites his own placebo study.) One problem found was that responsiveness to placebo didn't correlate with response to psychotherapy. (Cites Lieberman's study). Patients receiving psychotherapy role-induction interview improved more. 3. Provision of learning experiences - movement of values toward those of the therapist 4. Emotional arousal. Supplies motivation for change. Cites his experiments on emotional arousal and attitude change, manipulating arousal using ether drip or adrenalin (leads to temporary attitude change). Something else besides arousal may be needed to sustain change. 5. Enhances sense of mastery, control of one's self and internal states. (a) provides conceptual scheme (b) gives experience of success 6. Provision of opportunities (and incentives) to practice

Properties of Patient which assure success: 1. Distress 2. Earlier relationship with parent which leads to capacity to relate. (Molly Harrower's predictors) 3. To profit from specific procedures: capacity for insight for psychoanalysis.

Properties of Therapist which contribute to success:

We haven't gotten farther than Rogers' empathy, warmth, and positive regard; Whitehorn & Betz's Type A and B; and [missed reference name] activity level. He thinks success may be related to Therapist's parapsychological ability, healing power.

Physiology of hope: Placebos for dental pain lead to pain relief for some. Endorphin antagonist made pain re-occur for them.

1980

**Diamond, Michael Jay (1980). The client-as-hypnotist: Furthering hypnotherapeutic change. International Journal of Clinical and Experimental Hypnosis, 28, 197-207.**

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist. Relevant theoretical processes are discussed as are mutual hypnosis, modeling, and the uncommon techniques of Erickson (1964). 3 case illustrations are presented and implications discussed. It is hypothesized that the 'client-as-hypnotist' may in certain special situations further hypnotherapy by: (a) increasing client motivation; (b) enhancing therapeutic rapport; (c) increasing both client trust and skills in utilizing unconscious processes; (d) overcoming resistance and increasing hypnotizability; (e) providing a useful psychodiagnostic and behavior assessment index; (f) presenting a role 'model' for dealing with feelings, alterations in consciousness, and self-control; (g) providing a client-centered framework for subsequent therapeutic interventions; (h) increasing client self-esteem, mastery, and ego strength; and (i) increasing client self-control skills. Potential risks and contraindications for use of the technique are also discussed.

**Sheehan, Peter W. (1980). Factors influencing rapport in hypnosis. Journal of Abnormal Psychology, 89 (2), 263-281.**

The phenomenon of countering expresses the tendency of some highly susceptible subjects to favor the intent of the hypnotist when placed in a conflict situation where social influences of another kind dictate an alternative response. The present research explored the parameters of this objective index of involvement with the hypnotist to investigate the special relevance of rapport processes to the hypnotic setting. Rapport was manipulated in five different experiments, varying either the warmth or genuineness of the hypnotist. It was predicted from transference theorizing that countering would decrease in the negative context and increase in the positive one. Results confirmed predictions for

highly susceptible subjects tested in the former context but not the latter. In the negative setting, subjects were inhibited in their rate of countering, but maintained their previous level of response to the hypnotist when rapport was facilitated. Results highlighted the relevance of interpersonal processes to theorizing about hypnosis.

1979

Sheehan, Peter W. (1979). Expectancy reactions in hypnosis. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 25-32). Amsterdam: Elsevier/North-Holland Biomedical Press.

NOTES

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Susceptible Subjects are more likely to follow the hypnotist's nonverbalized suggestion when it is counter to their expectation. But not consistently. His article in April 1979 *Journal of Abnormal Psychology* reports 10 studies of this. Such individual differences that exist relate to styles of performance, parameters which have nothing to do with hypnotizability.

Thompson, Kay F. (1979). The case against relaxation. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 41-46). Amsterdam: Elsevier/North-Holland Biomedical Press.

NOTES

1:

"One wonders why facilitators continue to talk about and insist on relaxation as a precondition for hypnosis. Do we need to see this relaxation to believe our patients are truly in a hypnotic state?" (p. 43). "The advantages of eliminating relaxation as a precondition for trance include the elimination of the need to re-learn the non-relaxed state, the admission of more natural responses to the therapeutic situation, the recognition of spontaneous trance, and a freer communication between the doctor and patient which should result in a more comfortable use of hypnosis and its more widespread acceptance in medicine" (p. 45).

1978

Hearn, Greg (1978, November). Susceptibility and the process of social interaction in the hypnotic context. [Unpublished manuscript] (Submitted as a partial requirement for the B. S. degree with honours in psychology at the Univ of Queensland)

The hypothesis was tested that the process of social interaction between hypnotist and subject is dependent upon the susceptibility level of subjects. Using Interaction Process Analysis (Bales, 1950), the interaction patterns of 16 high susceptibles and 16 low susceptibles were analyzed. Susceptibility level had been pretested with the HGSHS:A. The hypnotist was then instructed on how to control for differences in the process of interaction which were isolated and the initial hypnotic session was repeated on a new sample. This time the performance and interaction patterns of six high susceptibles and six low susceptibles were compared. Results suggested that trait differences give rise spontaneously to differences in the process of interaction and some combination of these effect the subjects final hypnotic performance. Hence it is argued that an interactionist framework would aid the understanding hypnotic responsivity.

1976

Hodge, J. R. (1976). The contractual aspects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 24, 391-399.

No generally accepted theory of the essence of hypnosis is currently available, nor are any specific responses uniquely associated with hypnosis. A necessary, though not sufficient, aspect of hypnosis involves the subject's preconceived expectations and selective attention to a series of agreements ("contracts") which are developed between patient and therapist before the induction, during the induction and deepening procedures, and during the operational phase. These contracts may be either implicit or explicit, but they can be identified in all hypnotic interactions. The skillful therapist will make the contracts explicit by defining, at least in general terms, what he expects. If the patient agrees, i.e., "sings the contract," he is likely to comply with suggestions.

1972

Sacerdote, Paul (1972). The nature of the hypnotherapeutic process. American Journal of Clinical Hypnosis, 15 (1), 1-11

The author presents several clinical cases where hypnosis was successfully utilized. Through detailed description of what takes place during sessions it is shown how various approaches are adapted to the intellectual, cultural, emotional and hypnotic capabilities of the patient and to the progress of therapy. The author analyzes what takes place during and after hypnotic intervention and draws some conclusions about the nature of the hypnotherapeutic process which, he feels, is essentially a convergence of the patient's and therapist's conscious and subconscious expectations and goals. The importance of the therapeutic ego of the doctor is brought into proper focus. One of the clinical cases illustrates how the therapist can convert a therapeutic relationship that may appear sterile or even hostile into a productive one by utilizing the patient's responses, while avoiding stubborn insistence upon expectations of preconceived hypnotic responses. It is suggested that the hypnotherapeutic model may present, in clearer focus, what takes place in other psychotherapeutic exchanges which do not utilize hypnosis.

1970

Shor, Ronald E. (1970). The three-factor theory of hypnosis as applied to the book-reading fantasy and to the concept of suggestion. International Journal of Clinical and Experimental Hypnosis, 18, 89-98.

Maintained that many of the conflicting viewpoints in theories of hypnosis parallel the descriptive complexity of the phenomena. A 3-factor theory of hypnosis is surveyed in which hypnotic depth is conceived as a complex of 3 separate but complementary processes or dimensions. The theory is used to illuminate the book-reading fantasy and the concept of suggestion. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Blatt, Sidney J.; Goodman, John T.; Wallington, Sue Ann (1969). Is the hypnotist also being hypnotized?. International Journal of Clinical and Experimental Hypnosis, 17, 160-166.

Noted that 2 hypnotists had cognitive and affective experiences similar to those expected in the S as a function of the hypnotic manipulation when they were conducting hypnotic inductions. Though the hypnotists may have been responding to the mood tone of the Ss or responding on the basis of their expectations about the effect of the hypnotic manipulation, it seemed equally possible that the hypnotists may have experienced mild forms of the trance state they had induced in their Ss. These observations seemed consistent with prior notes of such a phenomenon. This phenomenon has important implications for the clinical and experimental use of hypnosis and for concepts such as transference and countertransference, empathy, demand characteristics, and E bias. Suggestions are

made for the systematic evaluation and study of this phenomenon. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hunt, Sonja M. (1969). The speech of the subject under hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 209-216.

Attempts to objectify changes taking place in the speech of 12 undergraduates under hypnosis as compared with their waking speech. A series of open-ended questions was asked in the waking and hypnotized states and the responses compared. Results indicate that the latency of response may be longer, the rate of speech slower, and the number of words in the response fewer under hypnosis. The rate of speech of E, however, also differed significantly between Ss in waking and hypnotized conditions. It was therefore not possible to attribute the speech changes only to the hypnotized state. They could have arisen from E's differential verbal treatment of hypnotized and waking Ss. The need for future research and its nature are discussed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Small, Maurice M.; Kramer, Ernest (1969). Hypnotic susceptibility as a function of the prestige of the hypnotist. International Journal of Clinical and Experimental Hypnosis, 17, 251-256.

Administered 40 undergraduates the Harvard Group Scale of Hypnotic Susceptibility, Form A. On the basis of the scores, Ss were divided into 20 "better" and 20 "poorer" Ss. A wk. later Ss were rehypnotized by a tape recording of the above induction procedure. On the 2nd induction, 1/2 of the Ss were told that the hypnotist on the tape was an expert; the other 1/2 were told the hypnotist was a novice. Results indicate that only the better Ss given novice instructions showed a change (decrement) in hypnotic susceptibility. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Conn, J. H. (1968). Hypnosynthesis: Psychobiologic principles in the practice of dynamic psychotherapy utilizing hypnotic procedures. International Journal of Clinical and Experimental Hypnosis, 16, 1-25.

DEFINES HYPNOSIS AS PRIMARILY A CHANGE IN REALITY TESTING, AND CONSIDERS IT AS BOTH AN ALTERED STATE OF CONSCIOUSNESS AND A MULTILEVEL DYNAMIC RELATIONSHIP IN WHICH THE S IS ALWAYS AWARE OF THE OPERATOR. HYPNOSYNTHESIS EMPHASIZES THE PATIENT'S VALUES AND EXPECTATIONS AND HIS FREEDOM TO CHOOSE WHAT TO SAY AND HOW HE SHOULD BE TREATED. PREFERENCE IS GIVEN TO TERMS OF "MORE OR LESS" CONSCIOUSNESS. THE PATIENT DOES NOT RECEIVE ANY TRAINING IN HYPNOSIS AND THERE IS NO ENCOURAGEMENT OF ACTING OUT IN HYPNOSYNTHESIS. ATTENTION IS DIRECTED TO REPETITIVE PATTERNS, AND THE HYPNOTIC EXPERIENCE IS UTILIZED AS A PRESENT DYNAMIC EXPERIENCE. HYPNOSYNTHESIS DEMONSTRATES THAT SYMPTOM REMOVAL IS POSSIBLE WITHOUT SYMPTOM SUBSTITUTION WHEN THERE IS AN EFFECTIVE WORKING RELATIONSHIP. THE COMMON FACTOR IN EVERY PSYCHOGENIC CURE, INCLUDING HYPNOTHERAPY, IS THE FOSTERING OF SELF-ESTEEM AND ACTIVE PARTICIPATION, BOTH OF WHICH ARE ACHIEVED BY EFFECTIVE COLLABORATION IN THE THERAPEUTIC SITUATION. (SPANISH + GERMAN ABSTRACTS) (50 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Fromm, Erika (1968). Transference and countertransference in hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 16, 77-84.

**THE HYPNOTHERAPIST IS OFTEN LOOKED UPON AS AN OMNISCIENT HEALER AND A PARENT FIGURE WITH MAGIC POWERS. HE MAY EVEN TEND TO THINK OF HIMSELF THIS WAY. THESE AND OTHER UNREALISTIC ATTITUDES STEMMING FROM EARLY CHILDHOOD FEELINGS, CHILDHOOD WISHES, AND FEARS ARE DISCUSSED. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

Sternbach, Richard A. (1968). Pain: A psychophysiological analysis. New York: Academic Press.

## NOTES

1:

**NOTES: Anxiety potentiates pain, no matter what the source of the anxiety ("meaning of the wound, intensity of the stimulus, a personality characteristic or introduced into the situation" (p. 25). "Local muscles show a marked increase in their electrical potentials following localized pain produced by pressure (Simons, Day, Goodell, and Wolff, 1943), and this striated muscle can potentiate and prolong the responses to the original stimulus (Hardy, Wolff, and Goodell, 1952)" (p. 51). Shor (1962) investigated the physiological response to pain during hypnotic analgesia and used procedures to minimize anxiety in both waking and hypnotized conditions. The 'pure pain' physiological response involved a slight increase in heart rate, depth of respiration, and palmar sweating, "little more than an orienting reflex" (p. 54).**

**Because people vary in the degree to which their pattern of response to pain is stereotyped, it is difficult to detect a pattern specific to pain. However, frequently there is inhibition of motility of the gastrointestinal tract and blocking of or more rapid contractions; increased oxygen consumption with hyperventilation; increase in muscle tension and hypermotility; and variable cardiovascular responses-sometimes elevated blood pressure, sometimes increased pulse, stroke volume, or peripheral vasoconstriction. The physiological changes appear to be preparing the person to take action.**

**Personality characteristics have been investigated with respect to pain reactivity and tolerance. Mueller (1962) predicted response to spinothalamic tractectomy for 14 patients with intractable pain due to spinal cord injuries with 85% accuracy using the Rorschach. Field dependence on the rod and frame test is associated with parasympathetic reactivity to pain, and less reaction to pain. "Those who can tolerate pain (intense stimulation) best can tolerate sensory deprivation (minimal stimulation) least, and vice versa" (p. 62). Also, the nondominant hand is more sensitive than the dominant hand.**

**Sternbach distinguishes pain tolerance from willingness to complain about pain. For example, cultural factors (ethnicity) affect not only pain toleration but also physiological response. Voluntary participation in a pain experience can in fact reduce the discomfort of the pain stimulus. "Pain tolerance may be in part a function of their ability to reduce anxiety concerned with the duration of time (a) a noxious stimulus will last, or (b) before a noxious stimulus will be experienced" (p. 67).**

**Phantom pain is an example of centrally occurring pain. It occurs in only a few patients who have a phantom limb, from 2-10% depending on how they are assessed. Scars and neuromas at the stump may reduce thresholds to peripheral stimulation or may themselves act as pain stimuli. Surgery on the neuromas and scar tissues seldom reduces the phantom limb pain. Most investigators assume it is a 'central' phenomenon of some sort, 'superadded sensations' which may be of psychogenic origin (Henderson & Smyth, 1948) or a 'central state of hyperexcitability' (Cronholm, 1951). Affect seems to be involved. The affects, and the individual's style of coping with them, seem to be the equivalents of the 'central' phenomena which result in pain. Two affects in particular seem to be associated with pain: anger, intropunitively expressed; and grief, the phantom pain representing both the loss and the wish to deny it. Both of these are likely to be associated with depression.**

A psychological (rather than neurological) explanation for phantom limb pain is supported by the success demonstrated by three interventions: psychotherapy, electroshock therapy, and sensorimotor task concentration. The latter approach, reported by Morganstern (1984) requires patients to concentrate on sensorimotor tasks while ignoring distracting stimuli, for 2 hours/day. Morganstern attributed their improvement to a combination of concentration and distraction so that central sensory processes gradually are reorganized and the patients become habituated to stimulation of the stump. Sternbach notes that these factors also characterize hypnosis and hypnotic analgesia. He proposes that the Morganstern results should inform our neurological explanation of phantom pain.

Sternbach goes on to discuss hypnosis, particularly as it offers information that could inform us about pain. He notes that hypnotic inductions and the hypnotic state are characterized by "immobility and sensory canalization, a reliance on the hypnotist for information and direction, and an altered state of awareness in which the environs are perceived as suggested by the hypnotist" (pp. 136-137). The Kubie and Margolin (1944) description of a concentrated focus of excitation in the brain with surrounding areas of inhibition is like the description of hypnosis presented by Ivan Pavlov. During this process, the hypnotized subject becomes dependent on the hypnotist for contact with the outside world, but this emotional/motivational response is not central to the induction. "What is essential is the restriction of sensory and motor activity which, in a variety of natural or experimental settings, with or without another person present, will invariably produce hypnoidal states and hypnagogic reverie" (p. 134).

The profound alterations in perception that are observed in hypnosis are relevant to the understanding of pain because pain "involves perception of certain tissue changes." Sternbach notes that the experimental problem of ascertaining whether a subject is faking hypnotic phenomena is similar to the experimental difficulties inherent in evaluating the (internal) experiencing of pain. He suggests that the Orne (1959) test for toleration of logical inconsistencies is an independent means of evaluating for genuine hypnotic response. Other possible indices are less spontaneous behavior (Gill & Brenman, 1959) or alterations in subjective awareness (Ludwig & Levine, 1965). On the Ludwig & Levine questionnaire, subjects reported changes in thinking, time sense, feelings of loss of control, body image changes, changes in sensations, etc.

It has been observed that physiological response depends on presence or absence of a shock, but behavioral and verbal response depends on suggested or not suggested analgesia (Sutcliffe, 1961).

In Sternbach's summary of the section on hypnosis in this book, he states, "Hypnotic analgesia adds to the above [hypnotic induction] the hypnotist's suggestion of pain relief, or the inability to perceive pain. Experimental and clinical data suggest that in most but not all instances, pain responses are then greatly attenuated. The data further suggest the reasonable inference that such hypnotic analgesia is effective either because attention is focused elsewhere, or because anxiety (concern about the stimulus effects) is very low. ...

"It seems to us reasonable to make a further inference from these data, concerning the relative roles of attention focusing and anxiety-reduction. It is our impression, from the studies cited above, that the focusing of attention is not in itself essential to the elimination of pain. It is necessary for the induction of hypnosis, and it is a useful (but not the only) means for a subject or patient to gain control over anxiety concerning pain stimuli. But the data strongly suggest that in hypnotic analgesia, as well as in other conditions, it is the absence of anxiety about the stimulation which is the single necessary and sufficient condition for perceiving the stimulus as a nonpainful sensation. This is suggested by the fact that subjects with hypnotic analgesia are able to attend to (focus attention on) the stimulus, and even describe it accurately as a sensation, and yet not produce pain responses. This is true also of subjects in control conditions without hypnosis. On the other hand, anxious subjects ( or patients), as we have seen elsewhere (Chapter V), typically produce marked pain responses to appropriate stimulation. Thus it seems reasonable to hypothesize that 'focusing attention' serves primarily to reduce a person's anxiety about his current situation, thus making possible either (1) the regression

and altered state of consciousness of a hypnotic trance, or (2) the perception of a noxious stimulus as a nonpainful sensation" (pp. 140-141).

1964

Field, Peter B. (1964). Bales interaction analysis of hypnosis. International Journal of Clinical and Experimental Hypnosis, 12, 88-98.

Sound films of 2 hypnotists, 4 Ss, and 2 simulators of hypnosis were scored by a modification of Bales' interaction process analysis. Comparisons are presented between the interaction profiles of hypnotists and Ss. Both of the hypnotists' transformed interaction percentages fell above the Ss' 95% confidence intervals for agreeing, asking questions, and giving suggestions, and below the Ss' confidence intervals for appearing submissive, giving opinions, showing tension, and giving information. No consistent differences were found between hypnotists and Ss for seeming positive, negative, or dominant, for disagreeing, or for releasing tension. The 2 simulators did not show consistent interaction differences from the real Ss. Both advantages and limitations in applying Bales' method to hypnosis are discussed. It is concluded that interaction process analysis provides a measure of the overt role-differentiation between S and hypnotist, but does not directly reflect some of the unique features of the hypnotic situation (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Orne, Martin T. (1964). A note on the occurrence of hypnosis without conscious intent. International Journal of Clinical and Experimental Hypnosis, 12, 75-77.

Anecdotal data reporting the occurrence of hypnosis in the absence of the hypnotist and without apparent conscious intent on the part of the S are discussed. It is felt that this phenomenon has considerable implications for an understanding of the hypnotic process. An authenticated autobiographical report of such an event is introduced. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Haley, Jay (1963). Strategies of psychotherapy. New York: Grune & Stratton.

NOTES

1:

Has information in Chapter II on how the hypnotist and the subject maneuver each other.

1963

Levitt, Eugene E.; Lubin, B. (1963). TAT card '12MF' and hypnosis themes in females. International Journal of Clinical and Experimental Hypnosis, 11, 241-244.

Modification of TAT Card 12M, so that the supine figure was a female, did not increase the frequency of hypnosis themes among sophomore student nurses. The hypothesis that difficulty in identifying with a male figure accounted for the card's inability to predict attitudes towards hypnosis in females was, therefore, not supported. The modified card did elicit significantly more identifications of the standing figure as a professional person. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Pulver, Sydney E. (1963). Delusions following hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 11-22.

Delusions occurring after hypnosis in the nonpsychotic patient are usually a result of the interplay of 3 factors. (a) the development of rapid, tense, transference reactions in hypnosis; (b) the presence of major defects in the patient's character structure; and (c) the occurrence of countertransference

reactions on the part of the hypnotist which touch on a specific area of conflict within the patient. The presence of a chaperon or the use of tape recorders are not satisfactory preventive measures. Rather, the physician using hypnosis should focus upon: (a) preliminary psychological evaluation and selection of patients free from disposition to delusion formation, (b) identification of transference reactions and a willingness to discuss with patients, (c) awareness of his own emotional responses to the patient. Basic courses in psychiatry are recommended. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

English, O. Spurgeon (1962). Some dynamic concepts of human emotions in relation to hypnosis. American Journal of Clinical Hypnosis, 4, 135-140.

He describes characteristics of the human personality as having a need for being dependent, tendency to obey or cooperate, need to avoid pain, tendency toward retreating into solitude and silence away from the stimuli of every day living, wish to avoid tension or anxiety; and therefore having a need to regress, in hypnosis.

Kuhner, Arthur (1962). Hypnosis without hypnosis. International Journal of Clinical and Experimental Hypnosis, 10 (2), 93-99.

The traditional concept of hypnosis that seeks a "sleep" state through employment of formal induction techniques seriously limits its general clinical applicability. It fails to fit the special needs of the patient. An approach designed to counteract this shortcoming manipulates the interpersonal relationship factor. Case illustrations from dental practice support the viewpoint that the proper relationship is akin to the hypnotic one and comparable results obtain without resort to ritualistic induction methods. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Weitzenhoffer, Andre M. (1962). The significance of hypnotic depth in therapy. International Journal of Clinical and Experimental Hypnosis, 10 (2), 75-78.

It is a common assumption that hypnosis has a quality of degree. While clinicians often state that success is unrelated to depth, the author maintains that depth determines the techniques one can successfully use in hypnotherapy. At the same time he believes that hypnotic behavior is multidimensional and that the major determinant of hypnotherapeutic success is the therapist's ability to establish a meaningful interpersonal relationship. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Schneck, Jerome M. (1961). Hidden determinants in deceptive requests for hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 9, 261-267. (Abstracted in Psychological Abstracts, 62: 4 II 61S)

Evaluation of the motives underlying the request for hypnoanalysis leads to the conclusion that often these patients do not wish for this form of treatment at all. Thus, requests for hypnoanalysis are often deceptive (a method of changing therapists during a period of negative transference). The implications of these hidden determinants are discussed and brief case references are given. From Psyc Abstracts 36:04:4II61S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Conn, Jacob H. (1960). The psychodynamics of recovery under hypnosis. International Journal of Clinical and Experimental Hypnosis, 8, 3-16.

Defines hypnosis as primarily a change in reality testing, and considers it as both an altered state of consciousness and a multilevel dynamic relationship in which the S is always aware of the operator. Hypnosynthesis emphasizes the patient's values and expectations and his freedom to choose what to say and how he should be treated. Preference is given to terms of "more or less" consciousness. The patient does not receive any training in hypnosis and there is no encouragement of acting out in hypnosynthesis. Attention is directed to repetitive patterns, and the hypnotic experience is utilized as a present dynamic experience. Hypnosynthesis demonstrates that symptom removal is possible without symptom substitution when there is an effective working relationship. The common factor in every psychogenic cure, including hypnotherapy, is the fostering of self-esteem and active participation, both of which are achieved by effective collaboration in the therapeutic situation. (Spanish + German abstracts) (50 ref.) (Psycinfo database record (c) 2002 APA, all rights reserved)

Kline, Milton V. (1960). Hypnotic age regression and psychotherapy: Clinical and theoretical. International Journal of Clinical and Experimental Hypnosis, 8, 17-35. (Abstracted in Psychological Abstracts, 62: 2 II 17K)

This paper deals with the experiential use of hypnotically induced age regression as a therapeutic process. Treatment successes were attributed to an intensification of the transference relationship. A main focus was the nature of the regressive relationship and its experiential qualities in relation to general hypnosis. Reid polygraph results suggest the perceptual reality of age regression to Ss. The phenomenon is discussed in terms of Piaget's genetic model. From Psyc Abstracts 36:02:2II17K. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Lindner, Harold (1960). The shared neurosis: Hypnotist and subject. International Journal of Clinical and Experimental Hypnosis, 8, 61-70. (Abstracted in Psychological Abstracts, 62: 2 II 61L)

Psychoanalytic appraisal of the psychology of the hypnotist. Both hypnotist and subject share in a neurotic "hypnotic phantasy," i.e., a magical satisfaction of emotional needs. The author posits that widespread subliminal recognition of the neurotic character of the hypnotic relationship has contributed to its lack of professional acceptance. From Psyc Abstracts 36:02:2II61L. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Schneck, Jerome M. (1960). Special aspects of hypnotic regression and revivification. International Journal of Clinical and Experimental Hypnosis, 8, 37-42/

#### NOTES

1:  
Author's Summary: "This report delineates a type of hypnotic revivification without the usually expected dramatic behavioral attributes and use of the present tense in verbalization. On the contrary, motor involvement is at a minimum, manifestations of acting out are devoid of dramatic channels, yet emotion is intense and verbalization is absent. Awareness of the existence of such revivification in the hypnotic setting is important for adequate understanding by the therapist and incorporation into hypnotherapeutic or hypnoanalytic procedure. Considerable alteration of temporal and spatial orientations take place and should be appreciated fully. The revivification under discussion was observed in hypnotic settings involving regressions to preverbal age levels. These observations permitted better recognition of similar occurrences for later age periods. Revivification without verbalization may be disclosed subsequently by the patient in spontaneous comments or explored by

the therapist when it has been suspected. The discussion of this phenomenon has centered on the hypnoanalysis of a fifty-four year old woman. The ingredients have been encountered often with others. Additional details pertaining to the revivifications have been described. The psychodynamic implications of the above-mentioned patient's reference to her hypnotic involvements as "vivification" events owing to intensity of the emotional components, have been outlined and linked to previously presented views on emotional insight preceding intellectual insight. The transference elements in revivifications have been given attention and shown to be consistent with a proposed concept of dynamic hypnotic age regression in contrast to chronological hypnotic age regression. The data presented have been correlated with views of a hypnotic-waking state continuum" (p. 41).

1958

Barber, Theodore Xenophon (1958). Hypnosis as perceptual-cognitive restructuring: II. "Post"-hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 6 (1), 10-20.

NOTES

1:

The author presents "experimental evidence indicating that there is no essential difference between 'hypnotic' behavior and 'post-hypnotic' behavior" (p. 11).

"Summary and Conclusions

"When 'somnambulistic' subjects were told to 'wake up' after they were given a 'post-hypnotic suggestion' and 'amnesia for the suggestion' they behaved as follows:

1. They opened their eyes and became relatively more aware of their surroundings.
2. They were aware that the signal for the 'post-hypnotic- behavior had special significance for them.
3. They were 'set' to 'obey the hypnotist's suggestions' from the moment they were told to 'wake up,' until they were convinced that their interpersonal relationship with the operator was no longer that of subject and hypnotist.
4. When the 'post-hypnotic suggestion' was uncomplicated and fitted into the normal pattern of behavior, the subjects carried it out without 'going deeper into trance,' i.e., without becoming relatively more 'detached' from their surroundings. However, when the 'post-hypnotic suggestion' was of such a nature that it was necessary for the subjects to 'go deeper into trance' to properly carry it out, the subjects did 'go deeper into trance.'

"Whether the subjects did or did not have amnesia for the 'post-hypnotic suggestion' was not important. 'Amnesic' and 'non-amnesic' subjects carried out the 'post-hypnotic' behavior in essentially the same way.

"These experiments indicate that:

1. If the operator properly manipulates the situation, the 'good' hypnotic subject is 'set' to carry out the operator's commands in the 'post-hypnotic' period in the same way as during 'hypnosis.'
2. If, in order to properly carry out the 'post-hypnotic suggestions,' it is necessary for the subject to 'go deeper into trance' -- i.e., to become relatively inattentive to stimuli not emanating from the operator -- the good subject will do so.
3. There is no essential- difference between the subject's behavior in the 'hypnotic' period and in the 'post-hypnotic' period.
4. If we are to continue speaking of 'suggestions' to be carried out in the post-hypnotic period we should term them 'post'-hypnotic 'suggestions'" (pp. 19-20).

Schneck, Jerome M. (1958). Relationships between hypnotist-audience and hypnotist-subject interaction. Journal of Clinical and Experimental Hypnosis, 6 (4), 171-181.

"Patients discussing or entering hypnotherapy are frequently influenced in their attitudes by some measure of direct or indirect contact with popular exhibitions of hypnosis. Expectations, interpretations, general behavior, and transference relationships are affected as a result. Previous papers by others have discussed and described popular exhibitions from the view of dangers and deception based on undeclared use of trained hypnotic subjects. The present paper is a study of a popular exhibition of hypnosis by a well known entertainer. Admixtures of good and rewarding entertainment method and poorly managed hypnotic technique are described. Stress is placed on the major approach involving impression by implication rather than elicitation of phenomena and clarification of claims with demonstration by challenge. The result is one of impressing the audience in regard to possible behavior under hypnosis without the actual proof of such claims. This is accomplished through reliance on the suggestibility and gullibility of the audience owing to its lack of experience and information. In most instances then, hypnotist-subject interaction is reduced to the most simple essentials. Stress is placed on the hypnotist-audience relationship. In some of the demonstrations there were varying degrees of subtle interplay between hypnotist-subject and hypnotist-audience relationships with the fostering of audience-subject identification and subject-hypnotist identification via coentertainer status. The hypnotist was capable at times of capitalizing on what he apparently sensed were the needs and likely reactions of certain subjects in connection with some forms of post-hypnotic behavior. The quality of the performance was mixed from an amusement point of view. Errors in technique occurred to a surprising degree in view of the hypnotist's extensive experience. Some entertaining highlights supported the performance. The relationship between hypnotist-audience and hypnotist-subject interaction are of interest within the larger context of interpersonal relations involving small and large groups.

1957

Barber, Theodore Xenophon (1957). Hypnosis as perceptual-cognitive restructuring: I. Analysis of concepts. Journal of Clinical and Experimental Hypnosis, 5 (4), 147-166.

#### NOTES

1:

"Summary

1. 'Trance' involves a selective and relative inattention to internal and external stimulation.
2. Hypnosis involves one type of 'trance' behavior but hypnosis differs from other types of 'trance' in that it is an interpersonal relationship in which one person, the operator, restructures the 'perceptions' and conceptions of the other person, the subject.
3. The operator can restructure the thoughts and 'perceptions' of the 'good' hypnotic subject because (a) the subject is relatively detached and inattentive to his self and his surroundings and (b) the subject is 'set' -- he is ready and willing -- to accept the operator's words as true statements and to 'literally think as the operator wants him to think.'
4. 'Perceptual-cognitive restructuring' and not 'suggestion' is the essential element in hypnosis.
5. We can begin to understand hypnosis and the phenomena of hypnosis by one general principle: the hypnotic subject behaves differently because he 'perceives' and conceives differently. The behavior of the hypnotic subject is in strict accordance with his altered conceptions of his self and his surroundings" (p. 162).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the induction of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 5 (2), 82-98.

#### NOTES

1:

The hypnotic state has four attributes: "an effect of emotional stabilization, a retrogression to an

infantile psychological functioning, suggestibility, and transmissibility of the hypnotic relationship" (p. 82). "SUGGESTIBILITY is a special motivation to accept, incorporate within one's self, and execute direct or implicit propositions, which is equivalent to the motivation of a child to accept, assimilate and carry out the propositions of its parents" (p. 84). The authors propose that verbal and non-verbal suggestions are incorporated during the course of education, lasting years and thus becoming in effect post-hypnotic suggestions. "The person will have in the future a special responsiveness, that may be more or less pronounced according to the circumstances, for those data (coming from books, movies, conversations, etc.) which agree with his emotionally-incorporated post-hypnotic suggestions" (p. 85). If while in an auto-hypnotic condition he comes in contact with someone "who appears to be the embodiment of the convictions or prejudices that on being stimulated started the process of emotional activation that led to the development of the hypnotic state, there may be a transformation of the auto-hypnotic condition into an interpersonal hypnotic relationship" (p. 86).

According to the authors, this theory can explain post-hypnotic (negative) sequellae. It also accomodates explanations of both Natural or Direct Orientation inductions and Indirect Orientation inductons, and explains phenomena such as patients entering hypnosis rather automatically while awaiting the appearance of Mesmer in his waiting room.

"To conclude, we will stress that the psychological mechanism of hypnotic induction is exactly the same in everyday life and in the experimental environment. The apparent differences like [sic] in the behavior of the subject in the hypnotic state, and are due to the motivation that arises from the circumstances and to the convictions, capacities, psychological maturity, and degree of retrogression of the individual" (p. 96).

Stillerman, Bernard (1957). The management in analytic hypnotherapy of the psychodynamic reaction to the induction of hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (1), 3-11. (Abstracted in Psychological Abstracts, 58: 1715)

## NOTES

1:

The author suggests ways to diminish patient resistance that may emerge in the initial hypnotherapy sessions. "(1) Question him before the first trance regarding his reactions to observing or experiencing hypnosis. How does he feel about being hypnotized now? (2) Observe the patient's physical and emotional reactions in the trance -- any restlessness, jerky movements, moans or groans, sweating, crying, laughing, anger, etc. If any such reactions occur, ask him how he feels, what he is thinking about. (3) Immediately following the first trance, discuss with him his reactions to the trance (emotional reactions, thoughts, feelings, flashes, associations, fantasies or dreams): (a) as he went into the trance, (b) while in the trance, (c) coming out of the trance. (4) At the second hypnotic session, before induction, question him again regarding his reaction to the previous session. Also, inquire particularly about any dreams which occurred subsequent to the first hypnotic session. (5) In general and at all times, note his verbal and non-verbal productions and the dreams he spontaneously presents" (p. 4).

Seven case examples are provided.

1956

Guze, Henry (1956). The involvement of the hypnotist in the hypnotic session. Journal of Clinical and Experimental Hypnosis, 4 (2), 61-68.

## NOTES

1:

"In summary, in the actual hypnotic relationship, the attitudes of the operator may influence his behavior markedly and are probably even more important than those of the subject in carrying through a successful relationship. It has been indicated in another paper that the subject's impulse

handling is more important than his attitude toward hypnosis in actual hypnotizability. This view is a re-interpretation of that of Sarason and Rosenzweig (16) with regard to the same problem. The way the operator handles his own impulses seems in itself a most significant problem, and is expressed in his reactions to the induction and later the trance state of the subject. It is indicated that to some workers, the hypnotic response of the subject offers a rare feeling of power which may have psychosexual implications of a heterosexual or homosexual kind depending on the sex of the patient and the emotional needs of the operator. Child-parent relationship attitudes may also be elicited as well as conflicts about dominance-submission related to earlier experience of the worker.\*\* As suggested by Bruno-Bettelheim (1) for children who cannot participate in relations with others as a result of a fear of their own hostility, it appears that some persons might find the hypnotic situation difficult because of a similar factor. Thus some therapists or research workers might be impelled to reject the use of this measure or to fail in using it, because of a non-verbalized fear of their own impulses toward a 'helpless' subject in their power. This same situational response may be a problem that arises in the psychotherapeutic or even ordinary medical relationship. Its effect may be to limit full exploration and exploitation of therapeutic possibilities, and to hamper treatment of numerous disorders.

"It is perhaps appropriate to point out in conclusion that Freud left hypnosis, it would seem, because of some unresolved problems. Wolstein (23) says because he could not hypnotize all his patients and because of the magical connotations of hypnosis. The hypnosis in transference is still an open field. Are the two phenomena over-lapping or on a continuum? Are the problems of the therapist really the same in both areas? Is transference an aspect of hypnosis" (pp. 66-67).

"\*\* Data on male-female differences in success as hypnotists with members of the opposite sex might be very illuminating" (p. 66).

Meares, Ainslie (1956). The hysteroid aspects of hypnosis. American Journal of Psychiatry, 113, 916-918. (Abstracted in Psychological Abstracts, 57: 3514)

#### NOTES

1:

Article discusses hypnotic behavior as ego defense.

Solovey, Galina; Milechnin, Anatol (1956). Concerning a theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 4, 37-45.

#### NOTES

1:

"The essential attributes of the hypnotic condition may be understood to derive from three sources:

- 1) The hypnotic emotional state per se
- 2) The resultant motivation of the 'subject' to comply with the desires of the 'operator' (reinstating a child-like responsiveness).
- 3) The RETROGRESSION to an earlier form of psychological functioning that takes place under a hypnotic state of growing intensity" (p. 43).

"Although the retrogressive process is a general response to emotions and probably exists in some toxic states as well, it has a remarkable feature in the hypnotic state: THE COALESCENCE OF MOTIVATION AND RETROGRESSION, which exists in hypnotized people, permits a peculiar manipulation of the retrogressed condition. The peculiar responsiveness of the subject may be tested and molded by means of propositions which act as suggestions. In this manner, the so-called HYPNOTIC PHENOMENA are elicited" (p. 44).

Wagner, Frederik F. (1956). A dynamic approach to the problem of hypnotic induction. Journal of Clinical and Experimental Hypnosis, 4, 93-98.

## NOTES

1:

The author discusses inductions in a broadly psychoanalytic framework. "In keeping with the terminology, hypnotic induction can be defined as a deliberate attempt to disturb the psychic [sic] equilibrium leading to a reorganization on a regressed level. This process takes place in a structured, goal directed interpersonal relationship to which the subject attempts to adjust himself. The outcome of this potential conflict determines whether or not the subject can be hypnotized. Hypnotizability can consequently be formulated as the degree of motivation to regress in this transference-like relationships with the hypnotist" (p. 95). He suggests that the thoughts and fantasies about the hypnotist are very important, as well as the kind of physical setting the subject would prefer, to assure adequate induction.

"With such information at hand the hypnotist would probably, to a greater extent, be able to phrase his suggestions in the patient's lingo and assume a proper attitude according to the patient's needs. By avoiding suggestions which stir up fearful fantasies about hypnosis he will try to keep anxiety at a minimum. By assuming a protective parental role he may stimulate infantile needs and give the patient a maximum of security; anxiety, and consequently, defenses may thereby be minimized. He may even assume an authoritarian role, deliberately stirring up anxiety, if he expects the subject will respond with regression" (p. 97).

1955

Kline, Milton V. (1955). Freud and hypnosis: II. Further observations on resistance and acceptance. Journal of Clinical and Experimental Hypnosis, 3 (2), 124-129.

## NOTES

1:

"Summary. Freud's rejection of hypnosis in the development of psychoanalytic psychology becomes upon closer examination a two fold process. It involves on the part of Freud the conventional recognition that suggestion plays a basic role in the primitive emotional energy that binds people together and influences the acting out of primary libidinal drives. From an ontogenetic (and presumably phylogenetic) point of view, Freud viewed suggestibility as a repressive element in the organization of behavior and one which in effect had to be dealt with indirectly. To deal with it directly was to create a state within which powerful emotions of an unpredictable nature could emerge. Hypnosis to Freud was a 'condition' which led to general heightened suggestibility and was identical with it. To make use of this condition was in essence an attempt to make use of an individual's energies in a dependent and essentially uninhibited manner. It seemed to Freud that having produced the hypnotic 'condition,' one actually had achieved a state of suspension or ablation of certain critical ego functions and this could lead to an intense and perhaps unmanageable interpersonal relationship. It was almost an 'ethical' rather than a scientific view as Freud discussed it in his thinking and theorizing about a general psychology.

"To a great extent the basic concepts of psychoanalysis were developed as the result of Freud's awareness of the existence of hypnotic phenomena and his need to circumvent and indirectly deal with the ego manifestations of this 'condition.' Thus Freud never really rejected hypnosis as a mechanism of human behavior. His comment of the psychosocial development of man (from which psychoanalytic psychology is influenced) was heavily weighted by his awareness of 'suggestibility' and the 'condition' descriptively called hypnosis.

"The simple equation of hypnosis with suggestibility is now scientifically outmoded and incorrect. The role of suggestion and its psychosomatic equations has taken on a drastically changed perspective in social psychology, particularly with regard to the early concepts of Le Bon, Freud and McDougall (5). For these reasons alone, Freud's circumvention of hypnosis becomes increasingly unsound scientifically and adherence to such a perception of hypnosis serves only to obscure theoretical

research in psychology and to maintain a rigidity born essentially of emotional ties and ethics alien to the nature of scientific inquiry" (pp 128-129).

Leuba, Clarence (1955). Conditioning during hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 256-259.

#### NOTES

1:

The author is responding to an article that concludes that conditioning during hypnosis leads to effects better accounted for by the research subjects' attempts to conform or please the Experimenter (Fisher, Seymour. An investigation of alleged conditioning phenomena under hypnosis. *J. clin. exp. hypnosis*, 1955, 3, 71-103).

"Informal attempts have been made to eliminate the personal subjective influence of the hypnotist when testing for the effects of 'alleged' conditioning under hypnosis. The conditioned stimulus has been administered post-hypnotically by other persons than the hypnotist, or when S was occupied, offguard, and presumably not set to please the hypnotist. The results have been equivocal. Usually, the conditioned responses occurred when the conditioned stimulus was administered by others than the hypnotist and in a variety of situations; when caught offguard, however, the S may not respond, at least not overtly; he may, for instance, only feel a tendency to cough when touched. This might be, of course, because coughing is often inhibited in social circumstances and the tendency, therefore, does not become overt. Sometimes when told by the hypnotist post-hypnotically that the experiments were over, the alleged conditioning disappeared; sometimes, on the other hand, when the hypnotist emphatically stated post-hypnotically that there was no odor present and that it had been just hallucinated, the S nevertheless smelled it when the cue was again present" (p. 258).

Rosen, Harold (1955). Regression hypnotherapeutically induced as an emergency measure in a suicidally depressed patient. Journal of Clinical and Experimental Hypnosis, 3 (1), 58-70.

#### NOTES

1:

After cautioning that regressive techniques are only to be undertaken by very experienced therapists, the author states in conclusion, "However, if the therapist have a thorough grounding in dynamic psychiatry, he may as an emergency measure, through the adjunctive use of hypnotic techniques of the type described in this article even induce regressive phenomena in the potentially homicidal or suicidal psychotic patient, in order that they may be integrated and utilized in the service of the ego, at first by blotting out ego-boundaries between patient and therapist, so that later on during the course of the therapeutic process these self-same ego-boundaries may be re-defined and re-constituted on a more mature emotional level and with much healthier personality functioning.

Schneck, Jerome M. (1955). Hypnotic interviews with the therapist in fantasy. Journal of Clinical and Experimental Hypnosis, 3 (2), 109-116. (Abstracted in *Psychological Abstracts*, 56: 1126)

" Summary. This report furnishes illustrations from two patients of the technique consisting of hypnosis interviews conducted by the patients with the therapist in fantasy. This method emerged from previous work with visual imagery in the form of scene visualization and some of its derivatives. The writer believes that further work with the technique presented now may prove to be beneficial in psychotherapy. At the same time it offers an opportunity for further study of personality functioning in general and certain aspects of psychodynamics. The patients manipulate the session in a way which furthers a duality in their functioning as a result of which they attempt to probe and contend with contradictory tensions in their unconscious. The image of the therapist undergoes certain distortions demonstrating dynamisms such as projection and identification as utilized by the patient. The

therapist is in a position to view all of this and to discern elements in his relationship with the patient which may otherwise have escaped him. Countertransference issues may be clarified in this way. The technique may assist at points where the therapist seems to be functioning too blindly and where the patient may more pointedly show the way by guiding the therapist while relating to a mental image of him. There is a possibility that some aspects of this approach in treatment may prove of value in psychotherapy which does not incorporate hypnosis. This may be of assistance to workers who have not been trained in hypnotherapy" (pp. 115-116).

Schneck, Jerome M. (1955). Transference and hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 3 (3), 132-135.

"Summary. This report describes an extreme posture in hypnosis, spontaneously assumed by a male patient, when the patient, seated in a chair, curved his head, neck, and upper body far forward so that his face finally was turned inward toward his body at the level of lower abdomen or pubis. This spontaneous motor phenomenon, aside from serving as an addition to spontaneous sensory and motor phenomena described previously, continued throughout a series of sessions and reflected symbolically a combination of broad rather than limited interest in treatment and its implications were accepted and used as a base in determining the direction and management of therapy. The constellation of events furnished an additional example of incorporation of hypnotic technique into psychotherapy" (p. 135).

Stokvis, Berthold (1955). Hypnosis and psychoanalytic method. Journal of Clinical and Experimental Hypnosis, 3, 253-255. (Abstracted in Psychological Abstracts, 57: 1157)

#### NOTES

1:

The author distinguishes between hypnosis/psychoanalysis and 'hypno-analysis' which Hadfield previously described as a combination of hypnotic catharsis and re-educative suggestions.

At the Leyden Clinic the author uses one of several methods to "apply hypnosis together with the utilization of psychoanalytic principles. ... [It] consists in a cathartic-analytic treatment of the patient in the waking state, while endeavouring to re-enact repressed psycho-traumatic events of the past, in the hypnotic state. The experiences in question are subsequently discussed with the patient and elucidated" (p. 253).

1954

Meares, Ainslie (1954). History-taking and physical examination in relation to subsequent hypnosis. Journal of Clinical and Experimental Hypnosis, 2 (4), 291-295.

#### NOTES

1:

"Summary. The history-taking and physical examination of the initial interview can be so structured as to facilitate the subsequent induction of hypnosis. Rapport is established, and negative transference feelings are not allowed to develop. There must be no holding back or hiding of the real complaint with screen symptoms. Physical examination is a symbolic surrender and paves the way for the real surrender of passive hypnosis. If induction by an active method is anticipated, authoritative attitudes are introduced into the history-taking and physical examination" (p. 295).

Watkins, John G. (1954). Trance and transference. Journal of Clinical and Experimental Hypnosis, 2 (4), 284-290.

## NOTES

1:

The author proposes that [hypnotic] trance and transference are essentially the same phenomena. "Yet while the hypnotherapist is often unaware he is dealing with transference, the psychoanalyst is often equally oblivious to the fact that he is interacting with his patient in a light trance ego state. ... Perhaps a re-examination of the entire problem of ego states and hypnotic trance is due" (p. 290).

1953

Kline, Milton V. (1953). Toward a theoretical understanding of the nature of resistance to the induction of hypnosis and depth hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 32-41.

## NOTES

1:

In this theoretical paper, the author makes the following theoretical deductions:

"1. Resistance to hypnosis appears to be a fundamental characteristic of hypnosis.

2. The nature and pattern of such resistance is highly variable and may be expressed consciously or unconsciously, ideationally or affectively, psychologically or somatically, actively or passively and in combinations of the above characteristics.

3. Hypnosis is often perceived as a threat to the individual's equilibrium or homeostatic adjustment and the reactions or resistance to this threat depend upon both the severity of the threat and the strength and nature of the subject's defenses.

4. The pattern and structure of resistance to hypnosis may be initially determined by the first stimulus the subject perceives as a threat:

(a) The stimulus could be the psychophysiological correlates of hypnosis per se, the vaso-motor and related phenomena and their influence on ego function. Even very light hypnotic states have been demonstrated to produce alterations in ego functioning (5, 21).

(b) The stimulus could be the threat of, or the activation of, a transference relationship which is quickly crystallized and synthesized in the patient's receptor perceptuality, because of alterations in receptor function which can accompany the induction of hypnosis.

(c) The stimulus could be a \_conditioned\_ response, either to the transference or to elements of the hypnotic procedure related to it.

(d) The stimulus could be an \_associated\_ response, either to the transference situation or to elements of the hypnotic procedure related to it.

(e) The stimulus could be a configuration of all the aforementioned components, stemming directly from association to the words of the hypnotist. Such a Gestalt-like response to hypnosis might involve transference threat, increased transference-impulse drives, neuro-psychological changes in ego function resulting from hypnosis per se and conditioned response patterns and associated imagery activity.

(f) Secondary and higher order stimuli may be come incorporated into hypnotic resistance or reaction patterns through a feeding back of stimulation through either physiological activity or associated cortical activity" (pp. 34-35).

Williams, Griffith W. (1953). Difficulty in dehypnotizing. Journal of Clinical and Experimental Hypnosis, 1, 3-12.

## NOTES

1:

The author collected "instances of difficult dehypnotization from the experience of experimenters and therapists and then [discussed] them with reference to three aspects: a) their behavioral characteristics, b) their dynamics so far as these could be ascertained, and c) the methods used to deal with them" (p. 3).

## RELIGION

2003

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

1998

Court, John (1998). Not the state, but the territory. Australian Journal of Clinical and Experimental Hypnosis, 26 (2), 104-112.

With the current growth of interest in spirituality, the interface between hypnosis and religious practices takes on new significance. Cautions have traditionally been expressed about the hypnotic state, with fears about control and willpower. While developments in the ethical use of hypnosis make such concerns less pressing, there remain significant paradigm issues which are being explored in the literature. These include pursuit of the age-old question, "Who are the legitimate healers in a society?" The territory of the church and the territory of the clinic are not entirely separate, so issues arise regarding the relative authority of practitioners to intervene in people's lives, and what such interventions should look like. Many Christians who might benefit from hypnosis have been warned to be totally against it. Evidence will be brought forward to challenge this and make it safer to look to therapeutic hypnosis without compromising beliefs.

1998-1999

Easterlin, Barbara L.; Cardena, Etzel (1998-99). Cognitive and emotional differences between short- and long-term Vipassana meditators. Imagination, Cognition and Personality, 18 (1), 69-81.

This study compared perceived stress and cognitive and emotional differences between two groups of Buddhist mindfulness [Vipassana] meditators. Nineteen beginning and twenty-four advanced meditators carried electronic pagers for five days and responded to daily random signals by completing an Experience Sampling form (ESF) containing items related to the dependent variables. As compared with beginners, advanced practitioners reported greater self-awareness, positive mood, and acceptance. Greater stress lowered mood and self-acceptance in both groups, but the deleterious effect of stress on acceptance was more marked for the beginners. These findings validate in a naturalistic setting some of the effects described in traditional Buddhist texts on mindfulness.

## NOTES

1:

"Meditation can be defined as the deliberate deployment of mental attention to obtain a particular patterning of consciousness. The aim of such control may be the stabilization of the stream of thought, greater relaxation, the attainment of an altered state, or the development of insights into the nature of mind [12]. Mindfulness meditation has sometimes been contrasted with concentration meditation as one of two main forms of meditation practice [13, 14]. The usual distinction is that mindfulness involves opening awareness to all contents and processes of mind, whereas concentrative forms of meditation involve shutting out all stimuli extraneous to a single object of attention" (p. 70). Long-

term meditators averaged 103 months and 85 days of retreat training. They did not differ from short-term meditators on measures of absorption, neuroticism, trait anxiety, or cognitive style; however they evidenced greater self-awareness and acceptance. The short-term meditators actually had more than a year of meditation experience so that differences between groups are not likely to be due to self-selection. The authors conclude that "meditation brings about sustainable changes in people's lives, above and beyond relaxation. ... [and] that greater conscious awareness through mindfulness techniques such as Vipassana meditation, increases acceptance, positive mood, and the ability to dispassionately observe one's mental states. These results have implications for clinical issues such as pain management and psychotherapy, in which acceptance and awareness are necessary ingredients for therapeutic change" (p. 78). JH

1997

Court, John (1997). Hypnosis, healing and the Christian. Carlisle United Kingdom: Paternoster Press.

Seeks to explore the interface between hypnotic phenomena and religious experiences. On the basis of clinical examples, and historical review, argues that the constraints expressed by some churches against hypnosis cannot be justified. Rather that there is a good deal of support for seeing religious experiences and clinical phenomena as similar. Challenges the use of the Old Testament to discount hypnosis in favor of more positive evaluations from the New Testament.

1996

Rosenbaum, Robert & Dyckman, John (1996). No self? No problem! Actualizing empty self in psychotherapy . In Hoyt , Michael F. (Ed.), Constructive therapies (2, pp. 238-274). New York NY: Guilford.

NOTES

1:

In this book chapter, Rosenbaum and Dyckman (1996) argue that self has no permanently fixed, defining, thing-like characteristics (p. 270). They thus dispute the classical notion--commensurate with the position of philosophical realism --that the self is a substance, with fixed qualities and measurable qualities. The authors refer to this classical self as a full self, contained inside the skin and delimited by its participation in linear time. Instead, they propose an empty self, not to be construed as a void, but as a fluid, connected, relational self that overflows the traditional boundaries of the skin and is open to greater possibilities for change. To support their view of an empty self, the authors include several case examples of working with hypnosis and strategic/narrative therapy with clients experiencing a variety of psychological and physical symptoms. The authors further contend that self is not unitary, but the product of multiple drafts (p. 248)[Editor note: See Dennett, 1991, in this database]. In the narrative-constructivist tradition, they argue, if we speak in terms of multiple contextual selves for us all...[then, people diagnosed with MPD/DID] are not so different from the rest of us (p. 249). The chapter draws from western & Buddhist philosophy, strategic/systemic and narrative therapies, Ericksonian hypnosis, and, cognitive science theories regarding memory, consciousness, embodiment, and language, to support their alternative view of, and treatment for, the self.

Csoli, Karen; Ramsay, Jason T.; Spanos, Nicholas P. (1994, August). Psychological correlates of the out-of-body experiences--a reexamination. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

1:

12% of population reports an out-of-body experience (OBE) sometime in their lives. They leave their body and can see self from the outside. Awareness is confined to the new point of view, not fragmented; there is unimpaired intellectual ability; feelings of detachment, completeness, well being, and profound relaxation. Can occur under stress or deep relaxation; not while driving a car.

Psychological correlates aren't known. Studies are inconclusive with respect to belief systems (religious, death anxiety, etc.); measures of absorption, hypnosis, imaginative ability, imagery controls. Recent Carlton study with 87 Ss (33 had OBE) got results we didn't expect. They completed questionnaires, were tested for hypnotizability, had an interview re OBE experience.

This study found the OBE-experiencing people had higher levels of anxiety, psychosomatic symptoms, and panic attacks. They were also higher on magical thinking, perceptual aberration, and Schizophrenia scores. They didn't differ on mysticism, levels of drug or alcohol use, or level of self esteem

Epstein, Seymour (1994). Integration of the cognitive and the psychodynamic unconscious. American Psychologist, 49 (8), 709-724.

Cognitive-experiential self-theory integrates the cognitive and the psychodynamic unconscious by assuming the existence of two parallel, interacting modes of information processing: a rational system and an emotionally driven experiential system. Support for the theory is provided by the convergence of a wide variety of theoretical positions on two similar processing modes; by real-life phenomena--such as conflicts between the heart and the head; the appeal of concrete, imagistic, and narrative representations; superstitious thinking; and the ubiquity of religion throughout recorded history--and by laboratory research, including the prediction of new phenomena in heuristic reasoning.

1994

Walsh, Roger (1994, August). Transpersonal psychology--the state of the art. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

1:

Twenty-five years ago a group formed that was called transpersonal psychology, following after humanistic psychology (e.g. Maslow). Some of the humanistic psychologists came into transpersonal psychology. Maslow was interested in healthy people, and in peak experiences that were transpersonal in nature--experiences encompassing wider aspects of life, including mystical experiences.

Peak experiences were thought to be positive, but also overwhelming. When psychologists looked Eastward, they found that there were whole families of these types of experiences, and that they could be induced by will and could be stabilized into not only peak but plateau experiences. There was a reservoir of wisdom in the world's religions that could be drawn upon. This wisdom is being integrated with Western science to create the discipline of transpersonal psychology.

There is a broad spectrum of altered states of consciousness. Traditionally, altered states of consciousness were thought to be few in number, and usually pathological. Our society has been resistant toward studying them. For example, Esdaile's use of hypnosis in surgery was not welcomed, even though he was lowering morbidity and mortality because he controlled shock. His paper was turned down for publication. He amputated a leg in front of colleagues in Britain, who commented that he "must have hired a very hard rogue" to have his leg cut off under hypnosis.

Our culture is monophasic, deriving its world view almost exclusively from the waking state; other cultures are polyphasic and also draw their world view from dreams, meditative, or yogic contemplative states, etc. Recently we can apply more sophisticated analyses, to compare states of consciousness and map these out, phenomenologically. There are several key dimensions of experience

for mapping the states: 1. Control 2. Awareness of Environment 3. Concentration 4. Mental Energy/Arousal 5. Emotion 6. Identity or Self Sense 7. Out-of-Body Experience 8. Content of Experience

Using these dimensions, we could compare shamanic, yogic, and Buddhist practices.

A Nepalese shaman drums himself into a trance state, demonstrating: 1. Ability to enter and leave an altered state of consciousness and partly control experience 2. Decreased awareness of his environment 3. Increased concentration, fluid attention 4. Increased mental energy/arousal 5. Either pleasurable or not [pleasurable] emotion 6. Separate self sense: may be experienced as a non-physical "spirit" or "soul" 7. Controlled ecstasy (Out of Body experience)

Buddhist meditation is training awareness to examine experience as minutely as possible, in effect a heightened awareness (Vipassana).

A yogic practitioner engages in concentration, focusing on a fixed stimulus and holding it unwaveringly, till it dissolves a sense of separation into a unity with the object, ultimately with the Self. [Author showed a slide comparing the three.] All three approaches have increased control and concentration. (The Yogi's is unshakable.) An awareness of the environment is increased for the Buddhist; the Yogi may lose awareness entirely. Others have ecstatic experience; the yogi has enstatic experience. Identity for the shaman is separate (a soul); for the Buddhist awareness is so precise that what was "I" is deconstructed into evanescent flux, into thoughts, images, emotions (like a movie with solitary frames); the yogi dissolves the self sense, but because of fixed concentration the separate self disappears and yogis feel like merging with larger Self.

So now for first time in history we can compare and map both similarities and differences. Now we have new possibilities for understanding and contrasting different practices. We can now differentiate the many states of consciousness that are available. But there are an awful lot of states. Can we find an over-arching framework? For the first time, we can say yes--due to the work of Ken Wilber. This is Developmental Structuralism (looking for common deep structures).

For example, you can identify millions of different faces, and they are surface structures; but they all have a common deep structure. Likewise, if we see that a Hindu creates images of [devas] and a Christian sees saints, they are seeing archetypal images. Likewise, Buddhists experience nirvana in which all phenomena disappear, and so does another group. This [sense of all phenomena disappearing] is common to both, but different from those who see archetypal images. We may be able to come up with a typology of altered states.

Wilber also says that these deep structures and corresponding states may develop in a developmental sequence, with common stages. Three transpersonal stages are subtle, causal, and non-dual. In meditation, first you learn how out of control the mind is, then gradually it quiets and you discover subtle experiences that you usually overlooked. Going further, all thoughts cease to arise, and there is only pure consciousness. Beyond that, images re-arise but are now recognized as projections of consciousness.

Subtle images may be formless (as in pure light, pure sound). The person may pay attention to more and more subtle sounds. Or the images may have form (as in shamanic power animals).

At the casual stage, the person may be aware of consciousness itself, only consciousness, with no objects: pure consciousness, void, the Atman of Vedanta, abyss of gnosticism.

At the non-dual stage, objects arise again: everything is recognized as expressions of consciousness--e.g., Zen's "one mind." Consciousness now has awoken and sees itself in all things, unbounded by space and time and limits because consciousness is what creates space, time, and limits. This is Moksha, Enlightenment, etc.

This is not the final task, because the final task is bringing the awakening to the world (Plato's re-entering the cave, to educate others; Zen oxherder entering the marketplace with help-bestowing hands; Christianity's "fruitfulness of the soul"). For Joseph Campbell, this was the hero's return.

Toynbee observed that each great contributor had withdrawn and then returned to the world to offer what they had found.

[It is a process of] transforming a peak into plateau experience; an altered state into a trait; stabilized into enduring understanding, and then bringing it back into the world.

Is there evidence for enlightenment? There now is analogical and laboratory support for this. Analogical support is lucid dreaming. Until 20 years ago, Western psychology thought lucid dreaming was impossible, but now LaBerge at Stanford University has shown physiological evidence. We know from every night's experience that we can create worlds and bodies on which our lives seem to depend. The claim of spiritual traditions is that there is a state of consciousness that bears a relationship to the ordinary [waking] state as lucid dreaming has to nonlucid dreaming. The Dalai Lama said they train yogis to be aware during dreams, not to lose awareness 24 hours a day; then to be aware of dreaming while in a waking period. A Tibetan dream yoga aim is the "great realization," that everything in existence is like a dream.

Laboratory studies have been done on enlightened people. The EEG data obtained while they are sleeping is consistent with lucidity during their dreams and between dreams. Rorschach tests have been done on advanced Buddhist meditators; at the penultimate of enlightenment, they show no evidence of conflicts around sexuality and aggression. The 2000 year old Buddhist texts say that at this stage these issues are resolved.

The implications for our usual state are that normality is not the peak of human development; normality is arrested development. The link between apes and civilization is us! We experience a consensus trance, a collective psychosis, society's hypnosis. We live in the biggest cult of all: CULTURE. The answer is, "Wake up."

A most important question is, if it is true that our conventional state of development is suboptimal, how do we develop other states? The classic answer is: take up a discipline, a practice (e.g., meditation, service, being in nature). One problem is that spiritual traditions are usually couched in archaic language, and have accumulated nonsense around them over the years. It is desirable to abstract out the essential elements. That is a recent thrust of transpersonal research.

There are six common elements: 1. Ethics: the moment you sit down to meditate, what emerges is all the unethical stuff you've done and what was done to you. Ethical behavior (not conventional morality) is a tool for mind training. 2. Attentional training: ordinarily we cannot sustain attention. (William James said the maximum is 3 seconds.) The aim is to be able to maintain attention on what one wants. It leads to the stabilization of mind, calming. 3. Emotional training: destroying negative emotions (well developed in Western psychology, maybe better than in the Eastern traditions, because we recognize the problem with repression); cultivating positive emotions (where contemplative practices do well, because they offer tools for unwavering, unconditional, and all-encompassing [positive regard]; what is known as agape in Christianity). 4. Redirection of motivation: changing what you want, etc. 5. Perceptual refinement: we mistake shadows for realities; according to St. Paul we "see through a glass darkly." This enhances sensitivity, accuracy, and subtlety of perception. 6. Wisdom: actually the first element, playing a role all through the path. Initial motivation sees suffering of the world; provides motivation for realizing that there must be another way of living, culminates with deep insight into nature of the world, mind, consciousness, reality (prajna; Christian's gnosis). When the mind is trained, stabilized, and clarified, the mind has a heightened capacity for understanding.

So for the first time we can recognize the common elements in religions; we can see that the contemplative core contain practices and road maps. This approach recognizes multi-state psychologies and philosophies.

APPLICATION. Many areas of research are developing in transpersonal psychology. These studies have implications for the state of the world. It is only 25 years since the founding of transpersonal psychology. The world's population has developed to the extent that every four months we are losing as many people from malnutrition as from a Holocaust. Our problems are still solvable. The best

population explosion control is to make education available to women in the Third World. The transpersonal vision gives a frame to recognize that we are all connected.

For a fuller account of transpersonal psychology, see R. Walsh & F. Vaughan (Eds). (1993) *Paths Beyond Ego: The Transpersonal Vision.* \_ New York: Tarcher/Putnam.

1993

Kokoszka, Andrzej (1993). Occurrence of altered states of consciousness among students: Profoundly and superficially altered states in wakefulness. *Imagination, Cognition and Personality*, 12, 231-247.

In a questionnaire survey waking altered states of consciousness (ASC) are found to be common among 174 Polish students. The experience of Superficially Altered States of Consciousness (SACS) was reported by 96 percent of subjects and more than half of them had such experiences often. Whereas an experience of Profoundly Altered States of Consciousness (PASC) was confirmed by 75 percent and about one-third of them had them often. The comparison of the experiences accompanying the ASC indicates that SASC are characterized by disturbances in experiencing the reality and oneself combined with positive, pleasant feelings and with quietness. On the other hand, PASC are accompanied by experiences related to an absolute, universal, eternal, and existential or religious matters. PASC are accompanied by extremely strong positive emotions of happiness, total love, etc. and are experienced as more rational than SASC, and with significantly less feelings of cognitive disturbances than in SASC. The comparison of circumstances of the ASC occurrence indicates that SASC occur in usual and common states and situation of everyday life, whereas PASC mainly in the context of religion and nature. The congruence of these findings with an integrated model of the main states of consciousness suggests a natural tendency for a cyclical occurrence of ASC, or more precisely, the differentiated waking states of consciousness.

1991-1992

Nelson, Peter L. (1991-92). Personality attributes as discriminating factors in distinguishing religio-mystical from paranormal experients. *Imagination, Cognition and Personality*, 11, 389-406.

In the first section of this article, an operationalized notion of preternatural experience is described which includes two general classes of experience: religio-mystical (Ontic) and paranormal (Perceptual). The exploratory study which follows uses the personality measures of the complete Tellegen Differential Personality Questionnaire taken from 120 subjects who reported having had spontaneous religio- mystical and/or paranormal experiences at some time in the past. The scores on all eleven primary dimensions, three higher order affect factors, and two validity scales were used individually, in univariate ANOVAs, and together, in a Direct Discriminant Function Analysis, to successfully separate two classes of preternatural experients from non- experients and from each other.

Zika, William (1991, January). *Hidden observer in psychotherapy.* [Lecture] Seminar in the UCLA Department of Psychiatry and Biobehavioral Sciences.

NOTES

1:

Author has explored use of a "hidden observer" metaphor in psychotherapy. He distinguishes between two types of dissociation--that resulting from involvement in fantasy and imagery (separation from the Generalized Reality Orientation described by R. Shor) and that between the "I" and the Observer. He calls the latter nonattachment instead of dissociation, aligning it with meditation concepts. The observer, in the hypnotized patient, is objective and even more in touch with reality than the patient in the waking state. He likens the Observer to Erickson's Inner Self, noting that just as patients learn to

allow the therapist to care for them, they can come to allow the Observer to care for them. During inductions he speaks of the Hidden Observer (H.O.) that always knows what is going on, giving a suggestion that the H.O. can be helpful. (This concept seemingly relates also to the observer in Multiple Personality Disorder, and to John Kihlstrom's discussion of William James and the self, as well as to amnesia/duality in age regression or duality (HO) in pain control.)

1988

Tobacyk, Jerome; Milford, Gary; Springer, Thomas; Tobacyk, Zofia (1988). Paranormal beliefs and the Barnum effect. Journal of Personality Assessment, 52 (4), 737-739.

Examined in 128 college students the hypothesis that paranormal beliefs emphasizing divinatory procedures that produce personalized feedback are associated with greater susceptibility to the Barnum effect, which is acceptance of bogus personality feedback consisting of relatively trivial statements with a high base rate. 76% of the Ss rated the accuracy of their personality descriptions favorably, showing a robust Barnum effect.

1987

Jana, Hrishikesh (1987). History and present state of hypnosis in India. [Lecture] Presented at the Department of Psychiatry, UCLA.

NOTES

1:

Hypnosis is discussed in relationship to traditional Indian medical and psychological treatments. The following Table illustrates some of the relationships among Asian approaches, which also include philosophical and religious elements.

1986

Spanos, Nicholas P.; Cross, Wendi P.; Lepage, Mark; Coristine, Marjorie (1986). Glossolalia as learned behavior: An experimental demonstration. Journal of Abnormal Psychology, 95, 21-23.

60 Ss listened to a 60-s sample of glossolalia (defined to them as pseudolanguage) and then attempted to produce glossolalia on a 30-s baseline trial. Afterward, half of the Ss received two training sessions that included audio- and videotaped samples of glossolalia interspersed with opportunities to practice glossolalia. Also, live modeling of glossolalia, direct instruction, and encouragement were provided by an experimenter. Both the trained subjects and untreated controls attempted to produce glossolalia on a 30-s posttest trial. About 20% of subjects exhibited fluent glossolalia on the baseline trial, and training significantly enhanced fluency. Seventy percent of trained subjects spoke fluent glossolalia on the posttest. Our findings are more consistent with social learning than with altered state conceptions of glossolalia.

1984

Burnham, John C. (1984, October/1986). The fragmenting of the soul: Intellectual prerequisites for ideas of dissociation in the United States. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 63-84). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

NOTES

1:

"Reductionism was a relentless pursuit of the idea that knowledge of components led to knowledge of causes. In this context, I propose to show how, in the psychological-medical realm, the initial concept was the soul, and the final intellectual product was dissociative phenomena" p. 64.

Wilson, Ian (1984). Jesus--The evidence. London England: Weidenfeld and Nicolson.

## NOTES

1:

Miracles of Jesus are attributed to hypnosis, in a culture that had already experienced faith healers. Many of those healed had diseases that today might fall into the 'hysteria' or 'psychosomatic' categories (paralysis, lameness, fever, catalepsy, haemorrhage, skin disease, mental disorder), which diseases are frequently responsive to hypnosis. Further, Jesus' reputation preceded him, and the fact that his cure rate was low in his home town is evidence of both the veridicality of the written record (Mark 6: 1-6) and the expectancy factor. "The significance of this episode is that Jesus failed precisely where as a hypnotist we would most expect him to fail, among those who knew him best, those who had seen him grow up as an ordinary child. Largely responsible for any hypnotist's success are the awe and mystery with which he surrounds himself, and these essential factors would have been entirely lacking in Jesus' home town" (pp. 111-112). The author also assigns other miracles (his transfiguration into dazzling light before three disciples; turning water into wine) to hypnosis [which other writers might ascribe to suggestion].

1982

Larbig, W.; Elbert, T.; Lutzenberger W.; Rockstroh, B.; Schnerr, G.; Birbaumer, N. (1982). EEG and slow brain potentials during anticipation and control of painful stimulation. Electroencephalography and Clinical Neurophysiology, 53, 298-309.

Cerebral responses in anticipation of painful stimulation and while coping with it were investigated in a 'fakir' and 12 male volunteers. Experiment 1 consisted of 3 periods of 40 trials each. During period 1, subjects heard one of two acoustic warning stimuli of 6 sec duration signaling that either an aversive noise or a neutral tone would be presented at S1 offset. During period 2, subjects were asked to use any technique for coping with pain that they had ever found to be successful. During period 3, the neutral S2 was presented simultaneously with a weak electric shock and the aversive noise was presented simultaneously with a strong, painful shock, again under pain coping instructions. EEG activity within the theta band increased in anticipation of aversive events. Theta peak was most prominent in the fakir's EEG. A negative slow potential shift during the S1-S2 interval was generally more pronounced in anticipation of the aversive events than the neutral ones, even though no overt motor response was required. Negativity tended to increase across the three periods, opposite to the usually observed diminution. In Experiment 2, all subjects self-administered 21 strong shock-noise presentations. The fakir again showed more theta power and more pronounced EEG negativity after stimulus delivery compared with control subjects. Contrary to the controls, self-administration of shocks evoked a larger skin conductance response in the fakir than warned external application.

## NOTES

1:

A published case study by Pelletier (1977) reported EEG theta enhancement during pain control states, which were maintained by EEG feedback of alpha and theta bands. That author concluded that EEG theta was necessary for the control of pain psychologically.

The authors of this article measured slow brain potentials (SBPs) and vertical eye movements (VEMs). Principal components analysis of the EEG wave forms found three components: theta (4-5.6 c/sec), alpha band (9-10 c/sec) and high frequencies (above 14.4 c/sec) plus harmonics loading in frequencies of 3.2-4.5 c/sec, 7.5-9, and above 15 c/sec.

Alpha "decreased over periods in the parietal record and was virtually absent in the fakir's EEG during period 3" (p. 301). The fakir had a lot of non-sinusoidal, especially square wave, activity.

"Very pronounced negativity was recorded preceding the aversive S2, greater than under neutral stimulus conditions ... This difference was most pronounced at the vertex ... The late negativity

increased over periods in control subjects ... especially in anticipation of the aversive S2 ... . This contrasts with the usually observed decrease of SBP components over trials. As is shown in Figure 2, the PCA [principal components analysis] yielded two components for the 2.0 sec S2 interval, a positive deflection, which can be assigned to the P300 complex (here not reported), and a negative deflection, labeled post- imperative negative variation. ... This negative component increased over periods, being more pronounced in response to the aversive stimulation ... with increasing differentiation over period ..." (p. 302-303).

The fakir undertook an elaborate self hypnosis or trance induction to achieve analgesia that he had previously demonstrated in the laboratory (thrusting 4 unsterilized metal spikes into his abdomen, tongue, and neck without bleeding). This included "long- continued fixation on a point above the eye-brows. Blank facial expression, staring eyes, and a very low rate of eye-blinks indicated a trance-like state (periods without eye-blinks more than 30 min)" (p. 299). During the experiment itself, the fakir showed few ocular movements during the second and third periods. He also demonstrated large skin conductance responses, recorded from the second phalanges of the index and middle fingers of the left hand, to the aversive S1.

Experiment 2 was designed to emulate the self-administered aversive stimulation that the fakir routinely undertook, by having the volunteer Ss hold a switch that they pressed twice/minute, giving themselves a mild shock and an aversive noise. (These were the same aversive stimuli as were used in Experiment 1.) There were 21 self-paced button presses.

Three additional measures were taken: 1. Bereitschaftspotential (BP) - the mean negative shift during the 0.3 sec interval prior to the motor response of pressing the switch 2. Postimperative component (PINV) - the mean negative shift 0.9 to 1.9 sec after stimulus onset, i.e. elicited by closing the microswitch 3. Skin conductance response (SCR) - maximum change in skin conductance level during five second interval after the motor response of pressing the switch.

The fakir, but not the control Ss, showed a pronounced precentral PINV on each single trial of Experiment 2. He also showed pronounced SCRs (indicating autonomic arousal), which was even greater than the SCRs of control Ss. His subjective pain rating was 1 in Experiment 1 (compared with 6.4 for controls) but 8 during Experiment 2 (compared with 5.7 for controls), on a scale of 1 to 10 maximum. Thus the fakir's pain increased from Experiment 1 to 2, while for many volunteer Ss it decreased 2 or 3 points. When interviewed, he said that "intention and motor commands prevented the fakir from getting into 'trance' satisfactorily. Consequently, he reported to have experienced the aversive stimuli as more painful than in experiment 1. Thus it might be that the observed PINV indicates the noncontingency between the demand for coping and the failure to cope or the discrepancy between expected control and presently experienced control" (p. 307).

In their Discussion, the authors speculate that control of pain such as can be achieved by the fakir may involve dissociation of higher (possibly thalamic and cortical) and lower (reticular formation) arousal structures. Their observation of slow brain potentials (theta) recorded in anticipation of painful or aversive stimuli is in agreement with earlier published studies. However their observation of increasing negativity in anticipation of aversive stimuli is in contrast to previous research findings, in which diminution of negativity is generally observed.

Both the fakir and subjects showed a post-stimulus negative shift in response to the S2; this has been "observed in normal subjects under conditions of change from controllable to uncontrollable aversive stimuli... and/or from obvious response- consequence contingencies to unpredictable control over the S2... PINVs were associated with an unexpected change in contingency or the inability to resolve ambiguity. Since a relationship was found between PINV amplitude and subjective ratings or experienced aversiveness of the painful stimulation, it may be speculated that obvious failure in coping with pain (i.e. more experienced pain) together with the requirement to cope (induced by instructions and experimental setting, giving rise to increased expectancy for control), produced a PINV (and probably feelings of uncontrollability together with a state of reactance and frustration) in the present

experiments. In accordance with this point of view, it is of particular interest that only the fakir showed a more pronounced PINV in experiment 2, in which subjects delivered the painful stimuli to themselves. A postexperimental interview revealed that intention and motor commands prevented the fakir from getting into 'trance' satisfactorily" (p. 307).

1980

Prince, Raymond (1980). Variations in psychotherapeutic procedures. In Triandis, Harry C.; Draguns, Juris G. (Ed.), Psychopathology (6, pp. 291-349). Boston: Allyn & Bacon.

NOTES

1:

Prince points out that indigenous practitioners often capitalize on the organism's endogenous healing mechanisms which develop spontaneously when the individual is distressed. "healers around the world have learned to manipulate and build upon these endogenous mechanisms in a variety of ways to bring about resolution of life's problems and alleviation of suffering" (p. 292). Prince is referring here to altered states of consciousness such as dreams, trance states, dissociations, and mystical experiences of various sorts which are cultivated and elaborated by indigenous healers for therapeutic purposes. In general, Western type practitioners have denigrated these procedures...." (from Ann. Rev. of Psychol., 1982, pp 243-244).

1977

Sacerdote, Paul (1977). Application of hypnotically elicited mystical states to the treatment of physical and emotional pain. International Journal of Clinical and Experimental Hypnosis, 25, 309-324.

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

1965

Pedersen, Darhl M.; Cooper, Leslie M. (1965). Some personality correlates of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (3), 193-203.

The present research was directed principally toward determining the relationship of a number of personality variables to hypnotic susceptibility. The personality variables utilized were selected to cover the personality domain as broadly as possible. Hypnotic susceptibility was measured by the Stanford Hypnotic Susceptibility Scale, Form A. A correlational analysis was completed for 30 Ss. This included (a) the correlations between each of the personality variables and hypnotic susceptibility and (b) the intercorrelations among all of the personality measures. It was found that the following variables correlated with hypnotic susceptibility at the 5% level of confidence: age (-.37), year in college (-.36), and missionary service (.37). Social class rating of father's occupation correlated significantly at the 1% level of confidence (.54). (29 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

de Moraes Passos, A. C.; Farina, Oscar (1961). Aspectos atuais de hipnologia. Sao Paulo, Brazil: Linografica Editora Limitada. (Abstracted in American Journal of Clinical Hypnosis, 1962, 4, 279)

NOTES

1:

Notes by Milton Erickson. "This large paper-covered volume is a collection of reprints and original studies making available in Portuguese some 45 articles by South American, North American, Mexican, and British authors reporting upon the use of hypnosis in the various fields of medicine and surgery, dentistry, psychology, and related fields. In addition there are included reports on the subject of hypnosis by Brazilian, North American, and British medical groups and two pronouncements by Pope Pius XII concerning the use of hypnosis and applied psychology.

1959

Bowers, Margaretta K. (1959). Friend or traitor? Hypnosis in the service of religion. International Journal of Clinical and Experimental Hypnosis, 7 (4), 205-215.

NOTES

1:

Hypnosis may potentiate religious experiences like prayer and worship, where hypnosis meets the world of inner reality. In the first to fourth centuries, Jewish mystics alluded to depth of mind in religious experience, but the idea of oneness with God "cannot be accepted as a healthy psychological concept" (p. 207).

"We have the possibility of understanding prayer and worship as an intrapsychic phenomenon, as a communication with one's total being. Once the premise of the indwellingness of God can be accepted as a psychological [sic] entity, then we can understand prayer as being a total response of the psychic life of the individual in order that he can understand the feelings of wholeness, self-confidence, and self-esteem in himself, and further, how this can be aided by hypnotic techniques" (p. 207).

The author interprets the 13th Century mystic's words, 'the divine will, dresses or cloaks itself in the will of the devout,' as similar to hypnosis, in which a state "may occur where the patient loses his awareness of the separateness of himself and the hypnotist so that the hypnotist's voice may be felt as his own voice" (p. 208). This is all right as long as awareness of separateness is re-established when the person comes out of the hypnotic or religious experience.

The religious mystic also may use autohypnosis "to achieve a greater experiencing of God and a heightened religious experience. Such a state likewise produces an ecstasy. Such ecstasy is sometimes present in religious conversion experiences as well. This ecstasy is healthy if the separateness and integrity of God and Man are kept separate" (p. 209). The author describes a phenomenon in which a priest who leads a deeply devotional religious service may feel a loss of a sense of self afterward, complaining of great fatigue and inability or unwillingness to relate to people. The same post-devotional emptiness and depression sometimes occurs among parishioners.

A psychoanalytically oriented case study of misdirected religious belief, amplified by religious service induced trance, is presented.

1958

Bowers, Margaretta K.; Glasner, Samuel (1958). Auto-hypnotic aspects of the Jewish cabbalistic concept of Kavanah. Journal of Clinical and Experimental Hypnosis, 6 (1), 50-70.

NOTES

1:

The authors present material quoted from numerous Jewish mystics to support the position that many

achieved self hypnosis or trance states in the course of their spiritual, especially prayer, practices. "Kavanah" means concentration in the Talmud; "the entire hope of efficacy of ritual or of prayer is wholly dependent on the person's achieving a proper state of concentration and devotion, which is Kavanah" (p. 51). Ecstasy is one aspect of Kavanah and was induced in one way through "concentration upon the magical and mystical properties of the Hebrew letters, arranging and rearranging the letters" (p. 51) in such manner as to produce a trance. Sometimes dissociation occurred ("suddenly I saw the shape of my self standing before me and myself disengaged from me and I was forced to stop writing!" [p. 64]).

Sometimes a particular way of breathing, a particular position of the body, or fasting were used to promote trance development. Imagery and fantasy were also used, in a way resembling the work of Erickson, Kline, and Young; imagery of light and light sources was especially prevalent, reminding one of the candle flame induction technique.

"... it would appear that one of the ambitious purposes of the ecstatic Kavanah was to produce prophets" (p. 61). Some medieval prophets would describe a person's past and predict his future like the modern Edgar Cayce. "The auto-hypnotic state of ecstasy represented by Kavanah was also used for the deliberate induction of states of hysterical dissociation so that the 'prophet' would be able to see his self on the opposite side of the room" (p. 63). But the practice of the mystic ecstatic Kavanah was "generally discouraged or reserved for the elite at best" (p. 65).

"... however, in the medieval Christian world ignorance of the unconscious mental processes was so profound that it made it extremely difficult for wise and prudent religious leaders to cope with the religious excitement and delusory revelations which broke out periodically. That the Jews were not entirely immune from such excesses at this time is shown by Dr. Scholem's [Major Trends in Jewish Mysticism, 1941] report that:

'In the writings of Eleazar of Worms .... one also finds the oldest extant recipes for creating the Golem -- a mixture of letter magic and practices obviously aimed at producing ecstatic states of consciousness. It would appear as though in the original conception the Golem came to life only while the ecstasy of his creator lasted. The creation of the Golem was, as it were, a particularly sublime experience felt by the mystic who became absorbed in the mysteries of the alphabetic combinations described in the "Book of Creation." It was only later that the popular legend attributed to the Golem an existence outside the ecstatic consciousness, and in later centuries a whole group of legends sprang up around such Golem figures and their creators'" (pp. 64-65).

Concentration was apparently used to avoid pain during torture of martyrdom and death. According to Scholem, the mystic Abraham ben Eliezer Halevi of Jerusalem recommended "to concentrate, in the hour of their last ordeal, on the Great Name of God; to imagine its radiant letters between their eyes and to fix all their attention on it. Whoever will do that, will not feel the burning flames or the tortures to which he will be subjected" (p. 66).

"We have demonstrated, therefore, that the Jewish mystics of former times, from the Biblical period through the Rabbinic period, on through the Middle Ages and almost up to the present day, used autohypnosis as a deliberate technique for the production of religious ecstasy and as a means for obtaining deeper religious insights or revelations. Both the methods by which they induced the autohypnotic trance, or Kavanah, and the ways in which they utilized it parallel some of the modern methods of hypnotic induction and of the utilization of the hypnotic trance" (p. 67-68).

"... hypnosis might well prove itself an important tool for an organized program of research into religious phenomena. Thus, for instance, hypnotic research could possibly provide us with an operational understanding of prayer and its effects. This might further lead to the development of more sophisticated and more effective techniques of prayer for use by scientifically-minded religionists. And it might even lead to the type of direct religious experience reported by religious geniuses of former days, but unfortunately lost to modern man" (p. 68).

Note: The second author is a rabbi.

1955

Glasner, Samuel (1955). A note on allusions to hypnosis in the Bible and Talmud. Journal of Clinical and Experimental Hypnosis, 3 (1), 34-39.

#### NOTES

1:

Author states, "To summarize: Although it is impossible to state with any definiteness that hypnosis is referred to in the Bible (Old and New Testaments) and in the Talmud, there would seem to be considerable evidence that the authors of these works were indeed familiar with phenomena which we today should call hypnotic or which we should explain in terms of suggestion" (p. 39). He refers to induced sleep states (e.g. when God took Adam's rib in creating Eve); "prophesying" (e.g. in the Book of I Samual) being "some sort of frenzied behavior induced by mass hypnosis" (p. 35); suggested blindness (e.g. Elisha's story in II Kings); mystic visions in which eyes appear (e.g. Ezekiel's visions of spiral wheels); miraculous cures in the New Testament, which could be due to suggestion; cures by Rabbis in early Christian centuries (known as 'sorcery'); and creation of illusions by rabbis, reported in the Talmud.

#### REPRESSION

1995

Bowers, Kenneth S. (1995, November). Revisiting a Century-Old Freudian Slip -- from Suggestion Disavowed to the Truth Repressed. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

1:

Cites J. Herman, Mason, and Miller who accused Freud of retreating from trauma theory to save his theory. Feminists view the Oedipal theory as a coverup for the denial of child sexual abuse. This moral position fuels trauma theory and practice. It is the moral dimension of this debate that gives so many problems for the investigation of traumatic memory.

The intellectual origins of repressed trauma are examined here. Freud's early trauma theory, his later conflict theory.

Etiology of Hysteria (1896) presents Freud's argument, based on 18 patients: child is passive victim of experience imposed on them; memory is repressed and hysterical symptoms are derivatives of these repressed memories; when memories return as pictures the task of therapy is easier than if returning as thoughts. Bartlett's memory research showed visual image is followed by sense of confidence that surpasses what should be there.

The fact that patients had to be compelled to remember was offered by Freud as evidence against the idea that the memories were suggested. The patients initially would deny the reality of their memories, which Freud used in saying that we should not think that patients would falsely accuse themselves. In letter to Fleiss, he presented the conflict theory, which he presented in 1905 in Three Essays on Sexuality and later in My Views...on Etiology of Neurosis.

In 1905 Freud indicated he was unable to distinguish fantasy from true reports (and did not deny the existence of the latter). Freud often reconstructed the "memories" from dreams, transference, signs, symptoms, fantasies, etc. They were not produced as conscious memories, and it was Freud who inferred the sexual abuse. From signs of distress he took evidence of proof.

Freud presented his theory to his patients and then sought confirmation.

Freud asks us to abandon historical for narrative truth. The problems with Freud's first theory became worse with his second theory. In Introductory Lectures Freud states that opponents say his treatment talks patients into confirming his theories. He relies on the patient's inner reality confirming

the theoretical ideas given to him. Success depends on overcoming internal resistance, however. The danger in leading a patient astray by suggestion has been exaggerated, because the analyst would have had to not allow the patient to "have his say." Freud denied strongly ever having done this.

Incorrect interpretations would not be accepted by the patients, and if believed would be suggestion. Brunbaum, another writer, said that this doesn't mean acceptance of a faulty idea won't occur. Both Milton Erickson and especially Pierre Janet reported cases in which suggestions were used to give benign memories to replace malignant ones.

Freud also viewed patient resistance to his interpretations as evidence that the interpretations were correct. Thus both resistance and acquiescence were thought to be validating. Popper's critiques using philosophy of science note that this makes his theory untestable.

Freud could not distinguish between the patient's reluctant acceptance of the truth and reluctant acceptance of a suggestion.

Contemporary theorists struggle less than Freud did with the problem of suggestion and suggestibility (and Freud did not have available the research on those areas!) Emotional upheaval that accompanies "insight" is readily taken to be validating. It may be true that bad memories are repressed, but that doesn't mean that all bad memories are true.

Treatment groups focus on recalling memories and sharing memories with others in the group, not on current relationships. Hermann states that the group provides powerful stimulus for remembering. The group, of course, is reinforced by others remembering. Repeatedly considering the possibility of abuse can increase the sense of familiarity.

Current views expressed by some clinicians that certain symptoms and syndromes (eating disorders, etc.) indicate early sexual trauma are similar to Freud's theory of hysteria. In these proposals, the inability to recall abuse becomes evidence that it occurred; and it tallies with the patient not having a sense of remembering.

Because some believe it is necessary to bring memory to light for cure to occur, there is a tendency to believe the reports of early childhood abuse.

Recognizing that some "memories" may have been a product of a therapist's suggestion helps prevent untoward effects. Modern therapists recapitulate Freud's "slip" when they do not acknowledge the role of suggestion.

Endorsing repression does not commit us to a belief that recovered memories must be accurate in all particulars. A memory that is repressed does not escape the usual kinds of degradation of memory.

And just because the material comes from unconscious sources, or has emotional accompaniments, it doesn't mean it is true. (Bowers gave an example of his dream that Israel and Venezuela shared a common border, which was rectified by his waking awareness of the Atlantic Ocean and the Mediterranean. He noted that nothing like the Atlantic can be called upon if the dream is that one's parent molested oneself at the age of six.)

Ian Hacking, in *Rewriting the Soul*, labels a more fundamental indeterminacy (for the historical past itself). Bathing rituals in childhood can be redescribed as abuse, which determines the historical past rather than describing it. It is thus easier to justify abuse if the event is something that can be reinterpreted. For example, the conflicts of adolescents with their parents, may be reinterpreted later if personality problems continue. If in adulthood one concludes that abuse occurred, then bathing rituals can be reinterpreted as if it were earlier abuse, as if the abuse has continued for years.

Sarbin, Theodore R. (1995). On the belief that one body may be host to two or more personalities. *International Journal of Clinical and Experimental Hypnosis*, 43 (2), 163-183.

The belief in the validity of the multiple personality concept is discussed in this article. Two scaffolding constructions are analyzed: dissociation and repression. As generally employed, these constructions grant no agency to the multiple personality patient. The claim is made that the conduct of interest arises in discourse, usually with the therapist as the discourse partner. In reviewing the history of

multiple personality and the writings of current advocates, it becomes clear that contemporary users of the multiple personality disorder diagnosis participate in a subculture with its own set of myths, one of which is the autonomous actions of mental faculties. Of special significance is the readiness to transfigure imaginings into remembering of child abuse, leading ultimately to the manufacture of persons. The implications for both therapy and theory of regarding the patient as agent in place of the belief that the contranormative conduct is under the control of mentalistic faculties are discussed.

Taylor, D. R. (1995). The validity of repressed memories and the accuracy of their recall through hypnosis: A case study from the courtroom. American Journal of Clinical Hypnosis, 37 (3), 25-31.

NOTES

1:

This case was one of a defendant who lived in California and who was accused of his wife's murder. Due to amnesia for the events at the time of the wife's death, he was not considered competent to aid in his own defense. "Conclusion. This case demonstrates that extremely emotional events, interpreted as life threatening on some level, can be actively repressed from conscious memory and that these memories can later be accurately recalled under hypnosis. This conclusion provides justification for using hypnosis in some legal cases" (p. 31). The fact that the accused committed suicide six months after acquittal supports the "premise behind repressed memories ... that they provide protection against a psychologically life-threatening event. At the time of the investigation, Mr. Bains had no waking memory of his suicide attempt; therefore, it could be hypothesized that had the amnesia continued, his suicide could have been prevented" (p. 31).

1994

Frankel, Fred H. (1994, October). On patients remembering abuse when it in fact may not have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES

1:

The concept of hidden memories has supported the profession of psychotherapy for a century. This process can only occur if there is a mechanism to support it. Bowers says, if memory is not reliably accurate, it is not reliably inaccurate either.

"Ideas passing as descriptions lead us to equate the tentative with [the factual.]" - Gould.

Three studies purporting to establish repression: 1. Briere & Comte sampled 450 adults who reported abuse. They asked, "Was there ever a time when you couldn't remember the forced experience?" How does respondent understand the question? Clients were all in therapy. 2. Herman and Schatzow (1989) "verification of abuse" study. 53 Ss in a survivor's group. Reports percentages who had no or little recall. Authors don't acknowledge that the group discussion and the attitude of therapist may have shaped the response. It is also not clear how many Ss who claimed to have "verified" their accounts were among those who had severe amnesia for the event. They could be Ss who had never lost the memory in the first place. 3. Williams interviewed women who earlier were in Emergency Rooms because of abuse being suspected. 38% did not report childhood abuse when questioned, and author concluded it was due to repression. Significant numbers of adults cannot remember things even past the age of 5.

Problem with wording of questions. Some of the women interviewed might have preferred not to report the event. This was not investigated in the study.

1994

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

## NOTES

1:

"A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

Loftus, Elizabeth; Polonsky, Sara; Fullilove, Mindy Thompson (1994). Memories of childhood sexual abuse: Remembering and repressing. Psychology of Women Quarterly, 18, 67-84.

Women involved in out-patient treatment for substance abuse were interviewed to examine their recollections of childhood sexual abuse. Overall, 54% of the 105 women reported a history of childhood sexual abuse. Of these, the majority (81%) remembered all or part of the abuse their whole lives; 19% reported they forgot the abuse for a period of time, and later the memory returned. Women who remembered the abuse their whole lives reported a clearer memory, with a more detailed picture. They also reported greater intensity of feelings at the time the abuse happened. Women who remembered the abuse their whole lives did not differ from others in terms of the violence of the abuse or whether the violence was incestuous. These data bear on current discussions concerning the extent to which repression is a common way of coping with childhood sexual abuse trauma, and also bear on some widely held beliefs about the correlates of repression.

NOTES: In previous research, it was reported that violent or incestuous abuse is particularly susceptible to repression. This study differs from previous investigations in the definition of violence. In the present study, 'violence' is defined as any act involving vaginal, oral, or anal sex. Earlier research defined 'violence' as involving sexual assault with physical injury or fear of death.

Depending on the definition of repression, a sizeable minority (31% or almost 1/5) of this sample forgot their earlier abuse for a period of time. The authors state that this suggests there is little 'robust repression' in this sample. They cannot rule out the possibility that some women who were abused still, to this day, do not recall the experience; or that some who continue to have memory loss based on organic causes, including blackouts.

The authors suggest that future research in this area use more specific questions, including assessing whether Subjects respond to statements like: "There was a time when I would not have been able to remember the abuse, even if I had been directly asked about it," or "There was a time when I would not have been able to report the abuse because I had no idea that it had even happened to me." Also, when Subjects report that a memory had emerged after a period in which they had no recall, the Experimenter should enquire about how and when the recovered memory occurred.

The authors conclude that remembering abuse is more common than forgetting it.

Nash, Michael R. (1994, October). Reports of early sexual trauma: The problem of false negatives and false positives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The problem of false positives and problem of false negatives are distinct and should be treated differently. The question involves pseudomemories vs repression.

Evidence for false positives: 1. Memory research 2. Developmental psychopathology 3. Contemporary psychoanalytic theory 4. Clinical field studies

No laboratory researcher has produced false memories that are as vivid, or as emotionally loaded as early abuse.

Evidence for repression: 1. "Repressor Personality" research (Weinberger & Schwartz, who view it as a trait rather than a state). 2. Implicit memory research 3. Hypnosis research on memory (see Nash chapter in Fromm & Nash book on research in hypnosis) 4. Clinical field studies

Ofshe, Richard; Singer, Margaret T. (1994). Recovered memory and robust repression: Influence and pseudomemory. International Journal of Clinical and Experimental Hypnosis, 42, 391-410.

A subset of the psychotherapists practicing trauma-focused therapy predicate their treatment on the existence of a newly claimed, powerful form of repression that differs from repression as used in the psychoanalytic tradition and from amnesia in any of its recognized forms. Recovered-memory specialists assist patients to supposedly retrieve vast quantities of information (e.g., utterly new dramatic life histories) that were allegedly unavailable to consciousness for years or decades. We refer to the hypothesized mental mechanism as 'robust repression' and call attention to the absence of evidence documenting its validity and to the differences between it and other mental mechanisms and memory features. No recovered-memory practitioner has ever published a full specification of the attributes of this mechanism. That is, the properties it would have to have for the narratives developed during therapy to be historically accurate to any significant degree. This article reports a specification of the properties of the robust repression mechanism based on interviews with current and former patients, practitioners' writings, and reports to researchers and clinicians. The spread of reliance on the robust repression mechanism over the past 20 years through portions of the clinical community is traced. While involved in therapy, patients of recovered-memory practitioners come to believe that they have either instantly repressed large numbers of discrete events or simultaneously repressed all information about abuse they may have endured for as long as a decade. Patients' therapy-derived accounts are thought by some social influence, memory, and clinical specialists to be inadvertently created iatrogenic effects: inaccurate pseudomemories and confabulations produced due to patient-therapist interaction, the use of leading, (sic) suggestions, hypnosis, and the mismanagement of the dependent relation of the patient on the therapist. Three cases are reported which illustrate how new life accounts predicated by robust repression can develop during therapy with a recovered-memory practitioner.

Spiegel, David; Schefflin, Alan W. (1994). Dissociated or fabricated? Psychiatric aspects of repressed memory in criminal and civil cases. International Journal of Clinical and Experimental Hypnosis, 42 (4), 411-432.

During the last decade, clinicians, courts, and researchers have been faced with exceedingly difficult questions involving the crossroads where memory, traumatic memory, dissociation, repression,

childhood sexual abuse, and suggestion all meet. In one criminal case, repressed memories served as the basis for a conviction of murder. In approximately 50 civil cases, courts have ruled on the issue of whether repressed memory for childhood sexual abuse may form the basis of a suit against the alleged perpetrators. Rulings that have upheld such use underscore the importance of the reliability of memory retrieval techniques. Hypnosis and other methodologies employed in psychotherapy may be beneficial in working through memories of trauma, but they may also distort memories or alter a subject's evaluation of their veracity. Because of the reconstructive nature of memory, caution must be taken to treat each case on its own merits and avoid global statements essentially proclaiming either that repressed memory is always right or that it is always wrong.

Spiegel, David (1994, October). On patients not remembering abuse when it in fact may have occurred. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

False memories and false non-memories may be two sides of the same coin. What is the evidence for repression?

If people are abducted by extraterrestrials, why don't they just keep them? [Joke!] It seems counter-intuitive that people would forget important, arousing things that happen.

The three main components of hypnosis (suggestibility, absorption, and dissociation) are also aspects of memory: 1. Absorption relates to encoding (narrowing attention); also happens during traumatic events (Loftus' "gun memory" which is so clear, while they don't encode what gunman's face looks like). 2. Dissociation relates to memory storage (compartmentalization of information). Traumatized people have symptoms of dissociation, depersonalization. If you are in an unusual mental state, you may watch the event; the memory is stored without the usual network of associations. 3. Suggestibility relates to retrieval. The way questions are asked influences one's response. But hypnosis is not an infinite influencer; the main damage to memory contributed by hypnosis is "confident errors" (McConkey).

We did research one week after the Loma Prieta earthquake, and found significant cognitive alterations, memory alterations, etc. In our sample, 1/4 of the people felt detached from their body or from the ground right after the earthquake.

Memory alterations were compared with data from other studies after other traumas. Difficulties with memory occurred in 29% of our sample.

The disorganization of memory can follow even just witnessing trauma (e.g. the recent slaying of 8 people in the law office in San Francisco) And people who witnessed the execution of Harris. They were in no danger themselves, yet the level of dissociative symptoms were as high in the former.

The Briere & Cone and Herman & Shatzow studies are based on self report of earlier trauma, and that is a problem in research. But Williams' study does have the age of people when they were abused as children; see her article in Journal of Consulting and Clinical Psychology.

## COMMENTS FROM THE AUDIENCE

Dabney Ewin: Sex abuse trauma differs from earthquakes because the abuser says, "If you tell anybody I'll kill you." This is like a post hypnotic suggestion, which is carried out compulsively when given to the victim during fear.

Dale: How do we account for the vigor in the attempts of each side to convince the other. The people who have been real victims of sexual abuse need to be able to talk with the people who are victims of False Memory Syndrome. The impact on a family is just as traumatic as the sexual abuse itself.

Response by D. Spiegel: I wouldn't recommend that combination, but the point you make about damage to the falsely accused is relevant. Their lives are shattered but remember the damage done throughout life by sexual abuse.

1993

Watkins, Helen H. (1993). Ego-State therapy: An overview. American Journal of Clinical Hypnosis, 35, 232-240

Ego-state therapy is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between the various "ego states" that constitute a "family of self" within a single individual. Although covert ego states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist. Any of the behavioral, cognitive, analytic, or humanistic techniques may then be employed in a kind of internal diplomacy. Some 20 years experience with this approach has demonstrated that complex psychodynamic problems can often be resolved in a relatively short time compared to more traditional analytic therapies.

Wickramasekera, Ian (1993, August). Some psychophysiological and clinical implications of the coincidence of hypnotic ability and neuroticism during threat perception. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

The electrodermal response to cognitive threat (mental arithmetic) of un hypnotized female patients with somatic symptoms, high on hypnotic ability and high on neuroticism (high-high) was found to be significantly higher ( $p .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (moderate-low). On verbal report or a subjective units of distress scale (SUDs), the high-high and moderate-low groups did not differ, but they were significantly different on a measure of self-deception or repression. The above findings are consistent with predictions from the High Risk Model of threat perception. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1993, Vol. 2, No. 3.)

1992

Christianson, S-A (1992). Emotional stress and eyewitness memory: A critical review. Psychological Bulletin, 112, 284-309.

Although not addressing hypnosis specifically, this is a comprehensive review of literature on memory for negative emotional events relevant to issues of hypnosis and memory. The final conclusion is that emotional events are indeed remembered differently than neutral or ordinary events and are well retained with respect to the event itself and concerning central, critical detail (not peripheral detail). Such memories seem less susceptible to forgetting. There is evidence for dissociation between memory for emotional information and memory for specific event information. There is also evidence of amnesia or memory impairment effects after high-arousal events, with memory increasing as more time passes after the event. The functional amnesia effects are probably due to an interaction between altered encoding operations and the specific retrieval circumstances aiding consciously and unconsciously controlled reconstructive processes. There is little evidence to support Loftus' contentions that emotional stress is bad for memory.

Gravitz, Melvin A. (1992, October). Historical and legal issues. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

1:

The 1976 Chowchilla kidnaping case in California stimulated interest in using hypnosis for forensic investigation; in the same year, it was used in a case of airline hijacking in the Mediterranean to Uganda. Hypnosis is used for obtaining "leads" and doesn't claim to develop "the truth."

Other uses include: lifting amnesia of witnesses and victims of trauma—including but not limited to crime; obtaining additional information in nonamnesic Ss; evaluation of a subject's mental condition (e.g. multiple personality disorder vs malingering, as in the Bianchi case). In each use, hypnosis is not infallible, is not complete. But no procedure is. Motivation, resistance, transference are all critical.

Historic questions: 1. whether coercion is entailed 2. impact of hypnosis on memory 3. possible harm to subject, physically and mentally

The coercion issue dates to Mesmer, whose procedures led to accusations of immoral suggestions. In the 1880s Charcot said no one could be forced to do anything while the Nancy school (Liebeault) said they could. Since then we have seen laboratory studies using student volunteers, fake "poison," rubber daggers, etc., as well as recent "real life" studies where Ss were induced to violate their morals (see Watkins). Review articles include those by Jacob Conn of Baltimore and the 1985 JAMA article written by a panel headed by Martin Orne.

For impact of hypnosis on memory, see the Orne report which did not fully support using hypnosis for memory enhancement.

Regarding possible harm to a hypnotic subject in the 19th century, a young man's death was attributed to nervousness and exhaustion and diabetes due to repeated hypnosis. Other studies of death (of chickens, of a frog) due to repeated hypnotization were published. Now the consensus is that hypnosis is not dangerous (but incompetence using hypnosis may be dangerous).

## LEGAL PRECEDENTS.

In 1897 a California court refused to accept testimony of a Subject who had been hypnotized. *People vs Eubanks*.

The 1950's Cornell case established that a person can be hypnotized for their own defense.

In 1963 the California supreme court ruled that a lower court made a mistake in not admitting testimony from someone who had been hypnotized.

In *Harding* (a Maryland case), the trauma victim, amnesic, was hypnotized one month later. The testimony was accepted. A 1983 Maryland appeals court overturned it, influenced by the California *Shirley* case.

In 1983 *Hurd* case, a victim, hypnotized, identified her husband as attacker. Lower court didn't permit the testimony; then a higher court reversed it. The court issued what are known as the Hurd rules, governing testimony that is acceptable: 1. hypnotist is licensed psychologist or psychiatrist with training in hypnosis 2. hypnotist must be independent of both the prosecution and defense 3. all information given to the hypnotist about the case must be written 4. hypnotist must obtain a nonhypnotic account of the memory before hypnosis is used. 5. must have taped record of the hypnosis sessions (preferably videotaped) 6. only hypnotist and subject should be present in the room

Soon after, California had the *Shirley* case. The California court ruled hypnosis per se is unreliable because it produces confabulation. This decision had a chilling effect throughout the country for several years.

In 1987 we had *Rock vs Arkansas*, the first and only case involving hypnosis to come before the U. S. Supreme Court. Vicky Rock shot her husband. Under hypnosis, she remembered she did not have her finger on the trigger, and her husband grabbed her and shook her. Lower court wouldn't admit the testimony of the gun expert, who testified the trigger was sensitive to jarring. Supreme Court ruled defendants (not necessarily others) could use hypnosis in their own defense.

1992

ISSMPD Critical Issues Task Force (1992). The Critical Issues Task Force Report: The role of hypnosis and amygdala interviews in the recovery of traumatic memories. MPD News, 10 (3), 6-9.

## NOTES

1:

Opinions are provided by Nancy Hornstein, Putnam, and Ganaway.

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Putnam, Frank W. (1992). Using hypnosis for therapeutic ab reactions. Psychiatric Medicine, 10, 51-65.

Abreaction, the dramatic reliving of traumatic events under hypnosis, is a powerful therapeutic intervention useful in the treatment of victims of trauma. First systematically applied in World War I, abreaction coupled with psychotherapeutic processing of the recovered material is increasingly being used with victims of child abuse and chronic PTSD. Abreactions are helpful in recovering dissociated or repressed traumatic material, reconnecting missing affect with recalled material and for transforming traumatic memories. Although abreactions can be induced with medications, hypnosis is the method of choice except in acute situations where it is not possible to establish rapport. A variety of hypnotic techniques for the induction and management of abreaction are discussed, together with the indications and contraindications for their use.

Somerville, Wayne R.; Jupp, James J. (1992). Experimental evaluation of a brief 'ideodynamic' hypnotherapy applied to phobias. Contemporary Hypnosis, 9, 85-96.

This study used a test-retest design to investigate the effectiveness of a brief 'ideodynamic' hypnotherapy which notionally located and reformulated memories in the treatment of simple phobia disorder. Subjects were 19 phobics randomly assigned to treatment (n = 10) and waiting control groups (n = 9). Rapid, significant, and sustained relief from phobic fear and avoidance was reported by 50% of treatment subjects. A number of symptoms and therapy process variables were correlated with treatment outcome. These included a negative association with hypnotizability and a positive association with hypnotic depth estimates. The ramifications of these and other associations are discussed and it is concluded that the 'ideodynamic approach' investigated may have contributed a therapeutic effect beyond the operation of treatment non-specific factors.

## NOTES

1:

Treatment consisted of: 1. Hypnotic induction. 2. Establishment of ideomotor signals described to clients as a means of communicating with the 'inner unconscious mind'. 3. Beyond the first therapy session, a review of work done in previous sessions. 4. Gaining signaled permission from clients to work on their problem and for the 'inner mind' to review relevant memories. 5. Location of the

'earliest critical event' by the 'inner mind'. 6. Review of the located memory by the 'inner mind'. 7. Establishing age at the occurrence of the 'critical' event. 8. Ideomotor signaling indicating suitability of a visual imagoic processing of the event.

If visual processing was chosen, the dissociated viewing procedure (step 9A) was used next, otherwise the ego-state procedure (step 9B) was employed.

The authors describe each treatment step in detail. Each subject received at least two sessions of therapy, or a maximum of three sessions if signaling indicated the presence of further unresolved memories after two sessions.

They present a case illustrating that the approach is possible with minimally hypnotizable subjects, in the apparent absence of imagoic experience, 'desensitization', catharsis, unpleasant affect, talking through or 'insight'.

"There was a positive correlation between changes in phobic fear and capacity for mental imagery which suggests that this may be one relevant variable in predicting response to memory reformulating therapy.

"There was a negative correlation between changes in fear and hypnotic responsiveness. So, successful therapeutic outcome was obviously not limited to highly hypnotizable subjects. Hypnotizability was assessed in a careful and standardized manner but testing was conducted 10 weeks following therapy. This meant that subjects had a substantial experience in hypnotherapy at assessment. Furthermore, at the time of assessment subjects were aware of the outcome of therapy and of the kinds of memories located during therapy. It has been suggested that an association between level of hypnotizedness achieved during treatment and outcome rather than an association between degree of hypnotizability possible during therapy and outcome, taps an hypnotic effect (Spiegel & Spiegel, 1978).

"All therapy sessions were of equal duration and, as the inductions were standardized, all subjects had an approximately equal opportunity to engage in memory reformulation. However, there were individual differences in the number of memories located and a strong significant association was found between reduced fear and the number of these critical memories that were dealt with. This result suggests that the therapeutic effect may have derived either from factors specific to the therapy cycle or from differing levels of motivation among subjects to undertake the necessary 'work'.

"Maximum discomfort experienced during session two of treatment was negatively correlated with relief from phobic fears. This relationship may again reflect the influence of unresolved problematic memories on subjects who had not achieved relief by that time. It is clearly consistent with relief not being associated with painful abreaction.

"The therapy permitted a pervading privacy through the options of non-imaginative processing of recalled material (which was used by a substantial minority of subjects) and conscious withholding of the content of memories from the therapist (which was employed to a large extent by all subjects). Their reports indicated that this 'privacy' was seen as attractive by both successfully and unsuccessfully treated subjects. Taken with other results mentioned above these process findings suggest that the treatment studied stood up quite well against other brief but highly stressful exposure treatments for phobia currently in use (e.g. Ost, 1989).

"Further research needs to address the complex question as to what are the necessary and sufficient features of this procedure in producing therapeutic change. Unsolicited comments by subjects about their experience during treatment suggested that some of them were surprised by the 'involuntary' nature of their ideomotor signaling while others said that signaling was under their voluntary control. Some expressed surprise at the nature of the memories that came to them 'suddenly' during therapy. Some memories were of traumatic childhood experiences that were unexpected and considered to have 'nothing to do with my phobia'" (pp 93-94).

**Terr, Lenore C. (1991). Childhood traumas: An outline and overview. American Journal of Psychiatry, 148, 10-20.**

Suggests 4 characteristics common to most cases of childhood trauma: visualized or otherwise repeatedly perceived memories of the traumatic event; repetitive behaviors; trauma-specific fears; and changed attitudes about people, life, and the future. Childhood trauma is divided into 2 basic types. Type I trauma includes full, detailed memories, "omens," and misperceptions while Type II trauma includes denial and numbing, self-hypnosis and dissociation, and rage. Characteristics of both types of childhood trauma can exist side by side. Such crossover Type I - Type II traumatic conditions of childhood are characterized by perceptual mourning and depression and childhood disfigurement, disability, and pain. Case examples are provided.

**Van Der Kolk, Bessel; Van Der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. American Imago, 48, 425-454.**

Describes the work of Janet concerning narrative versus traumatic memory, dissociation, and subconscious fixed ideas. Janet (1904) believed PTSD patients suffer from a phobia for the traumatic memory. Repression and dissociation are distinguished. Contemporary concepts of memory processing and the concept of schemas are then reviewed. Finally, a model is presented about how the mind freezes some memories. Evidence for the involvement of autonomic hyperarousal, triggering, and state dependent learning in PTSD is reviewed. They conclude that helplessness and the inability of the PTSD victim to take action (psychological and physical immobilization) facilitates dissociation. Includes practical ideas for the working through of trauma.

"Traumatic memories are triggered by autonomic arousal ... and are thought to be mediated via hyper-potentiated noradrenergic pathways originating in the locus coeruleus of the brain... The locus coeruleus is the 'alarm bell' of the central nervous system, which properly goes off only under situations of threat, but which, in traumatized people, is liable to respond to any number of triggering conditions akin to the saliva in Pavlov's dogs. When the locus coeruleus alarm gets activated, it secretes noradrenaline, and, if rung repeatedly, endogenous opioids. These, in turn, dampen perception of pain, physical as well as psychological (van der Kolk et al. 1989). These neurotransmitters which are activated by alarm affect the hippocampus, the amygdala and the frontal lobes, where stress-induced neurochemical alterations affect the interpretation of incoming stimuli further in the direction of 'emergency' and fight/flight responses" (p. 443).

1990

**Bonnano, George A. (1990). Remembering and psychotherapy. Psychotherapy, 27, 175-186.**

Reviews some of the empirical literature demonstrating the reconstructive nature of memory. The notion that the memory trace can consist of different forms of information is integrated with J. S. Bruner's (see PA, Vol 38:6801) tripartite model of representation, using the concepts of narrative and memory schemata. A case illustration demonstrates the pervasive organizing quality of the nuclear script and how, through such a structure, childhood events can hold a lasting impact on adult behavior. It is concluded that conceptual understanding can be translated into schematic terminology provided it is adequately modified to account for the reconstructive nature of memory.

**Frankel, Fred H. (1990). Hypnotizability and dissociation. American Journal of Psychiatry, 147, 823-829.**

Describes the multidimensionality of hypnosis and hypnotizability. He also points to the lack of clarity regarding the concept of dissociation and the extent to which its roots lie in the clinical experience of hypnosis. The concept of dissociation increasingly preempts repression and other defense mechanisms in current nosological thinking. The author cautions against equating hypnosis scores with dissociative capacity and advocates a clearer elaboration of the term "dissociation." Meanwhile, restraint in the use of the term "dissociation" is recommended.

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, 10, 117-128.

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or 'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations

Spiegel, David; Cardena, Etzel (1990, October). New uses of hypnosis in the treatment of posttraumatic stress disorder. Journal of Clinical Psychiatry (Supplement), 51, 39-43.

Vietnam veterans with PTSD and those abused as children have above average hypnotizability. Hypnosis provides controlled access to memories that may otherwise be kept out of consciousness. New uses of hypnosis with PTSD victims involve coupling access to the dissociated traumatic memories with positive restructuring of those memories. Hypnosis can be used to help patients face and bear a traumatic experience by embedding it in a new context, acknowledging helplessness during the event, and yet linking that experience with remoralizing memories, such as efforts at self-protection, shared affection with friends who were killed, or the ability to control the environment at other times. In this way, hypnosis can be used to provide controlled access to memories that are then placed into a broader

perspective. Patients can be taught self-hypnosis techniques that allow them to work through and thereby reduce spontaneous, unbidden, intrusive recollections.

1989

Eisen, Marlene R. (1989). Return of the repressed: Hypnoanalysis of a case of total amnesia. International Journal of Clinical and Experimental Hypnosis, 37 (2), 107-119.

A case study is presented of a woman suffering from global amnesia so profound that she had lost all sense of personal identity. Hypnotherapy was used to establish, through imagery, a solid inner core on which to rebuild a sense of self. From the image of a strong column on which rested a book with a golden lock (her history), to reading about other lives, books and stories were utilized to establish a safe external environment in which the reawakening of repressed memories was not longer perceived as dangerous. A discussion of relevant literature on the subjects of global amnesia, loss of personal identity, and post-traumatic stress is offered as a basis for discussing the present case.

Van der Kolk, Bessel A.; Van der Hart, O. (1989). Pierre Janet and the breakdown of adaptation in psychological trauma. American Journal of Psychiatry, 146, 1530-1540.

Reviews Janet's investigations into mental processes that transform traumatic experiences into psychopathology. He was the first to systematically study dissociation as the crucial psychological process with which the organism reacts to overwhelming experiences and show that traumatic memories may be expressed as sensory perceptions, affect states, and behavioral reenactments. Janet provided a broad framework that unifies into a larger perspective the various approaches to psychological functioning which have developed along independent lines in this century. Today his integrated approach may help clarify the interrelationships among such diverse topics as memory processes, state-dependent learning, dissociative reactions, and posttraumatic psychopathology.

1988

Pettinati, Helen M. (1988). Hypnosis and memory. New York and London: Guilford Press.

NOTES

1:

From a review in British Journal of Experimental and Clinical Hypnosis, 7, 175- 178, by Vernon H. Gregg]:

Book has 5 sections: 1. method, theory 2. mechanisms of memory enhancement 3. hypnotic and other forms of reversible amnesia 4. clinical uses of hypnosis for increasing accessibility of memories and fantasies 5. Summary

The chapter by Martin Orne et al presents a comprehensive review. Perry, Lawrence, d'Eon and Tallant contribute a lively assessment of age regression procedures in the elicitation of inaccessible memories. They provide a description of procedures, a brief historical review, and discuss problems of confabulation and creation of pseudomemories. Their account is illustrated by clinical and forensic examples and gives an interesting account of belief in reincarnation in terms of source amnesia.

Section 3 has Hollander's chapter on hysteria and memory, which illustrates the concept of reversibility of amnesia with two types of hysterical conditions: one of these types, the dissociative disorders, has the potential for amnesia to be reversed but the other, histrionic personality disorders, is characterized by no reversibility.

In the section on clinical studies of memory enhancement Frankel and Kolb both accept that uncovering repressed memories and fantasies is therapeutically beneficial and that the faithfulness of recovered memories is often not important for therapeutic success. Frankel illustrates the usefulness of hypnosis with several case studies. But he thinks that clinical issues are dealt with too briefly in this

book. In her summary chapter Pettinati points to the dearth of systematic research into the effectiveness of hypnosis in clinical settings.

Terr, Lenore C. (1988). What happens to early memories of trauma? A study of twenty children under age five at the time of documented traumatic events. Journal of the American Academy of Child and Adolescent Psychiatry, 27, 96-104.

The verbal and behavioral remembrances of 20 children who suffered psychic trauma before age 5 were compared with documentations of the same events. Ages 28 to 36 months, at the time of the trauma, serves as an approximate cutoff point separating those children who can fully verbalize their past experiences from those who can do so in part or not at all. Girls appear better able than boys to verbalize parts of traumas from before ages 28 to 36 months. Short, single traumas are more likely to be remembered in words. At any age, however, behavioral memories of trauma remain quite accurate and true to the events that stimulated them.

## NOTES

This article is relevant to those working with PTSD and in age regression.

1985-1986

Kunzendorf, Robert G.; Benoit, Michelle (1985-86). Spontaneous post-hypnotic amnesia and spontaneous rehypnotic recovery in repressors. Imagination, Cognition and Personality, 5 (4), 303-310.

The Salpetriere school of hypnosis posited that true hypnotic effects occur spontaneously in people with repressive tendencies. Consistent with this early position, the current study indicates that both spontaneous amnesia after hypnosis and spontaneous recovery during rehypnosis are statistically associated with repression (but not with hypnotic suggestibility). In contrast, both suggested forgetting and suggested recovery are statistically associated with hypnotic suggestibility (but not with repression). Whereas the latter effects of suggestibility are attributable to the demand characteristics of hypnotic suggestions, the spontaneous effects of hypnosis on repressors' memories are not reducible to social psychological principles.

1985

Nichols, Michael P.; Efran, Jay S. (1985). Catharsis in psychotherapy: A new perspective. Psychotherapy, 22 (1), 46-58.

Contemporary thinking about catharsis in psychotherapy is still dominated by Breuer and Freud's work with the cathartic method. Psychoanalysts take the fact that Freud abandoned catharsis as evidence of its ineffectiveness, while the emotive therapies developed in the 1960s returned to Freud's earliest view that neurosis results from repressed affect and can be cured by cathartic uncovering. Emotional memories continue to be thought of as foreign bodies lodged in the human psyche and requiring purgation. Unfortunately, this view divorces people from responsibility for their conduct and encourages a fractionation of human experience into feeling, thought, and action. In the current presentation, emotion is construed instead as a class of blocked or partially blocked actions, and in terms of a two-stage adaptational process. Implications of this view for psychotherapeutic practice are proposed, emphasizing richer self-expression and fuller appreciation of the consequences of responsible vs. disclaimed actions.

1984

Perry, Campbell (1984). Dissociative phenomena of hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 12, 71-84.

Janet's concept of dissociation, Freud's notion of the Censor and Hilgard's multiple controls of consciousness are considered in relation to the hidden observer (HO) phenomenon. A review of reports of recent research, including that of the author and co-workers, indicates that the hidden observer effect occurs only in 40-50% of high susceptible subjects. It is speculated that subjects who show Hidden observer have maintained some contact with reality whilst those high susceptibles who do not show hidden observer are more deeply involved in hypnosis.

## NOTES

Author describes a series of experiments in their laboratory. Ss are double screened to select highly hypnotizable people, and accepted into the research only if they pass the amnesia item of SHSS:C and most of the other 11 items of that scale. Ss are told that hypnosis is a procedure which permits subjects to exercise various skills or abilities such as relaxation, imagination, imagery, absorption and selective attention--that everyone has some of these skills to varying degrees, and that hypnosis is one of many techniques (including yoga, etc.) for bringing out these skills and abilities. All sessions are videotaped for the Experiential Analysis Technique (EAT). The Hidden Observer (HO) procedure was modified so that E touched the S's shoulder lightly at the start of the item, and a second time to terminate the item. Whereas Hilgard used cold pressor pain, they used a mildly unpleasant shock provided by a Take-Me-Along electric stimulator.

1980

Replying to Spanos and Hewitt (1980) in which data was interpreted as implying that the HO is an artifact of demand characteristics, "It struck me then, and still does, that people like Hilgard and ourselves, who believe that the HO is a phenomenon of hypnosis and not just some laboratory artifact, can only get it 40-50% of the time, whereas the investigators like Spanos and Hewitt, who believe it is all laboratory artifact, get the phenomenon almost 100% of the time. Usually it is the other way around, so it seems to me that if the HO is an artifact, it is unique in the history of psychology" (p. 77). They found that all highs with the HO also reported subjective experiences similar to HO experience when they were not hypnotized. "For instance, one female subject who has the HO, insists that she is not hypnotized, despite compelling evidence to the contrary, because she feels the same way when she is not hypnotized. By contrast, another subject who is interested in creative writing reports HO type experiences when she is on a creativity binge and also when she is stoned" (p. 79).

They observed several consistent findings in their research: "(1) contrary to the belief that subjects who report HO's are more susceptible than those who do not, our findings are the reverse" (p. 79). The differences are not large enough to be significant, but that may be due to a ceiling effect on the scales since the subjects are already selected to be high hypnotizables. "(2) A second repeated observation is that when all the Ss were administered the HO instructions, they were given a second electric shock to the still analgesic hand, and asked to report the degree of pain they felt on a 1-10 scale where 1 = no pain and 10 = extreme pain. ... the HOs report having the HO experience and their pain reports on the 1-10 scale increase, in the manner described by Hilgard using cold pressor pain. The no HOS report no subjective difference, and their degree of analgesia actually increases" (p. 79).

The author describes further studies in which they obtained results in the opposite direction from what they had expected, based on the supposition that people who do not have the HO appear to set aside critical judgement more and to be more imaginatively involved. "So the finding of greater recall after reversal of amnesia for the no HOs both on number of items and on bits was a surprise" (p. 81). When they extended this research into the area of pseudo-memories, they found that "of the 8 subjects who had the HO, 7 of them believed the pseudo-memory was real. Of the 19 subjects who did not have the

HO, only 6 of them accepted the pseudo-memory as real ... The effect was even stronger for duality in age regression. Of 12 subjects reporting duality, 10 reported the hallucinated noises as real; of the 15 with no duality, 3 accepted the reality of the pseudo-memory as actually having happened" (p. 81).

1980

Stam, Henderikus J.; Radtke-Bodorik, Lorraine; Spanos, Nicholas P. (1980). Repression and hypnotic amnesia: A failure to replicate and an alternative formulation. Journal of Abnormal Psychology, 89 (4), 551-559.

In an attempt to replicate and extend a study by S. R. Clemes, 2 groups of 10 undergraduate hypnotic Ss learned a list of 18 words and were given an amnesia suggestion telling them they would be able to remember only 10 of these words. Half of the list words were critical (i.e., considered to be related to repressed conflictual material) and half were neutral (unrelated to conflictual material) as determined by Ss' responses to a word association test. Experimental Ss received their own critical and neutral words and yoked control Ss received the critical and neutral words of experimental Ss. Neither the experimental nor the yoked control group exhibited selective amnesia in favor of critical words, thus constituting a failure to replicate Clemes's result. However, variables affecting the degree to which words were initially learned (e.g., imagery value, serial position) predicted their resistance to amnesia. These findings are inconsistent with a repression hypothesis but congruent with an inattention hypothesis of suggested amnesia. (41 ref).

1979

Kleinhauz, Moris; Dreyfuss, Daniel A.; Beran, Barbara; Goldberg, Tova; Azikri, David (1979). Some after-effects of stage hypnosis: A case study of psychopathological manifestations. International Journal of Clinical and Experimental Hypnosis, 27, 219-226.

Some deleterious effects of stage hypnosis are described through a case report. A middle-aged respected member of a kibbutz who became the subject of an evening's entertainment by a stage hypnotist suffered a posttraumatic neurosis. The stage hypnotist, unaware of her traumatic childhood during World War II when she and her sister were hidden by Gentiles, requested her to regress to that age. This reactivated a former successfully repressed trauma and acted as a precipitating factor to the development of a traumatic neurosis which was left untreated. She was self-referred for adequate psychiatric treatment 11 years later. This treatment successfully restored her to an adequate level of functioning.

1978

Shiple, R. H.; Butt, J. H.; Horowitz, B.; Farbr, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest

heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

1974

**Galín, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583.**

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanisms for at least some instances of repression and an anatomical locus for the unconscious mental contents.

1972

**Cedercreutz, C. (1972). The big mistakes: A note. International Journal of Clinical and Experimental Hypnosis, 20, 15-16.**

: In his book, *A System of Medical Hypnosis*, Ainslie Meares writes, "Most books on hypnosis, from Bernheim to the present time, devote a great deal of space to the description of successful and dramatic cures. These accounts may be of prestige value to the author, and may do something to inform the profession of the potential value of hypnosis in medicine, but these success stories are really of little help to those who would learn the technique of hypnotherapy because the emphasis is always on the success of the treatment rather than on analysis of the psychodynamic mechanisms which brought it about. As in everything else, we learn most from a study of our failures [p. 3]." These comments remain as true today as they were ten years ago. With the notable exception of Meares, few colleagues have been willing to share their errors, allowing us to profit from their experience. Thus, when Dr. Cedercreutz sent along a note describing his experience with one of his patients, I was struck by his generosity, and it seemed most appropriate for all of us to share his experience by way of the Journal. Hopefully, this may encourage other colleagues to share their failures as well as their successes so that all of us may learn to be more effective therapists and better scientists. M.T.O. [Martin Orne]

NOTES

The case reported involves a patient who had migraine headache removed with hypnosis, but later developed gastrointestinal symptoms that were operated surgically with absence of positive (physical) pathology noted. Subsequent investigation of the psychological component of the problem with hypnosis revealed an early trauma (seeing a soldier killed with a bayonette) that led to migraine-like pain in the head and vomiting

1970

**Fromm, Erika (1970). Age regression with unexpected reappearance of a repressed childhood language. International Journal of Clinical and Experimental Hypnosis, 18, 79-88.**

Describes the case of a 26-yr-old, 3rd-generation Japanese-American who thought he knew no Japanese. When hypnotically age-regressed to levels below age 4, he spontaneously and unexpectedly spoke Japanese, while only English was spoken at the adult and age-regression levels above 4 yr. The psychodynamics of the S's repression of the childhood language and questions pertaining to the nature and theory of age regression are discussed. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Raginsky, Bernard B. (1969). Hypnotic recall of air crash cause. International Journal of Clinical and Experimental Hypnosis, 17, 1-19.

Discusses the use of hypnotic techniques to help a 33-yr-old male recall suppressed material which implicated him in an air crash. The cause was found after 2 short hypnotic sessions, where other methods used over 2 years had failed. The method can be used in all cases of amnesia. The S was made to hallucinate a threatening situation, and his hallucination gave a clue to the basic problem. He was then made to hallucinate a pleasant scene, which gave an indication of the method he used to escape from the problem. This was repeated at the 2nd session for confirmation. If the patient did not bring up the required material by free association under hypnosis, a dissociation of the personality induced in which the observing ego watched what the experiencing ego was doing to cause the accident. The results demonstrated that hypnotic techniques were more successful than sodium amytal interviews, free association, psychiatric interviews, physical and emotional isolation, pressure by authorities, and kindness of friends. Reference was made to the problems involved when the interests of the S were in conflict with public safety. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

O'Connell, D. N. (1966). Selective recall of hypnotic susceptibility items: Evidence for repression or enhancement?. International Journal of Clinical and Experimental Hypnosis, 2, 150-161.

5 samples of Ss given initial standardized tests of hypnotic susceptibility were analyzed for posthypnotic item recall. All samples showed evidence of selective recall favoring passed items compared to failed items. 4 samples however, showed greater selectivity among the low-scoring Ss, contrary to previous report. This evidence is interpreted as favoring an interpretation of selective recall in terms of an enhancement rather than a repression model. Intersample differences in pattern of recall are stressed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Stross, L. (1966). Impulse-defense implications in a case of amnesia. International Journal of Clinical and Experimental Hypnosis, 2, 89-103.

An 18-yr-old girl with a delinquent history leading to several suicide attempts and a fugue is described as she was observed during shifting phases of her amnesic syndrome. Using the case study as a research tool, it is suggested that alteration of ego state might be an archaic, primitive means of defense against relatively unneutralized, intense drives. More speculative are the propositions, generated from this case, that the ego could employ different defensive means with regard to libidinal and aggressive drives and that alteration of ego state might be a specific defense against aggression. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

**Halpern, Seymore (1965). Body-image symbols of repression. International Journal of Clinical and Experimental Hypnosis, 13 (2), 83-91.**

Hypnointrospection, a method of hypnoanalysis which emphasizes self-perception during voluntary immobilization, is of demonstrable value in the elucidation of the problem of body-image. Hypnointrospective fragments of a case history showing the reorganization of the body-image during therapy are presented. The sequence of body-image phenomena is interpreted as an expression of attitudinal compromises among conflicting wishes implemented through neuromuscular channels. The continuous reorganization of the physical self as perceived by the patient during hypnointrospective analysis appears to be of significance for a general theory of body-image. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1963**

**LeCron, Leslie M. (1963). Uncovering early memories by ideomotor responses to questioning. International Journal of Clinical and Experimental Hypnosis, 11, 137-142.**

The author argues for the veridicality of birth and prenatal memories elicited by hypnosis, and in any event states they are therapeutically useful fantasies. He also advocates use of ideomotor signalling as a means of access to unconscious material. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1960**

**Dorcus, Roy M. (1960). Recall under hypnosis of amnesic events. International Journal of Clinical and Experimental Hypnosis, 8 (1), 57-61.**

**NOTES**

**1:**

The author reported on hypnosis work with eight cases, four dealing with attempts to recall misplaced or lost articles and four dealing with recall of information related to the commission of crimes. He concluded "that recall is not greatly improved under hypnosis. However, when strong emotional elements surround the events to be recalled some additional information may be secured" (p. 60).

**1955**

**Erickson, Milton H. (1955). Self-exploration in the hypnotic state. Journal of Clinical and Experimental Hypnosis, 3 (1), 49-57.**

**NOTES**

**1:**

A medical student who was interested in psychiatry and specifically in the question of whether one could in hypnosis remember something from earlier life that had been forgotten participated in an experiment. In hypnosis he was given instructions that amounted to permissive suggestions that he would be able to complete that task. Following about 30 minutes of silence he reported feeling fear, appeared as if he would vomit, went through a series of extreme negative emotions (reporting that he still did not have the significant memory), and requested that he be awakened. After resting 10 minutes he spontaneously returned to the somnambulistic level and then again went through extreme emotions, reporting that he had the memory but feared forgetting it again when he awoke. The author indicated that after awakening he would know whether or not he wanted to recall the memory. In the waking state, with support and indirect suggestions, the student gradually recalled a traumatic memory of childhood aggression and its consequences. Following that disclosure, some ideosyncratic problems in medical school (e.g. difficulty with dermatology) more or less disappeared.

1954

LeCron, Leslie M. (1954). A hypnotic technique for uncovering unconscious material. Journal of Clinical and Experimental Hypnosis, 2, 76-79. (Abstracted in Psychological Abstracts, 54: 7497)

"Summary. A technique is given whereby unconscious material and information may be learned under hypnosis through automatic movements of the fingers, or of Chevreul's pendulum. The movements are controlled by the unconscious mind of the patient. Questions are asked which can be answered either 'yes' or 'no.' With most people the movements of the pendulum can even be elicited in the waking state. Essentially, the method is a variation of automatic writing with movements substituted for writing. A brief case history is given wherein knowledge was gained in this way as to the causes for severe menstrual pains" (p. 79).

## RESEARCH METHOD

1995

Barabasz, Arreed F.; Barabasz, Marianne (1995, November). What we can do about it: Combining the expertise of clinicians and experimentalists. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

Bowers' study in which post hypnotic suggestion to touch ear, given by the secretary outside the laboratory, was followed by the high hypnotizables and not the lows was described.

Hypnosis research owes its development to clinical methods. However proto- studies fail publication and/or efficacy criteria.

We know nothing about the specificity of hypnosis in terms of its effects unless we measure hypnotizability. It's important that, even though lows may respond due to placebo etc., we not fool ourselves about what contributes to success.

Proto-studies lack literature survey, e.g. not citing prior research.

Case study research is helpful as a first step in furthering our knowledge. Key is careful observation and description. Fromm, 1981, wrote, "The purpose of a clinical manuscript must be to communicate to other clinicians new hypotheses, observations and findings which expand the professional horizon; or to present in detail new or modified techniques. It is important to state in clear cut, concrete form what was actually done so others can replicate, test, or apply the procedure to their own patients."

Barnier, Amanda J.; McConkey, Kevin M. (1995, November). Posthypnotic suggestion: Knowing when to stop helps to keep it going. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

1:  
Posthypnotic suggestion sometimes leads to compulsive and involuntary responding, but we have little information about the parameters of such a response. In some research in our laboratory, we found that subjects who were given a posthypnotic suggestion that encouraged them to experience a desire to respond, showed a different pattern of response from those simply told to make a specific behavioral response. In another study, we gave subjects a posthypnotic suggestion to mail a postcard every day to the experimenter; some subjects were told to respond until they saw the hypnotist again (termination), others were given no specific information about how long they should respond (no termination). Those expecting a termination to the suggestion showed a different pattern of response across 16 weeks of

testing. Thus, the information included in the suggestion about how or when to respond influences posthypnotic responding.

**Present Experiment:** Laboratory test of including specific information in the posthypnotic suggestion about how long to respond - cancellation cue vs. no cancellation cue. Responding indexed on four different tests: formal, embedded, informal, postexperimental. Also used real/simulating methodology. We expected that responding would decline across the four tests, but that the decline would be slowest for those expecting a cancellation cue.

**Methodology:** High hypnotizable subjects scored 8-10 on SHSS:C, lows scored 0- 3 on SHSS:C. Given real/simulating instructions (Orne, 1959). Formal test was given immediately after deinduction; embedded test was given during an inquiry question; informal test was given as the hypnotist appeared to terminate the experiment and leave the room; postexperimental test was given by another experimenter during a postexperimental inquiry. The suggestion was to cough when Ss heard a particular response cue.

**Results:** On the formal test, there was no difference between reals or simulators in either the cue or no cue condition, although simulators in the cue condition tended to overplay their response. Across the tests, responding declined. In particular, the majority of reals and simulators in the no cue condition stopped responding after the formal test. In the cue condition, reals and simulators responded similarly on the embedded test, but differently on the informal test; more reals than simulators continued to respond across the tests. Few subjects responded on the postexperimental test. Subjects' postexperimental comments indicated that reals and simulators in the no cue condition believed that one response was sufficient; simulators in the cue condition were confused about whether to keep responding, and reals in the cue condition responded compulsively across the test.

**Conclusions:**

The inclusion of a cancellation cue in a posthypnotic suggestions maintains responding for a longer period. Responding posthypnotically is not explained solely by demand characteristics. Rather, individuals respond on the basis of their interpretation of the implied intent of the hypnotist's message (c.f., Sheehan, 1971). Responding changes across test types. These findings contribute to a model of posthypnotic responding. They point to the active responding of hypnotized individuals (c.f., Kihlstrom: experimental subjects try to make sense of the message of the suggestions and instructions they receive).

Covino, Nicholas A. (1995, November). Rising to debate or rising to De Bait!

[Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES:**

As clinicians we need to embrace what researchers provide, but they need to pay attention to what clinicians provide, which is not myth and not fantasy.

Eastwood, John D.; Gaskaski, Peter; Bowers, Kenneth S. (1995, November). Frequency of pain reporting and analgesia: Exploration of a possible interaction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES**

1:

Two theories of pain control by hypnosis currently exist: 1. Socio-cognitive model - patient actively copes with noxious stimulus. Hypnotic analgesia should be like cognitive techniques like stress inoculation training. It requires deliberate effort. 2. Dissociative control model - pain reduction requires little cognitive effort.

These 2 theories have different predictions. He explains "ironic effects" theory, in which person must identify pain to reduce pain. Wagner's reflexivity constraint: any process of mental control must be consistent with state we are trying to create.

This investigation involved 25 Highs and 24 Lows who reported pain, produced by strain gauge. Taught either hypnotic analgesia or stress inoculation. Reported every 5 sec (high load) or 45 sec (low load). Subtracted report from baseline to make pain reduction scores. Highs in hypnosis had no difference in pain reduction under high or low mental load. For the other 3 groups (Highs under stress inoculation; Lows under either hypnosis or stress inoculation) the results were different. That is, for Highs in hypnosis the mean of pain reduction scores was the same even when challenged by frequent reports of how much pain was being experienced.

Results are congruent with Miller and Bowers' dissociative control model.

Wagner's ironic process theory is useful. Frequency of pain reporting moderates Ss reports of pain in analgesia. These results challenge the cognitive social model of hypnotic analgesia and support a dissociative control model. Unlike stress inoculation, hypnotic analgesia does not require cognitive effort for high hypnotizable subjects.

1994

Kiernan, Brian; Dane, Joseph R. (1994, October). Hypnoanalgesia reduces new physiologic index of pain, the R-III Index, but the role of hypnotic susceptibility remains unclear. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

NOTES

1:

Stimulated by work of Basil Finer, and following upon the Neodissociation theory of Hilgard; pain is registered by the body but dissociation that produces analgesia is a function of higher brain centers.

Could hypnotic analgesia be mediated lower, at the level of the spinal cord? Gate at dorsal horn could be open or shut; subject to descending modulation. Is hypnosis involved in descending modulation of activity in the dorsal horn?

Hypothesis: reduced pain intensity would be associated with reduced activity at dorsal horn. From Price & Barber, we wanted to look at affect and intensity aspects of pain. Polysynaptic reflex, R-III, latency consistent with conduction velocity (when hand touches a hot stove); even with severed spinal cord injury we still demonstrate the reflex. The magnitude of reflex is linearly related to the pain sensation. The stronger the electrical pulse, the greater the magnitude of the reflex. Magnitude of reflex is linearly related to subjective pain. It is an index of nociceptive activity.

Procedure: Evoke reflex with electrical stimulus at ankle; measure signal at muscle with EMG. We anticipated that at dorsal horn, descending modulation would dampen signal.

15 healthy volunteers. Sural nerve was stimulated. R III reflex measured via EMG response. Used the visual analogue scale (VAS) to assess pain.

1993

Council, James R.; Grant, Debora L. (1993, October). Context effects: They're not just for hypnosis anymore. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

NOTES

Context effects in Absorption research are found in correlations, not in mean differences. Original paper has been replicated and yet results are not always significant. Now we are trying to generalize the effect to other areas: an individually administered measure will influence other measures made in the same session.

Other tests that correlate with hypnosis are studied with 2 x 2 design, enabling order effects and same vs separate contexts to be studied. Or two tests are administered at two points in time, with "bridges" between the two sessions (e.g. same experimenter, same consent forms, etc.) As one adds more and more bridging cues, the correlation of Absorption with other Tellegen MPQ subscales increases.

Same context assessment increases correlation between hypnotizability and 6-8 other scales; with childhood trauma scale when trauma scale is administered first; with beliefs in paranormal phenomena when the measure is related to an adjustment scale. The same inflation of correlations was found in Beck Depression scale research.

These results are of concern because we may have to re-do a lot of personality research that suggested correlation between personality test variables, as the correlations may be inflated by the effects of testing in the same context.

Farvolden, Peter; Bowers, Kenneth S.; Woody, Erik Z. (1993, October). Hypnotic amnesia: Avoiding the 'Intentional Loop'. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL

#### NOTES

1:

The social cognitive view is that Ss actively try to forget and fool themselves, making an attributional error. Davidson & Bowers say (in neo-dissociation theory) the information is temporarily unconscious-like forgetting a friend's name at a cocktail party. Executive initiative, effort, and control are bypassed.

We used heart rate as indicator of cognitive effort. For highs there should be little increase in heart rate. 20 lows and 20 highs who passed amnesia item on Waterloo-C were used. Post-experimentally we asked them what they were doing following the suggestion of amnesia, and had judges evaluate the degree of effort.

Frischholz, Edward J. (1993, October). The many roles of context in clinical and experimental hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

1:

There are two potential sources of dissociation: 1. Person Effect - genetic factors, personality types 2. Situation Effect - situations like environmental causes, contextually dependent

Person Effects and Hypnotizability. Morgan (1973 Journal of Abnormal Psychology) Intraclass correlation determines heritability index: 62% of score is accounted for by genetic factors (though the twins were not reared apart, so family influences also were present). Piccione's research demonstrated long-term stability for hypnotizability scores; 25 years' test-retest  $r = .71$ ,  $N = 50$

Situational Effects and Hypnotizability. Norman Katz (1979) varied context before giving the Stanford Form C for a second time (sleep/trance induction, social learning induction, social learning relaxation induction). The latter two inductions showed significant gains of 3.33 and 2.87 on the scale, compared to .80.

Context effects must always be placed in perspective. When reanalyzing Katz with ANOVA, according to the recommendation of Cronbach for change score analysis, situation accounts for 17% of effect while person effect accounts for 49% (See Spiegel & Frischholz, 1992.)

Dixon, Michael; Laurence, Jean-Roch (1992). Two hundred years of hypnosis research: Questions resolved? Questions unanswered!. In Fromm,

Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 34-66). New York: Guilford Press.

## NOTES

These notes summarize only that part of the chapter concerning nonvoluntary behavior (pp 38-39; 58-61).

The concept of 'nonvolition' has been and continues to be an important issue in hypnosis research. The concept pertains to the "subjective report that the hypnotic suggestion is enacted without the subject's conscious and willful participation" (p. 38). When hypnosis was attributed to a magnetic fluid, in the days of Mesmer, the issue did not arise (because of course a person would not have control over something that happened to them physically). However, when hypnosis came to be considered a psychological phenomenon, the issue of how a behavior could be the result of motivated action and yet not perceived as being under conscious influence became important. In 1819 Faria wrote that the nonvolition paradox is due to the hypnotized subject's tendency to misattribute the source or reason for one's behaviors; he noted that successful suggestions depended upon the subject falsely attributing to the hypnotist the power to influence them. From that point forward, circular reasoning was used to state that one is hypnotized if one experiences their behavior as nonvolitional, and nonvolitional behavior signifies that a person is hypnotized.

"The observation of the seemingly complete automaticity of response in the highly hypnotizable subject led Liebeault in his 1866 book (followed later on by Bernheim and Liegeois) to describe these subjects as 'puppets' in the hands of the hypnotist. This was a quite unfortunate statement, since it would lead to one of the fiercest legal debates surrounding the use of hypnosis in the last 20 years of the 19th century (Laurence & Perry, 1988). ...

"The most prominent author (if not the only one) who attempted to tackle this difficult question was Pierre Janet, who would make the investigation of automatism the basis of his theory of hypnosis, rather than suggestion or suggestibility. This theoretical orientation is best exemplified by his concept of *desagregation psychologique* seen in some psychopathologies, or the carrying out of a posthypnotic suggestion in the normal individual (Janet, 1889; see also Ellenberger, 1970; Perry & Laurence, 1984; Prevost, 1973). Nonetheless, until the end of the 19th century, and for a good part of the 20th century, these reports of nonvolition were thought to be the end result of some neurological changes happening during hypnosis--an idea that has not been substantiated by contemporary research." (pp 38-39)

Reports of nonvolition are explained as due to dissociation by Hilgard, or as the results of misattributing the origins of behaviors and experiences by Spanos and by Lynn. Neodissociationists like Hilgard regard misattribution to be a cognitive alteration, mainly an internal triggering mechanism, while social psychologists like Spanos and Lynn regard the misattribution to be the results of situational demands and therefore an external triggering mechanism.

"Regardless of one's preferred metaphor, the issue of nonvolitional reports remains at the core of an integrated view of hypnosis and hypnotizability. The question remains as follows: By which mechanisms does this occur, and how can we predict a priori who will report involuntariness and under what circumstances? Whereas dissociationists have emphasized general cognitive mechanisms and de-emphasized situational factors, social-psychological theorists have emphasized situational variables and de-emphasized individual differences. Given the limitations of both approaches, emphasis will have to be placed not on their continued separation but on their integration, as more and more investigations demonstrate that they clearly interact with each other (see, e.g., Nadon, Laurence, & Perry, 1991)." (p. 60)

"At the height of the confrontation between the two French schools, hypnosis found its way into the legal arena. Following a series of criminal cases in which hypnosis had been allegedly involved, the two schools once again found themselves on opposite sides of the fence. For La Salpêtrière, only those who had a propensity toward criminality (and hystericals were prime candidates) could be the victims of hypnosis. For the Nancy school, in highly responsive individuals suggestions could lead to criminal behavior. Unfortunately for the Nancy school, it soon became evident that the concept of suggestion was not sufficient in explaining the questions raised by the courts, and Bernheim was forced to

recognize that in cases where suggestions had played a role, other dispositional and situational factors were probably more important in the genesis of the reprehensible behaviors. His espousing a too extreme position meant that the baby was thrown out with the bathwater. History may indicate that the same fate is now awaiting contemporary theoretical positions that adopt an extreme stance vis-a-vis the phenomenon of hypnosis" (p. 61).

1992

Frischholz, Edward (1992, October). The dimensionality of hypnotic performance. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

A 1985 article by Balthazar & Woody in Psychological Bulletin is the best I have read on this topic, and on how factor analysis can be used fruitfully.

Many people using the same data sets have arrived at difference conclusions. My results are based on two data sets: Balthazar & Woody's, in which they created a unidimensional scale. (If you factor analyze a simplex matrix you obtain a 3 factor matrix; yet you knew it was unidimensional. They pointed out the 2nd factor correlated with item difficulty, and the 3rd factor had a U-shaped correlation with item difficulty.)

Factor analysis may not be best way to demonstrate unidimensionality.

I decided to use non metric multidimensional analysis to confirm unidimension. By this, Form A appears to be multidimensional. The same holds true for Stanford Form C scale.

Interpretability of the different dimensions? I agree with Dr. Stone: unidimensions are better for interpreting tests. But you should start out by constructing one in the first place.

I argue that Form C is unidimensional, because the items were selected by using item/full score correlations, hence a first component was built into it. But what does the scale measure? The only way to know is to correlate it with external measures, like Woody does. There are no studies using factor analysis showing that different factors on hypnotizability tests have different correlations with external measures (e.g. Factor 1 doesn't correlate differently with Absorption than Factor 3).

We might better start with a theory if we are going to construct new hypnotizability scales. Don't just use item total correlations. It would be better to find items representing different dimensions, scale the items, then correlate them with different external referents.

Then when we do collect data, make sure the items are unidimensional representations.

Third, we should appropriately validate these dimensions.

Garssen, Bert; de Ruiter, Corine; Van Dyck, Richard (1992). Breathing retraining: A rational placebo?. Clinical Psychology Review, 12, 141-153.

Breathing retraining of patients with Hyperventilation Syndrome (HVS) and/or panic disorder is discussed to evaluate its clinical effectiveness and to examine the mechanism that mediates its effect. In relation to this theoretical question, the validity of HVS as a scientific model is discussed and is deemed insufficient. It is concluded that breathing retraining and related procedures are therapeutically effective, but probably due to principles other than originally proposed, namely decreasing the tendency to hyperventilate. An alternative principle is the induction of a relaxation response, presenting a credible explanation for the threatening symptoms, giving a distracting task to practice when panic may occur, and promoting a feeling of control.

## NOTES

Goal of treatment is to (1) reduce respiratory rate, and (2) cognitive reattribution of physical symptoms to hyperventilation instead of other more catastrophic causes. Reviews a number of studies, mostly small sample, including panic disorder studies, and concludes that the majority point to a

therapeutic effect of breathing retraining and cognitive reattribution of physical symptoms to hyperventilation for patients suffering HVS and the closely related panic disorder with or without agoraphobia. However, the specificity of these techniques for HVS is questionable. Vlaender-van der Giessen (1986) found relaxation training just as effective as breathing retraining; and Hibbert & Chan (1989) found breathing retraining equally effective as a placebo treatment, and not more effective with patients who had recognized symptoms at a hyperventilation provocation test than with those who had not.

Hajek, P.; Jakoubek, B.; Kyhos, K.; Radio, T. (1992). Increase in cutaneous temperature induced by hypnotic suggestion of pain. Perceptual and Motor Skills, 74, 737-738.

Eight patients with atopic eczema and six healthy subjects were given hypnotic suggestion to feel pain in the upper part of the back and in one case on the palm. An average local increase in skin temperature of 0.6 degrees centigrade (detected by thermovision) occurred under this condition. For some patients cutaneous pain threshold was increased before the experiment by means of repetitive hypnotic suggestion of analgesia. These subjects reported feeling no pain subjectively, but the local change in skin temperature was equal in both cases. The results suggest a central mechanism induced by measuring changes in pain threshold in the skin, which changes are independent of local changes in blood flow. Local pain in the middle of the upper part of the back, and in one subject for comparative purposes in the region of the right palm, was induced during a single hypnotic session by specific suggestion which emphasized a subjective feeling of local pain lasting for 6 minutes. In four of the eczema patients long-lasting cutaneous analgesia was induced before this experiment by a different suggestion which stressed the impossibility of conducting pain from the skin to the brain and which was repeated in ten consecutive hypnotic sessions. The spatial thermal reaction of the skin surface was monitored, with consecutive recordings taken at 20-sec. intervals before and after finishing the hypnotic suggestion of pain. There was a gradual increase in temperature (1.08 degrees Fahrenheit). In the four eczema patients with long-lasting cutaneous analgesia treated equally, the thermal reaction of the skin was similar to that described above although no subjective feeling of pain was reported. These subjects reported feeling only that their skin was getting warmer at the specified place.

Holroyd, Jean (1992). Hypnosis as a methodology in psychological research. In Contemporary hypnosis research (pp. 201-226). New York: Guilford Press.

## NOTES

This chapter deals with how the changes brought about by hypnosis (in cognition, behavior, motivation, etc.) may be used in research in other areas of psychology. "The distinction between experimental effects attributable to a personality trait (i.e. hypnotizability), hypnosis context (i.e. an induction), and interaction between the two is particularly important in using hypnosis as a research strategy.

The author discusses suggestibility, imagery enhancement, and changes in the mind-body relationship (immunology, pain, cognitive neuropsychology, attention, learning and memory, and awareness) as they might be employed in social psychology or psychophysiology research. She reviews problems inherent in using hypnosis as part of the research methodology, while noting that hypnosis nevertheless offers new information when introduced into traditional content areas. "For example, in cognitive psychology it has re-introduced the importance of studying experiential aspects of cognition, i.e. I think, I remember, or self reference (Kihlstrom, 1987)" (p. 223).

She concludes, "Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social- cognitive psychologists have contributed significantly toward unifying the fields of hypnosis research and general experimental psychology. At

the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, solely because of its altered-state characteristics. If theoretical physics can reconcile both wave and particle theories of light, it is conceivable that psychology can accommodate both behavioral and state theories of hypnosis" (p. 224).

Isenberg, S. A.; Lehrer, P. M.; Hochron, S. (1992). The effects of suggestion on airways of asthmatic subjects breathing room air as a suggested bronchoconstrictor and bronchodilator. Journal of Psychosomatic Research, 36, 769-776.

Thirty-three asthmatic subjects were told they were receiving, alternately, an inhaled bronchoconstrictor and inhaled bronchodilator, although they actually were only breathing room air. No subjects showed suggestion-produced effects on FEV1, although two (of the 19 on whom FEF50 was measured) showed effects of greater than 20% on measures of maximal midexpiratory flow. The incidence of the effect is smaller than reported previously, possibly because some subjects in previous studies inhaled saline, a mild bronchoconstrictor, and reversal of effect was not required for classification as a reactor. Higher percentages of subjects in this study showed decreased MMEF in response to the "bronchoconstrictor", but this appeared to reflect fatigue rather than suggestion effects. However, the fact that the effect occurred in a relatively non-effort-dependent measure suggests that real changes occurred in bronchial caliber, not just in test effort. Suggestion had a significant effect on perception of bronchial changes, but the correlation between actual and perceived changes was minimal. There was an increase in FVC prior to administration of the "bronchoconstrictor", possibly reflecting a preparatory response to the expected drug. Correlations among self-report variables suggested the existence of three personality dimensions among our population related to suggestion and asthma: cognitive susceptibility to suggestion of bronchial change; feeling of physical vulnerability; and anxiety. However, there was no significant relationship between airway response to suggested changes and hypnotic susceptibility, as measured by the Harvard Group Scale of Hypnotic Susceptibility

Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809.

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude.

1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under

double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

## NOTES

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids.

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

**Discussion:** The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic

suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co..

## NOTES

Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.

The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209). Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action. The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a 'distributed society of specialists that is equipped with a working memory, called a global workspace, whose contents can be broadcast to the system as a whole (p. 42)'" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

Hasher, L.; Stoltzfus, E. R.; Zacks, R. T.; Rypma, B. (1991). Age and inhibition. Journal of Experimental Psychology: Learning, Memory, and Cognition, 17 (1), 163-169.

Two experiments assess adult age differences in the extent of inhibition or negative priming generated in a selective-attention task. Younger adults consistently demonstrated negative priming effects; they were slower to name a letter on a current trial that had served as a distractor on the previous trial relative to one that had not occurred on the previous trial. Whether or not inhibition dissipated when the response to stimulus interval was lengthened from 500 ms in Experiment 1 to 1,200 ms in Experiment 2 depended upon whether young subjects were aware of the patterns across trial types. Older adults did not show inhibition at either interval. The age effects are interpreted within the Hasher-Zacks (1988) framework, which proposes inhibition as a central mechanism determining the contents of working memory and consequently influencing a wide array of cognitive functions.

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

## NOTES

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis.

The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be

perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]

2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.

3. Pain-related evoked potentials. Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

Discussion. "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser

might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

1990

Bartis, Scott P.; Zamansky, Harold S. (1990). Cognitive strategies in hypnosis: Toward resolving the hypnotic conflict. International Journal of Clinical and Experimental Hypnosis, 38, 168-182.

Two experiments were carried out to assess the relative contributions of dissociation and absorption as cognitive strategies employed by high and low hypnotizability Ss in responding successfully to hypnotic suggestions. Of special interest was the manner in which Ss deal with conflicting information typically inherent in hypnotic suggestions. In the first experiment, Ss rated their attentional focus and the involuntariness of their experience after responding to a number of hypnotic suggestions administered in the usual manner. In the second experiment, the level of conflict was varied by instructing some Ss to imagine a circumstance that was congruent and other Ss to imagine a circumstance that was incongruent with the suggested behavioral response. The results of the 2 experiments were consistent in suggesting that, depending upon the nature of the hypnotic suggestion, high hypnotizability Ss are able to employ dissociation or absorption in order to respond successfully. Low hypnotizability Ss, on the other hand, seem to be relatively ineffective dissociators. When the structure of the hypnotic suggestion precludes the use of absorption, the performance of low hypnotizables deteriorates.

Edmonston, William E., Jr.; Moscovitz, Harry C. (1990). Hypnosis and lateralized brain functions. International Journal of Clinical and Experimental Hypnosis, 38, 70-84.

Bilateral EEG measures were obtained on 16 high hypnotizable Ss (scores of >8 on the Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962), while performing hemisphere-specific tasks during hypnosis and a no-hypnosis control condition. Conditions and tasks were presented in counterbalanced order, and Ss served as their own controls. The data call into question the right hemisphere activation interpretation of lateralized brain function during hypnosis; rather, the data suggest a lack of task appropriate activity during hypnosis. The failure to attend to baseline activity measurements and the use of ratios to evaluate interhemispheric lateralization may contribute to potential misinterpretations of data. It is critical that activity changes of the separate hemispheres be taken into account in the interpretative process.

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

## NOTES

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespective whether they are of opioid or nonopioid nature)" (p.550)

1989

Brentar, J.; Lynn, Steven J. (1989). 'Negative' effects and hypnosis: A critical examination. British Journal of Experimental and Clinical Hypnosis, 6, 75-84.

Reviews evidence concerning if hypnosis is responsible for unwanted or negative posthypnotic effects, concluding that support for this hypothesis is lacking. Many such investigations are either anecdotal reports or are marred by methodological flaws that render the interpretation of posthypnotic experiences problematical. Controlled research has not provided support for the hypothesis that hypnosis per se is responsible for certain subjective changes which accompany it, or that hypnosis is more stressful or anxiety provoking than other common experiences encountered by subjects. Although a small percentage of subjects appear to experience posthypnotic reactions, they are typically fleeting, and the link between hypnotic procedures and negative effects has not been adequately substantiated. Indeed, routine hypnosis is typically harmless and is perceived by many subjects as a pleasant, positive experience.

Buss, A. H. (1989). Personality as traits. American Psychologist, 44, 1378-1388.

Personality traits have been challenged as unimportant determinants of behavior, but evidence suggests that traits may carry as much variance as experimental manipulations. Asking whether traits or manipulations control more variance is useless because researchers can plan paradigms that favor one or the other. When traits and manipulations complement each other there are several major kinds of interaction. The trait-manipulation dichotomy is analogous to the person-environment dichotomy, and both are related to active versus passive models of behavior. Trait variance is increased by aggregating across responses, situations, and time. Underlying aggregation are the issues of units and classes of behavior. Individual responses are on a continuum of breadth that extends successively upward to response classes, personality traits, and higher order traits. Broad and narrow traits each

have advantages and disadvantages. Recent research has led to novel personality traits and to knowledge about the origin and maintenance of traits. If there is to be a specialty called personality, its unique and therefore defining characteristic is traits.

Friswell, Rena; McConkey, Kevin M. (1989). Hypnotically induced mood. Cognition and Emotion, 3 (1), 1-26.

This article addresses theoretical and methodological issues that are central to an understanding of hypnotically induced mood. Initially, the hypnotic procedures that are typically used to induce moods are examined. Then the empirical research that has employed hypnotic moods is reviewed; specifically, the impact of hypnotic moods on physiological responses, behavioural performance, perceptual and cognitive responses, and personality, and clinical processes is examined. Finally, major theoretical and methodological issues are highlighted, and the research directions that will lead to a greater understanding of hypnotic mood are specified.

1988

Van der Does, A. J.; Van Dyck, R.; Spijker, R. E. (1988). Hypnosis and pain in patients with severe burns: A pilot study. Burns Including Thermal Injuries, 14, 399-404.

Presents a pilot study on the effectiveness of hypnosis in the control of pain during dressing changes of burn patients. Eight patients were treated, and all evaluated the interventions as beneficial. The treatment of four patients was more closely analyzed by obtaining pain and anxiety ratings daily. Results show a 50%-64% decrease in reported pain level for three patients and a 52% increase of pain for one patient. The mean decrease for these four patients was 30% (for overall as well as worst pain during dressing changes). A 30% reduction of anxiety level and a modest reduction of medication use were achieved concurrently. It is concluded that hypnosis is of potential value during dressing changes of burn patients. Comparison of global evaluations and daily pain ratings shows that systematic research in some cases leads to conclusions opposite from clinical observations. Follow-up recommendations for future studies are given.

Houle, M.; McGrath, Patricia Anne; Moran, Greg; Garrett, Owen J. (1988). The efficacy of hypnosis- and relaxation-induced analgesia on two dimensions of pain for cold pressor and electrical tooth pulp stimulation. Pain, 33 (2), 241-251.

This study evaluated hypnosis- and relaxation-induced suggestions for analgesia for reducing strength and unpleasantness of pain (noxious tooth pulp stimulation; cold pressor stimulation). The Tellegen Absorption Questionnaire was used to assess hypnotic susceptibility for 28 subjects in order to match treatment groups according to sex and susceptibility scores. Tooth pulp stimulation consisted of a 1 sec train of 1 msec pulses at a frequency of 100 Hz, applied at 20 sec intervals to the central incisor. Six stimuli, selected between S's pain and tolerance thresholds, were presented 3 times each in random order. Cold pressor stimulation consisted of forearm immersion in a circulating water bath maintained at 0-1 degrees C. Subjects made threshold determinations of pain and tolerance and used Visual Analogue Scales to rate the strength and the unpleasantness of both noxious stimuli before and after receiving either hypnosis- or relaxation-induced analgesia.

There were no significant differences between hypnosis- and relaxation-induced interventions. However the percent reduction in both strength and unpleasantness varied as a function of type of pain. Both hypnosis and relaxation significantly reduced the strength and unpleasantness of tooth pulp stimulation, but only the unpleasantness of cold pressor pain. The pain reductions were not correlated with subjects' hypnotic susceptibility levels.

The results indicate that the extent and the quality of the analgesia produced by these cognitive-based therapies vary not only according to subjects' characteristics and the efficacy of the intervention, but also according to the nature of the noxious stimuli. Tooth pulp and cold pressor stimulation represent qualitatively different stimuli with respect to both the type of nerves activated and the mode of stimulus application. Discrete, randomly presented levels of noxious electrical stimulation to the teeth activate predominantly small fibers and produce brief pain sensations that vary unpredictably in intensity. In contrast, continuous cold stimulation to the forearm activates a variety of nociceptive and non-nociceptive fibers and produces progressive cold and pain sensations with a predictable increase in intensity from cold sensations to paresthesia and severe pain.

## NOTES

In this investigation, when the authors conclude that "pain reductions were not correlated with subjects' hypnotic susceptibility levels" (p. 241), it must be noted that hypnotizability was estimated from scores on the Tellegen Absorption scale, which is not actually a measure of hypnotic susceptibility level.

1985

Coe, William C.; Yashinski, Edward (1985). Volitional experiences associated with breaching posthypnotic amnesia. Journal of Personality and Social Psychology, 48 (3), 716-722.

Highly responsive hypnotic subjects classified as having control over remembering (voluntaries) or not having control over remembering (involuntaries) during posthypnotic amnesia were compared during posthypnotic recall. Subjects reported their voluntariness after the experiment. Two contextual conditions were employed (2 x 2 design): a lie detector condition meant to create pressure to breach amnesia and a relax control condition. In contrast to earlier findings, the recall data showed that both voluntary and involuntary subjects breached under the lie detector condition compared with their counterparts in the relax condition; however, the degree of breaching was not great in any condition. The results are discussed as they relate to studies attempting to breach posthypnotic amnesia and characteristics of the voluntary-involuntary dimension.

1984

Bakker, Dirk J. (1984). The brain as a dependent variable. Journal of Clinical Neuropsychology, 6, 1-16.

The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical, neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

## NOTES

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right- hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P- type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12).

**Brodsky, Annette M.; McNeil, Daniel W. (1984). Hypnotizability and volunteering for hypnosis experiments. American Journal of Clinical Hypnosis, 26, 206-211.**

A class of 145 college students was given Barber's Creative Imagination Scale (CIS) and Spiegel's Eye Roll Sign, and later given several opportunities to volunteer for research projects, some of which specified hypnosis was involved. Those S's who volunteered for the hypnosis experiments took the Harvard Group Scale of Hypnotizability (HGSHS). Hypnosis volunteers differed from the non-hypnosis volunteers by significantly higher grades and more total experimental volunteerism, but were no significantly different on the CIS or Eye Roll Sign. In general, nonwhites scored higher on the CIS. Among hypnosis volunteers, there was a low negative correlation between the Harvard Consciousness scale and volunteering for experiments other than hypnosis.

Critelli, Joseph W.; Neumann, Karl F. (1984). The placebo: Conceptual analysis of a construct in transition. American Psychologist, *39*, 32-39.

The placebo in psychotherapy has unfortunately retained the negative connotation of an inert "nuisance variable," a label that it originally incurred in the field of medicine. In addition, the transition toward more cognitive models of psychotherapy, particularly Bandura's theory of self-efficacy, has led to problems in defining the placebo within psychology. This transition has resulted in an awkward interface between certain preferred cognitive metaphors and the negative connotations of a presumably cognitive placebo construct. As a result, suggestions have recently been made to dismiss the placebo construct from psychology and to do away with the use of true placebo controls in outcome research. The present analysis maintains that (a) the placebo can be adequately defined within psychology, (b) the negative connotation of the placebo label is largely undeserved, (c) the placebo retains a continuing conceptual and empirical utility for evaluating psychotherapy, and (d) the therapeutic efficacy of current therapies is well established even though they have not generally been shown to be more effective than nonspecific treatment.

1983

Dillon, F. Richard; Spanos, Nicholas P. (1983). Proactive interference and the functional ablation hypothesis: More disconfirmatory data. International Journal of Clinical and Experimental Hypnosis, *31*, 47-56.

According to the functional ablation hypothesis, memories for which amnesia has been hypnotically suggested do not interact with other information in memory. This hypothesis was tested in 2 interrelated experiments. In Experiment 1, Ss high and low in hypnotic susceptibility were administered a hypnotic induction procedure and tested on a Brown-Peterson (e.g., Wickens & Gittis, 1974) memory task designed to induce proactive interference (PI). Ss were exposed to 10 blocks of successive 3-word lists. Within each block, all words were strongly related, and, therefore, lists presented early in a block interfered with the retention of lists presented later (PI "buildup"). Following the "buildup" of PI, Ss were administered either a cue to be amnesic for the previous words of a block or a cue to relax. Contrary to the functional ablation hypothesis, the amnesia suggestion did not produce a "release" from PI in high susceptible hypnotic Ss. In other words, the amnesia suggestion did not prevent previously learned material from interfering with newly presented material. Experiment 2 demonstrated that the amnesia cues employed in the Brown-Peterson task produced a reversible recall deficit even though they failed to produce PI "release." These findings are consistent with the results of studies of the functional ablation hypothesis using the retroactive interference paradigms.

Johnson, Lynn S.; Dawson, Steven L.; Clark, Janet Lee; Sikorsky, Catherine (1983). Self-hypnosis versus hetero-hypnosis: Order effects and sex differences in behavioral and experiential impact. International Journal of Clinical and Experimental Hypnosis, *31*, 139-154.

Recent studies (Fromm, Brown, Hurt, Oberlander, Boxer, & Pfeifer, 1981; Johnson, 1979, 1981; Johnson & Weight, 1976; Ruch, 1975) of self-hypnosis versus hetero-hypnosis are compared. A study is reported addressing unresolved questions about interactions between order of presentation and sex with the 2 types of hypnosis. 90 male and 149 female volunteer college students were proportionally assigned to 1 of 4 groups, each of which received 1 of the following hypnosis-order combinations on successive days: self hypnosis, then hetero-hypnosis; hetero-hypnosis, then self-hypnosis; self-hypnosis, then another self-hypnosis; or hetero-hypnosis, then another hetero-hypnosis. Half of each group of Ss had a male hypnotist; half had a female hypnotist. Analysis of variance of total scores for

behavioral and experiential impact showed: (a) a general order effect, a decrease from first to second experience; (b) initial self-hypnosis to facilitate either subsequent experience, mitigating the general decrement; (c) switching modes to also reduce the decrement; (d) a clarification of certain order and sex interactions from earlier studies; (e) self-hypnosis to be behaviorally superior to hetero-hypnosis on later presentations; and (f) crossed-sex training to be experientially facilitatory. Conclusions are drawn about unresolved issues in self hypnosis research, including the limits of comparability of self-hypnosis versus hetero-hypnosis, which depend on definitional assumptions of the self-hypnosis state and the allowance for order effects in the design.

## NOTES

In their Discussion, the authors note that self hypnosis and heterohypnosis yield similar results, and that although clinical hypnosis effects may increase with practice, such would probably not be true for hypnosis in the experimental setting. They speculate that "self-hypnosis triggers an 'active involvement' which provides more continuity in responsiveness across experiences, while hetero-hypnosis encourages a more passive mode which is more susceptible to external events (like order effects)" (p. 150).

1982

Farthing, G. William; Brown, Scott W.; Venturino, Michael (1982). Effects of hypnotizability and mental imagery on signal detection sensitivity and response bias. International Journal of Clinical and Experimental Hypnosis, 30, 289-305.

It was hypothesized that the ability to selectively concentrate attention on mental images would be greater among high hypnotizable Ss than among low hypnotizable Ss, as indicated by a greater interference with visual signal detection by concurrent visual mental imagery in response to specified nouns. This hypothesis was not supported in the overall results, though the finding of a significant interference effect among the high hypnotizable female Ss, but not among other subgroups, indicates that further research with a more refined procedure might be worthwhile. On the control trials without images, the high hypnotizable Ss made more false alarms than lows, and had a significantly different bias index indicating that high hypnotizable Ss were more likely than lows to respond "yes" when uncertain about whether the signal was present; false alarms can be interpreted as a nonhypnotic measure of suggestibility. The high and low hypnotizable Ss did not differ in their times to generate images in response to the specified nouns.

Friedman, Howard; Taub, Harvey A. (1982). Accessibility: A necessary control for studies of essential hypertension. International Journal of Clinical and Experimental Hypnosis, 30, 4-8.

A study which was planned to compare the relative effects of relaxation and hypnosis upon essential hypertension also offered the opportunity to replicate some of the findings of a previous investigation. A failure in such replication led to consideration of the effect of accessibility to the laboratory, a variable not typically controlled. A significant differential effect of easy versus hard access was observed.

Frischholz, Edward J.; Blumstein, Renee; Spiegel, David (1982). Comparative efficacy of hypnotic behavioral training and sleep/trance hypnotic induction: Comment on Katz. Journal of Consulting and Clinical Psychology, 50 (5), 766-769.

Examines the claim by N. W. Katz (see PA, vol 62:6454) that social- learning hypnotic inductions produce significant gains in hypnotizability relative to a traditional sleep/trance hypnotic induction.

His use of a "raw gain-score analysis" is criticized because it fails to identify the significant influences of pretreatment individual differences on posttreatment response. Reanalysis of Katz's data indicates a highly significant pretest effect more potent than the observed treatment effect. Inconsistencies between Katz's findings and those of 6 previous studies are examined.

1981

Fromm, Erika (1981). How to write a clinical paper: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29, 5-9.

The standards for publishing clinical papers are in some ways the same and in some ways different from those applying to experimental articles. The present paper, written by the Clinical Editor of the International Journal of Clinical and Experimental Hypnosis, is meant to be a guide to clinicians on how to write publishable papers and to reviewers and readers on how to evaluate them.

NOTES

1:

"An outline could follow this sample:

- a) Statement of problem.
- b) Review of literature -- and not only the literature of the last 5 years.
- c) Clinical material -- number of patients, descriptions of cases.
- d) Description of method of treatment. If it is a new technique, give a verbatim account.
- 3) Results.
- f) Discussion. (Evaluate your own results and, if appropriate, compare them to those in the literature.)
- g) Conclusion.
- h) Tables and Figures (if appropriate).
- i) Footnotes.
- j) List of references.
- k) Abstract" (pp. 6-7).

"In closing, here is a short reviewers' and editors' guide -- a set of questions editors and referees ask. It might be helpful to be aware of these questions as you write a paper.

1. Is the article appropriate for our journal? Does it deal with hypnosis?
2. Has the hypothesis been made explicit?
3. Has the reason for or the origin of the hypothesis been made clear?
4. Does the paper describe something new or describe the approach to an old field in a new way?
5. Are references missing? Are all the citations correct and necessary? Or, is there padding?
6. Has the author been careful to cite prior reports dealing with the same topic? Prior theories about the same topic?
7. What was the "set" given to subjects? Was there control for experimenter influence and demand characteristics?
8. Were patients led to believe they were receiving treatment or not?
9. How was the diagnosis arrived at? Is it correct? Or, does the material given remain unclear as to the correctness or incorrectness of the diagnosis?
10. Was administration and scoring of tests and evaluation of the results done correctly?
11. If statistics were used, were they used correctly?
12. Are the figures, graphs, and tables used necessary and sufficient? Do they correspond logically to the textual argument of the article?
13. Is the discussion properly confined to the findings or is it digressive? Does it include new post-hoc speculations?
14. Has the author explicitly considered and discussed viable alternative explanations?" (p. 9).

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

1980

Case, David B.; Fogel, David H.; Pollack, Albert A. (1980). Intrahypnotic and long-term effects of self-hypnosis on blood pressure in mild hypertension. International Journal of Clinical and Experimental Hypnosis, 28, 27-38.

Self-hypnosis using the method of Spiegel (1974) was evaluated in 15 patients with labile or mild essential hypertension who were equally hypnotizable and adhered to a regimen of 6-10 daily exercises for a 4-month period. During the hypnotic state, there were consistent rises in both systolic and diastolic pressures in hypnotizable patients, but not in non-hypnotizable controls. Similar but smaller changes were also observed in normotensive subjects. Pressure rose immediately with hypnosis and subsided gradually over 15 minutes. However, the long-term effects of the daily practice of self-hypnosis were variable: ambulatory diastolic pressure fell in 5 patients, was unchanged in 7 patients, and rose in 3 patients. The changes in blood pressure could not be specifically attributed to the daily practice of self-hypnosis; however, all patients experienced improvement in well-being, mood, and behavior patterns during the 4-month period. The study indicates that self-hypnosis can produce changes in behavior and mood which may be beneficial to cardiovascular health, although paradoxically, the act of hypnosis by this technique is pressor. Aside from its therapeutic potential, self-hypnosis may provide useful information about central mechanisms of blood pressure regulation.

Ericsson, K. Anders; Simon, Herbert A. (1980). Verbal reports as data. Psychological Review, 87 (3), 215-251.

## NOTES

Proposes that verbal reports are data and that accounting for them, as well as for other kinds of data, requires explication of the mechanisms by which the reports are generated, and the ways in which they are sensitive to experimental factors (instructions, tasks, etc.). Within the theoretical framework of human information processing, different types of processes underlying verbalization are discussed, and a model is presented of how ss, in response to an instruction to think aloud, verbalize information that they are attending to in short-term memory (STM). Verbalizing information is shown to affect cognitive processes only if the instructions require verbalization of information that would not

otherwise be attended to. From an analysis of what would be in STM at the time of report, the model predicts what could be reliably reported. The inaccurate reports found by other research are shown to result from requesting information that was never directly heeded, thus forcing Ss to infer rather than remember their mental processes. (112 ref)

1978

Connors, J. R.; Sheehan, P. W. (1978). The influence of control comparison tasks and between-versus within-subjects effects in hypnotic responsivity. International Journal of Clinical and Experimental Hypnosis, 26, 104-122.

Type of experimental design (between- versus within-subjects) and type of control task were examined for their differential effects on the magnitude of objective and state report test scores associated with response to items on the Stanford Hypnotic Scale of Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). In an integrated program of work exploring design effects in hypnotic research, Ss in each of 7 comparison conditions that involved hypnosis and 4 separate comparison conditions that did not involve hypnosis were tested twice on successive occasions. Three of the control tasks used (waking, imagination, and imagination [alert] instruction) were counterbalanced with hypnosis to analyze possible order effects associated with hypnotic test conditions. Data indexed the patterns of between-versus within-subjects effects associated with standard control tasks and also highlighted the order effects that accompanied them. Imagination instructions, in particular, pose specific difficulties that require attention when Ss are tested as their own controls.

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not influenced by social desirability. Factor analysis indicated that subjective and objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

1977

Brown, Daniel P.; Fromm, Erika (1977). Selected bibliography of readings in altered states of consciousness (ASC) in normal individuals. International Journal of Clinical and Experimental Hypnosis, 25, 388-391.

The bibliography is divided into the following sections:

I. General Works

II. Reference material on personality in relation to altered states

III. Social and cultural determinants of altered states

IV. Cognition, information-processing, and ego-functioning

V. Methodology in the study of altered states

VI. Differentiation of hyperaroused states

VII. Shamanistic states

VIII. Possession-trance

IX. Psychedelic states

X. The meditative states

**XI. Personality differences and meditation**

**XII. Affective and cognitive change in meditation**

**XIII. Ordinary Buddhist meditation, concentration, and insight meditation**

**XIV. The variety of Buddhist meditation traditions**

**Crosson, B.; Meinz, R.; Laur, E.; Williams, D.; Andreychuk, T. (1977). EEG alpha training, hypnotic susceptibility, and baseline techniques. International Journal of Clinical and Experimental Hypnosis, 25, 348-360.**

3 alpha feedback sessions of 40 minutes were administered after a similar baseline period without feedback to 12 Ss high in hypnotic susceptibility and 12 Ss low in hypnotic susceptibility. Hypnotic susceptibility was not a significant dimension in alpha feedback training and previously reported relationship between alpha density and hypnotic susceptibility were not generally found. Evidence did support the efficacy of the current baseline procedure over others more commonly used. The possibility under certain conditions of there being a relationship between hypnotic susceptibility and alpha density and theoretical considerations in recording baseline are discussed.

**1976**

**Barber, Theodore Xenophon (1976). Pitfalls in human research: Ten pivotal points. Overview and recommendations. In Pitfalls in human research: Ten pivotal points.**

#### **NOTES**

Be aware of underlying paradigm and how it influences every aspect of the research. Make assumptions more explicit. 2. Person who plans the study should be different from person who is responsible for data analysis. 3. Person who plans the study should not be person who serves as experimenter and collects the data. 4. Investigator should serve as "pilot" subject to gain insight into how the Ss view the experimental design, to tighten the design, and to change experimental instructions that are not clear to the Ss. 5. Use a tight experimental script or protocol that clearly specifies how the experimenter is to carry out each phase of the study, and that considers the various contingencies that may arise. 6. Give the experimenters sufficient supervised practice in implementing the protocol and in correctly and honestly recording the data. The experimenters should carry out pilot studies under supervision. 7. Understand the many kinds of data analyses that lead to misleading conclusions and the kinds of analyses that can be used appropriately with specified sets of data. 8. Judge the research on the validity of the design and procedures that are used to answer the questions that are posed rather than on the outcome or the results that are obtained. 9. Teachers should place much more emphasis on the value of carefully following the prescribed procedures and carefully and honestly recording the data. 10. Check often to see if the experimenters are faithfully implementing the experimental protocol and are carefully and honestly recording the data--e.g. by making tape recordings or video tapes, using one-way mirrors to observe, or by sending stooges, who give predetermined responses.

**Coe, William C. (1976). Effects of hypnotist susceptibility and sex on the administration of standard hypnotic susceptibility scales. International Journal of Clinical and Experimental Hypnosis, 24, 281-286.**

Hypnotists' susceptibility and sex were examined for their effects on the administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Neither resulted in different hypnotic responsiveness from Ss. Comparatively inexperienced hypnotists obtained data similar to the normative sample for the Stanford scale. The results suggest that inexperienced hypnotists are capable

of administering standardized scales validly, and that characteristics of the hypnotist are relatively ineffective in distorting Ss' responses to these scales.

**Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. International Journal of Clinical and Experimental Hypnosis, 24, 215-227.**

The purpose of the study was to clarify the frequency of appearance of a hypnotically induced secondary personality and to compare Ss who were able to create secondary personalities in hypnosis to control Ss who could enter a deep hypnotic trance but were unable to produce secondary personalities.

The sample of 1,200 pupils was made up of the 3 highest grades of the secondary schools in the city of Oulu, Finland. A total of 450 students volunteered to participate in the study. All those who could enter a deep hypnotic state, 78 in all, were selected for closer study. 32 Ss were able and 43 were unable to create multiple personalities in hypnosis.

Ss also underwent a psychiatric interview. In addition, the identity of Ss was measured.

Both the psychiatric interview and identity examination gave parallel results to the effect that Ss capable of producing secondary personalities were clinically healthier and more adaptive than the group without secondary personalities. This finding is at variance with results presented in previous studies.

#### NOTES

Procedure for induction of multiple personalities involved re-hypnotizing Ss, suggesting, "You go back to an age preceding your birth, you are somebody else, somewhere else," and repeating the suggestion many times. Other suggestions were given that everything was completely normal, nothing miraculous was happening. A multiple personality was counted if the S then said he was a human being, was able to give his name and where he lived, could describe the social environment and his own personality.

1975

**Ahlberg, D.; Lansdell, H.; Gravitz, M. A.; Chen, T. C.; Ting, C. Y.; Bak, A. F.; Blessing, D. (1975). Acupuncture and hypnosis: Effects on induced pain. Experimental Neurology, 49, 272-280.**

The reactions of 14 volunteers to electrical stimulation near the supra-orbital nerve were studied under acupuncture, placebo-acupuncture, and hypnosis. As the intensity of stimulation increased, a minimum sensation, a minimum pain, and then a maximum or intolerable pain sensation were produced. Under hypnosis the average intensity of the stimulus for producing these sensations was higher than before the trance induction. Under acupuncture and placebo-acupuncture no clear increase in current intensity was observed. Acupuncture, as well as hypnosis, did not consistently change the blood, blood pressure, pulse rate, EKG, respiratory rate, or EEG.

**Brown, H. Alan (1973). Role of expectancy manipulation in systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (3), 405-411.**

Expectancy, relaxation, and hierarchy content were manipulated in a 2X2 factorial design with two additional control groups. It was hypothesized that a major portion of therapeutic change following desensitization could be accounted for by the subjects' responses to positive feedback inherent in the paradigm. Spider-phobic subjects saw either photographs of spiders or blank slides that they believed to be tachistoscopically presented pictures of spiders. In the factorial part of the design, half of the subjects believed their progress through the hierarchy to be contingent on autonomic responses; the others believed rate of progress to be random. Findings did not support the hypothesis that expectancy

was the only factor in desensitization, but they did serve to clarify the role of expectancy vis-a-vis the counterconditioning elements typically discussed in the literature.

Barber, Theodore Xenophon (1969). Invalid arguments, postmortem analyses, and the experimenter bias effect. Journal of Consulting and Clinical Psychology, 33, 11-14.

NOTES: Answers Rosenthal's (1969) criticism of five experiments Barber et al reported (1969).

1969

Barber, Theodore Xenophon; Calverley, David S.; Forgione, Albert; McPeake, John D.; Chaves, John F.; Bowen, Barbara (1969). Five attempts to replicate the experimenter bias effect. Journal of Consulting and Clinical Psychology, 33, 1-6.

NOTES

Failed to cross-validate the Rosenthal & Fode, 1963, work on experimenter bias effect in five separate investigations. Concludes that the effect is more difficult to demonstrate than was implied in several recent reviews and that it is not known what preconditions are necessary to obtain it.

Gravitz, Melvin A.; Hopkinson, David (1969). Some methodological developments in contemporary scientific research in hypnosis. International Journal of Clinical and Experimental Hypnosis, 17, 167-179.

Discusses modern scientific investigation in hypnosis to: (a) provide an orientation toward current areas of experimental research, (b) outline the methodological problems involved, (c) review selected critical investigative findings, (d) delineate the assumptions and points of view of the major researchers, and (e) elaborate upon certain implications of the above analyses. (Spanish & German summaries) (36 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Evans, Frederick J. (1968). Recent trends in experimental hypnosis. Behavioral Science, 13, 477-487. (Abstracted in American Journal of Clinical Hypnosis, 13, 143)

Research on hypnosis has been influenced by recent methodological contributions. Social psychological factors influence experimental results, and special control procedures have been developed to evaluate the essentially subjective nature of hypnosis. Several studies are reviewed covering posthypnotic suggestion and amnesia. These studies support a state oriented theory of hypnosis.

Graham, K. R.; Patton, Ann (1968). Retroactive inhibition, hypnosis, and hypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 16, 68-74.

THE RELATIONSHIP OF HYPNOSIS AND POSTHYPNOTIC AMNESIA TO RETROACTIVE INHIBITION. 4 GROUPS OF 10 STUDENTS EACH LEARNED LISTS OF ADJECTIVES IN A RETROACTIVE INHIBITION PARADIGM. 2 GROUPS LEARNED THE INTERVENING LIST WHILE THEY WERE HYPNOTIZED. SS OF 1 OF THESE WERE GIVEN INSTRUCTIONS FOR POSTHYPNOTIC AMNESIA, WHILE SS OF THE OTHER WERE TOLD TO RECALL WHAT THEY HAD LEARNED UNDER HYPNOSIS. THE SAVINGS AND RECALL SCORES OF BOTH GROUPS FOR ITEMS OF THE ORIGINAL LIST WERE NOT DIFFERENT FROM A 3RD GROUP WHICH HAD LEARNED ALL 3 LISTS IN THE WAKING STATE. ALL GROUPS

SHOWED SUBSTANTIAL RETROACTIVE INHIBITION WHEN COMPARED TO CONTROLS WHO HAD LEARNED NO INTERVENING LIST. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Bowers, Kenneth S. (1967). The effect for demands of honesty upon reports of visual and auditory hallucinations. International Journal of Clinical and Experimental Hypnosis, 15, 31-36.

SS, UNSELECTED FOR HYPNOTIC SUSCEPTIBILITY AND SIMPLY TOLD TO HALLUCINATE, MADE PRETEST RATINGS ON THE REALITY OF VISUAL AND AUDITORY HALLUCINATIONS. ALL SS WERE THEN TASK MOTIVATED TO HALLUCINATE. BEFORE THE RETEST RATINGS WERE MADE, 1/2 OF THE SS WERE CONFRONTED BY A 2ND E WITH DEMANDS FOR REPORT HONESTY. FOR BOTH SENSORY MODALITIES, THE MEAN CHANGE IN RATINGS FROM PRETEST TO RETEST WAS SIGNIFICANTLY GREATER FOR THE TASK-MOTIVATED THAN FOR THE HONESTY-REPORT CONDITION. RATINGS OF THE REALITY OF HALLUCINATIONS ARE EVIDENTLY HIGHLY SUSCEPTIBLE TO THE CONTEXT OF DEMANDS IN WHICH THE REPORT IS MADE. IT IS ARGUED THAT, IN THIS AND PREVIOUS EXPERIMENTS UTILIZING UNSELECTED SS, REPORTS OF HALLUCINATORY ACTIVITY ARE LESS APT TO REFLECT PERCEPTUAL ALTERATIONS THAN RESPONSE MODIFICATION IN ACCORDANCE WITH REGNANT EXPERIMENTAL DEMANDS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J. (1967). An experimental indirect technique for the induction of hypnosis without awareness. International Journal of Clinical and Experimental Hypnosis, 15, 72-85.

A procedure is described which has been used in an experimental setting as a method of indirectly inducing hypnosis without S's awareness. Ss are not told that hypnosis is involved in the procedure, but are told they will be taught how to relax. The aim of the indirect procedure is to create different expectations and preconceptions from those normally occurring in the special hypnotic relationship. Evidence from 3 studies (samples of 63, 63, 120) indicates that the procedure successfully induces hypnosis comparable in depth to other standard hypnotic procedures. About half of the Ss tested apparently do not recognize the procedure involves hypnosis. Approximately 30% of the Ss who receive the procedure, as well as 30% of the Ss in the control group who did not receive the procedure, but were tested with the same test suggestions, recognized that an attempt had been made to induce hypnosis. The perceptions about whether hypnosis was involved were unrelated to scores on typical hypnotic phenomena. It was concluded that the indirect induction technique successfully induces hypnosis and is a useful technique for manipulating S-expectations in an experimental context.

#### NOTES

"[The Subject] is told, 'A series of experiments are being conducted investigating the effects of relaxation on behavior. Because of confusing results in the literature, this study is designed to examine the relationship between relaxation and several other psychological phenomena, some of which might remind you of a variety of other phenomena which you may have heard or read about.' The S was told that a technique had been devised that would assist him to relax completely. His main task was to relax as completely as possible. This would be facilitated by lying comfortably on a couch, and by allowing his mind to become completely blank. To prevent himself from falling asleep, he should concentrate his attention on some object or idea. To help exclude other thoughts from his mind, E would continue to

talk in a monotonous voice saying little of importance, while the S stared at a spot on the wall. This shaping of the situation was continued with a considerable degree of apparent permissiveness.

"The S's attention was slowly directed to the rhythm of his own breathing as suggestions were given of eye fatigue. If S closed his eyes, he might find it convenient to concentrate on the rhythm of his own breathing. Perhaps this would be easy to think about if he visualized a pendulum swinging in time with his breathing. The E continued to talk and count in rhythm with S's breathing. Special words, such as 'breathing in and out; the pendulum swings back and forward,' were always spoken as S inhaled or exhaled. Counting was also timed to coincide with exhalation. Deeper relaxation was suggested as E counted slowly from 1 to 21, and later, from 1 to 31.

"Throughout the procedure, phrases and words (such as 'hypnosis,' 'trance,' 'drowsy') traditionally employed with hypnotic induction techniques were avoided. After approximately 30 minutes, a natural transition was made to the testing procedure. Suggestions of continued deep relaxation were intermingled between various tests administered. Termination was effected by suggesting that the relaxation would end as E counted from 'A' to 'H'" (p. 75).

1966

Evans, Frederick J.; Schmeidler, D. (1966). Relationship between the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale: Form C. International Journal of Clinical and Experimental Hypnosis, 14, 333-343.

3 SUBGROUPS OF 20 SS WITH HIGH, MEDIUM, OR LOW SCORES ON A SLIGHTLY MODIFIED, TAPE-RECORDED VERSION OF THE HARVARD GROUP SCALE OF HYPNOTIC SUSCEPTIBILITY, FORM A (HGSHS:A) WERE LATER ADMINISTERED THE STANFORD HYPNOTIC SUSCEPTIBILITY SCALE, FORM C (SHSS:C). THE 2 SCALES CORRELATED .59, WHICH IS LOWER THAN WOULD BE PREDICTED BY SCALE RELIABILITIES. THIS, TOGETHER WITH OTHER DATA BASED ON ITEM CHARACTERISTICS, INDICATES THAT THE 2 SCALES ARE NOT EQUIVALENT, BUT IN PART MEASURE DIFFERENT ASPECTS OF HYPNOTIC PERFORMANCE. SCORES ON HGSHS:A FOR LOW SS ARE PREDICTIVE OF SHSS:C SCORES, BUT THE STABILITY OF PERFORMANCE BETWEEN HGSHS:A AND SHSS:C IS NOT AS MARKED FOR MEDIUM AND HIGH SS ON HGSHS:A. THIS IS PARTLY A RESULT OF THE FAILURE OF PASSIVE MOTOR (PRIMARY) SUGGESTIBILITY TO DISCRIMINATE BETWEEN LEVELS OF SUSCEPTIBILITY, ALTHOUGH CHALLENGE ITEMS DO. THE 2 CLUSTERS OF ITEMS CORRELATE .23 AND .43 IN HGSHS:A AND SHSS:C, RESPECTIVELY. THE PASSIVE SUGGESTIBILITY ITEMS DETRACT FROM THE VALIDITY OF THE 2 SCALES. (SPANISH + FRENCH SUMMARIES) (20 REF.) (PsyncINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J.; Thorn, Wendy A. (1966). Two types of posthypnotic amnesia: Recall amnesia and source amnesia. International Journal of Clinical and Experimental Hypnosis, 14 (2), 162-179.

Posthypnotic recall amnesia refers to S's inability to recall, when challenged posthypnotically, the events which occurred during hypnosis. Posthypnotic source amnesia, occurs when S subsequently remembers the experiences of hypnosis, but has no recollection of acquiring the experiences. Data from 3 samples are presented to support the distinction between the 2 types of amnesia. Of 243 Ss, 18 experienced recall amnesia, 26 displayed source amnesia, but only 4 developed both kinds. There were no differences in rated depth of hypnosis of these 3 subgroups. Recall amnesia and source amnesia correlated .37, .38, and .39, respectively ( $p < .001$ ) in the 3 samples. The evidence indicates the 2 types of amnesia are different phenomena. Similarities between source amnesia and certain (dissociative)

normal and psychopathological memory processes are discussed. (Spanish & German summaries) (32 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Coe, William C. (1965). A method of self-teaching for experimental hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (3), 144-149.

A student's interest in hypnotic research may actually be discouraged because of the difficulty in obtaining a formal course or close supervision in hypnotic techniques. A method tried by 2 students to overcome this problem is presented. The "self-teaching" procedure attempts to fulfill 3 basic criteria: safeguarding the S, requiring minimal supervisory time, and learning to administer a standard hypnotic scale. Some benefits seem to have been realized. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Cooper, Leslie M.; Pedersen, Darhl M. (1965). A note on the failure to find personality differences between volunteers and nonvolunteers for hypnotic research. International Journal of Clinical and Experimental Hypnosis, 13 (4), 274-278.

Personality measures were administered to 136 students in an introductory psychology class at Brigham Young University. 30 Ss subsequently volunteered to have their hypnotic susceptibility assessed. There were no significant differences found between the means of the resulting 23 variables for the 30 volunteers and 106 nonvolunteers. 2 variables (age and ego strength) showed significantly different variances for the 2 groups, but these may be attributed to chance because of the number of significance tests made. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Field, Peter B.; Evans, Frederick J.; Orne, Martin T. (1965). Order of difficulty of suggestions during hypnosis. International Journal of Clinical and Experimental Hypnosis, 13, 183-192.

This study tests the hypothesis that successful response to suggestion during hypnosis predisposes to further successful response, but failure leads to subsequent failure. The Harvard Group Scale of Hypnotic Susceptibility was administered to 2 groups of 51 volunteer students. For 1 group, 8 of the 12 items were administered in the order easy-to-difficult; for the 2nd group, in the order difficult-to-easy. Total and 8-item mean scores, and frequency distributions, did not differ significantly between groups. Except for the item measuring posthypnotic amnesia, item difficulties for the 2 groups did not differ significantly. Although the difficult-to-easy group was more amnesic, the 2 groups recalled a similar number of additional items when amnesia was "lifted." The block of 4 easier items was relatively easier when preceded by a block of 4 harder items and, similarly, the harder items were relatively less difficult if preceded by a block of easier items. The magnitude of this effect was small, and the order effect hypothesis was basically not supported. Future research should consider the S's subjective impression of success and failure. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic

induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J.; Schmeidler, D. (1964). Reliability of two observers scoring the Stanford Hypnotic Susceptibility Scale, Form C. International Journal of Clinical and Experimental Hypnosis, 12 (4), 239-251.

2 Os scored the responses of 60 Ss on a 12-item objective test, Stanford Scale of Hypnotic Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). Mean total scores reported by the 2 Es did not differ significantly. The correlation between the total scores of the 2 Es was .947. Nevertheless, differences in total scores assigned occurred with 40% of Ss, which is a significant departure from perfect agreement. The 2 Es disagreed about correct scoring of 54 items (7.5% of all items scored). The extent of disagreement was significantly greater than 0. Disagreement was not related to the level of susceptibility of Ss, nor to the relative experience of Es with hypnosis. More than 1/2 of the disagreements involved systematic differences in the interpretation and application of the scoring criteria for 2 items; item 6: Dream, and item 9: Anosmia to Ammonia. These systematic differences affecting scoring reliability happened to counterbalance to produce similar total scores in this study. Several sources of potential scoring unreliability of SHSS:C are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Field, Peter B. (1964). Bales interaction analysis of hypnosis. International Journal of Clinical and Experimental Hypnosis, 12, 88-98.

Sound films of 2 hypnotists, 4 Ss, and 2 simulators of hypnosis were scored by a modification of Bales' interaction process analysis. Comparisons are presented between the interaction profiles of hypnotists and Ss. Both of the hypnotists' transformed interaction percentages fell above the Ss' 95% confidence intervals for agreeing, asking questions, and giving suggestions, and below the Ss' confidence intervals for appearing submissive, giving opinions, showing tension, and giving information. No consistent differences were found between hypnotists and Ss for seeming positive, negative, or dominant, for disagreeing, or for releasing tension. The 2 simulators did not show consistent interaction differences from the real Ss. Both advantages and limitations in applying Bales' method to hypnosis are discussed. It is concluded that interaction process analysis provides a measure of the overt role-differentiation between S and hypnotist, but does not directly reflect some of the unique features of the hypnotic situation (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneaux, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with

a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Austin, M. J.; Perry, Campbell.; Sutcliffe, J. P.; Yeomans, N. (1963). Can somnambulists successfully simulate hypnotic behavior without becoming entranced?. International Journal of Clinical and Experimental Hypnosis, 11 (3), 175-186.

It is proposed that in order to avoid confounding subject and treatment differences in experimental studies of hypnosis a "simulating control" group composed of susceptible Ss be used. This study relates to the issue of whether such Ss can successfully simulate hypnosis, without being entranced. Results indicate an affirmative answer. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Deckert, G. H.; West, L. J. (1963). The problem of hypnotizability: A review. International Journal of Clinical and Experimental Hypnosis, 11, 205-235.

This paper summarizes the relatively unsuccessful effort to relate hypnotizability to sex, age, psychiatric diagnoses, suggestibility, and various personality traits. The problems of measurement, subject selection, controls, and experimenter bias are reviewed. Comparison of data is difficult and replication of studies infrequent. This might be attributed to incomplete reporting of methodology, defects in experimental design, and various conceptual problems. Concepts which view hypnotizability as "something" universal, "something" unique, or "nothing" are briefly appraised. Finally, hypnotizability is seen as a "term" describing a relationship between a "route" and a "state"--each identifiable by measurable criteria. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Barber, Theodore Xenophon (1961). Experimental evidence for a theory of hypnotic behaviour: II. Experimental controls in hypnotic age-regression. International Journal of Clinical and Experimental Hypnosis, 9, 181-193.

5 studies are often cited in support of the contention that involuntary infantile or childhood behavior patterns are revived under hypnotic age-regression. These studies are presented and re-evaluated in terms of other experimental evidence. The author concludes that the "good" hypnotic subject may vividly imagine that he is a child and may perform childlike behavior; "however, it has not been demonstrated that during "hypnotic age-regression" earlier patterns of behavior are revived that could not be performed voluntarily by an appropriately motivated but un hypnotized adult. From Psyc Abstracts 36:04:4II81B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Black, Stephen; Wigan, E. R. (1961). An investigation of selective deafness produced by direct suggestion under hypnosis. British Medical Journal, 2 (5254), 736-741.

NOTES

Conditioned cardiac response extinguished by hypnotic deafness.

1959

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. (Abstracted in Psychological Abstracts, 61: 6626)

NOTES

1:

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

1954

Dittborn, Julio (1954). Dehypnotization and associated words. Journal of Clinical and Experimental Hypnosis, 2 (2), 136-138.

Author tested Freud's hypotheses about signs of emotional conflict gleaned from a word association test. A highly hypnotizable subject who had been accused of theft was tested with the word association test repeatedly. He had been given the suggestion, while in deep hypnosis, that any word provoking emotional conflict would automatically bring him out of hypnosis. That is, "dehypnotization was used as a new method to investigate the conflict-provoking quality of certain stimulus-words in an association word test" (p. 139). Freud's predictions were only partially supported.

Erickson, Milton H. (1954). The development of an acute limited obsessional hysterical state in a normal hypnotic subject. Journal of Clinical and Experimental Hypnosis, 2, 27-41.

NOTES

1:

The 25 year old female graduate student in psychology had often been used in hypnosis experiments and as a demonstration subject, and had witnessed induction of hypnotic deafness, blindness, and color-blindness though she had not been given those suggestions herself. Scientific curiosity appeared to be the motivation for volunteering to experience hypnotic blindness, but she was skeptical about her ability to experience it. The author gave a series of "exceedingly tedious" suggestions to develop somnambulism (passively responsive and receptive) followed by suggestions leading gradually to development of "blindness" with the intention of concealing it from the hypnotist, with attendant strong and mixed emotions.

The initial attempts failed because the subject ostensibly was deceiving herself into thinking she had developed hypnotic blindness, but the author also was of the opinion that she was seeking to meet unconscious personality needs. The author then covertly changed the goal of the experiment "to develop in the subject an acute hysterical obsessional compulsive mental state which would be accompanied by hypnotic blindness and which would parallel or resemble the obsessive compulsive hysterical mental disturbances encountered in psychiatric practice" (p. 32). The author developed a

monologue of suggestions based in part on the utterances of hospitalized obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc.

1953

Beigel, Hugo B. (1953). Hypnosis as an instrument in psychological experimentation. Journal of Clinical and Experimental Hypnosis, 1, 13-17. (Abstracted in Psychological Abstracts, 53: 6385)

#### Author's Summary

In this paper various areas of psychological research were pointed out in which experimentation with hypnotized subjects has been or could be employed to advantage. It is held that there are several problems which offer no point of attack unless hypnosis is used and several others which, in view of their complexity, cannot be effectually approached by the classic method of experimentation. Specifically mentioned were the areas of thinking, learning, perception, apperception, imagination, and emotion, in which the hypnotic experiment proves valuable when either amnesia for preceding experiences, isolation from concomitant influences, or the introduction of an as-if situation is necessary. While it is undeniable that some of the experiments cited need improvement if their results are to be considered reliable -- a remediable shortcoming they share with most first experiments -- it is also evident that the use of hypnosis in experiments offers an approach to some areas that have thus far been inaccessible. Needless to say, hypnosis should not be used when similar results can be as readily obtained by the customary experimental method, but as Gidro-Frank and Bull (10) state, our scant knowledge of the nature of the hypnotic state should not bar it from use as a scientific tool. Still the only one available technique to solve a problem. It must be added, however, that the experimenter must be thoroughly familiar with the technique but also to their physical and mental health.

Glasner, Samuel (1953). Research problems in the educational and social psychological applications of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (2), 42-48.

#### NOTES

1:

The author reviews literature in which hypnosis is used as an experimental research method in two general areas: hypnosis in learning and recall, and hypnosis in social psychology. "In summary, the application of hypnosis to research in the fields of educational and social psychology is practically virgin territory. Imaginative investigators should be able to develop numerous interesting experiments in these two great areas" (p. 47).

Israeli, Nathan (1953). Experimental study of projection in time: I. Outlook upon the remote future--extending through the quintillionth year. Journal of Clinical and Experimental Hypnosis, 1 (2), 49-60.

Author's Summary - This report on research now under progress is concerned with time projection and with hypnotic imagination and dreams of projection into varying remote future periods extending to the very distant quintillionth year. The work proceeded in stages including (a) orientation to the general procedure, (b) hypnotic future autobiographic material (age progression), (c) going successively from one future period to another from the end of the 21st century through the quintillionth year -- devoting usually one experimental session to any future period. This paper reports on the self-ratings for hypnosis depth reached by the subjects, their description of life, things, and events, in connection with each projection into a future period, and their visual or nonvisual imagery.

1. Self-ratings for hypnosis depth show with one insignificant exceptional instance that all subjects were always at least at the trance-level or in a deeper hypnotic stage. Individual differences in level

reached were indicated with a general trend towards more profound trance in later sessions. The deeper levels on the scale used were not described by the experimenter. Each subject gave those levels his own interpretation in setting up his own scale.

2. The time projections are to be explained in terms of changing space-time framework, social topographic reorientation, recentering, and non-conventional time centering.

3. Hypnotic suggestion to imagine and dream about being suddenly transported and projected into a specified future period is followed by rapid recentering as the subjects follow out the suggestions.

4. Although no specific instructions or sets of suggestions were included about the nature of their anticipations, the description of life, things, and events of any future period was on a predominant impersonal level, with the personal aspects in the background. Nonetheless, the suggestion of transportation and projection into a future period leads to various changes in one's present-situation perceptions, imagery, space-time framework, and system of concepts and beliefs. With a change in time reference, the description of life, things, and events is adjusted to the era or epoch specified. This involves description of technological, biological, psychological, and anthropological changes. The extinction of mankind is anticipated in the very remote future by some subjects. The earth and the moon are expected to disappear by collision or otherwise.

5. Individual analysis shows that the descriptions of the different future periods approximately fit into patterns and are not discontinuous. An individual subject's descriptions beginning with the first future period and taking in all the other periods show constructive or catastrophic trends or cyclical variation between both extremes. Descriptions of life, things, and events of each future period in the main change in a constructive or in a catastrophic direction. They are continuous but with certain discontinuities and incoherence.

6. A geocentric orientation and a heliocentric preoccupation are invariant and predominant. The subjects are unable to abandon their basic planetary orientation or schemata.

7. Colored imagery includes mainly the primary colors. They comprise both expanse colors and surface colors. Auditory imagery is quite frequent. There are also references to olfactory, tactile, and kinesthetic imagery. Thermic imagery becomes increasingly prominent in the more remote future periods when the sun's heat is described as more intense. Imagery changes with the outlook patterns and appears to have personal, structural, and social determinants. One subject's imagery was macropic.

## S RESESEARCH

### SCHOOL

2002

Bartolo-Abela, Marcelle; Benton, Theodore (2002, August). Hypnotherapy for AD/HD: Preliminary evidence for its effectiveness. [Paper] Presented at the 110th Annual Convention of the American Psychological Association, Chicago, Illinois.

Although AD/HD is typically treated with stimulants, non-pharmacological alternatives are regularly pursued because of adverse side effects of the stimulants. In a preliminary trial, 12 boys in special education programs who fulfilled DSM-IV criteria for AD/HD were treated with a standardized protocol of brief Ericksonian hypnotherapy, with self-hypnosis and audiotape homework, over 4 weeks. Posttherapy assessments using the Conners Teacher Rating Scale (CTRS) showed decreased overall maladaptive behavior of 33.30% ( $p < .001$ ), with specific reductions of 36.10% (hyperactivity;  $p < .001$ ) and 42.09% (daydreaming/inattention;  $p < .001$ ) over baseline scores. School records also showed improved grades. There was no difference in outcome based on age or comorbidity. These findings provide initial evidence for the effectiveness of hypnotherapy for AD/HD in boys.

1996

Sapp, Marty (1996). Three treatments for reducing the worry and emotionality components of test anxiety with undergraduate and graduate college students: Cognitive-behavioral hypnosis, relaxation therapy, and support counseling. Journal of College Student Development, 37 (1), 79-87.

The effects of cognitive-behavioral hypnosis, relaxation therapy, and supportive counseling in reducing the worry and emotionality components of test anxiety among undergraduate and graduate students were examined. Relaxation therapy was more effective with graduate students undergraduate responded more to supportive counseling. Similarly, cognitive-behavioral hypnosis and relaxation therapy were both more effective in reducing the worry and emotionality components of test anxiety and in improving grade point averages than was supportive counseling.

Wark, David (1996). Teaching college students better learning skills using self-hypnosis. American Journal of Clinical Hypnosis, 38 (4), 277-287.

Reports the effects of self-hypnosis used by 51 college students enrolled in a 10-wk course on efficient learning skills. All Ss were administered the Creative Imagination Scale (CIS). Subsequently, they learned to enter and deepen alert self-hypnosis. They gave themselves personal suggestions and then studied in hypnosis. They reported their depth of hypnosis and satisfaction with each session. Grades were collected the quarter before, during and after the course. Satisfaction and depth data indicated the Ss were involved throughout the course. Statistical testing showed that Ss who scored highest on the CIS had the lowest initial GPA, improved most during the course, and significantly increased their GPA in the quarter after.

1994

Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.

Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain

which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.

**Case #2:** Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."

**Case #3:** Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of Charlotte's Web (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of Charlotte's Web. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by Charlotte's Web permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

**Krippner, Stanley (1994, August). Improvement of academic skills for children and adolescents with hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

NOTES

Literature and research in this area are sparse, though there is clinical evidence that hypnosis is useful. My definition of hypnosis is a procedure facilitating a variety of structured goals or procedures in which a suggestion or motivation is enhanced by a mechanical device, another person, or oneself.

There are 3 areas of application in academics:

study habits

test taking

strengthening academic motivation

The hypnotist should know the specifics of academic achievement, because specific suggestions (e.g. "Imagine you are at desk focusing well for 20 minutes,") are better. Emphasis on the positive is better than negative. Use the words "imagination," "concentration," or "imagining pictures," rather than "hypnosis." I try to determine what they expect, based in part on what words they use.

In elementary school I focus on attitude and self esteem. I have them imagine reading a story, then how well they feel; that when they notice mistakes they won't be bothered because everyone makes mistakes.

For high school, I help them develop good habits for time motivation (e.g. suggestions to "make an outline to follow while you study"). At college level, I introduce self hypnosis. I make frequent use of mental imagery, at all levels--especially imagery rehearsal, in which the person is engaged in a particular activity.

In the NSF report on accelerated learning techniques (a project sponsored by the Army), Lozonov's "suggestopedia" techniques were studied. This review indicated it might enhance training effectiveness and reduce training time.

I have observed the suggestopedia classes in Bulgaria and Hungary. Classes had a relaxed comfortable learning environment. Rather than individual learning, it was group learning. It included preliminary exercises, new material, and a review of what was learned. The first stage used 2/3 of the time. Then suggestions were given by the teacher to promote learning. The presentation phase took one third of the time. The method encourages students to make mental images of the material. In foreign language classes, people take on new roles.

Stanton, Harry E. (1994). Self-hypnosis: One path to reduced test anxiety. Contemporary Hypnosis, 11, 14-18.

Describes a self-hypnosis technique and its efficacy in reducing test anxiety. Forty high school students were matched on sex and anxiety scores and randomly allocated to an experimental group (receiving two 50-minute sessions, a week apart, to learn the self-hypnosis technique), and a control group (receiving two 50-minute sessions focused on ways of reducing test anxiety). Students were retested after the two sessions, and 6 months later. Results showed a significant reduction in anxiety scores only for the hypnosis group, which was maintained at 6-month follow-up.

1993

Capafons, A.; Amigo, S. (1993). Hipnosis y terapia de auto-regulacion (Hypnosis and self-regulation therapy). In Labrador, F.J; Cruzado, J. A; Muqoz, M. (Ed.), Manual de tecnicas de modificacion y terapia de conducta [Handbook of behavior modification and therapy] (pp. 457-476). Madrid, Spain: Piramide.

Introductory chapter on hypnosis, self-hypnosis and emotional self-regulation therapy. Full description of applied methods for inducing hypnosis and using emotional self-regulation therapy.

1989

Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. American Journal of Clinical Hypnosis, 31, 173-180.

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego-strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

Stanton, Harry E. (1989). Hypnosis and rational-emotive therapy--a de-stressing combination: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37 (2), 95-99.

It has been suggested that teacher stress might be reduced through cognitive restructuring which is aimed at improving the rationality of their thinking. To test this hypothesis, 40 high school teachers were paired on their level of reasonable thinking, operationalized in terms of scores on the Teacher Idea Inventory (Bernard, Joyce, & Rosewarne, 1983), and allocated at random to one of 2 groups. They also completed the Face Valid Stress Test. The experimental group participated in 4 weekly treatment sessions involving a hypnotic induction and suggestions derived from key elements of Rational-Emotive Therapy. These focused on the reduction of what Ellis (Ellis & Grieger, 1977), the originator of this treatment, calls "irrational thinking." The control group spent the same amount of time discussing stress reduction methods. Both the Face Valid Stress Test and the Teacher Idea Inventory were re-administered at the end of this period and again 12 months after conclusion of the experiment. Results indicated that both the experimental and control groups significantly reduced their levels of irrational thinking and stress, although the former's improvement was more marked, particularly at the 12-month follow-up.

1981

Baum, D.; Lynn, Steven J. (1981). Hypnotic susceptibility level and reading involvement. International Journal of Clinical and Experimental Hypnosis, 29 (4), 366-374.

The study investigated differences between high and low hypnotizable Ss in their involvement in imaginative versus nonimaginative reading material. 10 high and 8 low susceptible Ss read passages of high and low rated imaginativeness. Ss' involvement in the passages was measured by self-report and reaction time. High and low hypnotizable Ss differed only in their involvement in imaginative material, with good Ss expressing greater involvement. High susceptible Ss tended to report more involvement in high than in low imaginative material, confirming J. R. Hilgard's (1965, 1970) observations. The reaction-time measure failed to parallel self-report, yielding non-significant results.

1976

Illovsky, J.; Fredman, N. (1976). Group suggestion in learning disabilities of primary grade children. International Journal of Clinical and Experimental Hypnosis, 24, 87-97.

This study reports the effects of tape-recorded hypnotic suggestions given to 48 hyperactive children between the ages of 6 and 8 from 3 public schools. The children had short attention spans, low frustration and tolerance [sic], and poor learning motivation. They were taught by the same method in class and received remedial instruction as in the previous year. In order to participate in this study, the children were brought from their regular classrooms every morning to listen in groups of 9, 10, or 19 -- according to the available accommodation in the school -- to suggestions of relaxation, to ideas of

coping with emotional problems, and to suggestions of modifying attitudes towards learning. The corrective reading teachers conducted these 15-minute sessions. After the session was over, the children were returned to their respective classes. At the beginning and at the end of the school year, the classroom teachers evaluated the children's behavior in class and their attitudes toward learning. The addition of the modified hypnotic technique enabled 45 of 48 children to function better in school. The improvement ranged from decreased hyperactivity to better than average performance in class. Significant correlations were found between percent of relaxation with increased attention span ( $r = .40$ ) and number of sessions attended with increased self-confidence ( $r = .46$ ).

Lawlor, E. D. (1976). Hypnotic intervention with 'school phobic' children. International Journal of Clinical and Experimental Hypnosis, 24, 74-86.

Case studies are used to illustrate the use of hypnosis in working with children who exhibit symptoms of "school phobia." Responses obtained during and after hypnosis are utilized to uncover underlying conflicts and fears.

The literature (Ansbacher, 1956; Friedman, 1959; Johnson, 1957; Johnson, Falstein, Szurek, & Svendsen, 1941; Kessler, 1966; Waldfogel & Gardner, 1961) confirms the findings that a child through his symptoms has fears which he is unable to bring to consciousness and talk about. Typical are fears of abandonment by parents; fears of disaster befalling parents, especially the mother; fears based on destructive wishes toward siblings due to severe rivalry for the mother's love and attention; fears that exhibiting angry feelings will be punished by the parents; and fears of annihilation and starvation. Hypnosis has aided in restoring these children to a school environment more quickly than more traditional methods. One case is reported with excerpts from a session. The perceptions uncovered through the use of hypnosis can be utilized with children in various school settings.

1956

Sears, Alden B. (1956). Hypnosis and recall. Journal of Clinical and Experimental Hypnosis, 4 (4), 165-171.

## NOTES

This paper reports two experiments. In the first one, 24 college students with IQs 135 or more who were making low C grades were called in for counseling and given conventional methods for remedial study. Afterwards 11 volunteered for hypnosis and were good subjects; they were enrolled in the hypnosis experiment. They were trained to go into hypnosis on signal, then had four sessions where they studied their school material in hypnosis, then four sessions where they (a) studied post hypnotically in the same way as they had done during hypnosis, and (b) were given post hypnotic suggestions that whenever they sat down to study they would have this degree of concentration and would be able to study, learn and remember in spite of distractions, and finally 4 sessions for reinforcement of the commands and discussion of any difficulties. Throughout the experiment they had 2 sessions each week. "Using their grades for the following semester as criteria: three had gone up slightly but were still doing C work; three were now achieving a B average; four were making an A average and one had a basic personality problem which came to light and is not considered in this paper" (p. 167).

The second experiment involved four art students who were given highly technical material of a mechanical nature and semi-technical material of the same type to learn in the waking state. They were tested for recall in both the waking and hypnotic states. "The hypnotic recall of the two types of material was about the same. However, the waking recall of the highly technical material was much less than that of the semi-technical material, thus tending to indicate that, in the waking state, the 'non-

meaningful material' was not remembered although they actually knew it well enough to reproduce it under hypnosis" (p. 168).

## **SEIZURES & EPILEPSY**

**2002**

**Gravitz, M.A. & Page, R.A. (2002). Hypnosis in the management of stress reactions.. In Everly, G.S.; Lating, J.M. (Ed.), A clinical guide to the treatment of the human stress response. (2nd, pp. 241-252). New York: NY: Kluwer/Plenum.**

**Reviews the history and current modes of hypnosis-based treatments of a variety of stress reactions.**

**2000**

**Breuer, William C. (2000). Physically focused hypnotherapy: A practical guide to medical hypnosis in everyday practice. Louisville, KY: SPRF Inc., 1810 Sils Avenue, Louisville, Kentucky, 40205.**

## **NOTES**

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1995

Bryant, Richard A.; Somerville, Ernest (1995). Hypnotic induction of an epileptic seizure: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 274-283.

This case study investigated the utility of hypnosis to precipitate a seizure in a patient with refractory epilepsy. The patient was twice administered a hypnotic induction and a suggestion to age regress to a day when he was distressed and suffered repeated seizures. The patient did not respond to the first hypnotic suggestion; however, an epileptic seizure was observed in the second hypnotic session. Videorecording and subdural electroencephalograph recording confirmed that he suffered an epileptic seizure. Postexperimental inquiry revealed that the patient used deliberate cognitive strategies to avoid seizure onset in the first session but adopted a more constructive cognitive style in the second session. Findings are discussed in terms of emotions, hypnosis, and cognitive style as mediating factors in the experimental precipitation of epileptic seizures.

1993

Litwin, R. G.; Cardena, E. (1993, August). Dissociation and reported trauma in organic and psychogenic seizure patients. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

: Early detection and differential diagnosis of non-epileptic seizures (NES) versus epileptic seizures (ES) is a major clinical issue in comprehensive epilepsy centers. Recent research suggests that differences in dissociative experiences between NES and ES patients may prove useful for diagnostic purposes. Non-epileptic seizures are frequently conceptualized as a dissociative response to past emotional trauma or abuse; dissociation in ES occurs as a result of electrophysiological abnormalities,

most often associated with the temporal lobes. The purpose of this study was to evaluate the effectiveness for the differential diagnosis of NES from ES of several measures of dissociation and of a self-report measure for physical and sexual abuse. Four quantitative measures of dissociation were utilized in this study: the dissociative disorders interview schedule (DDIS), dissociative experience scale (DES), Tellegen absorption scale (TAS) and the Stanford Hypnotic Clinical Scale (SHCS). The incidence of sexual and physical abuse was obtained from structured questions in the DDIS. Forty-one patients being evaluated for intractable seizures participated in this study; 13 ES patients with non-temporal lobe involvement (ES/NTL), 18 ES patients with temporal lobe focus (ES/TLE) and 10 patients with NES spells of psychiatric origin. The main researcher was blind to these diagnoses until the study was completed. Results show a trend toward greater incidence of dissociative experiences in the NES versus ES group on the DDIS, TAS and DES, although these differences tended to be modest and not statistically significant, perhaps given the small N of the study. There were no significant trends or differences in dissociative experiences reported by ES/NTL patients versus ES/TLE patients. Contrary to the study's hypothesis, ES patients were slightly more susceptible to being hypnotized than NES patients. As hypothesized, a significant difference was that NES patients reported physical and sexual abuse of higher incidence and longer duration than did ES patients. Logistic regression analysis for prediction of NES using the DES, TAS and SHCS instruments correctly predicted only 10% of NES patients. However, exploratory logistic regression analysis using the demographic variables of gender, months of sexual abuse and years of recurrent seizures suggest that these characteristics may be specific and sensitive in the prediction of NES. Being a female, having a higher incidence and longer duration of abuse and fewer years of recurrent seizures all predicted significantly the existence of non-epileptic seizure events, allowing for a 95% accuracy in diagnostic prediction. Our findings reinforce prior research indicating that dissociation is an important symptom component of both ES and NES events. The trend toward more prevalent dissociative experiences in the NES group suggests that in depth examination of these differences and of key demographic variables may help differentiate between these two groups. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

1991

Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.

Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.

NOTES

Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).

This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).

The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."

Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'

Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid (n = 8) or invalid (n = 8). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, *Cortex*, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel,

reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

1988

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 96-106.

In an earlier study, DeBenedittis and Sironi (1986) demonstrated that during depth EEG studies, electrophysiological correlates of hypnotic behavior emphasize the role of the limbic system in mediating the trance experience. In the case of a young man who was affected by medically resistant temporal lobe epilepsy and who was a potential candidate for surgical treatment, diagnostic depth EEG in hypnotic and non-hypnotic conditions offered a unique opportunity to stimulate limbic structures. This permitted an evaluation of the subjective and behavioral responses, as well as of the electrophysiological correlates. During hypnosis, repeated stimulations of the left and the right amygdala produced arousal from the hypnotic state each time, whereas the stimulation of other cerebral structures (e.g., temporal neocortex, Ammon's horn) or pseudostimulations were ineffective on the hypnotic state. These data represent the first experimental, controlled evidence of the amygdala's effects on the arousal from the hypnotic state in man, thus suggesting that hypnotic behavior is mediated, at least in part, by a dynamic balance of antagonizing effects of discrete limbic structures--the amygdala and the hippocampus.

#### NOTES

The patient was a 30-year-old man who had suffered from medically resistant psychomotor temporal lobe epilepsy since age 7; a diagnostic EEG showed right temporal seizure focus, concomitant with independent, contralateral, temporal spiking abnormalities. Hypnotizability was measured at 6 on the SHSS:C; the patient was given two training sessions in hypnosis, with suggestions for "dissociation, rehearsal and reframing of spontaneous seizure events, desensitization of their negative emotional impact, and amnesia" (p. 99).

Electrodes were implanted in deep cerebral structures (amygdala, Ammon's horn) and corresponding superficial areas of temporal cortex, with confirmation of placement by X-ray. Two weeks later the patient's brain was stimulated on two consecutive days, first in the waking state (Session 1) and then in hypnosis (Session 2). (Antiepileptic medication was discontinued three days before the stimulation sessions.) False (placebo) stimulations were randomly provided along with the true stimulations.

The false (placebo) stimulations did not result in subjective or behavioral changes in either the waking or the hypnosis condition.

In the waking condition, a psychomotor seizure was produced by stimulation of Right amygdala and Left Ammon's horn; stimulation of Left amygdala evoked only the aura patient usually had before a seizure, or a brief lapse of consciousness. Stimulating the temporal neocortex did not evoke seizure activity.

In the hypnosis condition, arousal from hypnosis into the waking condition occurred with stimulation of amygdala (either Right or Left). Stimulation of the temporal neocortex or of the Right Ammon's horn did not arouse the patient. Stimulation of Left Ammon's horn led to abortive seizures, such that it could not be determined whether the hypnotic state had been interrupted. Stimulating the Right amygdala "triggered a psychomotor attack similar to that recorded during the waking stimulation, but with reduced emotional involvement" (p. 100). For the Left Ammon's horn, "waking stimulation always induced clinical seizures with prolonged after-discharge, whereas hypnotic stimulation evoked only abortive seizures, without after-discharge" (p. 100).

In their Discussion, the authors note that animal experimental literature suggests that stimulation of the cortico-medial amygdala facilitates arousal functions, of the baso- lateral amygdala diminishes arousal and produces sleep, and lesions of the amygdala lead to 'amygdala hangover' (Weiskrantz, 1956). "The animal with amygdala destruction appears tame and placid, with reduced social reactivity, insensitive to environmental changes and reluctant to initiate new behavior, unless highly motivated (Isaacson, 1976)" (p. 101-102).

In contrast, the animal research on hippocampus suggests it is involved in inhibitory functions (Isaacson, 1976), and may be the 'internal inhibitor' theorized by Pavlov (1955) to be responsible for animal hypnosis. With lesions, animals are more willing to undertake new behaviors, less inactive, less distractible during goal-oriented behavior (Isaacson, 1976). "Moreover, normal hippocampograms show typical, slow (theta) synchronous activity opposed to the arousal desynchronized activity of the electroencephalogram. During hypnosis, desynchronization of the normal, slow activity of the hippocampal Ammon's horn has been registered as compared with the waking hippocampogram, opposite to the slow synchronous activity of the amygdala" (p. 102).

The authors note that their results are at variance with the finding by Crasilneck et al. (1956) that their patient, during brain surgery for an epileptogenic focus, aroused from hypnosis each time they stimulated the hippocampus. They explain the discrepancy as due to the fact that the hippocampus was not simply stimulated, but in fact there was 'coagulation' of a hippocampal vessel each time. Quoting from Crasilneck et al. "'The patient did not complain of pain during this [brain] excision [in hypnosis] except on one noteworthy occasion, when a blood vessel of the hippocampal region was being coagulated. The patient suddenly awoke from the hypnotic trance ... She was immediately rehypnotized. ... The surgeon then purposefully 'restimulated' the same region of the hippocampus. Once again, the patient abruptly awakened from trance... [p. 1607].'" To the present authors, the description appears misleading and responsible for subsequent misinterpretation of the observation. Because on the first occasion the hypnotic arousal effect followed 'coagulation' of the hippocampal region, it may be assumed that 'restimulation' is a misnomer for repeated coagulation. From this it may be inferred that the arousal effect observed by Crasilneck et al. (1956) could probably be ascribed to a hippocampal microlesion rather than to hippocampal stimulation. This could explain the apparent discrepancy" (p. 104).

Loewenstein, R. J.; Putnam, F. W. (1988). A comparison study of dissociative symptoms in patients with complex partial seizures, MPD, and posttraumatic stress disorder. Dissociation, 1, 17-23.

Depersonalization and dissociative symptoms have been widely reported in chronic seizure disorder patients, especially those with temporal lobe involvement and complex partial seizures (CPS). It has been theorized that development of multiple personality disorder may be related to temporal lobe pathology. We administered the Dissociative Experiences Scale (DES) to 12 male patients with severe chronic epilepsy, primarily of the complex partial type. Patients had epilepsy from 1 to 30 years. Most were being evaluated for intractable seizures occurring several times per week. DES data on the epileptic patients were compared with DES data on 9 male MPD patients and 39 PTSD patients. MPD and PTSD patients were significantly different from CPS patients in median DES scores and all DES

subscale scores. MPD and PTSD patients were far more similar on the DES, although MPD patients had a significantly higher score on the dissociation/psychogenic amnesia subscale of the DES. The authors conclude that there is little data to support a relationship between MPD, dissociation, and epilepsy.

1987

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, 64, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

#### NOTES

"Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

1986

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique

opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

## NOTES

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

Experimental Protocol: 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia; arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of Clinical and Experimental Hypnosis*) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor

rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

" In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), Biofeedback: Behavioral medicine. New York: Grune & Stratton, Pp. 147-165.

Serman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), Biofeedback: Behavioral medicine. New York: Plenum, 1977, Pp. 167-200.

**1984**

Cocores, James A.; Bender, Andrew L.; McBride, Eugene (1984). Multiple personality, seizure disorder, and the electroencephalogram. Journal of Nervous and Mental Disease, 172, 436-438.

Used the EEG to study multiple personality in a 48-yr-old ambidextrous male admitted for alcohol detoxification and individual psychotherapy. Despite conflicting reports in the literature, no changes in the EEG were found that could not be ascribed to the normal changes seen in transitions from various states of alertness. The problems of differentiating multiple personality as a psychiatric entity in itself from those cases arising as a result of chronic partial or partial-complex epilepsy are discussed.

**1981**

Gravitz, Melvin A. (1981). Non-verbal hypnotic techniques in a centrally deaf brain-damaged patient. International Journal of Clinical and Experimental Hypnosis, 29, 110-116.

Non-verbal techniques across several sensory dimensions were utilized with a brain-damaged centrally deaf 36-year-old female patient who had been referred for hypnotherapeutic relaxation. These included optical fixation on the therapist's hand with gradual thumb and fore-finger closure, vibratory stimuli, light shoulder pressures, arm stroking, manually facilitated air currents, and reinforcing homework assignments. With hypnotherapy, the patient's physical and emotional behavior was reported by her to have improved to a significant degree.

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

**NOTES**

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from

dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

1963

Masserman, J. H. (1963). Current psychiatric therapies. New York NY: Grune & Stratton. (Reviewed in American Journal of Clinical Hypnosis, 1964, 6, 278-279)

NOTES

Contains a chapter on 'Hypnotic studies of patients with convulsions'

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

NOTES

"Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).

1959

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. (Abstracted in Psychological Abstracts, 61: 6626)

## NOTES

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

1957

Moss, C. Scott (1957). A forced hypnoprojective fantasy used in the resolution of pseudo-epileptic seizures. Journal of Clinical and Experimental Hypnosis, 5 (2), 59-66. (Abstracted in Psychological Abstracts, 58: 5812)

## NOTES

A dream that occurred in natural sleep was used as the starting point for exploration in hypnosis, e.g. suggesting that the patient was seated in a movie theater and would see an element that had been in the dream, projected on the movie screen; then would see substitute pictures which had for him the same meaning as that element. "... as in the dream, commitments to reality [in hypnosis] are minimized and there are evidences of the archaic drive-oriented primary process and a loss of distance from the fantasy so that it becomes a transitory hallucinatory experience. In addition, the censorship function is reduced but not eliminated so that this case study is highlighted by the defensive symbolic substitutions provoked by the persistent demands of the therapist" (pp. 64-65).

## SELF

1999

Daniel, Sheryll (1999). The healthy patient: Empowering women in their encounters with the health care system. American Journal of Clinical Hypnosis, 42 (2), 108-114.

Many women's expectancies when they assume the role of patient include the experiences of regression, helplessness, passivity and fear. This paper describes techniques for interrupting this negative set and for facilitating the development of a self-efficacious state in which the woman experiences herself as an active and informed participant in her encounters with medical personnel.

1996

Rosenbaum, Robert & Dyckman, John (1996). No self? No problem! Actualizing empty self in psychotherapy . In Hoyt , Michael F. (Ed.), Constructive therapies (2, pp. 238-274). New York NY: Guilford.

## NOTES

In this book chapter, Rosenbaum and Dyckman (1996) argue that self has no permanently fixed,

defining, thing-like characteristics (p. 270). They thus dispute the classical notion--commensurate with the position of philosophical realism --that the self is a substance, with fixed qualities and measurable qualities. The authors refer to this classical self as a full self, contained inside the skin and delimited by its participation in linear time. Instead, they propose an empty self, not to be construed as a void, but as a fluid, connected, relational self that overflows the traditional boundaries of the skin and is open to greater possibilities for change. To support their view of an empty self, the authors include several case examples of working with hypnosis and strategic/narrative therapy with clients experiencing a variety of psychological and physical symptoms. The authors further contend that self is not unitary, but the product of multiple drafts (p. 248)[Editor note: See Dennett, 1991, in this database]. In the narrative-constructivist tradition, they argue, if we speak in terms of multiple contextual selves for us all...[then, people diagnosed with MPD/DID] are not so different from the rest of us (p. 249). The chapter draws from western & Buddhist philosophy, strategic/systemic and narrative therapies, Ericksonian hypnosis, and, cognitive science theories regarding memory, consciousness, embodiment, and language, to support their alternative view of, and treatment for, the self.

1992

Kirmayer, Laurence J. (1992). Social constructions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 40 (4), 276-300.

Both clinical and experimental views of hypnosis are social constructions that reflect the biases and interests of practitioners and scientists. Each perspective offers useful metaphors for hypnosis. Underlying clinical uses of the term hypnosis are states of mind associated with imaginative reverie and automatic behavior based on procedural knowledge. Social discourse and narratives shape hypnotic experience, but they are themselves influenced by mechanisms of attention and automaticity. Study of hypnosis must proceed on both social and psychological fronts to account for the experience and clinical efficacy of hypnosis.

#### NOTES

"In accord with Coe, Sarbin, and other social-psychological theorists, I will argue that hypnosis, like all higher mental phenomena, is fundamentally social in nature. To accept this, however, does not obviate the role of distinctive processes of attention, imagery, and imagination. Hypnosis is a socially constructed context and ritual for evoking imaginative enactment and involuntary of "automatic" modes of experience and behavior. Contemporary social-psychological theorists have failed to sufficiently explore the nature of enactment. A satisfactory account of hypnosis must go much deeper into the cognitive and social construction of experience; only then can involuntary behavior be properly distinguished from self-deception and self-authorship from cultural construction" (p. 277).

Kunzendorf, Robert; Carrabino, Carlene; Capone, Daniel (1992-93). 'Safe' fantasy: The self-conscious boundary between wishing and willing. Imagination, Cognition and Personality, 12, 177-188.

This experiment tested the hypothesis that a fantasy will impel people to 'act out' only if they fail to distinguish the fantasy from the anticipated reality. In the experiment, one task obtained a baseline measure of how long subjects could resist eating popcorn, then measured how long subjects could resist popcorn while fantasizing its taste. Another task instructed subjects to merge three circular images with three circular percepts of equal vividness, then presented subjects unexpectedly with only two of the three circular percepts. Some subjects thought that there were three circular percepts during the merger, and for these subjects, the length of resistance to popcorn was significantly shorter during the popcorn fantasy. But for subjects who self-consciously differentiated the two real circles

from the three merging images, the normal 'boundary' between wishful fantasy and willful eating was intact.

## NOTES

This research investigated whether people can fantasize without acting out. The authors place the study in the context of theories proposed by Freud and William James. Kunzendorf's source monitoring theory of self-consciousness suggests that "self-consciousness \_that one is imaging\_ is the phenomenal consequence of neurally monitoring the central source of one's imaged sensations, and self-consciousness \_that one is perceiving\_ is the subjective quality of neurally monitoring the peripheral source of one's perceived sensations" (p. 178).

The ability to carry out source monitoring varies. Those who have difficulty monitoring whether they are imaging or perceiving may also have trouble distinguishing wishful fantasy from anticipatory imagery, and therefore they might act on it.

This research "identified subjects with poor source monitoring--nondiscerners of reality--and investigated the effect of fantasy on their impulse control" (p. 179).

## METHODS.

Subjects sat in front of a computer monitor for all tests; they completed Eysenck's seventh impulsivity questionnaire for measures of impulsivity, venturesomeness, and empathy, Marks' Vividness of Visual Imagery Questionnaire (VVIQ).

The study used a test in which subjects maintained in mental imagery a red, green, and yellow filled circle that had been on screen, with eyes closed; were instructed to open eyes and merge their 3 imaginary circles with the 3 on the screen (but when they opened eyes only 2 were there), and they were then asked questions about how many circles they saw when they opened their eyes.

Then they were given a taste of popcorn, told to resist eating any more (but could press a key to receive a little if they couldn't resist), and then were told to resist by imagining that they were eating popcorn.

## RESULTS.

Those who discerned the two real circles while imaging a third circle of equal vividness (the Discerners), could resist eating popcorn for 137 sec in the baseline condition and 132 sec in the fantasy condition. Those who could not discern two real circles while imagining a third (Nondiscerners) could resist eating popcorn for 127 sec in the baseline treatment but only 95 sec in the fantasy treatment.

Discerners could identify the missing circle as the red one, whereas nondiscerners could not do so with any certainty; there was no effect of "image vividness".

"Vivid imagers" whose imagery matched real yellow circles of greater illuminance, exhibited more vivid imagery on the VVIQ as well.

In their Discussion, the authors suggest that "fantasy impels people to 'act out' only if they fail to distinguish fantasized sensations from perceived sensations. ... [the theory] is applicable to sexual fantasy and aggressive fantasy as well. This theory-- Kunzendorf's 'source monitoring' theory of self-consciousness--implies that fantasies of the sensory consequences of a behavior should not lead to the behavior, so long as the fantasies are self-consciously known to be imaginal and are not expected to be perceptual... But for people who cannot self-consciously distinguish between wishful images of pure fantasy and anticipatory images of perceptual reality, between wishing and willing, fantasies of gastronomical, sexual, or aggressive sensations are implicitly unsafe.

"Indeed, as Baars notes, 'the issue of voluntary control is at the very core of human psychopathology' [31, p. 254]. But recently, Baars' and others' theories of volition have emphasized the computer-metaphoric distinction between conscious 'willful' behavior and unconscious 'automatic' action [31, 39-40], and have neglected James' distinction between conscious willing and conscious wishing. Decades ago, when pre- computational theorists like Janet used the term 'automatism' to describe psychopathological behavior, they meant that an abnormally behaving patient was \_consciously

'possessed' by a fantasy\_--a wishful image, a hypnotic suggestion, or a fantasized personality [41]. In reemphasizing the phenomena of wishing, willing, and possession by fantasies, the present article redefines the latter phenomenon as possession by 'unmonitored' fantasies, which are distinguishable from anticipatory images impelling action" (pp. 184-185).

Stanton, Harry E. (1992). Brief therapy and the diagnostic trance: Three case studies. Contemporary Hypnosis, 9, 130-135.

## NOTES

He reviews very brief hypnotherapy, then writes, "A systematic way of encouraging people in the use of their inner resources to solve problems, the 'diagnostic trance', has been outlined by Havens and Walters (1989). People sit quietly, eyes closed, physically relaxed, concentrating upon the unpleasant sensations or feelings associated with their problem. By turning inward in order to focus upon these internal events, they tend to drift into a trance state.

"While mentally observing these unpleasant sensations, they describe, in a somewhat detached manner, the thoughts and images which are present in their minds. They make no effort to control these in any way, simply allowing associated memories to surface quite spontaneously. Usually they reveal a pattern of thinking, a series of images, or even a specific memory which is creating the problem. Sometimes these are in the form of visual images of previously forgotten incidents, usually of a traumatic nature. On other occasions they may take the form of a voice repeating a particular negative statement.

"Once people have been able to identify the source or sources of their unpleasant feelings, they attempt to find a thought or image which is sufficiently powerful to remove or displace the negative material. On many occasions, people find that they have the inner resources needed to solve their problem but, until given the opportunity provided by the diagnostic trance, they were unaware that they possessed these resources. However, the diagnostic trance procedure appears to encourage the spontaneous emergence of creative solutions" (p. 131).

Of the 103 patients with whom he used the procedure, "approximately 70% reported that it had helped them resolve the specific problem for which they had sought therapeutic assistance. ... In addition to being effective, the diagnostic trance is enjoyable, even when used to process past experience of an unpleasant nature. In its simplicity lies its strength. Patients find it easy to learn and, once they have gained confidence in its value as a problem-solving tool, often teach it to family members and friends" (p. 134).

## 1991

Kunzendorf, Robert G.; Beltz, Susan McLaughlin; Tymowicz, Gina (1991-92). Self-awareness in autistic subjects and deeply hypnotized subjects: Dissociation of self-concept versus self-consciousness. Imagination, Cognition and Personality, 11, 129-141.

By refining past tests of self-awareness in mirrors, current testing demonstrates that autistic subjects' percepts are dissociated from self-concept, whereas hypnotized subjects' sensations are dissociated from self-consciousness. In the current test of self-concept, subjects could not directly see a line inside the box on their lap, but subjects could see the line indirectly in a televised mirror image. When instructed to touch the line, autistic subjects reached towards the televised line, whereas nonautistic subjects reached towards the actual line occluded inside the box. This first result suggests that the autistic subject's visual percept of the televised line is dissociated from its spatial relationship to the subject's self-concept. In the current test of self-consciousness, subjects were told to use a televised mirror-image to move their hands together until touching, but were not told that they were actually seeing a pre-recorded tape of their hands struggling unsuccessfully to touch. When queried, hypnotized subjects denied that their tactually joined hands were touching, whereas nonhypnotized

subjects confirmed that their hands were touching. This latter result suggests that the hypnotized subject's hand-touching sensations are dissociated from the immediate and incontrovertible self-consciousness \_that one is perceiving the hands touching (not imaging them touching)\_.

Sapp, Marty (1991, August). The effects of hypnosis in reducing anxiety and stress in adults with neurogenic impairment. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

A repeated measures design was utilized to investigate the effects of hypnosis in reducing anxiety and stress in 16 adults with neurogenic impairment. Seven sessions were used to measure the efficacy of hypnosis. Session one was used to obtain a baseline level of anxiety and stress and to initiate hypnosis. Sessions three and six were used to obtain repeated measures of these emotions. Sessions two, four, and five were the treatment sessions. Session seven was used to conduct a four week follow-up on the effects of hypnosis. Levels of anxiety were measured by the State-Trait Anxiety Inventory, while stress was measured by the State-Trait Anger Expression Inventory. The results indicated a statistically significant decrease in anxiety and stress. Hypnosis also significantly increased levels of self-esteem. Finally, follow-up data demonstrated that the treatment gains were maintained.

#### NOTES

Hypnotizability was not related to treatment outcome. The average Barber Susceptibility Scale score was 3, which indicates that the subjects were fairly low in hypnotizability level.

1990

Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. American Journal of Clinical Hypnosis, 32, 201-207.

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales.

#### NOTES

The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

"The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items

related to modifications of regulatory control, changes in self-monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10-point scale. The items related to the experience of disturbances in identity, memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202-203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205). "All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, 10, 117-128.

## NOTES

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into

subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or 'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations.

Macfarlane, F. K.; Duckworth, M. (1990). The use of hypnosis in speech therapy: A questionnaire study. British Journal of Disorders of Communication, 25, 227-246.

## NOTES

Reports results of a survey of speech therapists trained in the use of hypnosis. The majority use hypnosis in treating voice or fluency disorders to achieve relaxation and encourage self-esteem and also in the treatment of acquired neurological disorders. Respondents were less inclined to use hypnosis with children. Problems encountered in the use of hypnosis are explored.

1989

Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. Imagination, Cognition and Personality, 9 (4), 303-320.

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low, low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

1988

Nissen, Mary Jo; Ross, James L.; Willingham, Daniel B.; MacKenzie, Thomas B.; Schacter, Daniel L. (1988). Memory and awareness in a patient with multiple personality disorder. Brain and Cognition, 8, 117-134.

We studied an individual with multiple personality disorder in whom each of several personalities claimed to have no direct awareness of the others and to be unable to consciously remember the experiences of other personalities. A broad selection of implicit and explicit memory tests was used to determine the extent to which one personality had access to knowledge acquired by another and the circumstances in which that knowledge would be expressed. The implicit assessment of memory was a necessary but not sufficient condition for demonstrating interpersonality access. The degree of compartmentalization of knowledge in this patient depended largely on whether the interpretation of presented information was likely to differ across personalities.

1987

Baker, Elgan L.; Nash, Michael R. (1987). Applications of hypnosis in the treatment of anorexia nervosa. American Journal of Clinical Hypnosis, 29, 185-193.

Historic and current reports in the literature involving applications of hypnosis with anorectic patients are reviewed and integrated to explicate core aspects of hypnotic interventions in treating anorexia nervosa. A comprehensive hypnotherapeutic approach is delineated which emphasizes the use of hypnotic strategies to reduce tension, enhance self-control, support increased and realistic body awareness, alter distorted body image, and foster appropriate autonomy and individuation. Preliminary data are also reviewed which support the clinical efficacy of this approach.

1986

Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.

## NOTES

Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.

Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical (primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).

With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus

associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.

Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses. The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from thalamus; low level of awareness as in twilight sleep or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus reticular activating system influences; associated with increased inhibitory thalamic and septal- hippocampal impulses radiating upward to the cortex. In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit. The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory septal-hippocampal complex which generates theta-wave activity, thus accounting for the close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1

sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self-concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

"... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103).

The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

Markus, Hazel; Nurius, Paula (1986). Possible selves. American Psychologist, 41 (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self-relevant form, meaning, organization, and direction to these dynamics. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and

interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self-distortion, and the relationship between the self-concept and behavior

1985

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

1984

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

T

his article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post-Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

#### NOTES

This is an abstract of an unpublished Ph.D. dissertation, University of Waterloo, 1984. It won the American Psychological Association Division 30 award for Best Student Paper at the 1984 APA Convention.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott (1984). The direct hypnotic suggestion of altered mind/body perception. American Journal of Clinical Hypnosis, 27, 95-102.

Attentional and emotional shifts are examined following a hypnotically suggested out-of-body experience (OBE). Two hypotheses were tested: 1) that the OBE is maintained by blocking the perception of body-relevant stimulation at a sensory level; 2) that a hypnotically produced OBE is an emotionally neutral or even pleasant experience. Fourteen hypnotic subjects and 15 simulating Ss were administered a standardized induction followed by suggestions for an OBE. Geometric figures were then presented to the body but not to the "awareness." Although hypnotic Ss reported that they could not see the information, they still correctly "guess" the identity of the figures beyond chance levels. Thus, body-relevant information was obviously not blocked at a sensory level, but was kept out of awareness by some other mechanism. In addition, a significantly greater number of hypnotized than

simulating Ss reported the OBE to be troubling and unpleasant, despite explicit suggestions for a positive experience. The potentially disturbing nature of OBEs and ways to minimize risk of negative affect are discussed.

Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGSHS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGSHS score as the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

1980

Erickson, Milton H. (1980). Innovative hypnotherapy. New York, NY: Irvington Publishers, Inc..

## NOTES

This fourth volume of four has 9 sections, with chapters as follows. I. General Introductions to Hypnotherapy

1. The applications of hypnosis to psychiatry
2. Hypnosis in medicine
3. Hypnotic techniques for the therapy of acute psychiatric disturbances in war
4. Hypnotic psychotherapy
5. Hypnosis in general practice
6. Hypnosis: Its renaissance as a treatment modality
7. Hypnotic approaches to therapy II. Indirect Approaches to Symptom Resolution
8. A clinical note on indirect hypnotic therapy
9. The hypnotic and hypnotherapeutic investigation and determination of symptom- function
10. Experimental hypnotherapy in Tourette's Disease
11. Hypnotherapy: The patient's right to both success and failure
12. Successful hypnotherapy that failed
13. Visual hallucination as a rehearsal for symptom resolution III. Utilization Approaches to Hypnotherapy
14. Special techniques of brief hypnotherapy
15. Pediatric hypnotherapy
16. The utilization of patient behavior in the hypnotherapy of obesity: Three case reports
17. Hypnosis and examination panics
18. Experiential knowledge of hypnotic phenomena employed for hypnotherapy
19. The burden of responsibility in effective psychotherapy
20. The use of symptoms as an integral part of hypnotherapy
21. Hypnosis in obstetrics: Utilizing experimental learnings
22. A therapeutic double bind utilizing resistance
23. Utilizing the patient's own personality and ideas: 'Doing it his own way' IV. Hypnotherapeutic Approaches to Pain
24. An introduction to the study and application of hypnosis for pain control

25. The therapy of a psychosomatic headache
  26. Migraine headache in a resistant patient
  27. Hypnosis in painful terminal illness
  28. The interspersal hypnotic technique for symptom correction and pain control
  29. Hypnotic training for transforming the experience of chronic pain V. Hypnotherapeutic Approaches in Rehabilitation
  30. Hypnotically oriented psychotherapy in organic brain damage
  31. Hypnotically oriented psychotherapy in organic brain disease: An addendum
  32. An application of implications of Lashley's researches in a circumscribed arteriosclerotic brain condition
  33. Experimental hypnotherapy in a speech problem: A case report
  34. Provocation as a means of motivating recovery from a cerebrovascular accident VI. Hypnotherapy with Psychotics
  35. Hypnotherapy with a psychotic
  36. Symptom prescription for expanding the psychotic's world view VII. Sexual Problems Hypnotherapeutic Reorientations to Emotional Satisfaction
  37. Posthypnotic suggestion for ejaculatio praecox
  38. Psychotherapy achieved by a reversal of the neurotic processes in a case of ejaculatio praecox
  39. Modesty: An authoritarian approach permitting reconditioning via fantasy
  40. Sterility: A therapeutic reorientation to sexual satisfaction
  41. The abortion issue: Facilitating unconscious dynamics permitting real choice
  42. Impotence: Facilitating unconscious reconditioning
  43. Latent homosexuality: Identity exploration in hypnosis
  44. Vasectomy: A detailed illustration of a therapeutic reorientation VII. Self-Exploration in the Hypnotic State: Facilitating Unconscious Processes and Objective Thinking
  45. Pseudo-orientation in time as a hypnotherapeutic procedure
  46. Facilitating objective thinking and new frames of reference with pseudo-orientation in time
  47. Self-exploration in the hypnotic state
  48. Self-exploration in trance following a surprise handshake induction
  49. The reorganization of unconscious thinking without conscious awareness: Two cases of intellectualized resistance against hypnosis IX. Facilitating New Identity
  50. Psychological shocks and creative moments in psychotherapy
  51. Facilitating a new cosmetic frame of reference
  52. The ugly duckling: Transforming the self-image
  53. A shocking breakout of a mother domination
  54. Shock and surprise facilitating a new self-image
  55. Correcting an inferiority complex
  56. The hypnotherapy of two psychosomatic dental problems
  57. The identification of a secure reality
  58. The hypnotic corrective emotional experience
  59. The February man: Facilitating new identity in hypnotherapy
- 1979

Horowitz, Mardi J. (1979). States of mind: Analysis of change in psychotherapy. New York NY: Plenum Medical Book Company. (Also published in London, England)

## NOTES

Provides a configurational analysis approach to describe problems, resources, and processes of change in psychotherapy. Uses psychoanalytic (ego psychology) model "that emphasizes information

processing and the structural aspects of self and object representations" (p. ix). The book provides methods for evaluating treatment outcome using increasingly precise ways of observing clinical material. As an example of how the author writes about states of mind, consider that "One could subject Hamlet to a description of his recurrent states of ambivalence, paralysis of action, deadly decisiveness, and pretense of gaiety or of madness; one could describe his various self-images and core models of role relationship, and explain his changes in state by the ways in which he processed information. Similarly, in a psycho-history one could plot the states, images, and information-processing styles of a person whose decisions interacted with important events" (pp. x-xi).

Spanos, Nicholas P.; Steggle, Shawn; Radtke-Bodorik, H. Lorraine; Rivers, Stephen M. (1979). Nonanalytic attending, hypnotic susceptibility, and psychological well-being in trained meditators and nonmeditators. Journal of Abnormal Psychology, 88 (1), 85-87.

Four groups of trained meditators differing in amount of meditation practice and a group of nonmeditators attended nonanalytically to a mantra in two meditation sessions. Subjects signaled intrusions into their attending, and were also assessed on several person variables. The four trained meditator groups differed from one another only in terms of self-esteem. When combined into a single group, meditators signaled fewer intrusions and reported "deeper" levels of meditating than nonmeditators. However, meditators and nonmeditators did not differ on hypnotic susceptibility, absorption, or indices of psychopathology.

1963

Fisher, S. (1963). Body image and hypnotic response. International Journal of Clinical and Experimental Hypnosis, 11, 152-162.

This study had 2 principal objectives: (a) To test the hypothesis that hypnotizability is negatively related to the definiteness of the individual's body image boundary, as measured by barrier and penetration scores derived from the Rorschach. (b) To ascertain what body image experiences are characteristic of the hypnotic state. Hypnotizability was evaluated with the Stanford Hypnotic Susceptibility Scale. In the male group only, hypnotizability was negatively correlated with boundary definiteness. Depersonalization proved to be the most characteristic body image change. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Mellenbruch, P. L. (1962). The validity of a personality inventory tested by hypnosis. American Journal of Clinical Hypnosis, 5 (2), 111-114. (In Psychological Abstracts: 63, 5234)

## NOTES

The authors found that administration of the California Test of Personality in the waking and hypnotized state resulted in subjects describing themselves in a better light in the waking state than in the hypnosis condition. The differences were especially noted on the following scales: Self Reliance, Feeling of Belonging, Family Relations, and Occupation Relations. The scales least subject to distortion (in sense of presenting a good image) in waking state are Sense of Personal Worth and Freedom from Anti-Social Tendencies. J. Holroyd

Sutcliffe, J. P.; Jones, J. (1962). Personal identity, multiple personality, and hypnosis. International Journal of Clinical and Experimental Hypnosis, 10, 231-269. (Abstracted in Index Medicus, 63, Mar., S -543)

The concept of multiple personality is critically examined in the light of its historical development. Various conceptions of multiple personality are considered: as a diagnostic fashion, as a product of shaping in therapy, as a product of hypnotic suggestion, as simulation, and as an extension of characteristics found in "normal" personalities. These considerations lead to the conclusion that the significant alterations of personality characterizing the syndromes are loss of self-reference memories,

and confusions and delusions about particular identity in time and place. The parallels in multiple personality and hypnotic phenomena lead to the heuristic hypothesis that degrees of proneness to multiple personality are predictive of degrees of hypnotizability. (76 item bibliogr.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## **SELF HYPNOSIS**

**1996**

**Kohen, Daniel (1996). Relaxation/mental imagery (self-hypnosis) for childhood asthma: Behavioral outcomes in a prospective, controlled study. Australian Journal of Clinical and Experimental Hypnosis, 24 (1), 12-28.**

Twenty-eight 7-12-year-old children entered a controlled study of the effects of self-hypnosis on asthma. Asthma belief and behavioral inventories were collected before, and at one and two years after intervention. Asthma diaries were kept daily and mailed monthly. Subjects were randomly assigned to (a) experimental (self- hypnosis), (b) waking suggestion (no hypnosis), (c) attention placebo (no hypnosis or asthma discussion), or (d) traditional control groups. Twenty-four completed one-month follow-up, 16 completed six months, and 13 completed two years. Results included: (a) fewer emergency room visits in the experimental group ( $p<0.05$ ); (b) less school missed in the experimental group compared to the traditional control group ( $p<0.001$ ) and to the waking suggestion group ( $p<0.005$ ); (c) no differences in psychological evaluations between groups; and (d) surprising findings regarding hypnotic and hypnotic-like experiences among subjects.

**1995**

**Olness, Karen N.; Lee, Lai (1995, November). Effects of self-induced mental imagery on autonomic reactivity in children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

## **NOTES**

One study that shows an IgA increase with hypnotic suggestion has been replicated and is in press. The present study emerges from work using hypnosis with biofeedback. Morgan's work with athletes has suggested the relationship between imagery and physiological activation. This has been observed clinically but not heretofore documented.

We are not using formal hypnosis. Each child was asked to think about being in a quiet place, doing exciting activities, baseline, etc. The children exhibited no neurological disorders, cognitive dysfunction, nor were they on medications at time of the study. We confirmed our clinical experience: there was an increase in pulse rate when imagery changed to activity. Skin temperature continued to go up during the period (despite imagery of being active like being on roller coaster). Skin conduction went down during baseline. EDA [electro dermal activities] was higher during active imagery. How do average daily thinking processes impact on autonomic changes over long periods of time? Do these changes affect cardiovascular status?

Clinically we observed that some children are more labile in different modalities, and under stress they react more in that system.

**1994**

**Amigo, Salvador (1994, August). New approach to self-regulation therapy--treatment strategies. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

## NOTES

Training programs demonstrate that hypnotisability can be improved. Use individualized treatment programs. Cognitive behavioural treatment can be improved by hypnotic suggestions. Emphasis is on alertness and relaxation, not sleepiness; on conversation with the clinician rather than just listening. Emotional self regulation is the procedure studied most. They used three phases: Phase 1: Sensory recall exercises (smell, taste, heaviness provoked by lifting a book). Phase 2: Reproduce sensations (hand stiffness, smell) without therapist stimulus. Phase 3: Generalization. Any demand generates the suggested effects. (Tell Subject his brain is very activated, that he can respond without training. Give therapeutic suggestions.)

Case of nicotine addiction presented.

Stanton, Harry E. (1994). Self-hypnosis: One path to reduced test anxiety. Contemporary Hypnosis, **11**, 14-18.

Describes a self-hypnosis technique and its efficacy in reducing test anxiety. Forty high school students were matched on sex and anxiety scores and randomly allocated to an experimental group (receiving two 50-minute sessions, a week apart, to learn the self-hypnosis technique), and a control group (receiving two 50-minute sessions focused on ways of reducing test anxiety). Students were retested after the two sessions, and 6 months later. Results showed a significant reduction in anxiety scores only for the hypnosis group, which was maintained at 6-month follow-up.

1993

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, **36**, 120-123

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.

Spiegel, David; Frischholz, Edward J.; Fleiss, Joseph L.; Spiegel, Herbert (1993). Predictors of smoking abstinence following a single-session restructuring intervention with self hypnosis. American Journal of Psychiatry, **150**, 1090-1097.

Examined the relation of smoking and medical history, social support, and hypnotizability to outcome with Spiegel's smoking-cessation program. A consecutive series of 226 smokers were treated with the single-session approach and followed up for 2 years. With a total abstinence criterion, 52% success was found after 1 week, and 23% abstinence at 2 years. Hypnotizability and having been previously able to quit smoking for at least a month significantly predicted the initiation of abstinence. Hypnotizability and living with a significant other person predicted 2-year maintenance. The results are superior to those of spontaneous efforts to stop smoking and suggest it is possible to predict which patients are most likely to respond and which patients are least likely to respond to such a brief intervention.

1992

Kostka, Marion (1992). Personal experience with 'Use of Hypnosis Before and During Angioplasty' [Letter]. American Journal of Clinical Hypnosis, 34, 281-282.

#### NOTES

Author read the article referred to after his/her heart attack and before angioplasty. Goal was to control preprocedure anxiety and assist by being relaxed and cooperative; also to be able to tolerate inflations of the balloon for as long as needed. Used self-hypnosis "and by the time I entered the laboratory my anxiety was under control. ... None of the physiological responses that can occur (i.e., nausea, pain, etc.) did occur and, for the most part, my postprocedure recovery was uneventful. ... Had two procedures because the artery again occluded. ... My cardiologist commented later that the time of inflation was longer than he had even attempted with any of his patients and he attributed this to my lack of symptoms. I felt this was due in part to the use of self-hypnosis. .... my subjective feeling was that both my discomfort and anxiety were minimal" (Pp. 281-82). No blood was sampled to measure catecholamine levels.

Mittleman, K. D.; Doubt, T. J.; Gravitz, Melvin A. (1992). Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water. Aviation, Space & Environmental Medicine, 63, 689-695.

The efficacy of self-induced posthypnotic suggestion to improve thermogenic responses to head-out immersion in 25 degrees C water was evaluated in 12 males. An online computerized system permitted the change in body heat storage to be used as the independent variable and immersion time as the dependent variable. Two one-hour hypnotic training sessions were used. There were no differences in rates of heat production, heat loss, mean skin temperature, or rectal temperature between control and hypnotic immersions. Individual hypnotic susceptibility scores did not correlate with changes in thermal status. Ratings of perceived exertion during exercise were similar for both immersions, but perceived sensation of cold was lower during the second rest period of the hypnotic immersion. Three subjects used images of warm environments during their hypnotic immersion and lost heat at a faster rate than during control immersions. These results indicate that brief hypnotic training did not enhance the thermogenic response to cool water immersion.

Stanton, Harry E. (1992). Brief therapy and the diagnostic trance: Three case studies. Contemporary Hypnosis, 9, 130-135.

#### NOTES

He reviews very brief hypnotherapy, then writes, "A systematic way of encouraging people in the use of their inner resources to solve problems, the 'diagnostic trance', has been outlined by Havens and Walters (1989). People sit quietly, eyes closed, physically relaxed, concentrating upon the unpleasant sensations or feelings associated with their problem. By turning inward in order to focus upon these internal events, they tend to drift into a trance state.

"While mentally observing these unpleasant sensations, they describe, in a somewhat detached manner, the thoughts and images which are present in their minds. They make no effort to control these in any way, simply allowing associated memories to surface quite spontaneously. Usually they reveal a pattern of thinking, a series of images, or even a specific memory which is creating the problem. Sometimes these are in the form of visual images of previously forgotten incidents, usually of a traumatic nature. On other occasions they may take the form of a voice repeating a particular negative statement.

"Once people have been able to identify the source or sources of their unpleasant feelings, they attempt to find a thought or image which is sufficiently powerful to remove or displace the negative material. On many occasions, people find that they have the inner resources needed to solve their problem but, until given the opportunity provided by the diagnostic trance, they were unaware that they possessed these resources. However, the diagnostic trance procedure appears to encourage the spontaneous emergence of creative solutions" (p. 131).

Of the 103 patients with whom he used the procedure, "approximately 70% reported that it had helped them resolve the specific problem for which they had sought therapeutic assistance. ... In addition to being effective, the diagnostic trance is enjoyable, even when used to process past experience of an unpleasant nature. In its simplicity lies its strength. Patients find it easy to learn and, once they have gained confidence in its value as a problem-solving tool, often teach it to family members and friends" (p. 134).

1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11). "... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space. He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a

self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Stanton, Harry E. (1991). The reduction in secretarial stress. Contemporary Hypnosis, 8, 45-50.

30 secretaries from a large business firm were matched on their stress thermometer scores and one member of each pair was allocated at random to either an experimental group or a control group which discussed stress management procedures. The experimental group had two treatment sessions in which they learnt a technique of induction, deepening and ego-enhancement which included (1) physical relaxation; (2) mental calmness; (3) disposal of unwanted mental and physical 'rubbish'; (4) removal of a negative barrier; and (5) enjoyment of a special place. The stress thermometer was administered on two further occasions, one immediately after completion of the second training session and one as a follow-up 2 months later. In addition, on these two occasions, subjects completed anecdotal reports, recording their impressions of the experiment. After completion of this first stage of the study, control group secretaries experienced the same two treatment sessions as had the experimental group. Results indicated that stress level was significantly lower both immediately after treatment and at the two-month follow-up.

1990

Fromm, Erika; Kahn, Stephen (1990). Self-hypnosis: The Chicago paradigm. New York: Guilford Press.

## NOTES

In addition to extensive research on self hypnosis, this book refers to a number of clinical investigations that involved self hypnosis with patients, as at least part of the treatment protocol: 1. J. R. Hilgard & LeBaron (1984) 34 patients, ages 4-1, with cancer pain 2. Spinhoven (1989) headache control; low back pain 3. Wakeman (1988) 50 patients with third degree burns (helping half of them to return to work in high temperature environments) 4. Katz, Kellerman, & Ellenberg - 36 children with acute lymphoblastic leukemia who needed to undergo bone marrow aspirations 5. Spiegel & Bloom (1983) - 54 women with metastasized carcinoma of the breast 6. Wark (1988) improving reading comprehension - 7 students 7. Aronson (1986) adolescent psychiatric inpatients 8. Swirsky-Sacchetti & Margolis (1986) severe hemophiliacs, reducing Factor VIII (the coagulant deficiency of hemophilia A) 9. Kohen, Olness, Colwell, & Heimel (1984) - 505 pediatric patients with a variety of problems (enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic

examinations) 10. Anderson, Basker, & Dalton (1975) - migraine patients 11. Hammond, Watkins-Bartch, Grant, & McGhee (1988) compared self-directed and tape-assisted self-hypnosis in 48 Ss  
Plus many papers with single cases or just a few cases.

Lombard, Lisa S.; Kahn, Stephen P.; Fromm, Erika (1990). The role of imagery in self-hypnosis: Its relationship to personality characteristics and gender. International Journal of Clinical and Experimental Hypnosis, 38 (1), 25-38.

30 volunteer Ss practiced self-hypnosis for approximately 4 weeks and wrote a record of their experiences in a diary following each session. Imagery produced during self-hypnosis was coded in 2 ways: the imagery was either reality oriented or it was fantastic and had primary process qualities. Levels of imagery production remained virtually the same over a 4-week period. Self-hypnotic imagery was significantly greater for the female Ss than for the male Ss, particularly primary process imagery. Verbal expressivity (measured as the average number of words per page of each S diary) was calculated to control for the effects of verbal production on Ss' imagery scores. When imagery scores were standardized based on verbal expressivity, female Ss still produced significantly more primary process imagery than male Ss. Personality characteristics (assessed by standardized personality inventories) were examined in relation to self-hypnotic imagery. "Impulse Expression" was positively related to primary process imagery for the female Ss. "Outgoingness" was positively related to primary process imagery for the entire sample, but especially for the female Ss.

Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.

Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls. Theoretical implications are discussed.

## NOTES

Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's 1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense

suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8) .

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

Spiegel, David; Cardena, Etzel (1990, October). New uses of hypnosis in the treatment of posttraumatic stress disorder. Journal of Clinical Psychiatry (Supplement), 51, 39-43.

Vietnam veterans with PTSD and those abused as children have above average hypnotizability. Hypnosis provides controlled access to memories that may otherwise be kept out of consciousness. New uses of hypnosis with PTSD victims involve coupling access to the dissociated traumatic memories with positive restructuring of those memories. Hypnosis can be used to help patients face and bear a traumatic experience by embedding it in a new context, acknowledging helplessness during the event, and yet linking that experience with remoralizing memories, such as efforts at self-protection, shared affection with friends who were killed, or the ability to control the environment at other times. In this way, hypnosis can be used to provide controlled access to memories that are then placed into a broader perspective. Patients can be taught self-hypnosis techniques that allow them to work through and thereby reduce spontaneous, unbidden, intrusive recollections.

1989

Grant, Guy (1989, June). An investigation of hypnotic susceptibility in self-hypnosis and imagery (Dissertation, University of Utah). Dissertation Abstracts International, 49 (12), 5517-5518-B.

## NOTES

"There were two phases in the study. In Phase One hypnotic susceptibility scores were assessed for 43 graduate student subjects by the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGS:SHS:A). In addition, the Self-Hypnosis Research Questionnaire (an experimental scale) provided performance scores for subjects under three hypnosis conditions: heterohypnosis, self-directed self-hypnosis, and tape-assisted self-hypnosis. The first purpose in Phase One was to calculate correlations between hypnotic susceptibility and each of the hypnosis conditions. The second purpose was to determine if there were significant differences across the three types of hypnosis. The third purpose was to discover if any existing differences were dependent on level (e.g., low, medium, or high) of hypnotic susceptibility. Analysis of the data yielded significant correlations between hypnotic susceptibility and (a) heterohypnosis, (b) self-directed self-hypnosis, and (c) tape-assisted self-hypnosis. There were significant performance differences across the three hypnosis conditions with heterohypnosis being somewhat superior to tape-assisted self-hypnosis, and tape-assisted self-hypnosis being slightly superior to self-directed self-hypnosis. This relationship held true regardless of level of hypnotic susceptibility (e.g., low, medium, and high).

"In Phase Two, 49 graduate student subjects were administered the shortened form of the Betts' Questionnaire Upon Mental Imagery (QMI) as well as the HGS:SHS:A, and to determine if mental imagery is an important component of hypnotic susceptibility. Analysis yielded a significant correlation between the two measures.

"Based on the current data, it was concluded that the HGSHS:A had some utility for predicting performance in hypnosis. It was noted that, as compared with self-hypnosis, heterohypnosis provided the greatest chance of eliciting a positive hypnotic response from subjects not trained or experienced in hypnosis. It was also concluded that the QMI was correlated with and had some utility for predicting performance on the HGSHS:A. It had difficulty, however, differentiating between low and medium hypnotizability" (pp. 5517- 5518).

Kahn, Stephen P.; Fromm, Erika; Lombard, Lisa S.; Sossi, Michael (1989). The relation of self-reports of hypnotic depth in self-hypnosis to hypnotizability and imagery production. International Journal of Clinical and Experimental Hypnosis, 37, 290-304.

Studied multidimensional nature of self-hypnotic depth in 22 high hypnotizables who volunteered for self hypnosis research. On personality scales, they were distinguished from the population at large by: strong theoretical orientation, high level of curiosity, disregard for opinions of others, and high Mf scale on the MMPI. Used the Stanford Profile Scale, SHSS:C and HGSHS:A, which measure the entire range of phenomena ordinarily used in experimental studies of hypnosis, including ideomotor phenomena, hypnotic fantasy and dreams, hypermnesias and age regressions, analgesias, negative and positive hallucinations, amnesias, posthypnotic phenomena, and cognitive and affective distortions. They asked Subjects to experience self hypnosis for 60 minutes/day for 4 weeks. Journals were coded for imagery production by scoring for both reality-oriented and primary process imagery. Subject had been taught to monitor their hypnotic depth using a slightly revised version of the Extended North Carolina Scale (ENCS) of Tart (1979). Previously, ENCS has been used only with hetero-hypnotic Subjects. The self- reports of depth using ENCS correlated highly with hypnotizability as measured by the Revised Stanford Profile Scale of Hypnotic Susceptibility... and with imagery production. Results demonstrate that ENCS scores are also a valid indicator of self-hypnotic depth among highly hypnotizable Subjects. Furthermore, they indicate that both hetero- hypnotizability and imagery production are related to self-hypnotic depth, but that the association between imagery and hypnotizability is due to their individual relationships to self-hypnotic depth.

Kunzendorf, Robert G. (1989-90). Posthypnotic amnesia: Dissociation of self-concept or self-consciousness?. Imagination, Cognition and Personality, 9, 321-334.

Two studies of posthypnotic amnesia tested predictions derived from the 'source' monitoring theory of self-consciousness. Experiment 1 tested the prediction that posthypnotic source amnesia is irreversible, because hypnosis attenuates self- consciousness of whether one's sensations have an imaginal source or a perceptual source. In this initial study, recall amnesia was reversed by posthypnotic cueing with a prearranged signal, but source amnesia was not reversed by such cueing. Experiment 2 examined whether the cued reversal of recall amnesia is attributable, in part, to the hypnotic attenuation of self-conscious 'source monitoring' and, in part, to the reversal of recall criteria: from a criterion rejecting 'seemingly imaginary' or 'sourceless' memories, to a criterion accepting 'sourceless but familiar' memories. In this latter study, posthypnotic recall amnesia was breached when subjects were instructed to trust their seemingly imaginary memories, but not when they were instructed to try harder to remember [emphasis removed from quoted text].

Meyer, H. K.; Diehl, B. J.; Ulrich, P. T.; Meinig, G. (1989). Changes in regional cortical blood flow in hypnosis. Zeitschrift fur Psychosomatische Medizin und Psychoanalyse, 35, 48-58.

NOTES

Regional cerebral blood flow (rCBF) was measured by means of the 133-Xenon inhalation method in 12 healthy male volunteers who had several months of experience in doing self-hypnosis (autogenic training). During hypnotically suggested right arm levitation, as compared to resting conditions, they found an increase in cortical blood flow and an activation of temporal areas; the latter finding was considered to reflect acoustical attention. In addition, a so-far-unexplained deactivation of inferior temporal areas was observed during successful self hypnosis and hypnosis. While there was a global absolute increase of cortical blood flow bilaterally, they could not observe a relative increase of the right as compared to the left hemisphere during hypnosis. Several subjects successfully performed the levitation of the right arm, despite a relative left hemispheric activation, provided the absolute right hemispheric activation remained dominant.

Moss, Barry F.; Magaro, Peter A. (1989). Personality types and hetero- versus auto-hypnosis. Journal of Personality and Social Psychology, 57, 532-538.

The Multivariate Personality Inventory (MPI; Magaro & Smith, 1981), the Harvard Group Scale of Hypnotic Susceptibility, and the Inventory of Self-Hypnosis (ISH; Shor, 1970) were used to investigate the relationship between personality style and hypnotic procedure in the determination of hypnotic susceptibility. On the basis of MPI scores, a normal college population was segregated into 5 personality styles: hysteric, manic, depressive, character disorder, and compulsive. The hysteric personality was found significantly more hypnotizable than the other personality types in the HGSHS induction context, whereas the compulsive personality was found significant more hypnotizability in the ISH induction context. Results are discussed in terms of personality and situational factors in relation to previous hypnotic susceptibility research.

Soskis, D. A.; Orne, E. C.; Orne, M. T.; Dinges, D. F. (1989). Self-hypnosis and meditation for stress management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 285-289.

In a 6-month follow-up study, telephone interviews were conducted with 31 male executives who were taught either a self-hypnosis or meditation exercise as part of a stress-management program. Use of and problems with the 2 exercises were similar, with the percentage of Ss using the techniques falling over 6 months from 90% to 42%. The exercises were used primarily for physical relaxation, refreshing mental interludes, aiding sleep onset, and stress-reduction. Problems with the exercises chiefly involved difficulty in scheduling even brief uninterrupted practice times and discomfort with the techniques. The incorporation of these issues into the clinical teaching of self-hypnosis may be useful.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in

survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

Spinhoven, Philip; Linssen, A. Corry (1989). Education and self-hypnosis in the management of low back pain: A component analysis. British Journal of Clinical Psychology, 28, 145-153.

Conducted a component analysis of a group program for chronic low back pain patients. 45 patients (aged 31-68 years) participated in the pain control course (PCC), consisting of education about pain and a training in self-hypnosis. A pain diary was used as a measure of pain intensity, up-time, and use of pain medication. Psychoneuroticism and depression were assessed using the Symptom Checklist-90 (SCL- 90) scores. No evidence was found for a differential efficacy of education or self-hypnosis on pain diary and SCL-90 scores. Subjects showed significant changes on all measures except reported pain intensity. It is suggested that the PCC is a noninvasive, inexpensive means of treatment that could be used to teach even more severely disabled low back pain patients to cope more adequately with their pain problem.

1988

Hammond, D. Corydon; Haskins-Bartsch, Catherine; Grant, Claude W.; McGhee, Melanie (1988). Comparison of self-directed and tape-assisted self-hypnosis. American Journal of Clinical Hypnosis, 31, 129-137.

Previous research on self-hypnosis has concentrated on the relationship between heterohypnosis and either self-directed self-hypnosis or self-initiated self-hypnosis. Despite widespread use of audiotapes to assist the process of self-hypnosis, no previous research has compared tape-assisted and self-directed self-hypnosis. Forty-eight inexperienced volunteers were hypnotized and taught self-hypnosis by posthypnotic suggestion and immediate practice in the office. They were randomly assigned to one of two experimental orders to practice self-directed and tape-assisted self-hypnosis. No differences were found between heterohypnosis or either type of self-hypnosis in response to behavioral suggestions. Experiential ratings, however, consistently favored heterohypnosis over either type of self-hypnosis. Tape-assisted self-hypnosis was consistently evaluated as superior to self-directed practice by newly trained subjects.

## NOTES

The tapes were more or less identical with the in-office hypnosis, including voice of the hypnotist, except that those doing self-directed self hypnosis received a posthypnotic suggestion for how to enter hypnosis by themselves. (All Subjects received written instructions to remind them about the procedures for home practice.)

When self hypnosis was evaluated, use of a tape produced greater concentration and absorption, less distraction, greater subjective depth, greater perception of nonvoluntary response to suggestion, and more changes in body perception (e.g. loss of awareness of the body, feelings of heaviness or of floating). Therefore, the tape-assisted experience could be viewed as more convincing to the Subjects. People tended to fall asleep more when they did self-directed self hypnosis than when they used a tape. However, people enjoyed heterohypnosis more than either self hypnosis experience, and reported more nonvoluntary experiences. The more positive response to heterohypnosis replicates research by Johnson et al. (1983), in which preceding self-hypnosis by a heterohypnosis induction may results in less positive experiences with the self-directed self hypnosis.

In their Discussion, the authors note that finding no differences between self hypnosis and heterohypnosis in the number of behavioral suggestions successfully passed replicates earlier research (Shor & Easton, 1973; Ruch, 1975; Johnson, 1979; Johnson, Dawson, Clark, & Sikorsky, 1983).

"Thus, our present study has replicated previous findings concerning the relationship of heterohypnosis and self-directed self-hypnosis. In clinical practice, it appears that a heterohypnosis experience virtually always precedes training in self-hypnosis. Our findings and those of the Johnson (1983) study suggest, however, that generally patients will experience self-hypnosis as significantly less powerful than their previous office experience. But, by using a tape to assist the patient in initial practice, the discrepancy between the quality of the experiences appears reduced. It should be noted that Johnson et al. (1983) provide the innovative suggestion that there may be something gained by having self-hypnotic instruction and practice precede a hypnotic experience by a therapist. Initial self-hypnotic experience may create a mental set of being more actively involved" (p. 136).

"However, we know nothing about how tape-assisted vs self-directed experiences are perceived by Ss with more self-hypnotic and heterohypnotic experience, and particularly if they are utilizing the same tape recording(s) over and over again. Other research (Hammond, 1987) recently followed up premenstrual syndrome patients who were trained in self-hypnosis. In this study, patients showed a clear preference for using tapes to assist them in self-hypnosis shortly after initial training. However, on 6-month follow-up, patients were found to be utilizing self-directed self-hypnosis much more frequently than tapes, with which they may have become somewhat bored. The issue of boredom has thus far not been adequately addressed in the self-hypnosis literature" (p. 136).

Ringrose, Douglas (1988, November). Use of self hypnosis and adjunctive therapy to manage phobic anxiety states. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

self studying self hypnosis

1987

Meyer, von H. K.; Diehl, B. J. M.; Ulrich, P.; Meinig, G. (1987). Kurz- und langfristige Änderungen der kortikalen Durchblutung bei Autogenem Training [Short and long-term changes in cortical circulation caused by autogenic training]. Zeitschrift für Psychosomatische Medizin und Psychoanalyse, 33 (1), 52-62.

Zwölf gesunde junge Männer, die seit mindestens einem halben Jahr Autogenes Training praktizierten, wurden mit der 133-Xenon-Methode untersucht. Dem Muster der kortikalen Ruhedurchblutung fehlte die aus der Literatur bekannte Hyperfrontalität, was auf eine langfristig durch Übung verminderte Aktivierung hinweisen konnte. Für gut realisiertes Autogenes Training wurden einerseits Bereiche des Homunkulus (pra- und postrolandische Zentralwindung) aktiviert und andererseits Regionen desakiviert, die mit akustischer Aufmerksamkeit und autonomen Funktionen verknüpft sind. Die niedrige linkshemisphärische Durchblutung in Ruhe und die relative Aktivierung der linken Hemisphere unter Autogenem Training werden diskutiert.

English Summary.

The well-known hyperfrontal pattern of hemispheric blood flow measured with 133-Xenon is not found in 12 healthy resting men who have been practicing Autogenic Training at least six months. This might indicate a long-term decrease in the level of activation. Successfully practiced exercises of Autogenic Training lead to an increased blood flow in the Rolandic area representing the body scheme (sic) and to a decreased blood flow in regions related to acoustical attention and to autonomic

functions. Left hemispheric cerebral blood flow is lower in rest. The relative activation of the left hemisphere during Autogenic Training is discussed.

1986

Aronson, David M. (1986). The adolescent as hypnotist: Hypnosis and self-hypnosis with adolescent psychiatric inpatients. American Journal of Clinical Hypnosis, 28 (3), 163-169.

This paper describes the theoretical rationale, pragmatic implementation issues, and procedure for a particular technique of clinical hypnosis which is designed as an adjunctive therapy within a multidisciplinary adolescent inpatient treatment program. A model of combined auto- and heterohypnosis which features collaborative production of audiocassettes is presented. Advantages and indications for this technique are discussed, and a case study is presented. - Journal Abstract

Markus, Hazel; Nurius, Paula (1986). Possible selves. American Psychologist, 41 (9), 954-969.

The concept of possible selves is introduced to complement current conceptions of self-knowledge. Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation. Possible selves are the cognitive components of hopes, fears, goals, and threats, and they give the specific self- relevant form, meaning, organization, and direction to these dynamics. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and second, because they provide an evaluative and interpretive context for the current view of self. A discussion of the nature and function of possible selves is followed by an exploration of their role in addressing several persistent problems, including the stability and malleability of the self, the unity of the self, self- distortion, and the relationship between the self-concept and behavior

McConkey, Kevin M. (1986). Opinions about hypnosis and self-hypnosis before and after hypnotic testing. International Journal of Clinical and Experimental Hypnosis, 34, 311-319.

Before hypnotic testing, Ss completed a questionnaire on their opinions about hypnosis and self-hypnosis. Approximately 1 week later, they completed a similar questionnaire that included questions about their experiences of hypnotic testing. Data are presented concerning Ss' agreement with statements about hypnosis and self-hypnosis. Findings are discussed in terms of their generality and in terms of whether Ss' opinions are consistent with scientific evidence.

Swirsky-Sacchetti, Thomas; Margolis, Clorinda G. (1986). The effects of a comprehensive self-hypnosis training program on the use of factor VIII in severe hemophilia. International Journal of Clinical and Experimental Hypnosis, 34, 71-83.

Hemophilia, the bleeder's disease, is characterized by internal bleeding episodes which have been associated anecdotally with psychological stress. The focus of the present investigation was to study the potential utility of a comprehensive self- hypnosis training program to decrease stress and to assess the amount of clotting factor used for bleeding by those individuals trained in self-hypnosis compared to a control group. 30 severe hemophiliacs on home therapy were randomly assigned to a treatment or to a waiting list control group. The treatment group received a comprehensive 6-week training program including support, education, deep relaxation, and self-hypnosis. Over the 18-week follow-up, the treatment group significantly reduced the amount of factor concentrate used to control bleeding in

comparison to controls. The treatment group also significantly reduced general distress level as measured by a symptom checklist. The training was extremely cost effective, and the results support the efficacy of this comprehensive training program to augment the medical management of severe hemophiliacs on a home therapy regimen.

## NOTES

The authors begin with a discussion of the importance of being able to reduce the amount of blood factor concentrate required by hemophiliacs, including the problems of obtaining uncontaminated blood in an era of HTLV-III and LAV contamination and the fact that some patients with Hemophilia A have developed antibodies to Factor VIII (so-called inhibitor patients). When an inhibitor patient hemorrhages, it is potentially life-threatening. Earlier controlled clinical research by LaBaw (1975) indicated that hypnosis might be useful for decreasing blood usage. The current study builds upon that research and adds further control procedures.

The hypotheses of this study were: "(a) hemophiliacs who received the comprehensive training program including self-hypnosis along with education, support, and relaxation for stress management would significantly reduce the amount of factor concentrate used to control spontaneous bleeding in comparison to randomly assigned waiting list controls; (b) the general distress level, as measured by the SCL-90 (Derogatis, 1977), would significantly decrease for the treatment group from pretraining to follow-up; and (c) hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. C. Orne (1962) would show a positive correlation with the treatment effect" (p. 74).

The Subjects were patients of a hematologically severe status (less than 1% clotting factor present in the blood); ages 11-50, mean age 30; normally distributed on socioeconomic variables; and prescreened to rule out serious psychological dysfunction. The treatment and control groups did not differ in SES or pretest bleeding severity. Control Ss were informed that they would receive the same training after the initial follow-up period. Three Ss were lost from the treatment group because they did not complete the 6 weekly self-hypnosis training sessions, and three from the control group due to geographic move or decision to obtain treatment elsewhere.

Patients recorded their factor usage on log sheets, and their reports were checked with distribution records kept at the clinic. (Factor received during hospital stays was not included. Also 3 "inhibitor" patients--2 treatment, 1 control--were removed from some analyses because they must infuse Factor IX at a level that far exceeds the amount appropriate for body were an inhibitor not present.)

The Ss, in groups of 3-4 people, were educated about the effects of stress on bleeding, physiological signals of overstress, and then trained as a group in self-hypnosis. Each training session began with a group hypnosis induction followed by various suggestions and imagery. They were given a cassette tape with suggestions for decreased bleeding, ego-strengthening, relaxation, and sensations of floating. In addition to listening to the tape at least once each day, they were taught rapid (1-2 minute) inductions to combat stress, and were to develop their own self-hypnosis procedure.

In terms of results, 9 of 11 (82%) treatment Ss and 4 of 10 (40%) control Ss decreased in blood factor usage ( $p < .05$ ). There was a great deal of variability between Subjects. While the treatment group demonstrated an overall decrease in factor usage, the control group actually had an overall increase in usage. The authors speculate that possibly a change in season caused the increase, because several Ss reported that a change in season ordinarily caused an increase due to their arthritic joints. Also, a change to warmer weather might have led to increased physical activity. General distress, measured by General Severity Index of the SCL-90, was reduced significantly for the treatment group. (Results of SCL-90 aren't reported for control group.)

The third hypothesis was not supported. In fact, the correlation between HGSHS:A and treatment effect was in the opposite direction from what was expected ( $- .25$ , n.s.). However, "there was a significant correlation ( $\rho = .56$ ,  $p < .025$ ) between Ss' self-reported trance usage and change scores,

indicating that those Ss who practiced self-hypnosis more were more likely to have decreased factor usage. There was also a trend ( $\rho = .44, p < .10$ ) between treatment Ss' change scores and their initial distress levels (GSI), suggesting that those Ss who were initially more distressed tended to profit more from treatment" (pp. 78-79).

In their Discussion, the authors suggest that the fact that the treatment effect of decreased factor usage was consistent throughout the follow-up period suggests that reduced usage was not due to a placebo effect. They note that placebo responses are usually brief, and situation-specific (Frank, 1976). They see the need for further research to clarify which component(s) of the treatment program are effective (self-hypnosis, relaxation, education, social support), and to extend the length of follow-up period. Since hypnotizability did not correlate with outcome, the results might be due to some other component. Since outcome did correlate with amount of self hypnosis practice, motivation may be an important determiner of effect.

Decreased stress was not only reported by Ss but also reflected in changes on the test scores (SCL-90). Also, several Ss spontaneously used the self hypnosis for school and occupational performance, and to relieve headaches. In terms of financial benefits, "the one patient who had the most significant decrease in factor usage noted an average monthly savings of \$850. For the entire treatment group (including those few Ss whose factor usage increased), the training resulted in savings of \$1240 per month over the follow-up period" (p. 81).

1985

Olness, Karen N.; Conroy, Mary Margaret (1985). A pilot study of voluntary control of transcutaneous PO<sub>2</sub> by children: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33, 1-5.

This pilot study took place to determine whether or not children could voluntarily change tissue oxygen as measured by a transcutaneous oxygen monitor. It tested 2 hypotheses: (a) children can voluntarily change tissue oxygen as reflected by a transcutaneous oxygen monitor and (b) children, experienced in use of self-hypnosis exercises, will be able to change tissue oxygen to a greater degree than children unfamiliar with such exercises. 11 children between the ages of 7 and 17 year were studied. 8 children were previously experienced in the use of self-hypnosis; 3 were not. A Novamatrix transcutaneous O<sub>2</sub>/CO<sub>2</sub> monitoring system provided a constant read-out of PO<sub>1</sub>, PCO<sub>1</sub> and local perfusion. After stabilization, children were asked to attempt increases of oxygen. 9 children increased tissue oxygen significantly. Of those, 8 children had previous self-hypnosis training. 1 had not. Only 2 children with no previous self-hypnosis training were unable to change oxygen values. This pilot study upholds both hypotheses; however, it does not conclude that self-hypnosis mediated the changes noted or that self-hypnosis would be essential to success in voluntary control of tissue oxygen.

1984

Fogel, Barry S. (1984). The 'sympathetic ear': Case reports of a self-hypnotic approach to chronic pain. American Journal of Clinical Hypnosis, 27 (2), 103-106.

Secondary gain issues may limit the success of hypnotherapeutic approaches to chronic pain. A self-hypnotic suggestion that promotes patients' awareness of the interpersonal aspects of their pain complaints was used in the treatment of two patients with chronic headache. Hypnotic suggestions that help make secondary gains conscious may be a useful addition to hypnotic techniques of pain management.

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

Kohen, D.; Olness, K.; Colwell, S.; Heimel, A. (1984). The use of relaxation-mental imagery (self-hypnosis) in the management of 505 pediatric behavioral encounters. Journal of Developmental and Behavioral Pediatrics, 5, 21-25.

This report assessed outcomes of hypnotherapeutic interventions for 505 children and adolescents seen by four pediatricians over a period of one year and followed from four months to two years. Presenting problems included enuresis, acute pain, chronic pain, asthma, habit disorders, obesity, encopresis, and anxiety. Using strict criteria for determination of problem resolution (e.g., all beds dry) and recognizing that some conditions were intrinsically chronic, the authors found that 51% of these children and adolescents achieved complete resolution of the presenting problem; an additional 32% achieved significant improvement, 9% showed initial or some improvement; and 7% demonstrated no apparent change or improvement. Children as young as three years of age effectively applied self-hypnosis techniques. In general, facility in self-hypnosis increased with age. There was an inverse correlation ( $p$  less than 0.001) between clinical success and number of visits, suggesting that prediction of responsivity is possible after four visits or less.

#### NOTES

Discusses the treatment of 505 pediatric patients with a variety of problems(enuresis, pain, obesity, anxiety reactions, habit problems, encopresis, headache, fear of pelvic examinations).

Smith, Mark Scott; Kamitsuka, Michael (1984). Self-hypnosis misinterpreted as CNS deterioration in an adolescent with leukemia and Vincristine toxicity. American Journal of Clinical Hypnosis, 26 (4), 280-282.

A thirteen year-old girl with leukemia was taught self-hypnosis techniques for symptom control. She was hospitalized with probable vincristine toxicity and a superimposed hyperventilation syndrome. Her spontaneous use of the self-hypnosis technique was misinterpreted as central nervous system deterioration until her apparently comatose state resolved with suggestions from the therapist.

#### 1983

Johnson, Lynn S.; Dawson, Steven L.; Clark, Janet Lee; Sikorsky, Catherine (1983). Self-hypnosis versus hetero-hypnosis: Order effects and sex differences in behavioral and experiential impact. International Journal of Clinical and Experimental Hypnosis, 31, 139-154.

Recent studies (Fromm, Brown, Hurt, Oberlander, Boxer, & Pfeifer, 1981; Johnson, 1979, 1981; Johnson & Weight, 1976; Ruch, 1975) of self-hypnosis versus hetero-hypnosis are compared. A study is reported addressing unresolved questions about interactions between order of presentation and sex with the 2 types of hypnosis. 90 male and 149 female volunteer college students were proportionally assigned to 1 of 4 groups, each of which received 1 of the following hypnosis-order combinations on successive days: self hypnosis, then hetero-hypnosis; hetero-hypnosis, then self-hypnosis; self-hypnosis, then another self-hypnosis; or hetero-hypnosis, then another hetero-hypnosis. Half of each

group of Ss had a male hypnotist; half had a female hypnotist. Analysis of variance of total scores for behavioral and experiential impact showed: (a) a general order effect, a decrease from first to second experience; (b) initial self-hypnosis to facilitate either subsequent experience, mitigating the general decrement; (c) switching modes to also reduce the decrement; (d) a clarification of certain order and sex interactions from earlier studies; (e) self-hypnosis to be behaviorally superior to hetero-hypnosis on later presentations; and (f) crossed-sex training to be experientially facilitatory. Conclusions are drawn about unresolved issues in self hypnosis research, including the limits of comparability of self-hypnosis versus hetero-hypnosis, which depend on definitional assumptions of the self-hypnosis state and the allowance for order effects in the design.

## NOTES

In their Discussion, the authors note that self hypnosis and heterohypnosis yield similar results, and that although clinical hypnosis effects may increase with practice, such would probably not be true for hypnosis in the experimental setting. They speculate that "self-hypnosis triggers an 'active involvement' which provides more continuity in responsiveness across experiences, while hetero-hypnosis encourages a more passive mode which is more susceptible to external events (like order effects)" (p. 150).

1982

Brown, Daniel P.; Forte, Michael; Rich, Philip; Epstein, Gerald (1982-83). Phenomenological differences among self hypnosis, mindfulness meditation, and imaging. Imagination, Cognition and Personality, 2 (4), 291-309.

A survey of 122 subjects was conducted to investigate the differences in the phenomenological quality of the experiences engendered by three types of awareness discipline: self-hypnosis (21 Ss), waking dreaming (49 Ss) and mindfulness meditation (25 Ss from a 2-week retreat, and another group of 27 Ss from a 2-day weekend retreat). A questionnaire, the profile of Trance, Imaging, and Meditation Experience (TIME) was used in the survey. Discriminant analyses were used to construct models of the differences in the phenomenological quality of the experiences among the three groups. A number of phenomenological dimensions, in the major areas of attention, thinking, memory, imagery, body sensations, emotions, time sense, reality sense, and sense of self, were found which could accurately distinguish among the experiences of practitioners of the three types of awareness training. Results show that while self hypnosis involves self-referential thinking, memory changes, and intense emotions, waking dreaming emphasizes the immediate impact of emerging images, which unfold in a thematic manner and have a sense of their own reality. Mindfulness meditators have difficulty managing distractions, but with experience learn greater awareness of bodily processes, and experience changes in the perception of time and self; mental processes seem to slow down, and awareness assumes an impersonal quality. No attributions as to the causes or sources of these phenomenological differences are made, as the survey was not large enough to provide comparison groups, subject matching, or other statistical controls necessary for causal analyses.

## NOTES

(Information taken from a pre-publication manuscript.)

1981

romm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

Gardner, G. G. (1981). Teaching self-hypnosis to children. International Journal of Clinical and Experimental Hypnosis, 29, 300-312.

Hypnotherapy with children increasingly includes teaching self-hypnosis in order that young patients may make the fullest possible use of their hypnotic talent. This paper discusses indications and contraindications, reviews issues of patient resistance and parental involvement, and describes in detail Gardner's 3-step method of teaching self-hypnosis to children.

#### NOTES

Table 1 lists the problems treated by self-hypnosis in children aged 3-20 years as: anxiety, asthma, bleeding disorders (hemophilia), body cast immobilization, burns and burn therapy, depression, drug abuse, enuresis, functional megacolon, hair-pulling, helpless feelings, insomnia, learning difficulties, muscle spasm, nausea, pain, poor self-esteem, psychogenic seizures, stuttering, tension. The author lists references discussing the use of self hypnosis with each of these problem areas.

Houston, Rodney Earl (1981). The effects of autohypnosis, imagery, or single suggestion on pain threshold and tolerance (Dissertation, University of Cincinnati). Dissertation Abstracts International, 42 (5), 1961-A.

#### NOTES

Pain threshold, pain tolerance, and subject's subjective opinion of the pain were studied in 94 volunteer subjects (75 female, 19 male), who had been randomly assigned to three treatment groups (self hypnosis, in-vivo imagery, single suggestion) and a control group. (The original randomized sample included 124 Ss, but 30 were lost to the study-- 22 because of initial baseline scores being above maximum, 2 after reading the consent form, and 6 not returning for post-testing.) Mean age was 25; age range was 18-59 years.

The pain stimulus was 33 degree F. ice water in which the dominant hand was submerged for as long as the subjects were able. Subjects were told to nod when pain was first felt (threshold), and remove their hand when the pain was more than they could tolerate (tolerance). They were then asked to rate the pain on a 7-point scale, from 'none' to 'extreme.' Thus the three outcome measures were threshold time, tolerance time, and degree of perceived pain.

During the week between pretesting and posttesting, the self hypnosis group was to listen to a tape training them in self hypnosis at least twice; the imagery group was to listen to their imagery training tape at least twice; the simple suggestion group received no training. Posttesting was the same as

pretesting, except that the simple suggestion group was given the single waking suggestion, "You will be able to withstand the pain much longer this time."

The experimental predictions were that treatment groups would increase in threshold levels and tolerance levels more than the control group; and that the treatment groups would decrease more than the control group in reported pain level. Multivariate analysis of variance of difference scores (pre- to posttest) demonstrated significant differences on the three dependent measures when comparing the three treatment groups to the control group. " Significant differences were also found when comparing treatment groups, autohypnosis and imagery to those given the single suggestion. No significant differences were found when comparing the autohypnosis to the imagery treatment.

"The results indicate that training in autohypnosis and in-vivo imagery has an effect on threshold, tolerance and pain levels. The results also indicate that the use of a single suggestion may not have an effect on threshold, tolerance, and pain levels" (p. 1961).

Sacerdote, Paul (1981). Teaching self-hypnosis to adults. International Journal of Clinical and Experimental Hypnosis, 29, 282-299.

The author presents operational definitions of self-hypnosis and examines the differences and similarities between hetero- and self-hypnosis in relation to the methods used and the hypnotizer's attitudes. It is argued that, with the exception of spontaneously occurring trances, there is no "pure" self-hypnosis. Most clinicians teach self-hypnosis through hetero-hypnosis, in part by direct or indirect posthypnotic suggestion. Some subjects never completely reach and maintain the same depth in self-hypnosis achieved in hetero-hypnosis, contrary to Ruch's (1975) conclusions. According to the present author, self-hypnosis taught through hetero-hypnotic experiences is effective as a method for physical and emotional tranquilization in nearly all subjects. Dynamically meaningful and physically effective self-hypnosis, however, is only learned by subjects who have been successful with deep hetero-hypnotic trances which included somnambulistic experiences. Effective deepening methods likely to stimulate psychodynamic creativity during hetero-hypnosis and subsequently during self-hypnotic trances are described. Some of the difficulties encountered by subjects during self-hypnosis are discussed: incomplete dissociative experiences; anxieties about self-control; doubts about the reality of the self-hypnotic state; and the possibility that negative attitudes, habits, and expectations may act countertherapeutically as posthypnotic suggestions. When successful, self-hypnosis permits prolongation and extension of effective therapy. Self-hypnotic teaching can be administered with different modalities in individual and in group settings. Clinicians can make useful contributions both to the therapeutic use of self-hypnosis and to a clearer theoretical understanding of self-hypnotic phenomena.

1980

Case, David B.; Fogel, David H.; Pollack, Albert A. (1980). Intrahypnotic and long-term effects of self-hypnosis on blood pressure in mild hypertension. International Journal of Clinical and Experimental Hypnosis, 28, 27-38.

Self-hypnosis using the method of Spiegel (1974) was evaluated in 15 patients with labile or mild essential hypertension who were equally hypnotizable and adhered to a regimen of 6-10 daily exercises for a 4-month period. During the hypnotic state, there were consistent rises in both systolic and diastolic pressures in hypnotizable patients, but not in non-hypnotizable controls. Similar but smaller changes were also observed in normotensive subjects. Pressure rose immediately with hypnosis and subsided gradually over 15 minutes. However, the long-term effects of the daily practice of self-hypnosis were variable: ambulatory diastolic pressure fell in 5 patients, was unchanged in 7 patients, and rose in 3 patients. The changes in blood pressure could not be specifically attributed to the daily

practice of self-hypnosis; however, all patients experienced improvement in well-being, mood, and behavior patterns during the 4-month period. The study indicates that self-hypnosis can produce changes in behavior and mood which may be beneficial to cardiovascular health, although paradoxically, the act of hypnosis by this technique is pressor. Aside from its therapeutic potential, self-hypnosis may provide useful information about central mechanisms of blood pressure regulation.

1979

Johnson, Lynn S. (1979). Self-hypnosis: Behavioral and phenomenological comparisons with heterohypnosis. International Journal of Clinical and Experimental Hypnosis, 27, 240-264.

In a study of behavioral and phenomenological differences between auto- and heterohypnosis, standard autohypnotic and hetero-hypnotic experiences were administered to 48 college students (25 males, 23 females). Total scores of behavioral and phenomenological responses were compared for each experience. The phenomenological scores were also factor analyzed for each type of hypnosis. Behavioral total scores were comparable. Inexperienced Ss were as able to hypnotize themselves as to be hypnotized by another. Scores on "challenge" items were also comparable, whereas items suggesting positive actions showed greater variability. Factor analyses showed that the subjective experiences were generally similar. Heterohypnosis evoked more feelings of unawareness, passivity, and loss of control. Self-hypnosis elicited more feelings of time distortion, disorientation, active direction, and trance variability. The relationship between hypnotic mode and order effects was discussed in terms of Ruch's (1975) facilitatory/inhibitory effects. Conclusions are drawn that self-hypnosis and heterohypnosis are sufficiently similar to be conceptualized under the same label. Data is offered on expectations of self-hypnosis and their effect on later responsiveness.

1978

Benson, Herbert; et al. (1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. Psychotherapy and Psychosomatics, 30, 229-242.

#### NOTES

This is a controlled clinical outcome study of psychotherapy involving the use of hypnosis.

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard (1978). Treatment of anxiety: A comparison of the usefulness of self-hypnosis and a meditational relaxation technique. Psychotherapy and Psychosomatics, 30, 229-242.

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two

techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption, heart rate and the self-rating questionnaires. The meditational and self- hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (1965) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

1977

Sachs, Lewis B.; Feuerstein, M.; Vitale, J. H. (1977). Hypnotic self-regulation of chronic pain. American Journal of Clinical Hypnosis, 20, 106-113.

A more diverse conceptualization of pain including the motivational- affective, cognitive-evaluative, as well as sensory components has resulted in a greater emphasis on 'central' factors in pain and the development of comprehensive treatments directed at these various components. This study is one such treatment program. Eight patients with chronic pain (mean duration of 8.8 years) were trained in a hypnotic self- regulation procedure to modify pain. Pre and post measures were collected on a series of indices relevant to the pain experience. The post-treatment evaluation indicated significant reductions in: (1) daily pain intensity, (2) the degree to which pain interfered with major life areas (e.g., sleep and social activity), (3) life dissatisfaction and suffering, (4) personality characteristics relevant to chronic pain and (5) percentage of self-administered pain medication. Despite the lack of a no-treatment comparison and placebo-attention controls, the chronicity of pain and the lack of effectiveness of prior medical interventions suggest that this treatment program is an effective agent in the control of chronic pain.

1976

Miller, Lawrence J. (1976). A comparison of hypnotic susceptibility for internal and external locus of control subjects in hetero- and self-hypnotic treatments (Dissertation). Dissertation Abstracts International, 37, 978-979.

: "This study investigated the use of self- and hetero-hypnosis with internal and external locus of control subjects. Fifty-eight subjects, matched on hypnotic susceptibility and internal-external locus of control, were randomly assigned to the self- or hetero-hypnotic treatments. Self reports of their hypnotic behavioral scores and hypnotic subjective responses were obtained for each subject. "The statistical analyses showed there were no significant differences between the internal and external locus of control groups or within groups in regard to self- and hetero-hypnosis total behavioral scores, "challenge" or "non-challenge" items, .... their reported subjective experiences. The results supported the similarity of hetero- and self- hypnosis. Various findings from past research in regard to I-E subjects were also challenged in terms of their generalizability to hypnotic settings" (pp. 978-979).

1974

Surman, Owen S.; Hackett, Thomas P.; Silverberg, Elizabeth L.; Behrendt, Douglas M. (1974). Usefulness of psychiatric intervention in patients undergoing cardiac surgery. Archives of General Psychiatry, 30, 830-835.

Twenty patients undergoing cardiac surgery were seen one or more times by a psychiatrist who performed two functions. In a supportive fashion he cleared up any misconceptions the patient had about the forthcoming surgery and he taught him a simple autohypnotic technique. Twenty controls, matched for relevant variables, received routine preoperative care. Contrary to the report of others, a single visit by the psychiatrist did not influence the incidence of postoperative delirium, anxiety, depression, pain, or medication requirements. However, there was a trend for patients receiving a greater number of preoperative visits to have a lower incidence of detected delirium. Age was the only factor in this study that differed significantly between delirious and nondelirious patients.

1973

Shor, Ronald E.; Easton, Randolph (1973). A preliminary report on research comparing self- and hetero-hypnosis. American Journal of Clinical Hypnosis, 16, 37-44.

A method is described for the study of the relationship between self- and hetero-hypnosis and initial findings are presented. A new instrument is described, the Inventory of Self-Hypnosis (ISH) which is a self-hypnosis adaptation of the hetero- hypnotic Harvard Group Scale, Form A (HGS). The new scale permits the making of precise item-by-item quantitative comparisons between the effects of these two scales. Preliminary research with 29 non-motivated college student subjects suggests that mean levels of responsiveness to the two scales are about the same, that item difficulty levels have much in common, but that whatever it is that the ISH measures is largely different from what the HGS measures. The findings help to formulate the need to study what it is that contributes to the similarities and differences. Further studies are in progress.

#### NOTES

Total Score Intercorrelations were reported as follows:

HGS ISHb ISHt

HGS 1.00 ISHb .39 1.00 ISHt .33 .67 1.00

Item Pass Percents Intercorrelations were reported as follows:

HGS ISHb ISHt

HGS 1.00 ISHb .72 1.00 ISHt .70 .82 1.00

ISHb = time calculated by breaths ISHt = time calculated by timer

The Inventory of Self Hypnosis (ISH) consists of 12 items, the same ones as in the Harvard scale with a few minor exceptions. Subjects are told that the inventory "is designed to teach self-hypnosis and that all of the information needed for a person to induce hypnosis in himself and to give himself a series of

simple suggestions is contained in the inventory booklet" (p. 40). Therefore, there is more emphasis on hypnosis as an active imagination (cognitive) skill. An example, using a suggestion for Immobilization of the Right Arm, follows.

"This set of instructions is devoted to having it become very difficult for you to lift your right arm. These instructions involve a count of 33 breaths. The first 30 breaths is the suggestion phase and the final three breaths is the trial phase.

"When ready close your eyes and pay close attention to your right arm. Notice how your arm shares in the general feeling of heaviness that you feel all over your body. Throughout the count of 30 breaths concentrate your thoughts on the idea of how heavy it feels; think about it growing more and more heavy, heavy like lead. Although you should try not to lift it until later, notice how the arm seems to become much too heavy to lift.

"At the end of the 30 breaths take 3 extra breaths. During this new count try to lift your arm to see how heavy it is. Perhaps in spite of being so heavy you will be able to lift it a little, although by then it may be too heavy even for that. You will notice that there is some resistance because of the relaxed state you are in. After the three breaths stop trying and relax. In a few moments your arm will feel normal again, no longer heavy; you can easily lift it if you want to. At that point open your eyes and continue reading below the double lines.

"Summary of instructions:

"Initial actions: Close your eyes. Pay close attention to the feelings in your right arm.

"During count of 30 breaths -- Main Actions: Concentrate on the idea of your arm becoming so heavy that you would not be able to lift it.

"3 breaths -- Try to lift your arm.

"Post actions: Let normal feeling return to your arm. Open your eyes and continue reading" (p. 41).

1970

**Maher-Loughnan, G. P. (1970). Hypnosis and auto-hypnosis for the treatment of asthma. International Journal of Clinical and Experimental Hypnosis, 18 (1), 1-14.**

Conducted 2 controlled studies into the use of hypnosis in 252 asthma patients. Several different control procedures were used. Methods and results were summarized, and the same conclusion was reached: That hypnosis supplemented by autohypnosis was significantly more effective than control procedures. An outline is given of details of treatment methods. A current analysis of Ss involving up to 6 yr. of follow-up, is presented to provide a working guide to the regime in regular practice. To be fully effective hypnosis should be employed before steroids are started. Steroid-dependent asthma is rarely totally relieved by hypnotherapy. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 18 (4), 235-250.**

Discusses the 1st 615 patient-smokers who were treated with a single 45-min session of psychotherapy reinforced by hypnosis. Technique of treatment, including rationale of approach, induction procedure, assessment of hypnotizability, and training instructions to stop smoking are presented in detail. 6-mo follow-up study results are discussed. Of 44% who returned a questionnaire, hard-core smokers stopped for at least 6 mo. Another 20% reduced their smoking to varying degrees. Results of a 1-session treatment compare favorably with, and often are significantly better than, other longer-term methods reported in the literature. It is suggested that every habitual smoker who is motivated to stop be exposed to the impact of this procedure, or its equivalent, so that at least 1 of 5 smokers can be

salvaged. (French & Spanish summaries). (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis: Final remarks in response to the discussants. International Journal of Clinical and Experimental Hypnosis, 18 (4), 268.

Reexamines the major points of the author's papers (see PA, Vol. 45:Issue 1) on smoking modification. Data inclusion, therapy length, Ss' ability to change, and use of multiple therapists and tape recordings as reinforcement are discussed. It is concluded that the method should be used to "sharpen our techniques that we can relatively quickly learn who has the capacity to change for given goals, and then to help evoke the desired change as efficiently as possible." (PsycINFO Database Record (c) 2003 APA, all rights reserved)

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1969

Frankenthal, Kate (1969). Autohypnosis and other aids for survival in situations of extreme stress. International Journal of Clinical and Experimental Hypnosis, 17, 153-159.

Presents case histories where strong autosuggestion was utilized to survive in situations of extreme stress by dissociating unbearable realities. The difference between hypnosis and depersonalization is discussed. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Fromm, Erika (1965). Spontaneous autohypnotic age-regression in a nocturnal dream. International Journal of Clinical and Experimental Hypnosis, 13 (3), 119-132.

A new operational approach to the psychoanalytic interpretation of dreams is presented and exemplified. The example used contains an autohypnotic age-regression in a spontaneous nocturnal dream which was dreamed after failure to achieve age-regression in a hypnotic session a few hours earlier. In the interpretative method discussed, emphasis is placed on learning to understand dreams as coherent cognitive structures. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Naruse, Gosaku (1965). The hypnotic treatment of stage fright in champion athletes. International Journal of Clinical and Experimental Hypnosis, 13 (2), 63-70.

The use of direct hypnotic suggestion, posthypnotically produced autohypnosis, and self-hypnosis in conjunction with autogenic training and progressive relaxation in the treatment of "stage fright" in athletes is discussed. Illustrative case histories drawn from a sample of athletes participating in the 1960 Olympic Games are presented. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Naruse, Gosaku (1965). The hypnotic treatment of stage fright in champion athletes. International Journal of Clinical and Experimental Hypnosis, 13 (2), 63-70.

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1963

Das, J. P. (1963). Yoga and hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 31-38.

The nature of Yoga and Samadhi (concentration) was described. A comparison with hypnosis revealed widely differing objectives, but many points of functional and methodological similarity. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Guinazu, S. (1960). Relajacion de Schultz e ionotoforesis calcica trans cerebral. Acta Hipnologia Latino-Americana, 1, 65-67. (Abstracted in American Journal of Clinical Hypnosis, 1962, 5, 75)

The author recommends the use of autogenic training in conjunction with transcerebral calcium iontoforesis for the treatment of neurotic and psychotic disorders. This combined therapy abbreviates treatment time and leads to greater percentage of recoveries. Four cases, taken from over two hundred, are presented and analyzed.

1955

Ambrose, Gordon (1955). Multiple sclerosis and treatment by hypnotherapy. Follow-up and further cases. Journal of Clinical and Experimental Hypnosis, 3 (4), 203-209.

#### NOTES

"Summary. Present day treatment of multiple sclerosis appears inadequate from the psychological view point and patients are too often forced to show a negative response to their illness.

"Six patients have been treated by hypnotherapy with marked subjective improvement. Three of these cases are described.

"The aim in these cases is to put the patient more in control of his organism. Patients should be told that their symptoms must never control them, they must control their symptoms.

"The very nature of the illness prevents the medical attendant from feeling scientific in his approach to these cases. Long follow-up is a necessity but much subjective improvement is possible using hypnotherapy.

"In the hypnoanalytical approach the usual exaggeration of the emotions allied with the psychosomatic reaction will often be found. Hypnosis appears to produce a rapid lessening of tension and anxiety in these cases.

"A deep state of hypnosis should be aimed at and auto-hypnosis must always be taught. It is sometimes useful to place a trusted person en rapport with the patient to carry on with positive and direct suggestions.

Hart, Hornell (1955). Measuring some results of autohypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 229-242.

## NOTES

The author developed self ratings for mood (euphoria-dysphoria) and alertness-fatigue, which were administered to college students in neutral conditions and after self-hypnosis conditions. The self hypnosis, or "auto-conditioning" usually involved deep relaxation self suggestions followed by other suggestions. The suggestions involved using the word 'you' to be able to re-instate the autoconditioning more and more effectively; suggestions for attitude change (e.g. that 'No matter what comes, we will grapple with it courageously'); and euphoria auto-suggestions (e.g. that 'you will come out of this deep relaxation, feeling rested, alert, cheerful and courageous').

In both single session experiments, as with a class of nurses who experienced an 8 minute auto-conditioning procedure, and in experiments extending over time, depression decreased. He noted that "for various reasons, the students who participated in autoconditioning experiments between February and May, 1955, were in many respects less successful than some of the previous experimental groups had been" (p. 235).

Increased alertness and diminished fatigue was also observed.

Many students chose to give themselves suggestions to correct the habit of procrastination. Two-thirds of the participants reported complete success, up to the level specified, and only one of 43 experiments on correcting procrastination was a "flat failure."

Kline, Milton V.; Guze, Henry (1955). Self-hypnosis in childbirth: A clinical evaluation of a patient conditioning program. Journal of Clinical and Experimental Hypnosis, 3 (3), 142-147.

## NOTES

The author reports use of self hypnosis for childbirth by 30 patients. Many required no drugs or greatly reduced drugs. The obstetricians usually had no prior experience with hypnosis and were cautious in providing medication at the earliest sign of discomfort.

"Summary. A two year experimental study of the use of self-hypnosis in childbirth has indicated its general effectiveness for virtually all the patients who received this type of pre-natal preparation. Although problems of selecting patients capable of utilizing this method have not been discussed in detail in this paper, it must be understood that this study depended upon a patient population selected on the basis of specific psychological characteristics which were indicative of both the judiciousness and effectiveness of self-hypnosis for obstetrics. "Within the limits set by these selective characteristics, which in themselves may be greatly broadened by further study, self-hypnosis as a means of patient participation in childbirth appears to have very great merit. It is a method that lends itself to simple administration and can be extended to many more patients than any other hypnotic approach. It minimizes the need of the obstetrician to utilize time and effort in patient conditioning without sacrificing any of the advantages of hetero-hypnotic techniques. Its use on a larger scale than reported upon here, with more exacting investigative techniques, seems clearly indicated" (pp. 146-147).

Stokvis, Berthold (1955). Autosuggestive active tonus regulation as an aid in hypnosis therapy. Journal of Clinical and Experimental Hypnosis, 3 (3), 140-141. (Abstracted in Psychological Abstracts, 56: 4699)

## NOTES

The author describes a way to encourage patients to help themselves. Each day, morning and evening before rising or going to sleep they are to spend 5-10 minutes relaxing and concentrating intensively on the words spoken to him by the doctor during the previous hypnosis session. Gradually this may become self hypnosis, as in autogenic training. The author poses a psychoanalytic explanation ("the

hetero-erotic bond with the hypnotist has then been replaced by the auto-erotic bond between the patient's Ego and Self" p. 140) as well as emphasizing the benefits of practice.

1954

Klempner, Edith (1954). Changes of the body image in hypnoanalysis. Journal of Clinical and Experimental Hypnosis, 2, 157-162.

## NOTES

Author describes people who experience age regression causing changes in body size, others who "see" themselves as a child (the watcher), both simultaneously. Others experience some part of the body as missing or added, or changing in dimensions; or a change may seem symbolic; or there may be sensory changes experienced in connection with body parts; and functions of sense organs might be felt. Equilibrium sense may change, or kinesthetic sensations. "We have a double system of memory; one is a complete and true copy of the actual experience, the other is incomplete, symbolical, fleeting. Past experiences are always present unchanged in form of thoughts or diagrams, connected with the knowledge which will bring them into consciousness" (p. 162).

1953

Schneck, Jerome M. (1953). Self-hypnotic dreams in hypnoanalysis. Journal of Clinical and Experimental Hypnosis, 1 (1), 44-53. (Abstracted in Psychological Abstracts, 53: 6579)

In evaluating self-hypnotic dreams from the view of form and content, they should be compared with nocturnal and hetero-hypnotically induced dreams of the same individual, aside from comparisons with others. Eight self-hypnotic dreams of a patient in hypnoanalysis are reported here. Well known dream mechanisms are readily discerned. Classic symbolism is encountered, as well as repetitive types of symbols peculiar to this patient's functioning. The dreams are given in detail along with the patient's associations and interpretations. Such self-hypnotic dreams may be used to extend and intensify hypnoanalytic work. They involve the patient more completely in treatment. They may be used to introduce new issues, bring problems into sharper focus, identify and analyze resistances. They may, in fact, be used for most any purpose that hetero-hypnotic dreams may be employed for in analysis (3). The text reveals other points of interest regarding self-hypnotic dreams in relation to therapeutic work, and additional investigations which may be instituted in connection with such dreams.

## SENSATIONS

2000

Eimer, Bruce N. (2000). Clinical applications of hypnosis for brief and efficient pain management psychotherapy. American Journal of Clinical Hypnosis, 43 (1), 17-40. (July)

This paper describes four specific clinical applications of hypnosis that can make psychotherapy for pain management briefer, more goal-oriented, and more efficient: (1) the assessment of hypnotizability; (2) the induction of hypnotic analgesia and development of individualized pain coping strategies;

(3) direct suggestion, cognitive reframing, hypnotic metaphors, and pain relief imagery; and (4) brief psychodynamic reprocessing during the trance state of emotional factors in the patient's experience of chronic pain. Important theoretical and clinical issues regarding the relationship between hypnotizability to the induction of hypnotic analgesia are presented, and attempts to individualize pain treatment strategies on the basis of assessed differences in hypnotizability and patients' preferred

coping strategies are described. Some ways are also presented of integrating direct hypnotic suggestion, COGNITIVE-EVALUATIVE reframing, hypnotic metaphors, and imagery for alleviating the SENSORY and AFFECTIVE-MOTIVATIONAL components of pain, with an exploratory, insight-oriented, and brief psychodynamic reprocessing approach during trance for resolving unconscious sources of resistance to treatment, and reducing the emotional overlay associated with chronic pain. Some basic assumptions underlying the use of this approach are discussed, and a brief step-by-step protocol is outlined.

1998

Eimer, Bruce; Freeman, Arthur (1998). Pain management psychotherapy: A practical guide. New York NY: John Wiley & Sons, Inc..

#### NOTES

"Pain Management Psychotherapy" (PMP) provides a clear and methodical look at pain management psychotherapy beginning with the initial consultation and work-up of the patient and continuing through termination of treatment. It is a thoughtful and thorough presentation that covers methods for psychologically assessing the chronic pain patient (structured interviews, pain assessment tests and rating scales, instruments for evaluating beliefs, attitudes, pain behavior, disability, depression, anxiety, anger and alienation), treatment planning, cognitive-behavioral therapy techniques, and a range of hypnotic approaches to pain management. The book covers both traditional (cognitive and behavior therapy, biofeedback, assessing hypnotizability, choice of inductions, designing an individualized self-hypnosis exercise) as well as newer innovative techniques (e.g., EMDR, pain-relief imagery, hypno-projective methods, hypno-analytic reprocessing of pain-related negative experiences). An extensive appendix reproduces in their entirety numerous forms, rating scale, inventories, assessment instruments, and scripts.

The senior author, Bruce Eimer, states in his online comments on Amazon.com that "most therapists hold the belief that 'real' chronic pain patients are quite impossible to help. This book attempts to dispel these misguided beliefs by providing a body of knowledge, theory, and techniques that have proven value in understanding and relieving chronic physical pain." He also states that "the challenge for the therapist is to persuade the would-ne patient/client that he or she has something to offer that can help take way pain and bring back more pleasure. This challenge is negotiated through the therapeutic relationship. However, the therapist just can't be 'warm, accepting, non-judgmental and empathic'. The therapist must also have knowledge and skills relevant to relieving pain. Only then can the therapist impart such knowledge, and in teaching these skills to the pain patient, help the patient become something of a 'self-therapist'. . . I dedicate this book to everyone who wants to find ways to make living with pain more comfortable, and to the ongoing search for better ways to relieve pain."

1992

Kay, L. M. (1992, October). The effects of hypnosis, relaxation, and suggestion on visual acuity (Dissertation, California School of Professional Psychology, San Diego). Dissertation Abstracts International, 53 (4), 2065-B. (Order No. DA 9221587)

"Evaluated the relative efficacy of several aspects of the hypnotic process on facilitating change in hypnotic state-dependent visual acuity in myopic student subjects. Five conditions included hypnosis with suggestions, neutral hypnosis, nonhypnotic suggestion, progressive relaxation, and a control (comedy). Visual acuity was assessed as baseline (a task-motivational situation where they were to try to see as well as possible) and after the experimental condition. Results found that hypnosis facilitated a significant improvement in visual acuity ( $p = .002$ ), although no differences were found in the other conditions" (p. 2065).

1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of

acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

1990

Arendt-Nielsen, Lars; Zachariae, Robert; Bjerring, Peter (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. Pain, 42, 243-251.

## NOTES

Sensory and pain thresholds to laser stimulation were determined, and the laser-pain evoked brain potentials were measured for 8 highly hypnotizable (Harvard Scores 10-11) student volunteers in 3 conditions: (1) waking, (2) suggestion of hyperaesthesia during hypnosis, (3) suggestion of analgesia during hypnosis.

The investigators used a laser beam 3 mm in diameter, with a 200 msec stimulus duration; the same area (but different points within the area) was used for consecutive stimulations. Ss were otherwise maintained in low stimulus conditions so they would not have visual or auditory cues about laser beam onset; they wore goggles, had eyes shut, and had earphones on. Sensory threshold was defined as warmth; pain threshold was defined as a distinct sharp pin prick.

The laser intensity used for stimulation corresponded to strong pain. Interstimulus intervals averaged 15 sec (but were randomly varied between 10-20 sec). Sensory and pain thresholds as well as two evoked potential measurements were taken during waking, hypnotized hyperaesthesia, and hypnotized analgesia conditions in a single 1 1/2 hour session.

The evoked potential component of interest was the negative complex N1 with latency of 300 msec; amplitude (P1=N1-P2) and latency of this complex (N1) were measured. EEG epochs contaminated by eye movement were omitted from analysis.

The standardized induction and deepening of hypnosis required 15-20 minutes; then the suggestion was given that Ss could alter their perception of stimuli such as pain. Hyperaesthesia suggestions were to imagine the right hand was in very hot water, then taken out but still very red, hot, sensitive so that even the vaguest stimulus would be detectable and unpleasant. They were told that they would receive a series of painful but tolerable stimuli, and to raise the left index finger if they could just perceive a laser pulse (sensory threshold), and again if they felt pricking pain (pain threshold).

Suggestions for analgesia were to imagine that their right hand was placed on their chest, and that their 'former right hand' was no longer their own but was made of some heavy and completely insensitive material like wood or stone. Sensory and pain threshold measures were then taken. During the evoked potential measurement period they received continuous suggestions of analgesia. They also were told to relax and imagine they were in a pleasant place, ignoring everything except the pleasant, relaxed feelings and imagining pleasant sights, sounds, feelings and the imagined place. They were told that though they would receive stimuli, they probably would be able to ignore the stimuli completely.

Results were as follows.

1. In the hypnotic hyperaesthesia condition, sensory and pain thresholds decreased significantly by 47% and 48%, respectively. Three Ss reacted to laser intensities far below what normally can be perceived in the waking state. [The authors ran a separate small control experiment to make sure that the Subjects were not using any other cues, but mention the possibility of light-sensitive skin reacting to the blue laser light, creating evoked potentials.]

2. In the hypnotic analgesia condition, sensory and pain thresholds increased by 316% and 190%, respectively. 7 of 8 Ss did not even respond to pain threshold when the laser intensity was increased to the noxious level of 3W, which is the level at which tissue damage can occur.

**3. Pain-related evoked potentials.** Amplitude of the first pain-related potential was increased significantly by 14% in the hyperaesthesia condition and reduced significantly by 31% in the analgesia condition. Changes in the evoked potentials were considered minor however compared to those observed for thresholds, which are subjective response measures. Even in Subjects who reported complete analgesia, the experimenters observed the laser pain evoked responses. There were no differences in latencies of the first pain-related potentials for the three conditions (indicating that peripheral and central afferent conduction velocities were the same).

**Discussion.** "There has been some dispute concerning the experimental design and the reliability of the data obtained in studies dealing with hypnotic suggested analgesia [Spanos & Chaves, 1970]. In our design 2 'opposite' conditions were induced, and the 2 inductions gave 'opposite' results.

"The experience of pain can be significantly altered by suggestions of analgesia, which is in accordance with a number of other studies (for review see [Barber & Adrian, 1982; Hilgard & Hilgard, 1975]). The finding that suggestions of hyperaesthesia can decrease the sensory and pain thresholds and increase the amplitude of the pain evoked potential is a new observation. Since synchronized auditory and visual stimuli from the laser were blocked, and the stimulus was given at random intervals, the changes might be induced by the hypnotic suggestions" (p. 247).

The authors discuss their results in terms of (1) four pain modulation systems (neural/opiate, hormonal/opiate, neural/non-opiate, and hormonal/non-opiate) and (2) focusing and defocusing attention. Because in their pilot study it was necessary to give suggestions continually in order to affect the laser evoked potentials, they conclude that endogenous substances or hormonal/non-opiates would play a minor role, if any, in hypnotic analgesia. (Price and Barber [25] had also found it important to give suggestions continuously.)

On the other hand, "event-related potentials [7, 26] and pain-related potentials have, previously, been shown to be sensitive to focused and de-focused attention. Recently, Miltner et al. [23] showed the influence of attention on the late pain-related component of potentials, evoked by painful intracutaneous electrical stimulation. The degree to which the subject paid attention to the painful stimulus had a powerful effect on the pain-related complex. When subjects ignored the pain, it was still possible to record the pain-related complex although all the subjects consistently reported less or no pain. In wakeful subjects where cutaneous pain was abolished by lignocaine infiltration, the pain-related evoked potentials were abolished [4]. In our study, we could also record evoked potentials although the subject subjectively did not feel pain. The reason might be that the S acted as if there was full analgesia to the stimuli, in order to satisfy the hypnotist. During suggested hyperaesthesia the thresholds declined below what normally could be perceived in the wakeful state. The volunteers could, therefore, not act hypersensitive, so something did happen.

"The discrepancy in subjective and objective responses might, however, be useful when investigating levels of the neuroaxis at which hypnosis might work" (pp. 248-249).

The authors note that this laser induced pain and the tooth pulp stimulation pain of Mayer & Barber both use the A-delta fibers. Barber & Mayer found it impossible to elicit pain within the output range of the stimulator (up to 150 microA) and reached maximal intensity for all volunteers during suggested analgesia. Using cutaneous laser stimulation the authors found that the skin damage level (3W) could be reached in 7 of 8 volunteers without any reaction of pain.

During the hyperaesthesia condition the sensory threshold was sometimes lower than can be detected in the waking state. Although some researchers have suggested that red light from a helium-neon laser might activate cutaneous photosensitive receptors and thereby elicit brain potentials, the authors were unable to elicit potentials in waking Subjects using their blue and green argon laser light with below sensory threshold intensity.

The authors also note that previous attempts to use physiological correlates of pain such as heart rate, blood pressure, respiration, and galvanic skin response have yielded confusing results. The physiological indicators are present even when Subjects report analgesia, leading some investigators to

conclude that the subjective reports are due to illusion [Sutcliffe, 1961], compliance [Wagstaff, 1986], or a placebo induced by the hypnosis context [Wagstaff, 1986]. "These confusing results lead to the conclusion that both the traditional methods used for induction of pain and the monitored physiological responses have been unsatisfactory. The present study has sought to eliminate some of the methodological difficulties by (1) using brief well-defined argon laser stimuli which in awake volunteers induce very stable perceptions between trials [Arendt-Nielsen & Bjerring, 1988], and (2) recording psychophysical thresholds and objective parameters quantitatively related to the intensity of the pain perceived (1, 3)" (p. 249).

Cikurel, Katia; Gruzelier, John (1990). The effect of an active-alert hypnotic induction on lateral asymmetry in haptic processing. British Journal of Experimental and Clinical Hypnosis, 7, 17-25.

In order to elucidate further left hemispherical inhibitory dynamics in response to instructions of hypnosis, bilateral haptic processing times were compared before and during a traditional hypnotic relaxation procedure and an active-alert procedure in which subjects pedaled a bicycle ergometer and instructions on mental alertness were incorporated with hypnosis. Previous evidence suggesting a slowing of left hemispherical processing and a facilitation of right hemispherical processing in susceptible subjects was replicated, and was shown to characterize high rather than medium susceptibles, the latter showing a bilateral slowing of processing. These effects occurred with both induction procedures whose influence on susceptibility was highly correlated. In fact the lateral shift in processing in the direction of left hemispherical inhibition and right hemispherical facilitation was favoured by the active-alert procedure, indicating that neuropsychological changes which occur with hypnosis cannot be discounted as a by-product of relaxation.

Ross, Colin A.; Fast, E.; Anderson, G.; Auty, A.; Todd, J. (1990). Somatic symptoms in multiple sclerosis and MPD. Dissociation, 3, 102-106.

Fifty subjects with multiple sclerosis (MS) were compared to 50 subjects with multiple personality disorder (MPD). MS patients endorsed an average of 3.0 somatic symptoms on structured interview, and MPD subjects an average of 14.5. Somatic symptoms characteristic of neurological illness were trouble walking, paralysis, and muscle weakness, while those characteristic of psychiatric illness were genitourinary and gastrointestinal symptoms.

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic emotions and physical sensations: A real-simulating analysis. International Journal of Clinical and Experimental Hypnosis, 37, 305-319.

Real hypnotizable Ss and simulating unhypnotizable Ss were administered a suggestion for either happiness, emotional neutrality, or sadness. The emotion was assessed through subjective and behavioral measures taken once before, twice during, and once after the emotion. Findings indicated that emotionally congruent changes occurred in both self-report and performance measures. Ss' physical sensations during the emotion were assessed on a 34-item self-report scale. It was demonstrated that Ss in the happy versus sad conditions reported different physical sensations; in particular, they reported different facial sensations. The responses of real hypnotizable subjects, however, were essentially paralleled by those of simulating unhypnotizable subjects. Therefore, the possibility exists that hypnotized subjects may have been responding on the basis of social demands. The findings are discussed in terms of the effects of the emotion suggestions, and the implications of real and simulating Ss displaying similar affective responses.

NOTES

Used the real-simulating model in an attempt to eliminate the possibility that hypnotized Subjects in previous studies may have been responding to the demand characteristics of the situation. Used both subjective and behavioral measures. Self-report happiness and sadness, of emotion intensity; behavioral performance measure of speech rate, indexed by counting speed (which has been shown to distinguish between happiness and sadness). Used 34-item self-report Physical Sensations Scale based on Pennebaker, J. W. *The psychology of physical symptoms*. New York: Springer-Verlag, 1982.

They cite Weiss, et al (1987) who focused on the onset latency, and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure.

Hall, H.; Minnes, L. (1989). Psychological modulation of auditory responses. *International Journal of Psychosomatics*, 36 (1-4), 59-63.

Psychological modulation of auditory response, the effects of imagery and suggestion on auditory thresholds were examined in naive subjects. After a hypnosis-like induction, the subjects, who were not aware of the purpose of the study, were asked to generate and maintain a specific set of images before, during, and after which their auditory thresholds were tested. Following the imagery, which represented cooling and vasoconstriction in the cochlea, audiograms revealed a temporary auditory threshold shift (TTS) in the experimental group only. This TTS pattern was similar to that produced by exposure to loud noise. Information carried in the image is suggested as the basis for the observed auditory changes. Although a hypnosis-like induction was employed, the subjects' level of hypnotizability did not appear to be related to the findings.

1986

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Church, Katherine L.; Monty, Richard A. (1986). Hypnotizability and speed of visual information processing. *International Journal of Clinical and Experimental Hypnosis*, 34, 234-241.

Following the determination of the luminance threshold of each S, high and low hypnotizable Ss were tested for speed of information processing using a backward masking paradigm with a bias-free and ceiling-free psychophysical task. No significant relationship between hypnotizability as measured by the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) of Weitzenhoffer and Hilgard (1959) and speed of information processing was observed. The order of administering SHSS:A, pre- or postthreshold task, was significantly related to luminance threshold. Results were compared to other studies wherein some evidence for a relationship between hypnotizability and speed of visual information processing had been offered.

## NOTES

106 college students were tested using tachistoscopic presentation of stimuli. 52 Ss received the SHSS:A immediately prior to the experimental tasks, 54 immediately after, and testing was terminated for each Subject after they failed 3 successive items. The test flash was set at 0.3 log units above threshold, i.e. double the threshold intensity. A trial consisted of 2 observation intervals, separated by warning tones. The test flash occurred randomly in one of the two intervals. The S indicated which observation interval contained the test flash by pressing a button. Feedback tones gave S information about the correct response.

"The masking experiment was begun with the suprathreshold test flash occurring 250 milliseconds prior to the onset of the larger bright masking stimulus. As before, a two-interval forced-choice staircase procedure was used, but this time the test intensity was constant, and ISI was changed. If S

'hit' three trials in a row, ISI was decreased by 10 milliseconds. The ISIs continued to decrease in 10-millisecond steps, until S "missed," causing an increase in ISI" (p. 348).

RESULTS were analyzed by 2 x 2 x 2 ANOVA (Hypnotizability, sex, and order of hypnotizability measurement). High hypnotizables = 7-12 on the SHSS:A, and low hypnotizables = 0-6. Ss receiving SHSS:A prior to the tasks had a significantly lower luminance threshold (-1.99 log mL) than did those having it after tasks (-1.93 log mL),  $p < .05$ . None of the other analyses were significant. No significant relationships were observed vis a vis the masking task, and the mean masking thresholds were almost identical for the lows and highs.

DISCUSSION. "Spanos (1982), in studying the effects of hypnotizability and suggestions in altering auditory sensitivity, reviewed the difficulties inherent in the measurement of perceptual accuracy and emphasized the role of response bias in the confounding of results" (p. 239). Secondly, these tasks reflect more fundamental, central processes and use more neutral stimuli than letter recognition used earlier. "Thus, while the masking effects of both the previous recognition tasks (masking by pattern) and the current detection tasks (masking by nearby contours) are presumably mediated through similar high level central processes, the differences in findings could possibly have been related to additional processing cues required in letter recognition" (p. 239). A footnote mentions, "Other studies have shown that with stimulus configurations similar to that used in the present study, there are significant central masking effects (Battersby & Wagman, 1962; Markoff & Sturr, 1971; Turvey, 1973)" (p. 239).

"Quite intriguing is the luminance threshold finding which, although not as robust as one would desire, suggests that a hypnotic induction procedure given prior to a task may significantly affect sensitivity on that task. Speculatively, the relaxation suggestions inherent in SHSS:A may account for the changes in luminance threshold" (p. 239).

## 1985

LaRiccia, P. J.; Katz, R. H.; Peters, J. W.; Atkinson, G. W.; Weiss, T. (1985). Biofeedback and hypnosis in weaning from mechanical ventilators. Chest, 87, 267-269.

Weaning patients from mechanical ventilation can be hindered by both physical and psychologic factors. Biofeedback has been used successfully as an adjunct in difficult weaning problems. We have used a combination of hypnosis and biofeedback to wean a patient with neurologic disease who previously failed weaning by standard procedures. A 30-year-old woman with respiratory failure secondary to multiple sclerosis with transverse myelitis was given eight sessions of biofeedback over 12 days in which the movements of her chest wall, as monitored by magnetometers, were displayed on an oscilloscope. The patient was praised for targeted respiratory rate, amplitude, and rhythm. These sessions included hypnosis in which the patient was given suggestions of well-being and that she could breathe as she had five years earlier. In this manner the patient was successfully weaned. Respiratory biofeedback and hypnosis appear to be useful adjuncts in weaning patients from ventilators.

Naish, Peter L. N. (1985). The trance described in signal detection terms. British Journal of Experimental and Clinical Hypnosis, 2 (3), 133-138.

## NOTES

While most current theories of hypnosis are of the non-state kind, clinical practitioners seem to use the concept of trance or altered state. The subjective reports of hypnotised subjects usually involve something akin to perceptual distortion, e.g. time distortion, suggested hallucinations. Such "misperceptions" can be explained by signal detection theory, in which the subject shifts the criterion by which they judge a sensation to be over the threshold of random neural excitation. Thus one would

predict that "highly susceptible hypnotic subjects will be those who are better able, or more willing, to shift their criteria by large amounts" (p. 134).

The author reports experiments from his laboratory that support his hypothesis.

[Jean Holroyd]

1983

Barabasz, Arreed F.; Lonsdale, Christopher (1983). Effects of hypnosis on P300 olfactory-evoked potential amplitudes. Journal of Abnormal Psychology, 92 (4), 520-523.

From a sample of 93 undergraduates, 4 high- and 5 low-hypnotic susceptibility (the Stanford Hypnotic Susceptibility Scale: Form C) Ss were exposed to a waking condition and a hypnotic induction condition that included a suggestion for anosmia. ANOVAs of the P300 showed significant amplitude increases for weak and strong odors for high-hypnotizable Ss in hypnosis, but not for high-hypnotizable Ss in the waking state. No such amplitude increases were found for the low-hypnotizable ss

1982

Farthing, G. William; Brown, Scott W.; Venturino, Michael (1982). Effects of hypnotizability and mental imagery on signal detection sensitivity and response bias. International Journal of Clinical and Experimental Hypnosis, 30, 289-305.

It was hypothesized that the ability to selectively concentrate attention on mental images would be greater among high hypnotizable Ss than among low hypnotizable Ss, as indicated by a greater interference with visual signal detection by concurrent visual mental imagery in response to specified nouns. This hypothesis was not supported in the overall results, though the finding of a significant interference effect among the high hypnotizable female Ss, but not among other subgroups, indicates that further research with a more refined procedure might be worthwhile. On the control trials without images, the high hypnotizable Ss made more false alarms than lows, and had a significantly different bias index indicating that high hypnotizable Ss were more likely than lows to respond "yes" when uncertain about whether the signal was present; false alarms can be interpreted as a nonhypnotic measure of suggestibility. The high and low hypnotizable Ss did not differ in their times to generate images in response to the specified nouns.

1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, 133 (3), 161-169.

"The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding

S2 differed only after the most intense S1. Hypnotic suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

Wallace, Benjamin; Hoyenga, K. B. (1980). Production of proprioceptive errors with induced hypnotic anesthesia. International Journal of Clinical and Experimental Hypnosis, 28 (2), 140-147.

The present study assessed the ability of Ss to localize their noses with the forefinger of their dominant hands. This was accomplished while S had his eyes closed and while the limb performing the task was or was not hypnotically anesthetized. In performing this task with an anesthetized limb, 2 error types were observed. The first involved a localization error of missing the nose location. A second error involved an increased amount of time required to find the nose location. An inverse relationship was found to exist between these error types such that a large localization error was associated with a short latency period while a small localization error was associated with a long latency period. Neither error type was evident when hypnotic anesthesia was absent.

1975

Talone, James M.; Diamond, Michael Jay; Steadman, Clarence (1975). Modifying hypnotic performance by means of brief sensory experiences. International Journal of Clinical and Experimental Hypnosis, 23, 190-199.

This study examined the extent to which hypnotic performance could be modified by means of 2 types of pre-hypnosis sensory experiences: (a) auditory stimulation in the form of recorded music, and (b) a variant of sensory restriction in the form of a short period of silence with eyes closed. 39 University of Hawaii students were given a baseline test of hypnotic susceptibility and then randomly assigned to 2 of 3 conditions. The Ss in the music and silence groups were exposed to 10 minutes of either recorded music or silence prior to a criterion hypnotic susceptibility scale. Control-group Ss were exposed only to the hypnotic test scale. All Ss reported their experienced hypnotic sensations. Music- and silence-group Ss completed a self-report scale assessing the role played by relaxation and receptive perception in the manipulation. Although the results were not consistent, both music and silence were significantly effective in increasing responsivity in comparison with practice only. The findings are discussed with reference to possible mediating mechanisms, and the implications of these findings with regard to modifying hypnotic ability, along with the need for replication studies, are considered.

1968

Kline, Milton V. (1968). Sensory hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 16, 85-100.

SENSORY HYPNOANALYSIS AS A PSYCHOTHERAPEUTIC APPROACH EMPHASIZES THE REORGANIZATION OF COGNITIVE CORRELATES OF SENSORY AND MOTOR COMPONENTS ENCOUNTERED IN BEHAVIORAL DISORDERS. NONVERBAL STIMULATION IS UTILIZED IN ELUCIDATING AREAS OF SENSORY DEPRIVATION AND SENSORY OVERLOADING WHICH APPEAR LINKED TO DISORGANIZING OR INTERFERING EFFECTS UPON THE BEHAVIORAL PROCESS. (SPANISH + GERMAN SUMMARIES) (16 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Schneck, Jerome M. (1966). A study of alterations in body sensations during hypnoanalysis. International Journal of Clinical and Experimental Hypnosis, 14 (3), 216-231.

Presents body-sensation phenomena which appeared in a patient in treatment. The total number exceeds that reported previously and supplies longitudinal as well as cross-sectional perspectives because the data were gathered over a period of several mo. Comparisons are made of this material with findings in other patients. The large variety of sensory phenomena are representations of conscious and unconscious experiences, many of which can be understood in relation to the S's conflicts or his total personality functioning at the time the phenomena appeared. Additional areas for investigation include: (1) evaluation of hypnotic sensory phenomena in relation to a variety of symptoms in the form of somatic complaints by patients seeking psychotherapy, (2) the study of sensory experiences in therapists in connection with their roles in the special settings of hypnotherapy and hypnoanalysis and in treatment without hypnosis, (3) the study of body sensations experienced by "normal" individuals and comparisons of them with hypnotic sensory phenomena, and (4) the evaluation of sensory phenomena as reflections of total psychosomatic functioning with its ideational and affective ingredients. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.

The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Brady, J. P.; Levitt, E. E. (1964). Hypnotically-induced 'anosmia' to ammonia. International Journal of Clinical and Experimental Hypnosis, 12, 18-20.

The procedure to demonstrate anosmia by the inhalation of ammonia is discussed. Deeply hypnotized Ss who are not knowledgeable of the relevant facts of physiology may fail to respond to ammonia fumes when it is suggested that they have no sense of smell (anosmia). However, persons who, in fact, are anosmic do respond to ammonia fumes because they are a powerful stimulus to the pain fibers in the nasal mucosa. This procedure illustrates that the crucial factor in the response of the hypnotized S is not the actual facts of anatomy and physiology, but the S's concept of them. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Sukhakarn, Khun Vichit (1960/1962). Extra ocular vision [Letter]. British Journal of Medical Hypnotism, 14 (2), 41-47.

#### NOTES

The article is in the original form of a letter to Herbert Spiegel, M.D. The author describes experiences training subjects, both blind and with normal vision, to 'see' through the skin of their cheeks. Training

involved concentrative meditation (Buddhist) and hypnosis. Simple tests were performed, apparently independently, by two other scientists.

"From information available from our subjects, the Extra Ocular Vision gained through the cheek-skin is different from those through the eyes as best explained here below:-- (1) The vision through the cheek-skin first takes a form of a series of spots somewhat like the image of coarse grain prints. Only after further training the spots are transformed into a clear object, so clear that needle threading is possible. (2) Objects seen through the cheek-skin are as clear as through the eyes. Distant objects can be magnified by the subject's wish, just like looking through an opera glass. (3) The vision gained through the cheek-skin is first 'seen' in black and white, and the 'colour picture' is achieved only after further training. But the colour 'seen' through the cheek is more intense than those through the eyes. (4) The field of vision 'seen' through each side of the cheek is more narrow than those seen through each eye. (5) There is a sign indicating that the vision through the cheek is only two-dimensional, the subjects find it difficult at first to stand the finger to another finger test" (p. 42).

**1955**

Ambrose, Gordon (1955). Multiple sclerosis and treatment by hypnotherapy. Follow-up and further cases. Journal of Clinical and Experimental Hypnosis, 3 (4), 203-209.

#### NOTES

"Summary. Present day treatment of multiple sclerosis appears inadequate from the psychological view point and patients are too often forced to show a negative response to their illness.

"Six patients have been treated by hypnotherapy with marked subjective improvement. Three of these cases are described.

"The aim in these cases is to put the patient more in control of his organism. Patients should be told that their symptoms must never control them, they must control their symptoms.

"The very nature of the illness prevents the medical attendant from feeling scientific in his approach to these cases. Long follow-up is a necessity but much subjective improvement is possible using hypnotherapy.

"In the hypnoanalytical approach the usual exaggeration of the emotions allied with the psychosomatic reaction will often be found. Hypnosis appears to produce a rapid lessening of tension and anxiety in these cases.

"A deep state of hypnosis should be aimed at and auto-hypnosis must always be taught. It is sometimes useful to place a trusted person en rapport with the patient to carry on with positive and direct suggestions.

#### SEQUELAE

**2000**

Gruzelier, John (2000). Unwanted effects of hypnosis: A review of the evidence and its implications. Contemporary Hypnosis, 17 (4), 161-193.

Reviews the growing evidence of unwanted consequences of hypnosis in experimental, clinical, and entertainment settings. Adverse effects are common, may be physiological or psychological, and are mostly short-lived. The more serious consequences almost exclusively occur in clinical and entertainment applications and have included chronic psychopathology, seizure, stupor, spontaneous dissociative episodes, and the resurrection of memories of previous trauma. Associated phenomena may include physiological events and may be unconsciously mediated. Two cases of 1st episode schizophrenia, one following hypnotherapy and one following stage hypnosis, are described. Evidence of affinities between schizophrenia and hypnosis is revisited in the light of contemporary evidence of

the neurophysiological mechanisms of hypnosis and schizophrenia, with implications for screening vulnerable individuals. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1999

MacHovec, Frank J.; Oster, Marc I. (1999). In the best of families: Understanding hypnosis complications in graduate and post-graduate training experiences. American Journal of Clinical Hypnosis, 42 (1), 3-9.

Unexpected, unwanted complications co-incident with the use of hypnosis can occur even to mental health professionals and in advanced hypnosis training. This article reports three such incidents, which occurred in the practice of a trained, licensed mental health professional, and university faculty member. Suggestions are provided for preventive practice, which may have reduced the risk of untoward aftereffects.

#### NOTES

In the Discussion section, the authors state, "A common thread throughout these three cases is that most occurred in the formal, controlled setting of a university, in a bona fide course on hypnosis given by a trained, experience [sic], and licensed mental health professional to a sophisticated, fully informed, and receptive class of students. That unwanted side effects occurred in such a setting points to the need for training and skill to avert complications and to properly intervene to correct and neutralize those complications as they arise" (pp. 6-7). They suggest ways of lowering risk of unwanted, unexpected side effects.

Moene, Franny C.; Hoogduin, Kees A. L. (1999). The creative use of unexpected responses in the hypnotherapy of patients with conversion disorders. International Journal of Clinical and Experimental Hypnosis, 47 (3), 209-226.

In a previously completed empirical study examining the use of hypnosis in a comprehensive treatment program with 85 patients who suffered motor conversion symptoms, 16 patients were reported by their therapists to have had unusual and unexpected responses during hypnosis. This article summarizes the literature on the occurrence of unintended phenomena during hypnosis and presents instances encountered in a study of conversion hysterics. The article illustrates these occurrences and their management with 7 clinical vignettes and concludes that surprising or unusual responses to hypnosis with these types of cases can be an opportunity for the patient to enhance understanding and gain control over his or her symptoms.

#### NOTES

The authors classify the problems into five groups: problems encountered during induction of hypnosis, problems encountered during treatment proper, untoward affect expression during treatment proper, exaggerated response to suggestions, and problems in terminating hypnosis. They offer a set of guidelines to therapists for managing these kinds of difficulties.

1998

Barber, Joseph (1998). When hypnosis causes trouble. International Journal of Clinical and Experimental Hypnosis, 46 (2), 157-170.

Like any other effective intervention, hypnotic treatment can occasionally cause harmful effects as well as beneficial ones. The first step in avoiding clinical complications is recognizing that they can occur. A review of the literature, however, suggests a long-standing inattention to the potential harmfulness of

hypnotic interventions, including patients' unexpected reactions, leading to clinical complications, including amnesia, catharsis, paralysis, disorientation, literalness of response, accelerated transference, and memory contamination. In addition to these unexpected reactions by patients, complications can also arise from a practitioner's need for power and by the inappropriately narrow focus on the hypnotic process itself, leading to distraction from the more fundamental clinical process.

**1996**

Lynn, Steven Jay; Martin, Daniel J.; Frauman, David C. (1996). Does hypnosis pose special risks for negative effects? A master class commentary. International Journal of Clinical and Experimental Hypnosis, 44 (1), 7-19.

**NOTES**

The authors review evidence in both experimental and clinical hypnosis situations. They conclude that "the available data do not justify the conclusion that hypnotherapy is any more dangerous, or ultimately less effective, than other psychotherapy and relaxation procedures" (p. 13). However, negative effects do sometimes occur in clinic or in laboratory. They indicate that the following situations and factors suggest need for particular care or vigilance:

Increased Psychopathology

Intensified Transference

Misconceptions About Hypnosis

Suggestions May Instigate or Reveal Unexpected Affect

Difficult or Inappropriate Suggestions

Direct Suggestions to Relinquish Symptoms

Countertransference Reactions

Suggestive Procedures and False Memory Creation

Inadequate Training in Psychology and Psychotherapy

**1995**

Barber, Joseph (1995, November). When hypnosis causes trouble. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

**NOTES**

Sexual acting out occurs, even with highly trained and responsible clinicians. But other problems occur, and it is the same qualities of hypnosis that make it useful that also make for problems. I found 20 publications that exhibited problems in therapy, and they all discussed only the mental illness of the patients.

Gravitz, Melvin A. (1995). Inability to dehypnotize: Implications for management. International Journal of Clinical and Experimental Hypnosis, 43, 369-374.

One of the possible complications of working with hypnosis, and a concern of some, is difficulty in alerting the patient from the hypnotic condition. Although such adverse reactions are rare and infrequently observed, they have been noted for many years. This article presents two cases of inability to dehypnotize and discusses the implications for clinical management of the dynamics that were found to be causally related to such behavior.

**NOTES**

The author presents two cases, and writes in conclusion, "It is clear that in both these cases, the individuals were in control of their situations and important personal needs of the moment. Practitioners who may encounter the infrequent problem of inability to dehypnotize their patients

should understand that the patient is thereby undertaking to control his or her own behavior for personally significant reasons. Understanding these reasons as defenses, and circumventing and even using such defenses, enable successful resolution of the problem" (p. 374). J. Holroyd

1994

Singh, Asha (1994, August). Positive and negative effects in hypnosis: Some contributing variables. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Subjects (N = 155) were randomly assigned to hypnosis with the Harvard hypnotizability scale, hypnosis with neutral imagery instead of the test items in the Harvard scale, and a control condition of a taped chapter read from an Introductory Psychology text. All procedures were taped. Subjects' attitudes toward hypnosis and psychiatric symptoms were first measured. Using self-report measures, positive and negative effects were assessed at three time periods: (a) retrospective assessment of the experience during the intervention; (b) pre-post testing for assessing state immediately after the intervention; and (c) assessment 2 to 4 days later. Results showed a consistent trend at all three time periods. Hypnosis with imagery was more positive and less negative than the control condition. It was also more positive than the Harvard scale. Hypnosis with the Harvard scale was slightly less negative and slightly more positive than the control condition. Hypnotizability was not correlated with hypnosis effects; however, the intensity of hypnosis, or 'hypnoidal state', predicted positive effects (but not negative effects) at every time period in all three groups. Initial attitude was only slightly associated with effect; a positive attitude predicted an overall positive reaction to the experience for all groups, and negative attitude predicted reduced state anxiety 2 to 4 days later. Psychiatric symptomatology predicted a more negative experience during all conditions, but was associated with less negative feelings, more positive feelings, and reduced state anxiety afterward. In conclusion, hypnosis with a self-selected student population in an experimental setting is no more harmful than a control condition; in fact it is more enjoyable and more positive in its effects than the latter. Hypnosis has more positive and less negative effects when the Harvard test items are replaced by neutral imagery. Subject attributes play a more complex role than hypothesized in determining hypnosis effects. The implications of these findings are discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

1993

Sivec, Harry; Lynn, Steven Jay (1993, October). Negative posthypnotic effects: The influence of prehypnotic experiences. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Ss and Experimenters may mis-attribute negative experiential effects to hypnosis because of temporal contiguity. This study required Ss to complete the experiences scale before and after hypnosis and before and after a non-hypnotic control procedure. The PES is a 65 item scale and has a stable factor structure assessing pleasant, perceptual/kinesthetic, anger, and anxiety experiences.

49 Ss completed the test before and after the Harvard Group Scale, minus the word "hypnosis" in the induction, though it was presented as a study of hypnosis; 33 had the study presented as study of body awareness, and were to focus on body parts corresponding to the parts mentioned on the Harvard.

#### RESULTS.

Ss in both groups reported more perceptual/kinesthetic effects after than before the experience. Research failed to find hypnosis was associated with unique effects that were negative. The single

increase might be due to focusing on the body. The only difference between groups was that hypnosis Ss reported fewer anger experiences than those in the other group.

This data disconfirms the belief that hypnosis is associated with negative effects.

1992

Brentar, John P.; Lynn, Steven J. (1992, August). The Post-Hypnotic Experience Scale: Validity and reliability. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

This paper describes the development of the Posthypnotic Experiences Scale (PES), a 57-item scale comprised of four subscales labeled Pleasant, Somatic- Kinesthetic, Irritability/Anger, and Anxiety. It was derived by way of an initial factor analysis using 444 subjects and refined by a second factor analysis using 288 subjects. In three data collection phases, the subscales were found to be internally consistent and to exhibit low to moderate test-retest reliabilities. The PES was also found to evidence excellent content, convergent, and discriminant validity, as measured by indices of hypnotizability, positive affect, depression, anxiety, hostility, sensation seeking, dysphoria, social desirability, perceptual aberration, absorption, and physical symptomatology. Behavioral validity was demonstrated in so far as subjects who were willing to volunteer for a second experiment, without reimbursement, scored higher on the Pleasant subscale than did nonvolunteers. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

Crawford, Helen J.; Kitner-Triolo, Melissa; Clarke, Steven W.; Olesko, Brian (1992). Transient positive and negative experiences accompanying stage hypnosis. Journal of Abnormal Psychology, 101 (4), 663-667.

Frequency of positive and negative experiences accompanying stage hypnosis was assessed in follow-up interviews with 22 participants of university-sponsored performances. Most subjects described their experience positively (relaxing, interesting, exciting, satisfying, illuminating, and pleasurable), but some described it negatively (confusing, silly, annoying, and frightening). Five subjects (22.7%) reported partial or complete amnesia; all were highly responsive to the stage hypnosis suggestions. One subject was completely unable to breach amnesia and felt annoyed and frightened. Five subjects (22.7%) believed the hypnotist had control over their behavior. Participants (n=15) tested subsequently on the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962) were mostly moderately to highly hypnotizable ( $M = 7.07$ ), and the scores correlated significantly ( $r = .68$ ) with the percentage of passed stage hypnosis suggestions.

NOTES: Echterling and Emmerling (1987, American Journal of Clinical Hypnosis) conducted a follow-up of 18 people who participated in stage hypnosis at a university, within a month after the experience. Referring back to the hypnosis itself, 39% reported positive experiences, 39% reported both positive and negative experiences, and 22% (four people) reported 'strongly negative' experiences. The present study contacted subjects immediately after the stage hypnosis experience, either in person or by telephone. They completed both objective questions and open-ended questions referring to three time periods: after the hypnotic induction, during the hypnotic suggestions, and after the stage hypnosis had been terminated. Subjects were invited to come to the laboratory to be tested for hypnotizability, and 15 of the 22 did return for testing.

Of the 22 Ss, 4 had previously participated in stage hypnosis, one in laboratory hypnosis, and one had been hypnotized by her father. Of the 15 tested with the Stanford Hypnotic Susceptibility Scale, Form C: 7 were high hypnotizables (scoring 9-12), 7 were medium hypnotizables (scoring 4-8), and one was a low hypnotizable (scoring 0-3). Several people reported that they 'went along with' the hypnotist's suggestions, role playing rather than actually experiencing the suggestions.

"Most of the subjects found the experience positive: 86.4%, relaxing; 86.4%, interesting; 77.3%, exciting; 59.0%, satisfying; 54.6% illuminating; and 54.6%, pleasurable. Negative experiences were also reported: 36.4%, confusing; 36.4%, silly; 9.1%, annoying; and 9.1%, frightening. Only 1 subject reported the stage hypnosis experience as entirely negative.

"The stage hypnotists told the participants about the suggestions at the end of the stage hypnosis performance and supposedly lifted amnesia. Despite this, some participants continued to experience partial or full amnesia for the suggestions. ...

"One participant reported complete amnesia even after the interview and was distraught, permitting only a telephone interview and not accepting an offer to be hypnotized at a later time to help recall what had been forgotten. ...

"... The interviewer told her what had been observed and attempted to breach the amnesia. The subject continued to report complete amnesia.

"Two other participants continued not to remember many of the suggestions but showed no major concern. Waking suggestions to breach amnesia were given, but no further information was obtained.

"Five participants reported feeling that the hypnotist had complete control over their behavior and that they could not resist the hypnotist's suggestions" (p. 664).

In their Discussion, the authors note that in general, when negative experiences occur, they tend to be mild and transient. None of the subjects in this investigation reported some of the negative sequelae reported in earlier literature (headaches, nausea, drowsiness). The few subjects who had strong cognitive distortions following hypnosis were highly hypnotizable, which also was observed in an earlier study published by the first author and her colleagues (Crawford, Hilgard, & Macdonald, 1982, *International Journal of Clinical and Experimental Hypnosis*).

Spontaneous post hypnotic amnesia is one example of cognitive distortion. The authors remarked on the rather high incidence of spontaneous amnesia for some specific suggestions (22.7%) , which was discovered when friends of the subjects described to them what they had done on stage. In an experimental study by Hilgard and Cooper (1965), only 7% of student subjects had spontaneous amnesia (though 35% had amnesia following suggestions for posthypnotic amnesia). Furthermore, in the Hilgard and Cooper study, hypnotizability correlated with suggested amnesia but not with spontaneous amnesia. Cooper (1972) reviewed the literature on posthypnotic amnesia and observed that spontaneous occurrence is less frequent than suggested amnesia.

Explanations of spontaneous amnesia include ideas that high hypnotizables who experience it are significantly different from those who do not (Chertok, 1981; Weitzenhoffer, 1989); or that it is due to expectancy (Kirsch, 1985); or that it is found in people with a tendency for dissociation in and out of hypnosis, or people who may be prone to repression or dissociative and post-traumatic stress disorders. For reviews of these issues, see Kihlstrom, 1987; Kihlstrom & Hoyt, 1990; Frankel, 1990; Nemiah, 1985; Spiegel, 1990; Spiegel & Cardena, 1991).

The authors note that stage hypnotists, while they may otherwise be ethical, do not provide information to subjects to correct misperceptions about hypnosis. For example, in this study 22.7% of the subjects believed, after the stage hypnosis experience, that the hypnotist had control over their behavior and they couldn't resist the suggestions. "Appropriate guidelines for stage hypnosis (see also Crawford et al., 1982) include screening out participants who are in therapy or counseling, correcting misperceptions about hypnosis among the participants before the hypnosis begins, screening subjects prior to hypnosis, avoiding embarrassing or upsetting suggestions, providing dehypnosis instructions to those who do not remain in hypnosis (or are asked to leave the performance), terminating fully the hypnotic experience, removing all amnesia suggestions and reviewing the events at the end of hypnotic experience, and remaining available afterward for further questions" (p. 666).

Peterson, Patricia; Coe, William C. (1991, April). Negative sequelae to hypnosis: A function of expectations?. [Paper] Presented at the annual meeting of the Western Psychological Association.

## NOTES

Researchers have theorized that the ways in which hypnotic subjects respond may result from their expectancies of the experience. If so, it seems likely that warning subjects of possible negative aftereffects before they are hypnotized could elicit subsequent reports of such effects.

Three groups of subjects were given varied expectancies prior to a hypnotic induction and scale: (A) a specific warning of a 50% chance of negative aftereffects, (B) a vague warning of negative aftereffects, and (C) no mention of aftereffects. Subjects later reported positive, negative, sleep related, and bodily change sequelae.

The findings were in the expected direction in that Group A reported more negative sequelae than Groups B or C. However, Group C (the controls) also reported more negative sequelae and bodily changes than Group B. The inadvertent addition of a positive expectancy administered in the Group B scenario may have acted as a confound and caused that group's lower level of negative sequelae.

## 1990

Gravitz, Melvin A. (1990). Adverse behavior associated with the eye-roll test of hypnotizability: Clinical and theoretical considerations. Psychotherapy: Theory, Research and Practice, 27, 267-270.

For 15 years, subjects' response to the eye-roll test has been used to measure susceptibility without adverse effects. A case is described of a hospitalized young man who displayed dissociative behavior when asked to do the eye-roll as part of a diagnostic evaluation. Etiological and theoretical considerations, and implications for therapeutic strategy are discussed.

Lazarus, A. A.; Mayne, T. J. (1990). Relaxation: Some limitations, side effects, and proposed solutions. Psychotherapy, 27, 261-266.

Deep-muscle relaxation has been widely regarded as anxiety inhibiting, and the relaxation response an antidote to tension and stress. However, some relaxation techniques have been shown to have negative effects. These include relaxation-induced anxiety and panic, paradoxical increases in tension, and parasympathetic rebound. Specific indications and contraindications are discussed

## NOTES

The following unpleasant side effects have been observed: "unpleasant sensations of heaviness, warmth, perspiration, tingling, numbness, dizziness, floating, coolness; paradoxical increases in tension; rapid heart rate; feelings of physical and psychological vulnerability; depression; fear of losing control; depersonalization; dissociation; myoclonic jerks; spasms; headache; akathisia; negative auditory, gustatory, and olfactory reactions; intrusive images and thoughts; anxiety; irritability; guilt; regressive urges; hallucinations; and panic" (p. 261).

People have been observed to have "negative or untoward reactions to meditation ([Lazarus, 1976]; French, Schmid & Ingalls, 1975; Kennedy, 1976), relaxation (Borkovec & Grayson, 1980; Carrington, 1977; Edinger & Jacobsen, 1982), and biofeedback (Miller & Dworkin, 1977). In his doctoral dissertation Heide (1981) found that more than half of his subjects under focused relaxation reported increased tension due to the relaxation session. Recently, the concept of RIA--relaxation-induced anxiety--has appeared in the literature (Heide & Borkovec, 1983; 1984). Clients suffering from generalized anxiety appear to be especially prone to RIA" (pp. 261-262).

Others have suggested that relaxation may be counterindicated for asthmatics, because the small airways dilate with sympathetic nervous system arousal. The specific instructions of autogenic training may be counterindicated for patients with gastrointestinal disease because focusing on a sense of warmth in the abdomen tends to produce more peristalsis, increased blood flow in the gastric mucosa,

and acidity in the gastric juice (Luthe & Schultz, 1979). Even the standard relaxation therapy for tension headache (as well as other pain problems) is being replaced with cognitive behavioral therapy, which may have relaxation as only one component. "The point again is that relaxation is not a panacea, and that an informed selection and administration of treatments is mandated, even in disorders where relaxation has traditionally been held second only to medication" (p. 264).

Interviews suggest people with relaxation induced anxiety (RIA) fear losing control. "Some are afraid of heightened arousal; others refer to helplessness, depression, some unidentified internal or external danger, a fear of going crazy, a negative association with anesthetics, a fear of falling from heights, plus any number of catastrophic expectations (Chambless & Goldstein, 1980)" (p. 264). Lazarus recommends that if someone displays RIA, the therapist may try alternative techniques, which might include for example tensing-relaxing muscles, passive receptivity, positive or pleasant imagery, focus on breathing, subvocal monotonous chant or mantra, or the Vipassana meditation practice of achieving awareness of spontaneous sensations and thoughts. The relationship with the therapist, differences in room illumination, amount of time per session, and sitting or reclining may be important.

"If a therapist deduces that a client is likely to derive benefit from relaxation training, three obvious questions arise: (1) Which of the many types of relaxation training programs is this particular client likely to respond to? (2) How frequently, and for what length of time, should the client practice the selected relaxation sequence? (3) Will treatment adherence be augmented or attenuated by the supplementary use of cassettes for home use?" (P. 262).

The authors describe their Structural Profile Inventory (SPI; Lazarus, 1989), a 35- item questionnaire, which may be used to predict the preferred sequences and forms of relaxation to employ with individual clients. "A predominantly imagery/sensory reactor, for example, may do well with visualization and autogenic training, whereas a highly active/cognitive client might be better advised first to engage in strenuous exercise followed by calming self-statements (Zilbergeld & Lazarus, 1988)" (p. 265). They suggest that for those patients who are perfectionistic and simply can't "just let go," they might simply fill a bathtub with warm water and sit in it for 10-20 minutes and rest with a magazine (rather than "relax") once or twice a day.

Page, Roger A.; Handley, George W. (1990). Psychogenic and physiological sequelae to hypnosis: Two case reports. American Journal of Clinical Hypnosis, 32 (4), 250-256.

Two cases of hypnotic sequelae occurring in a research context (with a non-clinical college population) are reported. Case 1 was a male who experienced retroactive amnesia following hypnosis: He was unable to recall familiar telephone numbers later that day. This was not a continuation of an earlier confusion or drowsiness (as is often found) since he indicated he was wide awake following hypnosis. Two parallels exist with previous reports: unpleasant childhood experiences with chemical anesthesia and a conflict involving a wish to experience hypnosis but a reluctance to relinquish control. Case 2 was a female who, while in hypnosis, experienced an apparent epileptic seizure that had characteristics of both petit mal and grand mal seizures. Although having a history of epilepsy, she had not had a seizure in 7 years. We suspect that the seizure was psychogenic and may have been triggered by wording used in the hypnotic scale or other similarities. Possible mechanisms are discussed and preventative recommendations are made.

1989

Brentar, J.; Lynn, Steven J. (1989). 'Negative' effects and hypnosis: A critical examination. British Journal of Experimental and Clinical Hypnosis, 6, 75-84.

Reviews evidence concerning if hypnosis is responsible for unwanted or negative posthypnotic effects, concluding that support for this hypothesis is lacking. Many such investigations are either anecdotal reports or are marred by methodological flaws that render the interpretation of posthypnotic experiences problematical. Controlled research has not provided support for the hypothesis that hypnosis per se is responsible for certain subjective changes which accompany it, or that hypnosis is more stressful or anxiety provoking than other common experiences encountered by subjects. Although a small percentage of subjects appear to experience posthypnotic reactions, they are typically fleeting, and the link between hypnotic procedures and negative effects has not been adequately substantiated. Indeed, routine hypnosis is typically harmless and is perceived by many subjects as a pleasant, positive experience.

Rickard, Henry C.; McCoy, Anthony D.; Collier, James B.; Weinberger, Martha B. (1989). Relaxation training side effects reported by seriously disturbed inpatients. Journal of Clinical Psychology, 45, 446-450.

Examined the extent to which 50 seriously disturbed inpatients (aged 24-74 years) reported side effects related to passive and progressive relaxation training. Questionnaire results show that most Subjects reported few side effects. When side effects were reported, intrusive thoughts were most frequent. There was no significant difference in side effects reported in response to the 2 training procedures.

1988

MacHovec, Frank J. (1988). Hypnosis complications, risk factors, and prevention. American Journal of Clinical Hypnosis, 31, 40-49.

There is a substantial body of clinical and experimental research data documenting the incidence of mild to severe after effects coincident with the use of hypnosis in persons with no prior history of similar medical or mental problems. This article provides an overview of relevant clinical and experimental research and a review of pertinent literature since 1887. Subject, hypnotist, and environmental risk factors are listed, a definition and classification system for hypnosis complications is suggested, and recommended preventive practices are described.

1986

Echterling, Lennis G.; Emmerling, David A. (1986, August). Contrasting response expectancies of stage and clinical hypnosis. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

Although both are labeled hypnosis, the experience, behaviors, and effects of hypnosis in stage and clinical settings differ dramatically. We explore these differences between stage and clinical hypnosis and conceptualize them within the framework of nonvolitional response expectancy. Two methods were used to gather information for this study. First, we observed the contrasting styles, strategies and situations in both stage and clinical hypnosis. Second, we identified and interviewed individuals who had experienced trance in both clinical and stage settings. We found significant differences in hypnotist style, subject attribution of causality, trance depth, trance behavior, and outcome. Our discussion contrasts the differing response expectancies of stage and clinical hypnosis in terms of situation, subject's role, and subject's perception of hypnotizability.

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Judd, Fiona K.; Burrows, Graham D.; Dennerstein, Lorraine (1986). Clinicians' perceptions of the adverse effects of hypnosis: A preliminary study. Australian Journal of Clinical and Experimental Hypnosis, 14, 49-60.

Questionnaires were sent to all members of the Australian Society of Hypnosis and responses obtained from 202 members and associate members who used hypnosis clinically. Respondents' experience in the use of hypnosis and the frequency of use of hypnosis as a treatment modality varied. Overall 43.5% of respondents reported adverse effects with one or more patients over the preceding year. Most adverse effects attributed to hypnosis were transient and included development of panic or extreme anxiety, development of excessive dependence and difficulty in terminating hypnosis. Exacerbation or precipitation of significant depression was an infrequent but serious adverse effect attributed to hypnosis. Other infrequent adverse effects included symptom substitution, acting out behaviour, fantasied sexual seduction, precipitation or worsening of psychotic illness or difficulties in the management of organic conditions. The difficulties were acknowledged of differentiating between the effects of hypnosis itself and other components of the therapeutic transaction, but the results of this survey suggested both that hypnosis be employed clinically by properly trained professionals and that further sensitive clinical research is needed in the area.

LeBoeuf, Alan (1986). Relaxation-induced anxiety in an agoraphobic population. Perceptual and Motor Skills, 62, 910.

Two groups of 14 agoraphobic patients with anxiety attacks were randomly assigned to suggestion-imagery (like hypnosis) and progressive relaxation (with muscle tensing and release). The progressive relaxation group showed greater drop in subjective anxiety, but there was no difference between groups with regard to heart rate. Following the experience, the suggestion-imagery group had more negative responses to : Did you experience anxiety? Did you ever fear losing control? Did you experience any strange sensations during the session? Was the session aversive?

Milne, Gordon (1986). Hypnotic compliance and other hazards. Australian Journal of Clinical and Experimental Hypnosis, 14, 15-29.

Hypnosis is not an external 'force' or 'power' but a special kind of interaction between two persons. The outcome depends on the skill and intentions of the hypnotist and the responsiveness and compliance of the subject. Skill may be marred by procedural errors, 'sins of omission'; intentions by a

self-centred rather than a patient- centred approach, 'sins of commission'. A hazard peculiar to the use of hypnosis is a fallacious belief in the power it enables the operator to wield over the subject.

1985

Fellows, Brian J. (1985). Hypnosis teaching and research in British psychology departments: Current practice attitudes and concerns. British Journal of Experimental and Clinical Hypnosis, 2 (3), 151-156.

The author mailed a questionnaire to 58 departments of psychology to determine the extent/nature of hypnosis teaching and research, and attitudes toward teaching and research on hypnosis. The author noted a general anxiety about teaching students how to do hypnosis (as contrasted with learning about hypnosis). "Some of the anxieties which departments have about the teaching of hypnosis seem to stem from some rather ancient and invalid conceptions about the nature of hypnosis and what it can do" (p. 153). The author also relates his personal experience teaching undergraduates "something about the procedures and phenomena which have been traditionally associated with hypnosis" (p. 153). They may use one of the standard hypnotizability scales, study a particular hypnotic phenomenon such as ideomotor action or age regression, or study an empirical issue such as facilitation of recall. He reports not meeting with "any particular difficulties," but also that he has seen two problems: the student who is anxious about doing the procedure, and an occasional subject who reports the experience was unpleasant or disturbing--e.g. during age regression. He reports teaching students to handle these events in a normalizing manner. J. Holroyd

1984

Fewtrell, W. E. (1984). Relaxation and depersonalization. British Journal of Psychiatry, 145, 217.

#### NOTES

In 40 anxious patients treated with Jacobson's progressive relaxation, 7 reported distress (something like Heide's Relaxation Induced Anxiety). Looking retrospectively at the clinical notes, these seven usually reported symptoms of a depersonalization syndrome prior to treatment. The author administered Dixon's (1963) Self Alienation Questionnaire, which purports to measure depersonalization. The patients who had distress scored significantly higher on Self-Alienation than ten randomly selected control subjects who had responded to the relaxation procedures without problems (adverse effects patients' mean = 32; controls' mean = 22; P = .05).

This article presents evidence that the presence of relaxation may distress depersonalized patients, presumably exacerbating feelings of unreality.

Heide, F. J.; Borkovec, T. D. (1984). Relaxation-induced anxiety: Mechanisms and theoretical implications. Behaviour Research and Therapy, 22, 1-12.

Literature evidence documenting the occurrence of relaxation-induced anxiety is reviewed, and several hypothesized mechanisms to explain the phenomenon are discussed. Possible avenues for circumventing the problem in therapy are offered. Finally, a theoretical model is presented wherein the phenomenon is viewed with a broader framework designed to explain the development and maintenance of the more generalized anxiety disorders. That framework emphasizes the emergence of fear of somatic anxiety cues and fear of loss of control from more fundamental interpersonal anxieties.

Kleinhaus, Moris; Beran, Barbara (1984). Misuse of hypnosis: A factor in psychopathology. American Journal of Clinical Hypnosis, 26, 283-290.

Six cases of posthypnotic trauma are presented to illustrate possible psychopathologic symptoms that may be exhibited in Ss following the misuse of hypnosis, particularly for a stage performance. Medical professionals must be made aware of the possibility of immediate as well as long-term deleterious effects that may follow misuse of hypnosis so that those cases which come to the attention of the physician will be properly diagnosed and treated.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott (1984). The direct hypnotic suggestion of altered mind/body perception. American Journal of Clinical Hypnosis, 27, 95-102.

Attentional and emotional shifts are examined following a hypnotically suggested out-of-body experience (OBE). Two hypotheses were tested: 1) that the OBE is maintained by blocking the perception of body-relevant stimulation at a sensory level; 2) that a hypnotically produced OBE is an emotionally neutral or even pleasant experience. Fourteen hypnotic subjects and 15 simulating Ss were administered a standardized induction followed by suggestions for an OBE. Geometric figures were then presented to the body but not to the "awareness." Although hypnotic Ss reported that they could not see the information, they still correctly "guess" the identity of the figures beyond chance levels. Thus, body-relevant information was obviously not blocked at a sensory level, but was kept out of awareness by some other mechanism. In addition, a significantly greater number of hypnotized than simulating Ss reported the OBE to be troubling and unpleasant, despite explicit suggestions for a positive experience. The potentially disturbing nature of OBEs and ways to minimize risk of negative affect are discussed.

Smith, Mark Scott; Kamitsuka, Michael (1984). Self-hypnosis misinterpreted as CNS deterioration in an adolescent with leukemia and Vincristine toxicity. American Journal of Clinical Hypnosis, 26 (4), 280-282.

A thirteen year-old girl with leukemia was taught self-hypnosis techniques for symptom control. She was hospitalized with probable vincristine toxicity and a superimposed hyperventilation syndrome. Her spontaneous use of the self-hypnosis technique was misinterpreted as central nervous system deterioration until her apparently comatose state resolved with suggestions from the therapist.

1983

Heide, F. J.; Borkovec, T. D. (1983). Relaxation-induced anxiety: Paradoxical anxiety enhancement due to relaxation training. Journal of Consulting and Clinical Psychology, 51, 171-182.

The present study was designed to document the occurrence of relaxation-induced anxiety. Fourteen subjects (7 male, 7 female) suffering from general tension and significant levels of anxiety were given one session of training in each of two relaxation methods, progressive relaxation and mantra meditation; order of presentation was counterbalanced. Four of the subjects plus one other who terminated prematurely displayed clinical evidence of an anxiety reaction during a preliminary practice period, while 30.8% of the total group under progressive relaxation and 53.8% under focused relaxation reported increased tension due to the relaxation session. Progressive relaxation produced greater reductions in subjective and physiological outcome measures and less evidence of relaxation-induced anxiety, and the phenomenon was not clearly evident from physiological measures and from subjective ratings even in this clinical population.

1982

Crawford, Helen J.; Hilgard, Josephine R.; MacDonald, Hugh (1982). Transient experiences following hypnotic testing and special termination procedures. International Journal of Clinical and Experimental Hypnosis, 30, 117-126.

For those who are responsive to hypnosis, the experiences can be unusual and involving. It is not surprising, therefore, that such experiences in response to tests of susceptibility may not be fully terminated when the hypnotic sessions end. In order to study the initial persistence of the effects, following administration of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) and the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and E. R. Hilgard (1962), 107 college Ss were interviewed about their hypnotic experiences and subsequent experiences related to hypnosis. 72% of Ss reported feelings of relaxation and being rested following SHSS:C. Only 5% reported minor transient posthypnotic experiences following HGSHS:A, while 29% of Ss reported these feelings following SHSS:C. Except in 1 case, cognitive distortions or confusion were reported only following the more cognitively oriented SHSS:C by Ss who scored significantly higher on cognitive items than those Ss who reported feeling drowsy. A special termination procedure involving exercise and conversation had no significant effect on the number of transient experiences. Such minor transient experiences are not a risk to Ss and any slight discomfort or uneasiness they cause can easily be dealt with by a well-trained hypnotist.

1981

leinhauz, Moris; Beran, B. (1981). Misuses of hypnosis: A medical emergency and its treatment. International Journal of Clinical and Experimental Hypnosis, 29 (2), 148-161.

Hypnosis is an intense interpersonal relationship requiring 2-way respect and involvement. Inadequate understanding of this dynamic relationship, and a consequent inability to cope with its potential dangers, may result in posthypnotic trauma. Unless treated carefully by a hypnotherapist who is experienced in both the techniques of dehypnotization and the utilization of psychotherapy, such traumas may persist for a very long time. In this paper, one striking case illustrates mishandling of the hypnotic event and immediate posthypnotic treatment and details the procedure by which successful treatment was eventually determined.

1979

Kleinhauz, Moris; Dreyfuss, Daniel A.; Beran, Barbara; Goldberg, Tova; Azikri, David (1979). Some after-effects of stage hypnosis: A case study of psychopathological manifestations. International Journal of Clinical and Experimental Hypnosis, 27, 219-226.

Some deleterious effects of stage hypnosis are described through a case report. A middle-aged respected member of a kibbutz who became the subject of an evening's entertainment by a stage hypnotist suffered a posttraumatic neurosis. The stage hypnotist, unaware of her traumatic childhood during World War II when she and her sister were hidden by Gentiles, requested her to regress to that age. This reactivated a former successfully repressed trauma and acted as a precipitating factor to the development of a traumatic neurosis which was left untreated. She was self-referred for adequate psychiatric treatment 11 years later. This treatment successfully restored her to an adequate level of functioning.

1978

Pettinati, Helen M.; Evans, Frederick J. (1978). Posthypnotic amnesia: Evaluation of selective recall of successful experiences. International Journal of Clinical and Experimental Hypnosis, 26 (4), 317-329.

Following suggestions of posthypnotic amnesia, Ss who are unresponsive to hypnosis tend to recall those suggestions that they passed rather than the ones that they failed; similar trends in hypnotizable Ss have been equivocal (Hilgard & Hommel, 1961; O'Connell, 1966). Modifications on the present selective recall index were developed to take into account the differences in the total recall pools available to hypnotizable and un hypnotizable individuals (who also differ in the total number of successful experiences), for the purpose of clarifying the amount of potential bias in the scoring procedure that may be accounting for previous ambiguous results. A sample of 88 volunteers were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Both high and low hypnotizable Ss recalled more passed experiences during posthypnotic amnesia than would be expected by chance when alternative scoring procedures were used. This result is in accord with findings in other contexts in the normal memory literature. Although highly hypnotizable Ss were less likely to selectively recall successful experiences than were low hypnotizable Ss using 5 different scoring procedures, the differences between high and low Ss were not significant.

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

#### NOTES

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

Duncan, B.; Perry, C. (1977). Uncancelled hypnotic suggestions: Initial studies. American Journal of Clinical Hypnosis, 19, 166-176.

Despite considerable anecdotal evidence of uncancelled hypnotic suggestions persisting posthypnotically, no laboratory investigation of the phenomenon's parameters has ever been attempted. From the literature on posthypnotic suggestion, one might expect uncancelled suggestions to have a quasi-automatic component and to be affected additionally by social, expectational and interactional variables. The report summarizes three initial investigations of parameters that may affect the carry over of uncancelled suggestions into the posthypnotic period. IN the first two, the incidence of uncancelled suggestions influencing behaviour following hypnosis was low. In a third experiment, there was a marked increase in the number of Ss manifesting the phenomenon. This appeared to be related to the hypnotist's instruction that Ss would experience all effects suggested for as long as the hypnotist asked them to. The finding is interpreted in the light of evidence indicating that highly hypnotizable Ss may imbue the hypnotist's communications with special meaning. The role of Ss motives, attitudes and sets, and of differences in specialized skills among highly hypnotizable Ss are also discussed as a basis for future investigation of other parameters affecting the phenomenon's occurrence.

Ryken, Klazina; Coe, William C. (1977, August). Sequelae to hypnosis in perspective. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

Sequelae associated with hypnosis are generally described in clinical contexts. The present study, however, examined the aftereffects of hypnosis in an experimental context, using appropriate control groups for comparison. A standard, self-report questionnaire was administered to six groups of subjects: two groups had been hypnotized and four groups had not been hypnotized. The results indicated that hypnosis created no more negative sequelae than most of the non-hypnotic conditions and actually resulted in more positive outcomes than some of the non-hypnotic conditions.

1976

Stewart, C. G.; Dunlap, W. P. (1976). Functional isolation of associations during suggested posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 24, 426-434.

A search was made for functional isolation effects of hypnotic amnesia that do not derive directly from either the explicit content or simple demand characteristics of amnesia instructions. The frequency of response repetition on a word association task was investigated as a function of posthypnotically suggested recall amnesia during the normal waking state. A trace of evidence for predicted amnesia effects occurred with only 1 out of 6 intensively trained, highly susceptible subjects. The results are compatible with the view that (a) suggested recall amnesia produces a disturbance of the retrieval process similar to source amnesia, and (b) indirect associational measures then merely serve to stimulate retrieval.

1974

Hilgard, Josephine R. (1974). Sequelae to hypnosis. International Journal of Clinical and Experimental Hypnosis, 22 (4), 281-298.

An interview sample of 120 university students yielded evidence that 15% had some kind of reaction to hypnosis that endured an hour or longer following an individual Form C session subsequent to group hypnosis. If those with short-term reactions lasting from 5 minutes to 1 hour are added, the number with some lingering effect rises to 31%. Although these symptoms following laboratory hypnosis were not found to be severe, their presence is of importance both for theoretical and practical reasons. Although as found in an earlier study, sequelae to hypnosis were more frequent among those with unpleasant reactions to earlier childhood anesthesia, the difference did not reach statistical significance.

1970

Fromm, Erika (1970). Age regression with unexpected reappearance of a repressed childhood language. International Journal of Clinical and Experimental Hypnosis, 18, 79-88.

Describes the case of a 26-yr-old, 3rd-generation Japanese-American who thought he knew no Japanese. When hypnotically age-regressed to levels below age 4, he spontaneously and unexpectedly spoke Japanese, while only English was spoken at the adult and age-regression levels above 4 yr. The psychodynamics of the S's repression of the childhood language and questions pertaining to the nature and theory of age regression are discussed. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1968

Faw, Volney; Sellers, David J.; Wilcox, Warren W. (1968). Psychopathological effects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 26-37.

The probability that hypnotic induction produces psychopathological effects has not been experimentally determined. The present study hypothesizes various negative effects following hypnosis such as increased signs of personality disturbances, increased need for medical attention, greater tendencies toward suicide, and negative effects among the more maladjusted persons of the population sample. 107 college students were assigned at random to experimental and control groups. The experimental group was hypnotized 3 times in successive weeks. A comparison between control and experimental groups in respect to pre- and post-MMPI score differences plus a follow-up with the college counseling center and infirmary for a 90-day period following induction led to the rejection of the hypotheses. A comparison of measures yielded some significant differences in favor of the

experimental group. It is concluded that there are nondetrimental effects when hypnosis is used with a normal college population.

Sakata, Kenneth I. (1968). Report on a case of failure to dehypnotize and subsequent reputed aftereffects. International Journal of Clinical and Experimental Hypnosis, 16 (4), 221-228.

The failure of a hypnotized S to execute a suggested task may have contributed to a failure to dehypnotize, the repression of the unsuccessful task after awakening, and a prolongation or reinstatement of hypnosis 3 days later. Some interview material and procedures utilized in handling the problems encountered are presented. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Cooper, L. M. (1966). Spontaneous and suggested posthypnotic source amnesia. International Journal of Clinical and Experimental Hypnosis, 14 (2), 180-193.

The occurrence of spontaneous and/or suggested posthypnotic source amnesia was investigated in a sample of 93 introductory psychology students. Ss were randomly assigned to 1 of 2 groups, served as Ss on 2 successive days, and were administered the Stanford Hypnotic Susceptibility Scale, Form C. For 1 group, source amnesia was suggested on 1 day and was not suggested on the 2nd day; this order was reversed for the 2nd group. 2 Ss (2%) showed spontaneous source amnesia on 1 of the 2 days and a significantly larger number, 8 (9%), showed suggested source amnesia. With a less rigid criterion of scoring source amnesia, the frequency of spontaneous source amnesia increased to 15% and suggested source amnesia to 11%. Spontaneous source amnesia correlated .57 with susceptibility, and suggested source amnesia, .34 with susceptibility. A correlation of .48 was found between recall amnesia and spontaneous source amnesia and .49 between recall amnesia and suggested source amnesia. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Kost, Paul F. (1965). Dangers of hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (4), 220-225.

The various kinds of complications which have been associated with hypnosis are reviewed, and it is concluded that they have been greatly exaggerated. The dangers that are involved in hypnosis occur through ignorance, overzealousness, lack of understanding of the bases of interpersonal relationships, and the irresponsible acts of those who would use the technique for entertainment. [Author's Abstract]

Orne, Martin T. (1965). Undesirable effects of hypnosis: The determinants and management. International Journal of Clinical and Experimental Hypnosis, 226-237.

Various kinds of complications arising from the use of hypnosis are reviewed. The distinction is drawn between the induction of hypnosis when it is perceived as an episodic event, as in a laboratory context, versus the effect when it is perceived as leading to permanent changes, as in a therapeutic context. An attempt is made to draw these and other distinctions in order to understand better the possible sources of difficulties. [Author Abstract]

SEXUALITY

2001

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. ([available online:] <http://www.iuniverse.com/bookstore/marketplace>))

#### NOTES

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

1999

Kirsch, Irving; Lynn, Steven Jay (1999). Automaticity in clinical psychology. American Psychologist, 54 (7), 504-515.

The authors provide an overview of the literature on the ability of response expectancies to elicit automatic responses in the form of self-fulfilling prophecies and link it to the broader psychological investigation of automatic processes. The authors review 3 areas of research in which response expectancies have been shown to affect experience, behavior, and physiology: placebo effects, the effects of false biofeedback on sexual arousal, and the alteration of perceptual and cognitive functions by hypnotic and nonhypnotic suggestion. Also reviewed are data suggesting that all behavior, including novel and intentional behavior, is initiated automatically. Following this review, the authors summarize some of the ways in which knowledge of response expectancy effects and other automatic processes that influence experience and behavior can enhance clinical practice.

#### NOTES

Although expectancy accounts for some variance in the development of classical hypnosis effects, it is also true that "experimental data suggest that faking accounts for relatively few of these effects" (p. 507). "The best predictors of hypnotic suggestibility are waking suggestibility and response expectancy, and expectancy remains a significant predictor of hypnotic response even with waking suggestibility controlled (Braffman & Kirsch, in press; Kirsch, 1997)" (p. 508). The authors theorize that automatisms (like Chevreul pendulum) are "responses that are primed for automatic activation by two response sets: an intention and an expectancy for their occurrence" (p. 508). They suggest that most behavior is routine, virtually automatic, because cognitive structures like schemas, scripts, or plans that are outside immediate awareness trigger the behavior. They cite research by Libet (1985) and hypotheses developed by Nisbett & Wilson (1977) and Dennett (1991), concluding that "the feeling of will is a judgment, rather than an introspected content" (p. 509). The authors discuss the Chevreul pendulum phenomenon in terms of expectancy theory and explore how their theory would apply to psychotherapy.

1995

Kirsch, Irving; Lynn, Steven Jay (1999). Automaticity in clinical psychology. American Psychologist, 54 (7), 504-515.

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#### 1995

American Medical Association Council on Scientific Affairs (1995). Report on memories of childhood abuse. International Journal of Clinical and Experimental Hypnosis, 43 (2), 114-117.

#### NOTES

"The AMA considers the technique of 'memory enhancement' in the area of childhood sexual abuse to be fraught with problems of potential misapplication" (p. 114). "Most controversial are those 'memories' that surface only in therapy and those from either infancy or late childhood (including adolescence)" (p. 114)

Ganaway, George K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. International Journal of Clinical and Experimental Hypnosis, 43 (2), 127-144.

It is contended that prevailing exogenous trauma theory provides in most cases neither a sufficient nor a necessary explanation for the current large number of diagnosed cases of dissociative identity disorder (multiple personality disorder) and related dissociative syndromes purported to have arisen as a response to severe early childhood physical and sexual abuse. Relevant aspects of instinctual drive theory, ego psychology, object relations theory, self psychology, social psychological theory, sociocultural influences, and experimental hypnosis findings are drawn on to demonstrate the importance of adopting a more integrative theoretical perspective in the diagnosis and treatment of severe dissociative syndromes. Further cooperative experimental and clinical research on the etiology, prevalence, and clinical manifestations of the group of dissociative disorders is strongly encouraged.

Guyer, Charles G. II; Van Patten, Isaac T. (1995). The treatment of incest offenders -- a hypnotic approach: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 266-273.

Incest has become more prominent in public awareness over the past 15 years. The major focus of this interest has been on the incest survivor. The incest offender has received less attention. A hypnotic

approach to treating incest offenders is outlined that involves a seven-stage approach. A case example is presented and future research directions suggested.

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

Levitt, Eugene E.; Pinnell, Cornelia Mare (1995). Some additional light on the childhood sexual abuse-  
psychopathology axis. International Journal of Clinical and Experimental Hypnosis, 43 (2), 145-162.

This exposition is an attempt to unravel the complexities of the relationship between childhood sexual abuse and adult psychopathology. Four facets of the relationship are examined in some detail: (a) the extent of childhood sexual abuse; (b) the probability that sexual abuse in childhood will result in psychopathology in the adult; (c) the reliability of early life memories in later life; and (d) the role of recovered memory of trauma in the healing process. The conclusions of this logico-empirical analysis are that first, government statistics tend to underestimate the extent of childhood sexual abuse, whereas independent surveys tend to overestimate it. Estimating prevalence is further complicated by variations in the definitions of key terms. Possibly the only safe conclusion is that true prevalence cannot be reliably determined. Second, empirical investigations of childhood sexual abuse conclude that not all victims are emotionally injured. A substantial number of these investigations find that a majority of victims suffer no extensive harm. Other variables such as family dynamics are involved; there may be only a few cases in which emotional harm results from sexual abuse as a single factor. Third, memory research suggests that memory in general is a dynamic, reconstructive process and that recall of childhood events is particularly vulnerable to distortion. Memory cannot dependably produce historical truth. Last, there is some clinical evidence that abreaction of a traumatic event in adulthood may have a remediative effect. Similar evidence for childhood trauma is lacking. The belief in the healing effect of recalling and reliving a childhood trauma depends on the therapist's orientation

Nagy, Thomas F. (1995). Incest memories recalled in hypnosis -- a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (2), 118-126.

Accuracy of repressed memories recovered in hypnosis cannot be reliably determined with any greater certainty than non-hypnotically recalled events. Therefore, the practice of therapists' accepting hypnotically enhanced memories as veridical, absent corroborating evidence, is not advocated. A 52-year-old woman with a 27-year history of panic attacks and sleep disorder inadvertently recovered incest memories in hypnosis. Photographs and remembered events by other family members were thought by the patient to provide general support although they did not constitute actual proof of abuse. Implications are discussed.

Smith, William H. (1995). Hypnosis in the treatment of sexual trauma: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 43 (4), 366-368.

## NOTES

Author was asked to respond to two questions:

Is there a role for hypnosis in work with rape victims?

How does the therapist avoid the pitfalls of voyeurism and revictimization?

1994

Adrian, Cheri (1994, August). Sexual feelings in hypnosis: Managing therapeutic boundaries in hypnotic work. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

Therapist countertransference has been little addressed in discussions of hypnosis, particularly the sexual feelings that may be evoked in therapists in the hypnotic context. These are some of the most disturbing and problematic feelings therapists can experience toward patients, and they are little addressed in training. This issue is important both because of our increasing efforts to prevent sexual boundary violations in therapy and because therapist sexual feelings, like other countertransference feelings, can have important clinical meanings that are often avoided or ignored. This discussion defines the nature and purposes of patient-therapist boundaries. It describes the various dynamics which have been identified in therapists who become confused about sexual boundaries and proceed to mismanage them. It then elaborates the ways that using hypnosis may create special vulnerability for the therapist, not only to experiencing sexual feelings toward patients, but to becoming confused about their meaning and relevance to treatment. The discussion focuses attention on the origins and clinical significance of therapist sexual feelings, and acknowledges that such feelings may serve both awareness enhancing and defensive functions in the therapeutic process. A clinical case example illustrates various kinds of sexual feelings therapists may experience, the many meanings therapist sexual feelings may have, the various discomforts they typically generate, and the impulses to avoidance or acting out they may provoke. Further discussion addresses both clinically appropriate and inappropriate ways of managing boundaries in the presence of sexual arousal, and of utilizing sexual feelings as a means of deepening clinical understanding and of directing treatment. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

Bloom, Peter B. (1994). Clinical guidelines in using hypnosis in uncovering memories of sexual abuse: A master class commentary. International Journal of Clinical and Experimental Hypnosis, 42 (3), 173-178.

## NOTES

Gives case example and clinical guidelines for using hypnosis in uncovering memories of sexual abuse.

1. In medical practice, "Primum non nocere," i.e. "First do no harm."
2. "No therapist should ever, either directly or indirectly, suggest abuse outside of a specific therapeutic context--certainly not to a client who is on the phone making a first appointment!"
3. "A therapist must not jump quickly to the conclusion that abuse occurred simply because it is plausible."
4. "A therapist should never simply assume that a client who cannot remember much from childhood is repressing traumatic memories or is in denial."
5. "Remember 'a client is most vulnerable to suggestion and the untoward influence of leading questions when therapy begins to delve into painful life situations from the past, particularly from childhood.'"
6. "Therapists ... should be cautious about suggesting that clients cut off communication with their families."
7. "Therapists should reconsider the 'no pain, no gain' philosophy of treatment."
8. "The context of therapy is as important as the content."
9. "Tolerate ambiguity."

(Sincerity and conviction on the part of the patient reporting abuse are not in and of themselves reason

to believe the material.) 10. "Respect the current science of memory." 11. "Maintain responsibility for making the diagnosis and choosing the treatment." 12. "Pursue alternative diagnoses to account for the symptoms." 13. "Historical and narrative truth: Understand the difference."

#### COMMENT

The tenet that insight is necessary for change and growth is not true. Change can occur without insight, although insight may be helpful in maintaining change once it has occurred.

#### SUMMARY

These guidelines are presented to enhance safe practice, however, clinicians should use their own judgement to determine the best path to follow with each patient.

#### NOTE

Guidelines 1, 8, 9, 10, 11, 12, and 13 are those of Peter B. Bloom. Those labeled as Guidelines 2, 3, 4, 5, 6, and 7 were taken with permission from Yapko, M. (1993 September/October). "The seductions of memory. The false memory debate." *Family Therapy Networker*, 17, pp. 30-37. All discussions, however, are those of Peter B. Bloom.

Bowers, Kenneth S. (1994, October). Bringing balance to controversy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Skeptics argue that concept of "repression" has no scientific merit, though even if a valid concept, it wouldn't validate all memories recovered. Skeptics regard laboratory evidence as essential, while clinicians are impressed by case reports. See Polonyi, Personal Knowledge.

It is not reasonable to say there is no evidence for fugue states, when seeing one, if it has not been demonstrated in the laboratory. But you can investigate some of the phenomena in the laboratory.

Most of the time it is an affectively loaded idea that is repressed; in contrast, trauma usually lead to intrusions into consciousness. So repression of a traumatic event may be a rare way to deal with the event.

Claims for repression and ESP differ in that there are probably observable mechanisms in the former (e.g. thought avoidance). If a person ejects thoughts about a topic frequently enough, the ejections become automatic. Freud's original description of repression used the word "intentional" and it was a footnote that took out that idea. (See Erdelyi's publications).

Recent research we conducted on intuition and on problem solving is relevant to this problem.

[The remainder of Bowers' presentation is not summarized here.]

Loftus, Elizabeth; Polonsky, Sara; Fullilove, Mindy Thompson (1994). Memories of childhood sexual abuse: Remembering and repressing. Psychology of Women Quarterly, 18, 67-84.

Women involved in out-patient treatment for substance abuse were interviewed to examine their recollections of childhood sexual abuse. Overall, 54% of the 105 women reported a history of childhood sexual abuse. Of these, the majority (81%) remembered all or part of the abuse their whole lives; 19% reported they forgot the abuse for a period of time, and later the memory returned. Women who remembered the abuse their whole lives reported a clearer memory, with a more detailed picture. They also reported greater intensity of feelings at the time the abuse happened. Women who remembered the abuse their whole lives did not differ from others in terms of the violence of the abuse or whether the violence was incestuous. These data bear on current discussions concerning the extent to which repression is a common way of coping with childhood sexual abuse trauma, and also bear on some widely held beliefs about the correlates of repression.

#### NOTES

In previous research, it was reported that violent or incestuous abuse is particularly susceptible to repression. This study differs from previous investigations in the definition of violence. In the present study, 'violence' is defined as any act involving vaginal, oral, or anal sex. Earlier research defined 'violence' as involving sexual assault with physical injury or fear of death.

Depending on the definition of repression, a sizeable minority (31% or almost 1/5) of this sample forgot their earlier abuse for a period of time. The authors state that this suggests there is little 'robust repression' in this sample. They cannot rule out the possibility that some women who were abused still, to this day, do not recall the experience; or that some who continue to have memory loss based on organic causes, including blackouts.

The authors suggest that future research in this area use more specific questions, including assessing whether Subjects respond to statements like: "There was a time when I would not have been able to remember the abuse, even if I had been directly asked about it," or "There was a time when I would not have been able to report the abuse because I had no idea that it had even happened to me." Also, when Subjects report that a memory had emerged after a period in which they had no recall, the Experimenter should enquire about how and when the recovered memory occurred.

The authors conclude that remembering abuse is more common than forgetting it.

Mulhern, Sherrill (1994). Satanism, ritual abuse, and multiple personality disorder: A sociohistorical perspective. International Journal of Clinical and Experimental Hypnosis, 42 (4), 265-288.

During the past decade in North America, a growing number of mental health professionals have reported that between 25% and 50% of their patients in treatment for multiple personality disorder (MPD) have recovered early childhood traumatic memories of ritual torture, incestuous rape, sexual debauchery, sacrificial murder, infanticide, and cannibalism perpetrated by members of clandestine satanic cults. Although hundreds of local and federal police investigations have failed to corroborate patients' therapeutically constructed accounts, because the satanic etiology of MPD is logically coherent with the neodissociative, traumatic theory of psychopathology, conspiracy theory has emerged as the nucleus of a consistent pattern of contemporary clinical interpretation. Resolutely logical and thoroughly operational, ultrascientific psychodemonology remains paradoxically oblivious to its own irrational premises. When the hermetic logic of conspiracy theory is stripped away by historical and socio/psychological analysis, however, the hypothetical perpetrators of satanic ritual abuse simply disappear, leaving in their wake the very real human suffering of all those who have been caught up in the social delusion.

Nash, Michael R. (1994). Memory distortion and sexual trauma: The problem of false negatives and false positives. International Journal of Clinical and Experimental Hypnosis, 42 (4), 346-362.

Logically, two broad types of mnemonic errors are possible when adult psychotherapy or hypnosis patients reflect on whether they were sexually abused or not as a child. They may believe that they were not abused when in fact they were (false negative error), or they may believe they were abused when in fact they were not (false positive error). The author briefly reviews the empirical evidence for the occurrence of each of these types of errors, and illustrates each with a clinical case. Further, in considering the incidence, importance, and clinical implications of these errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea is made for theorists and researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

Nash, Michael R. (1994, October). Reports of early sexual trauma: The problem of false negatives and false positives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

The problem of false positives and problem of false negatives are distinct and should be treated differently. The question involves pseudomemories vs repression.

Evidence for false positives: 1. Memory research 2. Developmental psychopathology 3. Contemporary psychoanalytic theory 4. Clinical field studies

No laboratory researcher has produced false memories that are as vivid, or as emotionally loaded as early abuse.

Evidence for repression: 1. "Repressor Personality" research (Weinberger & Schwartz, who view it as a trait rather than a state). 2. Implicit memory research 3. Hypnosis research on memory (see Nash chapter in Fromm & Nash book on research in hypnosis) 4. Clinical field studies

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings.

This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimize the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

#### 1993

Hawkins, Russell (1993). An analysis of hypnotherapist-client sexual intimacy. International Journal of Clinical and Experimental Hypnosis, 41, 272-286.

While sexual interaction between psychologists, physicians, and other health therapists of all kinds and their clients is typically condemned by professional bodies as unethical, the controversy regarding the potential for hypnosis to produce compliant behavior in unwilling or nonconsenting subjects suggests that hypnotherapist-client sex may warrant special attention. Because the experiments required to clarify the potential for hypnosis to potentiate nontrivial compliance are themselves unethical and/or inconclusive, experimental methods cannot be adequately used to clarify this issue. Instead, the matter can be addressed by reference to other forms of evidence, such as the responses of therapists and clients to anonymous surveys and the analysis of cases, that have reached the courts. Consideration of this qualitatively deficient evidence suggests that even if the use of hypnotic suggestion can lead to compliance to sexual demands, overt coercion is seldom used in practice. Social psychological and situational factors are particularly salient in understanding therapist-client sex. The question of whether there are special properties of the dynamics of the hypnotic experience, other than specific coercive suggestion and beyond those typically found in other forms of therapy, is considered. Comparisons are drawn with other examples of socially condemned sex, such as teacher-student sex, sexual harassment in the workplace, incest, and extramarital sex.

London, Ray William (1993, October). Refreshed adult memories: Abuse survivor or therapeutic victim?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

The author addresses four areas: 1. public policy 2. psychological issues 3. legal issues (evidence) 4. how to properly deal with it

A definition of sexual abuse is being applied to behaviors that for years were not considered out of bounds (e.g. entering a bathroom where someone else is). Furthermore, using the word "survivor" for abused people equates patients with survivors of concentration camps, who do not present with repressed memories typically. National incidence of child abuse remains unclear estimates are 6 to 60% of females. In Florida, only 13% of cases reported are confirmed.

Some therapists who specialize in this area in surveys indicate that they have false beliefs regarding memory and effects of trauma.

[These represent only partial notes on a lengthy and substantial paper.]

Perry, Campbell (1993, October). A case of multiple allegations of masturbation by a psychiatrist during hypnotic and/or sodium amytal therapy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

This is a case study of a Canadian psychiatrist accused by 5 women of masturbating during therapy.

Rhue, Judith W.; Lynn, Steven Jay (1993, October). Dissociation, childhood sexual abuse, and fantasy. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

We are reporting on part of an ongoing study, with results still being analyzed. We are looking at imagination, fantasy, and dissociation in abused and non-abused children. This focuses on the relationship between dissociation and fantasy and imagination.

For Janet, dissociation was the primary defense against trauma. [Quotes D. Spiegel also.] There is a body of research on trauma associated with the development of dissociation. 1. NIH found 97% of multiple personality patients reported trauma in childhood; 83% were sexually abused; 75% were repeatedly physically abused; 68% had both types of abuse. 2. Bliss - studied 70 MPDs and found same results. 3. Ross, Norton, and Noosney [?name] - found same results 4. Coombs & Milstein - same

The incidence of retrospective reports of abuse is much lower in other types of patients.

So, what is going on during child abuse? We wanted to look at children experiencing or who recently experienced abuse. Also looked at a children's scale of dissociation symptoms and validated other studies.

We studied 39 children referred to Ohio University College of Osteopathic Medicine; 12 had primary problem as sexual abuse (8 of whom were female). Non-abused Ss were either behavioral or adjustment disorders. 8 reported severe physical abuse. Parents concurred in presence of abuse. Physical abuse consisted of broken bones, burns, etc. Average age 9-10.

Ss were given the Beck Depression Scale, Children's Fantasy Inventory, Meyers' Children's Creative Imagination Scale, Children's Perception Alteration Scale, Figure Drawings, WISC-R, and 2-3 other measures. Research assistants administering the scales didn't know the children's diagnoses.

We found no support for the hypothesis that sexual abuse in childhood is associated with imagination, fantasy, or dissociative tendencies--not surprising considering that only 4 Ss were abused by their

father or stepfather, 2/3 of Ss had fondling as the most severe abuse they had experienced; only 2 had intercourse; 2/3 were abused only 1-3 times. Sexual abuse that is not violent, severe, prolonged, or perpetrated by a parent may not lead to the same problems.

In a sample of women whose assaults were rape, only 25% reported it as rape.

On other hand, physical punishment was more reliably associated with dissociation (.47), imagination and fantasy in absorption scale (.41-.51 with question about using imagination to block awareness of punishment). Physical punishment was associated with increased dissociation.

Sample size is small and the trend is in the predicted direction, so later results may be significant.

Conclusion: measures of fantasy, dissociation, and imagination were correlated. Children's Perception Alteration Scale and the measures of fantasy and imagination were validated. Diverse measures of fantasy were highly correlated with one another.

We need a non-abused sample to add to this research.

The clinical sample had a higher dissociation score than Evers, Sanders, and Shostick's cutting score.

We use 60 as a cutting score (for an abused sample) while they used 55.

#### COMMENTS FROM THE AUDIENCE:

Jack Watkins: the sexual abuse for the most part was not painful. Answer by Rhue: The group of sexual abuse cases includes very wide varieties of experiences; we need to examine that in our research. Also, trauma and the perception of trauma is an individual matter.

Etzel Cardena: We presented a paper at APA in which sexual abuse was a predictor of psychogenic seizures, and most important, the duration of the abuse.

Phyllis Alden: In a recent study in Germany, it was length of time for the abuse that predicted [dissociative symptoms?].

Sivec, Harry; Lynn, Steven Jay (1993, October). Hypnosis and early memories. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

The investigators hypnotized people and asked that they recall their earliest memories. Gorham & Hafner tested highs and lows in 2 sessions, one with a hypnotic induction. Ss in hypnosis reported more themes, whether high hypnotizables or not. Ss might have held back in non hypnosis condition however.

Hypothesized that early memories would have affect-laden materials.

20 Ss in hypnosis group, 20 Ss in relaxation condition, all highs (scored minimum of 9 of 12 on the Harvard Scale). Ss were told they were randomly selected from a pool and that it was a study of personality. Ss were administered a number of questionnaires and tests.

The two groups received either a Stanford Form C Scale induction or a relaxation procedure.

We used the procedure of Bloom [spelling?] for recall of two memories, and to probe the earliest memory. Also to recall two recent memories. Counterbalanced for order of presentation.

Positive affect, negative affect, affect intensity, and primary process were rated; 12 themes were rated. ANOVA was used.

Earliest memory at 3.8 yrs. Next earliest is 7.5 for hypnosis and 5.2 for relaxation groups. 4.3 is earliest for hypnosis group; there may be a basement effect. Negative affect varied by condition and by order of administration and recency of memory assessed. When early memories were elicited first, no differences were found in groups; when elicited second, negative affect was greater for [missed words]. Affect was more abundant and intense in the hypnosis group, but only when recent memories were elicited before early memories and only in the [missed words].

Early recollections were slightly more primary process (bizarre) than later, which should alert clinicians.

Themes didn't differ between groups. Early memories involved more trauma than later memories. Negative affect correlated with psychopathology measures for earliest memory but not later memory. Used posthypnotic experiences scales. There is a decrease in unpleasant experiences, suggesting the benefit of catharsis when recalling early memories.

1992

Darken, Rachel (1992). Hypnosis in the treatment of survivors of sexual abuse. Australian Journal of Clinical and Experimental Hypnosis, 20, 105-110.

This paper outlines the problems of child sexual abuse and its long-term sequelae, often reaching down generations. In psychotherapy with survivors of childhood sexual abuse, hypnosis offers a flexible treatment modality and the paper focuses particularly on the use of hypnosis and self-hypnosis for the "reparenting" element of psychotherapy.

Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.

The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD.

Hoencamp, E. (1992). Comment on the Nelson case. [Comment/Discussion] .

NOTES

Comments on paper by H. B. Gibson, 'A recent British case of a man charged with using hypnosis for rape and other sexual offences.' Commentator refers to his earlier article, Hoencamp, E. (1990). Sexual abuse and the abuse of hypnosis in the therapeutic relationship. International Journal of Clinical and Experimental Hypnosis, 28, 283-297.

Hollander, Ellen L.; Baw, Saul D. (1992, October). Improving outcomes in sex therapy through the use of hypnotic methods. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

This is a report on the Cornell University Medical College Human Sexuality Program and Behavior Therapy Program. Cognitive-behavioral treatment is the principal approach in sex therapy these days (in contrast to insight treatment before 1954).

The authors find hypnosis to be useful in cases that were previously thought to be treatment refractory. Insensuality, inability to be absorbed, seems at the root of these problems. Hypnosis is useful for diagnosis and for developing task relevant immersion.

Three types of disorders: Desire phase Excitement phase Orgasm phase

Each phase has specific obstacles that can be elicited with a detailed interview: 1. Desire: anti-fantasy or the person focuses on unpleasant images 2. Excitement: performance anxiety or rumination about sexual potency (especially in men) 3. Orgasm: spectating or self-observation

Basic treatment strategy is to promote maintenance of absorption while dealing with the material that had been eliciting anxiety. In past we traditionally assumed absorption was present. Often this isn't the case. It can be addressed with hypnotic methods. Conceptualized as a skill, hypnosis can improve the patient's ability to shift from peripheral to focal awareness.

Reports in the literature address sexual dysfunction as one unitary phenomenon, using direct suggestions, anxiety/stress reduction techniques, metaphorical suggestions, ego strengthening devices, hypnoanalytic procedures to uncover the unconscious determinants of dysfunction.

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Mottahedin, I. (1992). Was hypnosis involved in the Nelson case?. Contemporary Hypnosis, 9 (3), 158-163.

#### NOTES

This is a comment on a case described by Gibson in the same issue of this journal. The case involved a man accused of raping women after hypnotizing them.

Murrey, Gregory J.; Cross, Herb J.; Whipple, Jim (1992). Hypnotically created pseudomemories: Further investigation into the 'memory distortion or response bias' question. Journal of Abnormal Psychology, 101 (1), 75-77.

I

In order to study whether pseudomemories represent actual memory distortions or are a result of response bias, 60 highly hypnotizable subjects and subjects from the general population were divided into 4 experimental groups and were tested for pseudomemory manifestation after receiving a false suggestion. Of the 4 groups of subjects, 3 were offered a monetary reward as a motivation to distinguish false suggestion from the actual occurrence. Pseudomemory manifestation was found to be significantly higher among subjects not offered a reward than among subjects who were offered such a reward. The implications of these findings are discussed.

NOTES: The article contains a review of the literature through 1989. The study tested the hypothesis that when it is important to distinguish fantasy from reality in a hypnosis experiment, subjects can do so--a position presented by Spanos and McLean (1986). They used a verifiable event to test for pseudomemory production, as in research published by McCann and Sheehan (1988). Subjects were 30 high hypnotizable and 30 unselected students.

Subjects were shown a videotape of a mock robbery scene. The next week, Groups A, B, and C heard audiotapes "to enhance memory," but in addition to motivating statements about "trying to remember" certain details, the tapes included misleading information (e.g. "Remember the color of the hat the robber was wearing" when in fact there was no hat on the robber). Subjects in these groups were 'influenced.'

"Both highly hypnotizable subject groups (Groups A and B) listened to the audiotape after being administered a 10-min hypnotic induction procedure (modified from that of Barber, 1969). Subject Group C listened to the audiotape without hypnosis. The control group, Group D, did not listen to the audiotape and was, therefore, classified as 'uninfluenced.'"

A week later subjects responded to multiple-choice and yes-no or true-false questions about the robbery scene. The yes-no question about whether the robber was wearing a hat served as the

dependent variable, a measure of pseudomemory. "To motivate subjects to report the truth rather than to follow any perceived expectations of the experimental of social context, we offered subjects in Groups B, C, and D a monetary reward if they achieved the most correct answers on the quiz (according to the videotape). The reward was offered just before administration of the quiz to ensure that no collusion between the subjects could occur. Group A was not offered any such reward" (p. 76). "The number of subjects in Group A (hypnotized, influenced, no reward) who reported the false information at posttest (12) was significantly greater than that of Group B (hypnotized, influenced, offered reward.... However, the difference in incidence of pseudomemory between Group B and the control group, Group D (not hypnotized, uninfluenced, offered reward), was nonsignificant" (p. 76).

**Table 1 Incidence of Pseudomemory Per Group** -----

	False suggestion	Group A	Group B	Group C	Group D
result (n=15)	(n=15)	(n=15)	(n=15)	(n=15)	(n=15)

Accepted 12 6 7 3

Rejected 3 9 8 12 ----- Note. Group

A = hypnotized, influenced, not offered reward.

Group B = hypnotized, influenced, offered reward.

Group C = not hypnotized, influenced, offered reward.

Group D = not hypnotized, not influenced, offered reward.

In the Discussion, the authors wrote, "Because the only variable among these groups was the reward, a reasonable conclusion from the findings is that pseudomemories manifested by the subjects were (for the most part) not actual memory distortions. Presumably, the reward provided the subjects in Group B an incentive to 'report the truth' and a disincentive to give biased reports on the basis of the perceived expectations of the social or experimental context. Thus these data suggest that pseudomemory effects or the occurrence of the pseudomemory phenomenon among highly hypnotizable subjects can be minimized by providing a motivation to subjects to give unbiased reports. "A major implication of these findings is that researchers should control for response bias resulting from perceived social demands or from leading test designs when they conduct pseudomemory research. Of further concern is the fact that a number of researchers contend that hypnotic interrogation of eye-witnesses can greatly facilitate the creation of pseudomemories (Levitt, 1990; Loftus, 1979; Orne, 1979; Putnam, 1979), and therefore hypnosis either should not be allowed in the courtroom or should be strictly controlled. Yet in light of our findings, response bias may be a confound in pseudomemory research, and thus researchers need to be cautious when making inferences to specific situations from data obtained in an experimental setting.

"Despite the existence of a confound of (unmeasured) differences in hypnotizability between the two groups, there was no significant difference between Group B and the control group (Group D). This suggests that if response bias is controlled for, there may not be significant differences in manifestation of pseudomemories between highly hypnotizable subjects and subjects representative of the general population. However, further research is needed in order to address this question" (pp. 76-77).

1991

Chu, James A.; Dill, Diana L. (1991). Dissociation, borderline personality disorder, and childhood trauma. American Journal of Psychiatry, 148 (6), 812.

Comments on the article by S. N. Ogata et al (see PA, vol 78:4681) on the high prevalence of childhood physical and sexual abuse in inpatients with borderline personality disorder. It is suggested that dissociative symptoms in borderline patients may simply be a less severe form of intrapsychic fragmentation than multiple personalities.

Cornell, William F.; Olio, Karen A. (1991). Integrating affect in treatment with adult survivors of physical and sexual abuse. American Journal of Orthopsychiatry, 61 (1), 59-69.

Presents a theoretical and technical model for affectively centered treatment of adults abused as children, focusing on the function of denial and dissociation as central defense mechanisms. The concept is introduced of working at an "affective edge." At this experiential point, a client can maintain both cognitive understanding and emotional and bodily awareness without triggering denial and dissociation. This approach fosters careful monitoring of the client's functioning both during and between therapeutic sessions. The proposed therapeutic approach uses noninvasive touch and body-centered techniques. Focus is on integrating affect and on the importance of the therapeutic relationship.

Friedrich, William N. (1991). Hypnotherapy with traumatized children. International Journal of Clinical and Experimental Hypnosis, 39 (2), 67-81.

The psychological impact of trauma can include cognitive, affective, and behavioral components. The degree to which a child is either overwhelmed by or unable to access the traumatic event can make the working through of the event in therapy difficult. Hypnotherapy is a useful modality not only for alleviating symptoms but also for uncovering the traumatic event(s) with associated affects, integrating and making sense of the experience. 4 case studies are reported to illustrate the utility of hypnotherapy with young, traumatized children.

Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. Contemporary Hypnosis, 8, 129-140.

The literature relating to whether hypnosis can be used to compel people to perform acts that are dangerous, immoral or criminal is reviewed, some evidence over the past 200 years being discussed. Relevant real-life instances are cited as well as the laboratory studies of the twentieth century. Detailed criticisms of the latter are made, and it is shown that although no really conclusive findings have emerged, such research has strongly implied that hypnosis does not increase compliance. Four past criminal trials concerned with alleged rape and sexual assault are cited. It is concluded that whilst hypnosis may be one among a number of techniques used in sexual seduction, it is not reasonable to claim that rape has ever been effected by means of hypnosis alone.

NOTES: Review of literature that concludes that while hypnosis may be one among a number of techniques used in sexual seduction, it is not reasonable to claim that rape has ever been effected by means of hypnosis alone.

Rhue, Judith W.; Lynn, Steven Jay (1991). Storytelling, hypnosis and the treatment of sexually abused children. International Journal of Clinical and Experimental Hypnosis, 39 (4), 198-214.

The present article describes an assessment and therapy program for sexually abused children using hypnotherapeutic techniques which center on storytelling. Storytelling presents the therapist with an opportunity to use comforting suggestions, symbolism, and metaphor to provide the emotional distance necessary to deal with the trauma of abuse. Hypnotherapy proceeds in a stepwise fashion from the building of a sense of safety and security; to imaginativge sharing; to the introduction of reality events; to the final step of addressing complex emotional issues of loss, trust, love, and guilt brought about by the abuse.

Smith, William H. (1991). Antecedents of posttraumatic stress disorder: Wasn't being raped enough? A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 129-133.

Many rape victims, like those traumatized by war, accidents, and natural disasters, are able to recover from their ordeal with supportive, crisis-oriented treatment. For others, however, symptoms may persist and require more intensive treatment. Hypnosis allows a modulated re-experiencing and abreaction of the traumatic event that can help to provide the victim with a relieving sense of mastery, and it fosters a receptive context for reassurance and interpretation regarding the irrational or exaggerated thoughts and feelings involved. 2 case examples are presented in which earlier conflicts appeared to play a role in perpetuating the patients' symptoms. Detecting and addressing these antecedents resulted in complete alleviation of long-standing problems through relatively brief treatment using hypnosis.

1990

Levitt, Eugene E. (1990). A reversal of hypnotically "refreshed" testimony: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 6-9.

A case is briefly presented in which questioning under hypnosis led to a positive identification of an accused rapist when the victim had previously been uncertain. During the trial, the victim was first certain, then reverted to her pre-hypnotic uncertainty. An appeal from the conviction of the defendant was denied on the grounds that the witness' uncertainty meant that the hypnotic intervention was harmless error. It is possible that this decision may not be entirely justified.

Perry, Campbell (1990). Coercion by hypnosis? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 242-243.

## NOTES

"A postexperimental inquiry (following Orne, 1959) might have informed the reader of the degree to which operationalization of the coercion in terms of disobedience was successful. Without this additional step, it is difficult to determine whether what was found in the laboratory by these investigators applies to what has been reported in clinical and field settings for almost 200 years" (p. 242).

"In particular, elsewhere, the authors equate coercion with involuntariness and appear to view involition as a euphemism for coercion. While I agree that perceiving involition of one's own behavior may contribute to the commission of unconsenting acts in hypnosis, the two are easily distinguished at the conceptual level. Laboratory subjects ordinarily report much behavior in hypnosis that is experienced involuntarily, without the issue of it being coerced ever being broached" (p. 242).

Author describes cases in which patients claimed they participated in sex with hypnotist against their wills because they were hypnotized. "What may be happening in both of these reports is that the hypnotized subjects found themselves responding involuntarily; from this, they appear to have adduced that they could not resist the hypnotist's suggestion. That is, they were coerced not by hypnosis but by their belief, which was a direct function of the experience of involuntariness, that they could not resist" (p. 243). "In short, if a hypnotized person equates involuntary behavior with powerlessness, "coercion" may occur in this limited sense. Conceptually, this appears to be a far cry from equating involition with coercion" (p. 243).

Somer, E. (1990). Brief simultaneous couple hypnotherapy with a rape victim and her spouse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 1-5.

This paper presents a case involving a rape victim and her emotionally affected spouse. Although the assault occurred before the couple met, the husband was too upset to concentrate when the victim wanted to share her rape-related feelings, nor could he provide the much needed empathy and support. This, apparently, was due to his difficulties in handling his own rage. Simultaneous couple hypnotherapy was used to allow the victim to share her experience under conditions safe for both her and her spouse. As he imagined in trance the rape account described by his age-regressed wife, he learned to identify his emotions and experience them in a controlled manner. During subsequent sessions, the husband was encouraged to include himself in his wife's abreaction and reshape the traumatic scene for both of them. The husband's rescuing behavior and the expressions of violent anger towards the perpetrator had several positive consequences. Not only did they change the abandonment component of the victim's traumatic memory, but they also helped the husband deal in better ways with his own feelings of anger. It also provided the couple with a helpful coping mechanism they later effectively applied under different circumstances.

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

Venn, J. (1988). Misuse of hypnosis in sexual contexts: Two case reports. International Journal of Clinical and Experimental Hypnosis, 36 (1), 12-18.

A military officer was accused by 2 young men of having used hypnosis to attempt homosexual relations. The officer denied the charges and claimed that the young men had imagined these events while they were in altered states of consciousness. The officer did admit to questionable practices such as consuming alcoholic beverages with the 2 young men and then using relaxation techniques with them in bedrooms. Subject motivation and nonhypnotic coercive tactics such as abuse of authority and alcohol seem important in understanding alleged cases of hypnotic coercion

1986

Herman, Judith; Russell, Diana; Trocki, Karen (1986). Long-term effects of incestuous abuse in childhood. American Journal of Psychiatry, 143, 1293-1296.

Studied 2 groups of adult women with histories of incest, a nonclinical sample (n - 152) and an outpatient sample (n - 53) to investigate long-term outcomes of sexual abuse. Results indicate that Ss in the community sample reported a range of long-term effects from the incest. Most said they had recovered well from their trauma. Most Ss who had suffered forceful, prolonged, or highly intrusive sexual abuse, or who had been abused by their father or stepfather, reported long-lasting negative

effects. The patient sample reported histories comparable to the most severe traumatic histories in the community sample.

Miller, Arnold (1986). Hypnotherapy in a case of dissociated incest. International Journal of Clinical and Experimental Hypnosis, 34 (1), 13-28.

This case study describes hypnotherapy with a young woman who, in the course of treatment, began to remember her incestuous relationship with her alcoholic father. Her presenting symptoms included self-assaultive masturbation, suicidal fantasies, depression, impaired sexual functioning, and inability to resume her education. Different phases of treatment entailed uncovering work, mastering the incest experience with the help of emotionally corrective experiences, the use of part-selves to assist coping, and the integration of several part-selves into a more effective personality. After 4 years of treatment she has successfully resumed her education, has normal sexual functioning, and is no longer incapacitated by depression.

1985

Bliss, Eugene L.; Larson, Esther M. (1985). Sexual criminality and hypnotizability. Journal of Nervous and Mental Disease, 173, 522-526.

Investigated 33 17-35 yr old sexual offenders, 18 of whom had been convicted of rape, 9 of pedophilia, and 6 of incest. Ss completed a questionnaire containing a list of 15 factors that might have contributed to their crime, a self-report containing 305 items that are symptoms characteristic of 11 major psychiatric syndromes, and the Stanford Hypnotic Susceptibility Scale. Controls for the self-report were 48 individuals taken from a church group, nurses, technicians, and graduate students. Controls for the hypnotizability scale were cigarette smokers who smoked 1 1/2 pack/day and S data taken from the literature. Results show that two-thirds of the Ss had histories of spontaneous self-hypnotic experiences (dissociations); 7 of these were DSM-III multiples and 6 were probable multiples. This group had very high hypnotizability scores. The other one-third without histories of spontaneous self-hypnosis had normal scores. It is concluded that spontaneous self-hypnosis contributed to the perpetration of the crimes in many of these cases, although other factors also directed the antisocial behaviors. (22 ref).

1984

Matthews, William J. Jr.; Kirsch, Irving; Allen, George J. (1984). Posthypnotic conflict and psychopathology -- controlling for the effects of posthypnotic suggestions: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 362-365.

Hypnotically implanted paramnesias (false memories) designed to arouse Oedipal and non-Oedipal sexual conflicts were implanted in 2 groups of male undergraduate Ss. Ss in a third condition were hypnotized but no paramnesia was implanted. In a fourth condition, the Oedipal paramnesia was presented to Ss who had been instructed by coexperimenters to simulate hypnosis. All Ss had achieved a score of 7 or higher on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962). Following implantation of the paramnesia, Ss were given conflict activating instructions consisting of posthypnotic suggestions to express strong sexual feelings in response to cue words contained in the paramnesias. Ss in all conditions produced significantly more symptoms of discomfort to cue words than to neutral words. No significant between-group differences were found. These results question the contention that discomfort following the implantation of an Oedipal paramnesia constitutes empirical support for psychoanalytic theory.

Nash, Michael R.; Lynn, Steven Jay; Givens, Deborah L. (1984). Adult hypnotic susceptibility, childhood punishment, and child abuse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32, 6-11.

Earlier empirical and theoretical work has suggested that there is a relationship between higher hypnotic susceptibility and severity of childhood punishment. Experiment 1 surveyed the parents of 14 extremely high and 11 extremely low susceptible Ss concerning punishment. Low susceptible Ss were found to be more frequently punished than highs; no significant differences were found on the severity measure. Experiment 2 assessed the hypnotizability of 16 adult Ss who reported being physically abused before the age of 10 and compared these scores to those of 300 adult Ss who had not reported being abused. The mean hypnotizability of abused Ss was greater than that of controls, and the distribution of their scores appeared bimodal. Limitations of both experiments are discussed and suggestions are made for future investigations.

Stava, L. (1984). The use of hypnotic uncovering techniques in the treatment of pedophilia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 350-355.

This case study describes the use of the hypnotic uncovering techniques of induced dreams (Sacerdote, 1967) and the affect bridge (Watkins, 1971) in reducing inappropriate sexual arousal in a male pedophile. Treatment effects were examined through the use of both psychophysiological measures of penile tumescence and psychological tests. The hypnotherapeutic treatment regime consisted of 25 sessions over approximately 9 months. At the end of treatment, psychophysiological measures revealed a definite reduction of sexual excitation to slides of prepubescent children. Psychological testing indicated reduced defensiveness as well as reduced sexual anxiety to adult women. Various hypnotherapeutic experiences which may have contributed to the treatment effects are discussed.

Watkins, John G. (1984). The Bianchi (L.A. hillside strangler) Case: Sociopath or multiple personality?. International Journal of Clinical and Experimental Hypnosis, 32 (2), 67-101.

The case of Kenneth Bianchi (the Los Angeles "Hillside Strangler") has been controversial ever since he was first arrested in January, 1979. This contributor saw Bianchi as a consultant on March 21st and 22nd, 1979. Under hypnosis, he manifested what appeared to be a multiple personality. An underlying personality, "Steve," whose existence was apparently unknown to Bianchi, claimed responsibility for the 2 murders in Bellingham and those in Los Angeles. As a consequence, the court appointed 5 other consultants to examine the defendant. On April 20, 1979, I activated the Steve personality without a hypnotic induction. It described many murders in Los Angeles, indicating which ones he (Steve) had done and which ones Bianchi's cousin (Angelo Buono) did. The major personality (Ken) appeared to be amnesic to all this. 2 additional "personalities" were elicited by Martin Orne, another consultant. However, Orne would not accept the diagnosis of multiple personality. He diagnosed Bianchi as an "Antisocial Personality" (Sociopath) and claimed that he was a clever malingerer. He also asserted that Bianchi had never been hypnotized. The evidence, Rorschach tests, intelligence tests, handwriting samples, art creations, plus recorded sessions by Watkins, Orne and others, are analyzed. This writer concludes that the diagnosis of multiple personality is strongly supported.

1983

Epstein, S. J.; Deyoub, P. L. (1983). Hypnotherapeutic control of exhibitionism: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (2), 63-66.

Hypnotherapy was used to treat a 30-year-old exhibitionist in 8 sessions. Under hypnosis, he explored causes for his behavior, developed tension reducing techniques, and learned a posthypnotic emergency response. If he felt exposure imminent, his fists would clench, precluding the possibility of exposure. At 2-year follow-up, there were no known exposures.

**Karlin, Robert (1983). Forensic hypnosis--two case reports: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31 (4), 227-234.**

Two criminal cases are briefly described. In these cases, hypnosis was used to "refresh the recollection" of the victim. In each case, the victim's unsupported identification of a perpetrator, produced through hypnosis, was the sole evidentiary basis of the prosecution. There was considerable evidence that both identifications were based on confabulation.

**Polk, W. M. (1983). Treatment of exhibitionism in a 38-year-old male by hypnotically assisted covert sensitization. International Journal of Clinical and Experimental Hypnosis, 31 (3), 132-138.**

This case study reports the successful treatment of a 38-year-old male with a 14 year history of exhibitionism. A multifaceted treatment program was used, involving hypnotically assisted covert sensitization and brief marital therapy. Hypnosis was used to develop psychic aversive and reinforcing stimuli from the patient's past experience. The value of hypnosis in enhancing imagery in cognitive treatment approaches and the need for only experienced clinicians to utilize the present intervention strategy is discussed.

**1981**

**Frutiger, A. Dewane (1981). Treatment of penetration phobia through the combined use of systematic desensitization and hypnosis: A case study. American Journal of Clinical Hypnosis, 23, 269-273.**

Systematic desensitization and hypnosis were used in a client with long- standing penetration phobia. Glass test tubes were used in dilation exercises and masturbation instead of more expensive metal catheters. The client was able to have intercourse and adequate sexual adjustment.

**1980**

**Erickson, Milton H. (1980). Innovative hypnotherapy. New York, NY: Irvington Publishers, Inc..**

**NOTES**

**1:**

**NOTES: This fourth volume of four has 9 sections, with chapters as follows. I. General Introductions to Hypnotherapy**

- 1. The applications of hypnosis to psychiatry**
- 2. Hypnosis in medicine**
- 3. Hypnotic techniques for the therapy of acute psychiatric disturbances in war**
- 4. Hypnotic psychotherapy**
- 5. Hypnosis in general practice**
- 6. Hypnosis: Its renaissance as a treatment modality**
- 7. Hypnotic approaches to therapy II. Indirect Approaches to Symptom Resolution**
- 8. A clinical note on indirect hypnotic therapy**
- 9. The hypnotic and hypnotherapeutic investigation and determination of symptom- function**
- 10. Experimental hypnotherapy in Tourette's Disease**
- 11. Hypnotherapy: The patient's right to both success and failure**
- 12. Successful hypnotherapy that failed**
- 13. Visual hallucination as a rehearsal for symptom resolution III. Utilization Approaches to Hypnotherapy**
- 14. Special techniques of brief hypnotherapy**

15. Pediatric hypnotherapy
16. The utilization of patient behavior in the hypnotherapy of obesity: Three case reports
17. Hypnosis and examination panics
18. Experiential knowledge of hypnotic phenomena employed for hypnotherapy
19. The burden of responsibility in effective psychotherapy
20. The use of symptoms as an integral part of hypnotherapy
21. Hypnosis in obstetrics: Utilizing experimental learnings
22. A therapeutic double bind utilizing resistance
23. Utilizing the patient's own personality and ideas: 'Doing it his own way' IV. Hypnotherapeutic Approaches to Pain
24. An introduction to the study and application of hypnosis for pain control
25. The therapy of a psychosomatic headache
26. Migraine headache in a resistant patient
27. Hypnosis in painful terminal illness
28. The interspersal hypnotic technique for symptom correction and pain control
29. Hypnotic training for transforming the experience of chronic pain V. Hypnotherapeutic Approaches in Rehabilitation
30. Hypnotically oriented psychotherapy in organic brain damage
31. Hypnotically oriented psychotherapy in organic brain disease: An addendum
32. An application of implications of Lashley's researches in a circumscribed arteriosclerotic brain condition
33. Experimental hypnotherapy in a speech problem: A case report
34. Provocation as a means of motivating recovery from a cerebrovascular accident VI. Hypnotherapy with Psychotics
35. Hypnotherapy with a psychotic
36. Symptom prescription for expanding the psychotic's world view VII. Sexual Problems Hypnotherapeutic Reorientations to Emotional Satisfaction
37. Posthypnotic suggestion for ejaculatio praecox
38. Psychotherapy achieved by a reversal of the neurotic processes in a case of ejaculatio praecox
39. Modesty: An authoritarian approach permitting reconditioning via fantasy
40. Sterility: A therapeutic reorientation to sexual satisfaction
41. The abortion issue: Facilitating unconscious dynamics permitting real choice
42. Impotence: Facilitating unconscious reconditioning
43. Latent homosexuality: Identity exploration in hypnosis
44. Vasectomy: A detailed illustration of a therapeutic reorientation VII. Self-Exploration in the Hypnotic State: Facilitating Unconscious Processes and Objective Thinking
45. Pseudo-orientation in time as a hypnotherapeutic procedure
46. Facilitating objective thinking and new frames of reference with pseudo-orientation in time
47. Self-exploration in the hypnotic state
48. Self-exploration in trance following a surprise handshake induction
49. The reorganization of unconscious thinking without conscious awareness: Two cases of intellectualized resistance against hypnosis IX. Facilitating New Identity
50. Psychological shocks and creative moments in psychotherapy
51. Facilitating a new cosmetic frame of reference
52. The ugly duckling: Transforming the self-image
53. A shocking breakout of a mother domination
54. Shock and surprise facilitating a new self-image
55. Correcting an inferiority complex
56. The hypnotherapy of two psychosomatic dental problems

- 57. The identification of a secure reality
- 58. The hypnotic corrective emotional experience
- 59. The February man: Facilitating new identity in hypnotherapy

1978

Araoz, Daniel (1978, August). Hypnosis in treating sexual abulia. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Sexual abulia is described as a pathological condition where normal sexual desire is absent, following Kaplan's recent conceptualization of hypoactive sexual desire. Reasons for preferring the current descriptive label are proposed. The clinical use of hypnosis in its treatment is outlined with emphasis on constructive and guided fantasy production. A detailed case illustrates the procedure of hypnotherapy in treating an extreme case of sexual abulia. General conclusions on the effectiveness of hypnosis for this sexual dysfunction are drawn and two hypotheses are suggested to explain its cure. The need for further research is stressed.

Brown, Jude M.; Chaves, John F., Ph.D (1978, August). Hypnosis in the treatment of sexual dysfunction. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Recent reports suggest that hypnosis may be a useful technique for the treatment of sexual dysfunction. Five distinct strategies for the utilization of hypnosis in sex therapy can be identified: (1) as a diagnostic tool, (2) to improve self-confidence, (3) as an adjunct to behavior therapy, (4) for the direct removal of symptoms, and (5) to facilitate the resolution of neurotic conflicts. Case reports documenting these applications of hypnotic procedures typically fail to include significant information regarding patient variables, symptomatology, the nature of the therapeutic intervention, and criteria for improvement. Although the conclusions provided by these case studies are encouraging, it is essential that the efficacy of hypnotic techniques in sex therapy be evaluated by controlled studies.

1977

Wijesinghe, B. (1977). A case of frigidity treated by short-term hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 25, 63-67.

The case is presented of a patient with longstanding frigidity who was resistant to treatment by widely used behavioral techniques. Following the training in hypnosis, a free-association procedure enabled her to integrate past experiences, unconscious fantasies, and her sexual difficulty. The patient made a dramatic recovery and the treatment gains were seen to be maintained at follow-up after 1 year.

1966

Roper, P. (1966). The use of hypnosis in the treatment of exhibitionism. Canadian Medical Association Journal, 94, 72-77. (Abstracted in American Journal of Clinical Hypnosis, 1966, 9, p. 83)

The use of hypnosis in the treatment of exhibitionism is described in three patients in whom the condition has been present for more than five years. In each patient there was no subsequent recurrence of the exhibitionism once therapeutic suggestions had been made in a deep hypnotic trance, the follow-up period being respectively five years, four and a half years, and one year. The method of treatment and the results are discussed in terms of the concepts of behaviour therapy. It is concluded that with certain patients suffering from exhibitionism the use of hypnosis may well be one of the best methods of treatment, but considerable care should be exercised to exclude those patients with an

underlying psychosis, mental defect or psychopathic condition. It is also noted that the efficacy of the treatment would appear to depend on achieving a satisfactory depth of hypnotic trance. If this is not reached, the results are less likely to be successful. (Author's abstract, from AJCH pp. 83-84).

1965

Beigel, Hugo G. (1965). Three transvestites under hypnosis. International Journal of Clinical and Experimental Hypnosis, 13 (2), 71-82.

The literature on transvestism is reviewed. Most authorities agree that it is rarely, if ever, treated successfully. A therapeutic approach is outlined which combines conventional analytically-oriented psychotherapy with appropriate hypnotherapeutic techniques. 3 illustrative cases are presented. Clinical study in the manner described has been proved effective in less than 50 sessions in 10 of the 24 cases seen. It has helped to clarify the etiology of this condition. The widely accepted belief that transvestism cannot be treated successfully appears unwarranted in the light of the findings presented. (18 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Schneck, Jerome M. (1965). Hypnotherapy for vaginismus. International Journal of Clinical and Experimental Hypnosis, 13 (2), 92-95.

The literature on hypnotherapy contains few comments, usually generalizations, on vaginismus. 2 patients with this problem are presented here. Methods used and degrees of success are described. Major stress was on hypnotic relaxation with supporting, persuading, and graded, encouraging measures. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Dittborn, Julio (1957). Hypnotherapy of sexual impotence. Journal of Clinical and Experimental Hypnosis, 5 (4), 181-192. (Abstracted in Psychological Abstracts 62: 3 II 81D)

#### NOTES

"Summary

"An attempt is made to classify sexual impotence using several criteria, namely; the performance of coitus, the duration of the symptom and the nature of the sexual object which causes it.

"A method of muscular relaxation and preanesthetic hypnosis is described, which, when associated to where visual filmlike images may lead through training, in certain cases, to the progressive disappearance of the symptom.

"The evolution of nine cases variously classified is narrated.

"The possible mode of action of the therapeutic method hereby described is discussed from a theoretical standpoint" (pp. 191-192).

Merrill, George G. (1957). Sexual complications of hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (3), 138-146.

#### NOTES

"Summary: Sexual complications of hypnosis can occur, consisting of either positive or negative erotic manifestations, of either a heterosexual [sic] or homosexual sort, to a more intense degree than is seen in most other forms of psychotherapy. These complications can result in a real threat to the hypnotist himself as well as to the success of his treatment, unless he is emotionally prepared to deal with them competently" (p. 145).

1956

Guze, Henry (1956). The involvement of the hypnotist in the hypnotic session. Journal of Clinical and Experimental Hypnosis, 4 (2), 61-68.

#### NOTES

"In summary, in the actual hypnotic relationship, the attitudes of the operator may influence his behavior markedly and are probably even more important than those of the subject in carrying through a successful relationship. It has been indicated in another paper that the subject's impulse handling is more important than his attitude toward hypnosis in actual hypnotizability. This view is a re-interpretation of that of Sarason and Rosenzweig (16) with regard to the same problem. The way the operator handles his own impulses seems in itself a most significant problem, and is expressed in his reactions to the induction and later the trance state of the subject. It is indicated that to some workers, the hypnotic response of the subject offers a rare feeling of power which may have psychosexual implications of a heterosexual or homosexual kind depending on the sex of the patient and the emotional needs of the operator. Child-parent relationship attitudes may also be elicited as well as conflicts about dominance-submission related to earlier experience of the worker.\*\* As suggested by Bruno-Bettelheim (1) for children who cannot participate in relations with others as a result of a fear of their own hostility, it appears that some persons might find the hypnotic situation difficult because of a similar factor. Thus some therapists or research workers might be impelled to reject the use of this measure or to fail in using it, because of a non-verbalized fear of their own impulses toward a 'helpless' subject in their power. This same situational response may be a problem that arises in the psychotherapeutic or even ordinary medical relationship. Its effect may be to limit full exploration and exploitation of therapeutic possibilities, and to hamper treatment of numerous disorders.

"It is perhaps appropriate to point out in conclusion that Freud left hypnosis, it would seem, because of some unresolved problems. Wolstein (23) says because he could not hypnotize all his patients and because of the magical connotations of hypnosis. The hypnosis in transference is still an open field. Are the two phenomena over-lapping or on a continuum? Are the problems of the therapist really the same in both areas? Is transference an aspect of hypnosis" (pp. 66-67).

"\*\* Data on male-female differences in success as hypnotists with members of the opposite sex might be very illuminating" (p. 66).

1953

Beigel, Hugo G. (1953). Prevarication under hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 32-40.

#### NOTES

Author describes three cases in which hypnosis was used to confirm or disconfirm information provided in the waking state. All three cases involved marital relationships and mistrust. "It is interesting that, awakened from the hypnotic state, none of the subjects made the slightest attempt to deny any of the admissions made" (p. 39).

Kroger, William S. (1953). Hypnotherapy in obstetrics and gynecology. Journal of Clinical and Experimental Hypnosis, 1 (2), 61-70.

Author's Summary - "A high percentage of gynecologic complains [sic] are due to psychic factors. Therapeutic efforts, therefore, must be directed primarily toward the psychologic component. Until recently, the principal weapon of the dynamically oriented physician was orthodox psychoanalysis. However, the increased interest for a relatively rapid approach has demonstrated the diagnostic and therapeutic value of hypnoanalysis. This development has been concomitant with the psychoanalyst's [sic] interest in 'brief psychotherapy' and narcosynthesis.

"In many functional gynecologic disorders, hypnoanalysis has supplanted the parent therapy even though this form of treatment utilizes the concepts of dynamic psychiatry.

"The relevant literature on the use of hypnotherapy in functional obstetrical and gynecological disorders has been reviewed.

"Significant areas for research have been pointed out.

"This review emphasizes that hypnosis *per se* is only of value in obtaining symptomatic relief. On the other hand, hypnoanalysis elicits the responsible dynamics behind the symptom, and is effective in reaching all aspects of the personality.

"Hypnoanalysis will be more applicable in obstetrics and gynecology when there is a wider acceptance of its techniques" (p. 68).

## **SIMULATOR**

**1999**

**Bryant, Richard A.; Barnier, Amanda J.; Mallard, David; Tibbits, Rachel (1999). Posthypnotic amnesia for material learned before hypnosis. International Journal of Clinical and Experimental Hypnosis, 47 (1), 46-64.**

The impact of a suggestion for posthypnotic amnesia on material learned either before or during hypnosis was investigated across 2 experiments. In Experiment 1, very high, high, and low hypnotizable participants learned a word list either before or immediately after a hypnotic induction. During hypnosis, participants were given a suggestion for posthypnotic amnesia for the word list. After hypnosis, they were tested on recall, word-fragment, and word-recognition tasks. Experiment 2 replicated and extended Experiment 1 through application of the real-simulating paradigm. Across the 2 experiments, there was no difference in the performance of participants who learned the word list either before or during hypnosis. Although amnesia on direct memory measures was associated with high hypnotizability (Experiment 1), an explanation based on demand characteristics could not be excluded (Experiment 2). The implications of these findings for the use of post-hypnotic amnesia as a laboratory analog of disorders of autobiographical memory are discussed.

**Kirsch, Irving; Burgess, Cheryl A.; Braffman, Wayne (1999). Attentional resources in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 47 (3), 175-191.**

Theories of hypnotic responding differ regarding attentional processes. Predictions derived from neodissociation, dissociation control, response set, and ironic process theory were tested by administering suggestions with and without cognitive load to high suggestible participants and low suggestible simulators. Cognitive load interfered with responses to ideomotor and cognitive suggestions but not with responses to challenge suggestions. The effect of cognitive load on suggested amnesia depended on the assessment of that response. Although cognitive load decreased recall on the amnesia trial, it did so even more on recall trials before the amnesia suggestion was given and after it was canceled. These data indicate that attentional effort is required for both recall and memory suppression. Under conditions of low cognitive load, simulators displayed less recall than did nonsimulating participants during suggested amnesia, and they reported smaller subjective responses to ideomotor and challenge suggestions.

**1998**

**Barnier, Amanda J.; McConkey, Kevin M. (1998). Posthypnotic responding: Knowing when to stop helps to keep it going. International Journal of Clinical and Experimental Hypnosis, 46 (2), 204-219.**

The authors examined the effect of specifying (cue) or not specifying (no cue) the cancellation cue for posthypnotic suggestion. Responding was indexed on formal, embedded, informal, and postexperimental tests. Thirty-six real, hypnotized participants and 20 simulating participants took part in an application of the real-simulating paradigm. Responding declined across the four tests. Real participants in the cue condition maintained responding longer than simulators in the cue condition, and they also maintained responding longer than reals and simulators in the no cue condition. The findings highlight the interactional influence of individual, interpersonal, and situational factors in posthypnotic responding and underscore the active involvement of individuals in hypnotically initiated events.

Perugini, Eve Marie; Kirsch, Irving; Allen, Sarah T.; Coldwell, Eleanor; Meredith, Janelle M.; Montgomery, Guy H.; Sheehan, Julia (1998). Surreptitious observation of responses to hypnotically suggested hallucinations: A test of the compliance hypothesis. International Journal of Clinical and Experimental Hypnosis, 46 (2), 191-203.

Suggestions for arm levitation and for visual, auditory, tactile, and taste hallucinations were administered twice via audiotape to a group of high suggestible students and low suggestible simulators. During one of the administrations, participants were led to believe they were alone, but their behavior was surreptitiously recorded on videotape and observed on a video monitor. During the other administration, they were observed openly by an experimenter who had not been informed about group assignment. When unaware that they were being observed, simulators were significantly less responsive to suggestion and engaged in substantially more role-inappropriate behavior. In contrast, the responsiveness of nonsimulating students was not affected by the presence of an experimenter, and they exhibited little role-inappropriate behavior even when alone. These data indicate that the responses of suggestible individuals reflect internally generated changes in experience and are not due to simple intentional compliance (i.e., faking).

1997

Green, Joseph P. (1997). Hypnotizability, the dissociative experiences scale, HGSHS: A amnesia, and automatic writing: Is there an association?. International Journal of Clinical and Experimental Hypnosis, 45 (1), 69-80.

The present study examined whether participants (N = 112) selected on the basis of high and low dissociative ability (Dissociative Experiences Scale [DES]; Bernstein & Putnam, 1986), high and low/simulating hypnotizability (Harvard Group Scale of Hypnotic Susceptibility, Form A [HGSHS:A]; Shor & Orne, 1962), and past performance on the HGSHS:A amnesia item differentially passed an automatic writing suggestion administered during a follow-up experiment. Results from a loglinear analysis supported a single main effect for hypnotizability. Low hypnotizable, simulating participants were more than six times as likely to pass the automatic writing suggestion than high hypnotizable participants. Results found dissociation status and past performance on an ostensibly dissociative suggestion (i.e., amnesia) to be independent of passing the automatic writing suggestion. Findings are discussed in light of other research regarding the relation between the DES and hypnotizability.

1996

Martin, Daniel J.; Lynn, Steven Jay (1996). The Hypnotic Simulation Index: Successful discrimination of real versus simulating participants. International Journal of Clinical and Experimental Hypnosis, 44 (4), 338-353.

Researchers have attempted to find a method that accurately and reliably discriminates hypnotized individuals from those who are simulating hypnosis. Although an extensive literature exists in this area, researchers have failed to identify a discriminator that is consistently successful with a majority of the individuals who are tested. In the current study, 43 hypnotized and 37 simulating participants were categorized on the basis of their scores on the newly created Hypnotic Simulation Index (HSI). Using all 31 items of the HSI as predictors, 94% of the participants were correctly classified. In addition, a reduced set of only 15 items correctly classified 96% of the participants. These results suggest that the HSI is effective in discriminating hypnotized and simulating participants. -- Journal Abstract

Reed, Steven B.; Kirsch, Irving; Wickless, Cynthia; Moffitt, Kathie H.; Taren, Paul (1996). Reporting biases in hypnosis: Suggestion or compliance?. Journal of Abnormal Psychology, 105 (1), 142-145.

The tendency of highly hypnotizable participants to bias their retrospective perceptual reports in response to instructional demands was reexamined with the addition of low-hypnotizable control participants instructed to simulate hypnosis. Mean scores of high-hypnotizable participants and simulators did not differ, but the responses of simulators to the demand instruction was less variable than those of high-hypnotizable participants, and the shape of the response distribution was different. Unlike simulators, some high-hypnotizable participants who had reported changes in perception that were consistent with a hypnotic suggestion subsequently reported changes opposite to those suggested by a demand instruction. These data were interpreted as suggesting that the responses of high-hypnotizable participants to both the demand instruction and the preceding hypnotic suggestion were not entirely due to compliance.

1995

Barnier, Amanda J.; McConkey, Kevin M. (1995, November). Posthypnotic suggestion: Knowing when to stop helps to keep it going. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

Posthypnotic suggestion sometimes leads to compulsive and involuntary responding, but we have little information about the parameters of such a response. In some research in our laboratory, we found that subjects who were given a posthypnotic suggestion that encouraged them to experience a desire to respond, showed a different pattern of response from those simply told to make a specific behavioral response. In another study, we gave subjects a posthypnotic suggestion to mail a postcard every day to the experimenter; some subjects were told to respond until they saw the hypnotist again (termination), others were given no specific information about how long they should respond (no termination). Those expecting a termination to the suggestion showed a different pattern of response across 16 weeks of testing. Thus, the information included in the suggestion about how or when to respond influences posthypnotic responding.

Present Experiment: Laboratory test of including specific information in the posthypnotic suggestion about how long to respond - cancellation cue vs. no cancellation cue. Responding indexed on four different tests: formal, embedded, informal, postexperimental. Also used real/simulating methodology. We expected that responding would decline across the four tests, but that the decline would be slowest for those expecting a cancellation cue.

Methodology: High hypnotizable subjects scored 8-10 on SHSS:C, lows scored 0- 3 on SHSS:C. Given real/simulating instructions (Orne, 1959). Formal test was given immediately after deinduction; embedded test was given during an inquiry question; informal test was given as the hypnotist appeared to terminate the experiment and leave the room; postexperimental test was given by another

experimenter during a postexperimental inquiry. The suggestion was to cough when Ss heard a particular response cue.

**Results:** On the formal test, there was no difference between reals or simulators in either the cue or no cue condition, although simulators in the cue condition tended to overplay their response. Across the tests, responding declined. In particular, the majority of reals and simulators in the no cue condition stopped responding after the formal test. In the cue condition, reals and simulators responded similarly on the embedded test, but differently on the informal test; more reals than simulators continued to respond across the tests. Few subjects responded on the postexperimental test. Subjects' postexperimental comments indicated that reals and simulators in the no cue condition believed that one response was sufficient; simulators in the cue condition were confused about whether to keep responding, and reals in the cue condition responded compulsively across the test.

**Conclusions:**

The inclusion of a cancellation cue in a posthypnotic suggestions maintains responding for a longer period. Responding posthypnotically is not explained solely by demand characteristics. Rather, individuals respond on the basis of their interpretation of the implied intent of the hypnotist's message (c.f., Sheehan, 1971). Responding changes across test types. These findings contribute to a model of posthypnotic responding. They point to the active responding of hypnotized individuals (c.f., Kihlstrom: experimental subjects try to make sense of the message of the suggestions and instructions they receive).

**Green, J. P.; Lynn, Steven J. (1995, August). Dissociation, hypnotic amnesia and automatic writing: Is there an association?. [Paper] Presented at the annual meeting of the American Psychological Association, New York.**

This study examined whether differences in self-reported dissociative experiences (DES, Bernstein & Putnam, 1986) and past performance on hypnotic amnesia (HGSHS: A, Shor & Orne, 1962) influence the frequency of passing an automatic writing suggestion. Participants (N = 112) were divided into high hypnotizable ('real') and simulating groups. Results from a log linear analysis indicated that automatic writing was independent of both dissociation status and past performance on an ostensibly dissociative hypnotic suggestion (i.e., amnesia). Simulators were more than six times as likely to pass the automatic writing suggestion than reals. Findings were discussed in light of other research regarding the relation between the DES and hypnotizability. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1995, Vol. 4, No. 3.)

**Schnyer, David M.; Allen, John J. (1995). Attention-related electroencephalographic and event-related potential predictors of responsiveness to suggested posthypnotic amnesia. International Journal of Clinical and Experimental Hypnosis, 43 (3), 295-315.**

Higher frequency electroencephalographic (EEG) activity around 40 Hz has been shown to play a role in cognitive functions such as attention. Furthermore, event-related brain potential (ERP) components such as N1 and P1 are sensitive to selective attention. In the present study, 40-Hz EEG measures and early ERP components were employed to relate selective attention to hypnotic response. Participants were 20 low hypnotizable individuals, half assigned as simulators, and 21 high hypnotizable individuals. Each of these groups was subsequently divided into two groups based on recognition amnesia scores. The four groups differed in 40-Hz (36-44 Hz) EEG spectral amplitude recorded during preinduction resting conditions but not in EEG amplitude postinduction. The groups also differed in N1 amplitudes recorded during hypnosis. Regression analysis revealed that these effects only distinguish the high hypnotizable participants who experienced recognition amnesia from all other

groups. The findings support the role of selective attention in hypnotic responsiveness, and the utility of subdividing high hypnotizable individuals is discussed.

1994

Kennedy, James; Coe, William C. (1994). Nonverbal signs of deception during posthypnotic amnesia: A brief communication. International Journal of Clinical and Experimental Hypnosis, 42 (1), 13-19.

The question of hypnotic subjects complying with instructions, perhaps even purposely deceiving the hypnotist or deceiving themselves, has arisen from the state-nonstate (skeptical-credulous) theoretical controversy. However, experimental testing of competing hypotheses has been difficult. The current report offers methodological procedures that may prove useful. Subjects who were given posthypnotic amnesia instructions were tested on free recall and implicit recall of a 20-word list. To detect the possibility of deception, videotapes of real subjects and simulating subjects during and after posthypnotic amnesia were rated for nonverbal signs of deception, signs taken from the works of Ekman, Ekman and Friesen, and Zuckerman et al. Preliminary results were gathered on a small pilot sample, and recommendations for procedural improvements are proposed.

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1994). Is the hypnotized subject lying?. Journal of Abnormal Psychology, 103, 184-191.

Do the verbal reports of deeply hypnotized Subjects truthfully reflect their subjective experiences of hypnotic suggestions? Exp 1 established that the electrodermal skin conductance response (SCR) provides an effective method for detecting deception in the laboratory equally well in hypnotized and nonhypnotized Subjects. In Exp 2, deeply hypnotized and simulating Subjects were administered a number of hypnotic suggestions in a typical hypnotic session, without mention of deception, and were questioned about their experiences while SCR measures were recorded concurrently. Results indicate that 89% of the hypnotized Subjects' reports met the criterion for truthfulness, whereas only 35% of the simulators' reports met this criterion. Implications for the theory of hypnosis are discussed.

Lynn, Steven Jay; Pezzo, Mark (1994, August). Close encounters with aliens? Simulated accounts following a hypnotic interview. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

## NOTES

A survey of 5900 adults regarding unusual experiences concluded that 1 of 50 Americans may have had UFO experiences.

This study resembles that of Lawson (1977), in which Ss were asked to imagine UFO experiences; their descriptions were difficult to distinguish from real reports. One problem with Lawson's research is that he provided the Ss with information (e.g. to imagine they were abducted by aliens).

Our study differs from Lawson's in that we didn't actually hypnotize subjects. Our Ss' task was to 'simulate hypnosis, in recovered memory research.' We manipulated cues provided to the Ss. Ss were told their purpose was to role play an excellent hypnotic subject. Standard simulation instructions were given. Then they were told that hypnosis frequently is used to recover experiences that the Ss cannot remember.

Ss were given a description of a Scene: driving on a road in the country, no traffic, etc. They were told that they couldn't remember 2 hours of what happened. Then a second Experimenter used a pseudo hypnotic induction, and told them they were going to recall material regarding events that had happened.

Ss completed an Omni Magazine questionnaire developed by Hopkins, who is an advocate of UFO sitings. They received the questionnaire either after the experiment, before the experiment, or with specific cues.

4 of 21 (19%) of the minimal cue condition Ss identified lights in the sky as a UFO; at the end, 52% saw a UFO. Thus, even with minimal information, subjects report interactive behavior. Almost all medium cue Ss reported the UFO. 17% felt a loss of control, being floated or transported to the spaceship. Only one S said the aliens were cruel. Only one of the role players picked up the word "trondant," a word used by Hopkins to pick up simulators who are hypnotized.

Our findings present a conservative picture. When Ss thought they would be thrown out of the experiment if detected as simulators, they avoided talking about bizarre events. 15% who were told to role play a close encounter failed to do so!

Our findings do not imply that persons who report contacts are simulating; but the basis for such reports are widely available to college students.

Lynn, Steven. Jay; Rhue, Judith W.; Myers, Bryan P.; Weekes, John R. (1994). Pseudmemory in hypnotized and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 42 (2), 118-129.

High hypnotizable (n = 23) and low hypnotizable simulating (n = 13) subjects received pseudomemory suggestions. High hypnotizable and low hypnotizable simulating subjects were equally likely to pass the target noise suggestion during hypnosis and were also equally likely (high hypnotizables, 47.83%; low hypnotizable simulators, 64.29%) to report pseudomemories when tested for pseudomemory after instructions to awaken. As in previous research with task-motivated subjects, pseudomemory rate (high hypnotizables, 47.48%; low hypnotizable simulators, 46.25%) was not reduced by informing subjects that they could distinguish fantasy and reality in a nonhypnotic state of deep concentration. At final inquiry, after deep concentration, high hypnotizable and low hypnotizable simulating subjects' pseudomemories remained comparable (43.48% and 38.46%, respectively). Unlike previous research, high hypnotizable subjects did not report more unsuggested noises and more pseudomemories of novel sounds than did awake low hypnotizable simulating subjects. Pseudo-memory reports were generally consistent with subjects' ratings of whether the hypnotist expected them to believe the sounds were real or imagined.

Martin, D.; Tomak, J.; Lynn, S. J. (1994, October). Detecting simulation with the hypnosis simulation index. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

Orne described demand characteristics of the hypnotic situation, such that some Ss want to either deceive the hypnotist or to please the hypnotist or to help the experiment work. To separate essence of hypnosis he devised an experimental technique, which informs S to role-play, and tells them intelligent Ss will be able to do this. Sheehan & McConkey note that though the model specifies subjective experience, it lacks a way of determining if people are truthful.

We developed a scale assuming hypnotized Ss would be truthful and wouldn't say they had experiences they didn't, but that simulators would exaggerate. The scale included events plausibly reported by highs but not widely reported.

The scale has 31 items, and is titled the Hypnotic Experience Scale. It has 24 items for experiences during hypnosis, 5 for experiences after hypnosis, and 2 for how deeply hypnotized they felt and what kind of hypnotic subject they thought they were.

Ss participated in 2 sessions. They had the Harvard group scale in the first, and simulation instructions in second session. Simulation instructions were read to Low and Medium subjects. To encourage Ss to keep eyes closed, they were told it was essential to keep their eyes closed. We had scores on:

Hypnosis Simulation Index

**SCL 90**

**DES**

**Tellegen Absorption Scale**

**Highs did not receive any simulation suggestions. Then the Stanford Scale was administered. Highs and Simulators had to pass at least 9 Harvard items.**

**Of the predictors, only the Hypnosis Simulation Index discriminated. It correctly classified 94% of the Ss. To eliminate non-useful items, a stepwise discriminate analysis was performed. 15 items remained. These 15 items were used in a series of analyses. They discriminated between the 2 groups from 100% to 70% of the time.**

**This study is the first to successfully discriminate hypnotized from dissimulating subjects. Simulators' performance indicate they tend to respond in stereotypic ways that exaggerate how hypnotized Ss respond. Hypnotized Ss who passed more than 10 items only rated themselves as average on hypnotizability.**

**This has potential applications in forensic situations.**

**Spiegel, David; Schefflin, Alan W. (1994). Dissociated or fabricated? Psychiatric aspects of repressed memory in criminal and civil cases. International Journal of Clinical and Experimental Hypnosis, 42 (4), 411-432.**

**During the last decade, clinicians, courts, and researchers have been faced with exceedingly difficult questions involving the crossroads where memory, traumatic memory, dissociation, repression, childhood sexual abuse, and suggestion all meet. In one criminal case, repressed memories served as the basis for a conviction of murder. In approximately 50 civil cases, courts have ruled on the issue of whether repressed memory for childhood sexual abuse may form the basis of a suit against the alleged perpetrators. Rulings that have upheld such use underscore the importance of the reliability of memory retrieval techniques. Hypnosis and other methodologies employed in psychotherapy may be beneficial in working through memories of trauma, but they may also distort memories or alter a subject's evaluation of their veracity. Because of the reconstructive nature of memory, caution must be taken to treat each case on its own merits and avoid global statements essentially proclaiming either that repressed memory is always right or that it is always wrong.**

**1992**

**Mare, Cornelia; Lynn, Steven Jay; Segal, David; Sivec, Harry; Marsden, Kim; Myers, Bryan (1992, October). The 'dream hidden observer': A real-simulator comparison. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

**NOTES**

**In previous research, after the Stanford Scale Form C dream suggestion, the authors gave the suggestion to the Ss that "in hypnosis you can discover part of the unconscious mind that is aware of new thoughts, images, that might be related or might not be related to your dream; let your index finger lift when that happens." There were strong demand effects observed in those Ss.**

**94% of highs and 78% of mediums passed the hidden observer test, with more personal and more primary process material produced in the hidden observer condition. All Ss recalled their suggested dreams after awakening, but only 1/3 recalled their hidden observer. The authors think it was because Ss thought the hidden observer was "unconscious."**

**Authors compared highs with low simulators in the present study. Michael Nash says two things differentiate highs: more primary process thinking, and more affect availability in hypnosis. In this study, if high hypnotizables' dreams have more of these, it would support the psychoanalytic model.**

**N = 18 Highs who passed 9 Harvard Scale suggestions; 18 lows passed 3 or fewer suggestions.**

**Simulating instructions were from Orne, 1977.**

**Hypnotists were blind to the hypotheses and to the hypnotizability of Ss. This differs from the first study in two ways: (1) instructions to Ss (here they were more like Hilgard's original suggestions), and (2) more probing about dream content before receiving the hidden observer instructions.**

**We did a 5-point scale on bizarre content, on different thoughts after the experience, and on additional content. Primary process was measured by Bizarre Content and by Shifts in Time or Location. Did ANOVA on 2 primary process and 3 affect measures. Many other analyses also were used. Even under multiple probes, most Ss passed hidden observer test. (In both groups only 1 didn't pass the hidden observer test.) So it is a very reliable suggestion, suggesting that hidden observer instructions are a very credible metaphor (for clinical practice).**

**The 2 groups were comparable on rates of reporting more personally revealing information in the hidden observer condition: so this suggestion could be useful to get additional information from patients.**

**The results supported one hypothesis: dream reports were associated with more primary process thinking. This was more true of highs than lows. Results supported the view that primary process is not attributed to role playing because the blending of dream and hidden observer responses occurred in the high hypnotizables; more novel content was found in the highs.**

**No support was found for the hypothesis that more affect is produced under these conditions.**

**Though simulators were unable to role-play the primary process thinking of highs, they may have been vigilant and may have suppressed primary process thinking.**

**Mozenter, Randi H.; Kurtz, Richard M. (1992). Prospective time estimation and hypnotizability in a simulator design. International Journal of Clinical and Experimental Hypnosis, 40, 169-179.**

**The present study of prospective time estimation examined the effects of hypnosis on short time intervals using a real-simulator design. The major hypothesis predicted a 2-way interaction between group (high hypnotizability, low hypnotizability, and simulator) and condition (waking and hypnotic) across all 4 time intervals (30, 60, 120, and 240 seconds). It was further hypothesized that on a "suggested" task (a measure of hypnotic depth), high hypnotizability subjects and simulators would not differ from each other but would differ from low hypnotizability subjects. 42 undergraduates were screened on both the Creative Imagination Scale (Wilson & Barber, 1977) and the Stanford Hypnotic Clinical Scale for Adults (Morgan & J. R. Hilgard, 1975, 1979) and assigned to 1 of 3 groups (high hypnotizability, low hypnotizability, simulator) based on combined hypnotizability scores. Subjects verbally estimated time intervals of 30, 60, 120, and 240 seconds, 3 times each, both while in a waking and a hypnotic condition. Hypnotic depth was assessed once following each time interval. Partial support was found for the first hypothesis where, for both the 60- and 120-second intervals, high hypnotizability subjects increased their overestimation in the hypnotic condition. Low hypnotizability and simulator Subjects showed no such increase. The second hypothesis, that high hypnotizability and simulator Subjects would differ from low hypnotizables on the "suggested" task, was confirmed. The partial replication of previous research was examined in the context of choice of hypnotizability measure and reliability of time estimation.**

## **NOTES**

**[Perhaps the increase in time estimation shown by highs is evidence of inhibition of cortical response--the time keeper. It is the opposite of the shortened experience of time that often has been found in hypnosis when retrospective technique was used (Bowers, 1979; Jasinski, 1986), though St. Jean did not find time shortening in 3 studies (p. 170).]**

1991

Berrigan, Lee P.; Kurtz, Richard M.; Stabile, Joseph P.; Strube, Michael J. (1991). Durability of 'posthypnotic suggestions' as a function of type of suggestion and trance depth. International Journal of Clinical and Experimental Hypnosis, 39, 24-38.

3 types of 'posthypnotic suggestion,' based upon factor analytic studies, were administered to high hypnotizability Ss (reals) and to low hypnotizable Ss instructed to simulate hypnosis (simulators) (N = 12 high and 6 low hypnotizable Ss per suggestion). The 'posthypnotic suggestions' consisted of instructions given to Ss following a hypnotic induction that, when the posthypnotic cue was later given, they would re-enter the hypnotic state and perform a certain task at that time. Ss were then tested 6 times for durability of 'posthypnotic response' during an 8-week period. Responses to the 'suggestions' were rated by research assistants (objective scores) and by Ss themselves (subjective scores). There was a significant Trials x Type of 'Suggestion' interaction for both types of scores for the reals but not for the simulators, indicating different rates of decline with time for the different 'suggestions' for the hypnotic Ss. Depth of reported hypnotic trance during the assessment sessions was found to be strongly related to performance of the 'posthypnotic suggestion' for both real and simulating Ss.

#### NOTES

The suggestion was either arm lowering, verbal inhibition for the name of S's hometown when asked, and suggestion of imagined or hallucinated smell of ammonia odor in response to the sound of a substance-free aerosol can being sprayed.

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1991, August). Is the hypnotized subject lying?. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

To determine whether or not hypnotized subjects misrepresent or lie about their hypnotic experiences, electrodermal skin conductance responses were measured while groups of deeply hypnotized subjects and simulators responded to questions about their experiences to a series of suggestion. 89% of the responses of the hypnotic subjects met the criteria for truthfulness, while 65% of the responses of the simulators indicated deception. Differences between "reals" and simulators were highly significant. The relevance of the results for the nature and theory of hypnosis is discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

Spanos, Nicholas P.; DuBreuil, Susan C.; Gwynn, Maxwell I. (1991). The effects of expert testimony concerning rape on the verdicts and beliefs of mock jurors. Imagination, Cognition and Personality, 11, 37-51.

Mock jurors heard one of 4 versions of a 'date rape' case and deliberated in small groups, to a verdict. Exposure to the direct examination of an expert who testified about rape myths undermined belief in the defendant's testimony that sex with the complainant had been consensual, and increased the frequency of guilty votes. However, exposure to the expert's cross-examination reversed the effects of the direct examination on the frequency of guilty votes. Women jurors disbelieved the defendant and voted him guilty to a greater extent than male jurors, while in both sexes profeminist attitudes correlated with disbelief in the defendant's testimony but failed to correlate significantly with final verdicts. Implications are discussed

1990

Bates, Brad L. (1990). Compliance and the Carleton Skill Training Program. British Journal of Experimental and Clinical Hypnosis, 7, 159-164.

## NOTES

He presents examples of how the Carleton training program for increasing hypnotizability encourages compliance, which suggests that the results are not truly an increase in suggestibility or hypnotizability.

Spanos, Nicholas P.; James, Barbara; de Groot, Hans P. (1990). Detection of simulated hypnotic amnesia. Journal of Abnormal Psychology, 99, 179-182.

Highly hypnotizability nonsimulators and high- and low-hypnotizable simulators of hypnosis were administered a hypnotic amnesia suggestion and tested for recall and recognition of a previously learned word list. Simulators exhibited higher levels of recall and recognition amnesia than non-simulators. Most important, simulators recognized 'forgotten' words at lower levels than expected by chance significantly more often than did nonsimulators. Implications for the detection of simulated amnesia in clinical samples are discussed.

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

## NOTES

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic emotions and physical sensations: A real-simulating analysis. International Journal of Clinical and Experimental Hypnosis, 37, 305-319.

Real hypnotizable Ss and simulating un hypnotizable Ss were administered a suggestion for either happiness, emotional neutrality, or sadness. The emotion was assessed through subjective and behavioral measures taken once before, twice during, and once after the emotion. Findings indicated that emotionally congruent changes occurred in both self-report and performance measures. Ss' physical sensations during the emotion were assessed on a 34-item self-report scale. It was demonstrated that Ss in the happy versus sad conditions reported different physical sensations; in particular, they reported different facial sensations. The responses of real hypnotizable subjects, however, were essentially paralleled by those of simulating un hypnotizable subjects. Therefore, the possibility exists that hypnotized subjects may have been responding on the basis of social demands. The findings are discussed in terms of the effects of the emotion suggestions, and the implications of real and simulating Ss displaying similar affective responses.

## NOTES

Used the real-simulating model in an attempt to eliminate the possibility that hypnotized Subjects in previous studies may have been responding to the demand characteristics of the situation. Used both subjective and behavioral measures. Self-report happiness and sadness, of emotion intensity; behavioral performance measure of speech rate, indexed by counting speed (which has been shown to distinguish between happiness and sadness). Used 34-item self-report Physical Sensations Scale based on Pennebaker, J. W. *The psychology of physical symptoms*. New York: Springer-Verlag,

1982.

They cite Weiss, et al (1987) who focused on the onset latency, and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure.

Marks, David F.; Baird, John McR.; McKellar, Peter (1989). Replication of trance logic using a modified experimental design: Highly hypnotizable subjects in both real and simulator groups. *International Journal of Clinical and Experimental Hypnosis*, 37, 232-248.

A potentially useful method for diagnosing the presence of hypnosis has been the comparison of hypnotic Ss and simulators. The present study attempted to replicate the hypnotic-simulator differentiation in regard to trance logic, as originally described by Orne (1959), using a modified design in which Ss in the 2 conditions were matched for hypnotizability scores. Orne's doubled person hallucination (DPH) suggestion was presented, and the results showed significant differences between the two treatment conditions in both DPHs and spontaneous transparency reports. One interesting case of DPH occurred in the simulator group with one S in whom a hypnotic-like state was self-induced. In contrast to the placid acceptance of DPH among Subjects in the hypnotic condition, the experience was a confusing and mildly disturbing one for this S, who was not expecting any unusual perceptual experiences. Trance logic results from the 'metasuggestion,' experienced through participation in a formal induction procedure, that hypnosis entails new rules of experience and behavior.

## NOTES

Demonstrates changes in perception as a function of suggestion. This experimental design should show what the essential characteristics of hypnosis would be. They compared hypnotized Subjects with simulating Subjects, but modified the original simulator design so that the Subjects in the two conditions were matched for hypnotizability scores. In this design, hypnotizability can be eliminated as a causal factor if any differences are found between groups. The design has the disadvantage of not being able to assure that the simulating Subjects do not inadvertently enter hypnosis.

"The results indicate that the distribution of hypnotized and simulator Subjects reporting DPH has a 1-in-20 probability of occurring by chance. These results confirm Orne's (1959) original claim that hypnotized Subjects who report the hallucination will tend to acknowledge the real target person behind. In contrast with most of the previous research, the present study has replicated Orne's finding that 100% of reals who acknowledge the hallucination also report DPH. Orne also claimed that simulators who report the hallucination will seldom report DPH. In the present experiment 58% of the simulators produced DPH responses, a greater number than would be expected on the basis of Orne's original data. In the 25 year period between the two studies, however, the sophistication of the university student population in regard to hypnotic effects could well have increased and, therefore, a better level of hypnotic simulation might well be expected. Additionally, and perhaps more importantly, highly hypnotizable simulators can be expected to be more successful at accurately playing the role of hypnotized Ss, because they are more likely to have had direct access to relevant fantasy-oriented experiences than low hypnotizables" (p. 242).

"The claim by Orne (1959) that a spontaneous transparency response is 'absolutely diagnostic' of the hypnotized S therefore appears to be correct" (p. 242).

"Hypnosis is a condition in which suggestions bring about alterations in imagery, memory, mood, motor control, or perception. These alterations are subjectively real, and while the circumstances under which these alterations occur most reliably entail co-operative, highly hypnotizable Ss participating in a hypnotic induction procedure, highly hypnotizable Ss may experience hypnotic phenomena in their everyday life (Shor, 1959; Shor, Orne, & O'Connell, 1962). The results of the present investigation correspond well to the description of 'trance logic' given originally by Orne (1959). The Ss were selected from the high end of a continuum which has variously been characterized as 'tranceability' or suspension of usual 'generalized reality-orientation' (Shor et al., 1962), 'absorption' (Tellegen & Atkinson, 1974), 'fantasy-proneness' (Wilson & Barber, 1983), and in the general literature, 'hypnotizability' or 'hypnotic susceptibility.' The Subjects who experienced DPH would likely have been characterized by high scores on other measures of hypnotizability, and they were found to have significantly higher scores on the measure of hypnotizability used in the present study (CIS plus BSS)" (p. 244).

Spanos, Nicholas P.; Flynn, Deborah M. (1989). Simulation, compliance and skill training in the enhancement of hypnotizability. British Journal of Experimental and Clinical Hypnosis, 6, 1-8.

Subjects who underwent cognitive skill training were compared to no treatment controls and to subjects in two simulation treatments on the behavioural and subjective dimensions of two hypnotizability post-tests. Ss in a trained simulation treatment received skill training but were instructed to fake the responses of someone who had been transformed by training into an excellent hypnotic subject. Standard simulators did not receive skill training, but were instructed to fake their responses to the two post-tests. A final group of untrained Ss (i.e. naturals) who attained the same behavioural scores on a hypnotizability index as did post-tested skill-trained Ss, was also compared to the treated groups. Ss in the two simulation treatments performed similarly on all hypnotizability indexes. Simulators out-performed both skill-trained and natural subjects (who failed to differ from one another) on all indexes, and skill-trained and natural subjects, in turn, out-performed the no treatment controls. These findings suggest that sustained faking cannot account adequately for the enhancements in hypnotizability produced by skill training.

Van Denberg, Eric J.; Kurtz, Richard M. (1989). Changes in body attitude as a function of posthypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 37, 15-30.

Hypothesized that highly hypnotizable subjects who remained amnesic for posthypnotic suggestions to improve body attitude would show greater changes than subjects who were not amnesic. Subjects given simulating instructions were used as a comparison group to assess experimental demands. 48 females were screened with the Harvard and assigned to one of 4 conditions: (a) high hypnotizable with amnesia suggestions, (b) high hypnotizable without suggested amnesia, (c) low hypnotizable simulator with amnesia, and (d) low hypnotizable simulator without suggested amnesia. A fifth group was formed of those high hypnotizable subjects who remembered the suggestion despite instructions to the contrary. The Body Attitude Scale (Kurtz, 1966) was administered prior to and 3 days after the experimental suggestions. Results generally demonstrated that high hypnotizable amnesic subjects manifested the greatest attitudinal and phenomenological changes as a result of the posthypnotic suggestion, although conclusions were tempered by performance of simulating subjects. The implications for hypnosis research and clinical practice are discussed.

NOTES

"The hypothesis that hypnotized subjects would report greater positive changes in affect, self-esteem, and social functioning than simulators was tested using a brief structured questionnaire. An analysis of Subjects responses to the questionnaire while with the 'blind' research assistant (simulators in role) revealed number significant differences between groups (N = 48) on six of the seven questions. ... An analysis of Subjects' responses to the questionnaire while being debriefed by the primary investigator (simulators out of role) revealed significant differences among groups (N = 48) on three of the seven questions. ... High hypnotizable subjects with maintained amnesia demonstrated a strong tendency to be the most responsive of all groups of subjects on the first and second assessment. In contrast, the high hypnotizable Ss for whom amnesia 'broke down' reported the fewest phenomenological changes of any of the five groups during the first assessment, and comparatively few during the second assessment. Also of note is that once out of their role, simulators in both conditions dramatically reduced their reporting of positive change" (pp. 23-24).

"Moreover, a closer examination of the data demonstrated that phenomenological and behavioral differences in the groups did appear at several points during the experiment. For example, the 10 high hypnotizable subjects told to explicitly remember the suggestion did so, while 3 of the 10 simulators in this condition claimed to have forgotten it. On debriefing, these Subjects reported they did this because they believed 'really hypnotized subjects wouldn't be able to remember anything, even if they were told they could.' Further, no simulator in the amnesia condition reported they could recall the suggestion, in contrast to the high hypnotizable subjects, 44% of whom said they did remember it. With regard to phenomenological differences, simulators stated during debriefing with the primary investigator that they intentionally faked changes on BAS, and that they experienced no true effects from the suggestion for positive body attitude change. In contrast, high hypnotizability amnesic subjects reported global, pervasive changes in their mood and self-esteem that went beyond specific alterations in attitudes toward their appearance. By comparison, high hypnotizable subjects told to remember the suggestion reported greatly increased self-absorption and acute awareness of the suggestion, 'sort of like a broken record in my head'" (pp. 25-26).

"As shown by the present study, amnesia maintenance can be quite problematic. Of 18 high hypnotizable subjects for whom amnesia was suggested, only 10 remained fully amnesic for the suggestion after 3 days. In addition, those 8 subjects for whom amnesia 'broke down' showed minimal shifts on BAS, or in reports of phenomenological changes. Such frequent amnesia failure has been reported by other researchers, although the effectiveness of the suggestion is not always so compromised" (p. 26).

1988

Gruzelier, John; Allison, James; Conway, Ashley (1988). A psychophysiological differentiation between hypnotic behaviour and simulation. International Journal of Psychophysiology, 6, 331-338.

Psychophysiological differentiation between conditions of hypnosis and simulation were examined with markers evolved from a series of experiments charting neuropsychophysiological accompaniments of hypnotic behaviour. Eighteen subjects participated in two sessions in which bilateral electrodermal activity was monitored to moderate intensity tones. Measurement in Session I, a Baseline-Control, of individual variation in rates of habituation of orienting responses, non-specific responses and tonic levels of skin conductance, enabled allocation of matched groups to Session II in which the same auditory stimuli were mixed with a taped hypnotic induction. Half the subjects were instructed to fake hypnosis and the others to comply. In session II the groups were differentiated as follows: (1) rate of habituation to the tones was retarded in the simulation condition and facilitated in the hypnosis condition compared with baseline; (2) the incidence of non-specific electrodermal responses was elevated in simulators after instructions to 'fake hypnosis'; (3) right-hand levels of skin conductance

were elevated in simulators; (4) all but one subject in the hypnosis condition admitted to hearing the tones whereas all but one in the simulation condition claimed not to have heard them

Spanos, Nicholas P.; Gwynn, Maxwell I.; Della Malva, C. Lori; Bertrand Lorne D. (1988). Social psychological factors in the genesis of posthypnotic source amnesia. Journal of Abnormal Psychology, 97 (3), 322-329.

Three experiments assessed the role of social psychological variables in source amnesia. Experiment 1 found that low-hypnotizable subjects instructed to simulate partial amnesia were more likely to exhibit source amnesia than high-hypnotizable hypnotic or task-motivated subjects. Experiment 2 found equivalent rates of source amnesia in low-hypnotizable simulators and high-hypnotizable hypnotic subjects. In addition, the findings of Experiment 2 failed to support the idea that the instructions for partial amnesia given to simulators cued for the occurrence of source of amnesia as well as for the occurrence of partial amnesia. In Experiment 3, preliminary instructions that legitimated source amnesia as a role-appropriate response produced significantly more posthypnotic source amnesia than did neutral or no instructions. Together, the findings of the 3 experiments support the relation of source amnesia to experimental demands and subjects' expectations.

1987

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern- masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

## NOTES

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7

dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials

Response Category S Group N Related Unrelated Total

Hypnotized 9 7.22 10.78 18

(40.13%) (59.88%) (100%)

Simulating 15 12.13 5.87 18

(67.43%) (32.61%) (100%)

Baseline 19 8.79 9.21 18 Controls (48.82%) (51.17%) (100%)

Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials

Related Responses S Group Phonetic Semantic Hypnotized 1.78 5.44

(9.89%) (30.24%) Simulating 7.07 5.07

(39.27%) (28.16%) Baseline 4.21 4.58 Controls (23.38%) (25.44%)

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.)

In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the

present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

Weiss, F.; Blum, G. S.; Gleberman, L. (1987). Anatomically based measurement of facial expressions in simulated versus hypnotically induced affect. Motivation and Emotion, 11, 67-81.

#### NOTES

Cited by Bryant R. A. & McConkey, K. M. (1989) Hypnotic emotions and physical sensations: A real-simulating analysis, IJCEH, 37, 305-319, who state, "Finally, future research could usefully focus on aspects of experiencing emotions that are not obvious to simulators. Recent research by Weiss et al. (1987), for instance, that focused on the onset latency and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure, and this points to the potential value of investigating specific aspects of emotional experience. Thus, future investigations of real and simulated emotions and physical sensations could usefully employ more subtle and unobtrusive measures of the specific emotional responses of subjects" (p. 316).

1986

Schacter, Daniel L. (1986). Amnesia and crime: How much do we really know?. American Psychologist, 41, 286-295.

Claims of amnesia occur frequently after the commission of violent crimes and can have a significant bearing on the outcome of criminal trials. This article considers the relation between amnesia and crime within the broader context of research on memory and amnesia and provides a critical evaluation of current knowledge concerning the issue. Particular attention is paid to the problem of distinguishing between genuine and simulated claims of amnesia. It is suggested that reliable data concerning the nature of amnesic episodes that occur after the commission of a crime are sparse, and that there is as yet little evidence that genuine and simulated amnesia can be distinguished in criminal cases. The results of several laboratory studies are summarized that indicate that feeling-of-knowing ratings distinguished between genuine and simulated amnesia under conditions in which psychologists and psychiatrists did not.

Silverman, Paul S.; Retzlaff, Paul D. (1986). Cognitive state regression through hypnosis: Are earlier cognitive stages retrievable?. International Journal of Clinical and Experimental Hypnosis, 34, 192-204.

Piagetian theory maintains that stage sequence is invariant due to irreversible transformations of cognitive structure which characterize development. The present study aimed to test this claim by attempting to stage-regress hypnotized and hypnosis-simulating adults. A prediction discrepancy technique was used whereby 3 tasks (conservation of volume, horizontality, and seriation) and target ages (8, 7, and 5 years) were selected based on evidence of failure by actual children, but adult predictions of success by children. Under both regressed and simulating conditions, adult task scores were substantially higher than those of actual children, though slightly lower than scores obtained during the normal adult state. The modest partial regression obtained suggests superficial performance adjustments attributable to procedure demand characteristics or to enhancement of role playing rather than temporary modifications of cognitive structure.

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J. (1986). Component analysis of cognitive skill training for the enhancement of hypnotic susceptibility. Journal of Abnormal Psychology, 95, 350-357.

Four treatments to enhance the hypnotic responsiveness of subjects who pretested as low in hypnotic susceptibility were compared. Complete skill training included information aimed at encouraging (a) positive attitudes, (b) the use of imagery strategies, and (c) an interpretation of hypnotic behavior as active responding. Partial training included only components (a) and (b). Both training packages enhanced attitudes toward hypnosis to an equivalent degree. However, complete training was much more effective than either partial training or no treatment at enhancing behavioral and subjective responding on two different posttest scales of hypnotic susceptibility. More than half of the subjects who received complete training, but none of the partial training or control subjects, scored in the high-susceptibility range on both posttests. Subjects explicitly instructed to fake hypnosis and those in the complete skill-training treatment exhibited significantly different patterns of posttest responding. Findings support social psychological perspectives that emphasize the importance of contextual factors in hypnotic responding.

Spanos, Nicholas P.; Weekes, John R.; Menary, Evelyn; Bertrand, Lorne D. (1986). Hypnotic interview and age regression procedures in the elicitation of multiple personality symptoms: A simulation study. Psychiatry, 49, 298-311.

Patients diagnosed as suffering from multiple personality (i.e., multiples) behave as though they possess two or more distinct personal identities. When behaving as one identity, these patients often display signs of amnesia for events that occurred while they were behaving as a different identity (Sutcliffe and Jones 1962; Taylor and Martin 1944). In most theoretical accounts multiples are conceptualized as the passive victims of unconscious psychological processes that are beyond their sphere of control. For instance, patients' secondary identities are typically described as "dissociated" mental entities, as "taking over" behavioral control, as behaving independently of (and often in opposition to) patients' wishes and intentions, and so on (Allison and Schwarz 1980; Gruenewald 1984; Prince 1930; Watkins and Johnson 1982). Our paper criticizes this traditional account and suggests instead that multiple personality may be more usefully conceptualized as a social role enactment. Along these lines we present a study using college student role players as subjects to test the hypothesis that the kinds of clinical interview procedures employed routinely to diagnose multiple personality may instead encourage and legitimate enactments of this syndrome.

1985

Ashton, M.A.; McDonald, R.D. (1985). Effects of hypnosis on verbal and non-verbal creativity. International Journal of Clinical and Experimental Hypnosis, 33 (1), 15-26.

60 female volunteers, 30 hypnotizable and 30 un hypnotizable, screened on 2 measures of hypnotizability, were assigned to a hypnosis, simulation, or waking motivated treatment condition to assess whether hypnosis has a differentially enhancing effect upon verbal and non-verbal creativity test performance. Verbal and figural components of the Torrance Tests of Creative Thinking (Torrance, 1974) and the Sounds and Images Test (Cunnington & Torrance, 1965) were the principal dependent variables. Postexperimental measures of absorption and effortless experiencing were also obtained. A 2 x 3 independent groups ANOVA did not sustain the prediction of an interaction effect between S hypnotizability and the presence of hypnosis on 3 composite measures of verbal and nonverbal creativity. Although there was an absence of treatment effects, hypnotizable Ss consistently achieved higher scores on the Torrance scoring categories, and their performance was statistically

superior on a composite index of overall creativity. Absorption and effortless experiencing measures were also significantly higher for hypnotizable Ss than for unhypnotizable Ss.

Lundy, R. M.; Geselowitz, L.; Shertzer, C. L. (1985). Role-played and hypnotically induced simulation of psychopathology on the MMPI: A partial replication. International Journal of Clinical and Experimental Hypnosis, 33 (4), 302-309.

In Wilcox and Dawson (1977) hypnotized Ss who were simulating paranoia while taking the MMPI (Dahlstrom & Welsh, 1960) were not detected as simulators by 2 MMPI validity measures, the F scale and the Gough F minus K index (Gough, 1950). The present study found that hypnotized Ss were detected by the same measures, thus failing to replicate Wilcox and Dawson (1977). Hypnotized Ss in the present study, however, were different from a comparison group in not appearing to overlay psychopathology to the same degree.

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Frauman, David; Rhue, Judith (1985). Hypnotic age regression and the importance of assessing interpersonally relevant affect. International Journal of Clinical and Experimental Hypnosis, 33, 224-235.

The present study was undertaken to replicate an earlier experiment and to clarify which factors in this previous experiment (Nash, Johnson, & Tipton, 1979) were responsible for the obtained child-like behaviors of hypnotically regressed Ss. As in the previous study, 3 characteristics of the transitional object relationship (spontaneity, specificity, and intensity) were used as the primary criteria to investigate the effects of hypnotic age regression when Ss were regressed to age 3 and placed in 3 home situations. While in the previous study E suggested separation anxiety and isolation during the 3 home situations (mother-absent condition), the present study deleted all references to anxiety and isolation, and replaced them with suggestions of security and maternal proximity (mother-present condition). As expected, the mother-present versus mother-absent conditions led to similar hypnotized- simulating differences. In further accord with predictions, hypnotized Ss and simulating Ss requested a transitional object infrequently in the presence of mother. The importance of using dependent measures which index affective processes germane to interpersonal affect-laden experience is discussed.

Spanos, Nicholas P.; Weekes, John R.; Bertrand, Lorne D. (1985). Multiple personality: A social psychological perspective. Journal of Abnormal Psychology, 94, 362-376.

The part of an accused murderer remanded for pretrial psychiatric evaluation was role played by 48 college students. Role players were assigned to interview treatments that varied in how extensively they cued for symptoms of multiple personality. The most explicit treatment (i.e., Bianchi treatment, n = 16) included a hypnotic interview that was used in diagnosing a suspect in the "Hillside strangler" rape- murder cases as suffering from multiple personality. A less explicit hypnotic treatment (n = 16) and a nonhypnotic treatment (n = 16) were administered to the remaining role players. Most subjects in the Bianchi treatment displayed the major signs of multiple personality (e.g., adoption of a different name, spontaneous posthypnotic amnesia). In a later session subjects who role played as multiple personalities performed very differently on psychological tests administered separately to each role-played identity. Those who failed to enact the multiple personality role performed similarly when tested twice. Findings are discussed in terms of a social psychological formulation that emphasizes the roles of active cognizing, contextual cueing, and social legitimization in the genesis of multiple personality.

Spanos, Nicholas P.; de Groot, Hans P.; Tiller, Dale K.; Weekes, John R.; Bertrand, Lorne D. (1985). 'Trance logic,' duality, and hidden observer responding in hypnotic, imagination control, and simulating subjects: A social psychological analysis. Journal of Abnormal Psychology, 94 (4), 611-623.

Tested the hypothesis that a tolerance for logical incongruity characterizes hypnotic responding and is related to reports of duality experiences during age regression and hidden-observer responding during suggested analgesia. 30 undergraduates (the "reals") with high scores on a responsiveness-to-suggestion scale were randomly assigned to hypnotic or imagination control treatments, while 15 undergraduates with low scores were assigned to a simulation treatment in which they were instructed to fake hypnosis. Ss were assessed on 6 indicators of logical incongruity, given age-regression suggestions and perception tasks, administered a suggestion for analgesia and hidden observer instructions, and interviewed. Results do not support the hypothesis. The differences in responding that did emerge between reals and simulators were accounted for by the different task demands to which Ss were exposed. These behavioral differences, which have been previously interpreted in terms of intrinsic characteristics of hypnosis, may instead reflect a combination of between-treatments differences in demands and between- Ss differences in the interpretation of those demands and in the ability to fulfill them.

1984

Lynn, Steven Jay; Nash, Michael R.; Rhue, Judith W., Frauman, David C.; Sweeney, Carol A. (1984). Nonvolition, expectancies, and hypnotic rapport. Journal of Abnormal Psychology, 93 (3), 295-303.

Prior to hypnosis, subjects were informed either that hypnotizable subjects can resist motoric suggestions or that such control does not characterize good hypnotic subjects. During hypnosis, susceptible and simulating subjects received countering suggestions involving inhibiting suggestion-related movements. Susceptible subjects' responses were found to be sensitive to prehypnotic normative information. There was a corresponding tendency for reports of involuntariness to be sensitive to the expectancy manipulation. Furthermore, subjects were able to feel deeply hypnotized and to rate themselves as good subjects yet concomitantly experience themselves as in control over their actions when normative information supported this attribution. Reports of suggestion-related sensations but not imaginative involvement were associated with movements in response to countersuggestion. Simulators were unable to fake susceptibles' reports of sensations and involuntariness. However, for all subjects, movements paralleled expectancies about appropriate response, supporting the hypothesis that involuntary experiences are sensitive to the broad expectational context and are mediated by active cognitive processes. Also, rapport with the hypnotist was found to be a factor. Susceptible subjects with highly positive rapport resolved hypnotic conflict, in part, by achieving a compromise between meeting normative expectations and complying with the hypnotist's counterdemand.

Matthews, William J. Jr.; Kirsch, Irving; Allen, George J. (1984). Posthypnotic conflict and psychopathology -- controlling for the effects of posthypnotic suggestions: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (4), 362-365.

Hypnotically implanted paramnesias (false memories) designed to arouse Oedipal and non-Oedipal sexual conflicts were implanted in 2 groups of male undergraduate Ss. Ss in a third condition were hypnotized but no paramnesia was implanted. In a fourth condition, the Oedipal paramnesia was presented to Ss who had been instructed by coexperimenters to simulate hypnosis. All Ss had achieved a score of 7 or higher on the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962). Following implantation of the paramnesia, Ss were given conflict activating instructions

consisting of posthypnotic suggestions to express strong sexual feelings in response to cue words contained in the paramnesias. Ss in all conditions produced significantly more symptoms of discomfort to cue words than to neutral words. No significant between-group differences were found. These results question the contention that discomfort following the implantation of an Oedipal paramnesia constitutes empirical support for psychoanalytic theory.

Orne, Martin T.; Dinges, David F.; Orne, Emily Carota (1984). On the differential diagnosis of multiple personality in the forensic context. International Journal of Clinical and Experimental Hypnosis, 32 (2), 118-169.

The problems of diagnosing multiple personality disorder in a forensic context are discussed, and illustrated by the case of State v. Kenneth Bianchi (1979), a defendant who was both charged with first degree murder and suspected of having the disorder. Because of the secondary gain (e.g., avoiding the death penalty) associated with the diagnosis of multiplicity in such a case, hypotheses had to be developed to permit an informed differential diagnosis between multiple personality and malingering. If a true multiple personality disorder existed, then (a) the structure and content of the various personalities should have been consistent over time, (b) the boundaries between different personalities should have been stable and not readily altered by social cues, (c) the response to hypnosis should have been similar to that of other deeply hypnotized subjects, and (d) those who had known him over a period of years should have been able to provide examples of sudden, inexplicable changes in behavior and identity, and evidence to be the case. Rather, the content, boundaries, and number of personalities changed in response to cues about how to make the condition more believable, and his response to hypnosis appeared to reflect conscious role playing. Further, the life history indicated a persistent pattern of conning and deliberate deception. It is concluded that Mr. Bianchi was simulating a multiple personality and the diagnosis of Antisocial Personality Disorder with Sexual Sadism was made. Differential diagnoses and the clinical aspects that appeared to account for his behavior are discussed.

Sheehan, Peter W.; Tilden, Jan (1984). Real and simulated occurrences of memory distortion in hypnosis. Journal of Abnormal Psychology, 93 (1), 47-57.

79 undergraduates were prescreened for high or low susceptibility to hypnosis (Harvard Group Scale of Hypnotic Susceptibility--Form A) and tested individually to examine memory distortion in hypnosis. Independent groups of Ss were allocated to a 2 x 2 factorial design in which s grouping (hypnotic or simulating) was crossed with an information condition that either misled or did not mislead Ss about a series of scenes depicting an apparent robbery. It was hypothesized that memory distortion would characterize the performance of hypnotic Ss when memory was examined in unstructured, narrative recall. Results show that real Ss were differentiated appreciably from simulating Ss in the extent to which they incorrectly intruded uncued errors (i.e., errors not arising from misleading information) into their memories but not in their intrusion of cued errors (i.e., errors arising from misleading information). Real Ss remembered correctly more detail of a peripheral kind but also distorted more with respect to the same kind of detail. Results overall negate the view that earlier memory traces are revived in hypnosis, thereby leading to more accurate retrieval, and suggest that hypnotic Ss bring distinctive styles of information processing to bear on their recollections of complex, socially meaningful events

Sheehan, Peter W.; Grigg, Lyn; McCann, Terry (1984). Memory distortion following exposure to false information in hypnosis. Journal of Abnormal Psychology, 93 (3), 259-265.

92 Ss preselected for hypnotic responsiveness on the Harvard Group Scale of Hypnotic Susceptibility--Form A were tested in strict application of the real-simulating model of hypnosis to examine the hypothesis that hypnotic Ss distinctively incorporate false material into their memories when that material is introduced after, rather than before, hypnotic induction. Both real (n = 46) and simulating (n = 46) Ss were either exposed or not exposed to misleading information after receiving induction instruction. Procedures for testing were otherwise identical to those adopted in an earlier study by the 1st author and J. Tilden (see PA, vol 71:14147) in which false information was presented prior to hypnosis. Results confirm the hypothesis and show that hypnotic Ss differed appreciably from simulating Ss by incorporating more misleading material into their memory. Findings highlight the possibility of distinctive processing in hypnosis and implicate lowered critical assessment by hypnotic Ss of information they confidently accepted in the hypnotic context (20 ref)

1983

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

Wagstaff, Graham F. (1983). Comment on McConkey's "Challenging hypnotic effects: The impact of conflicting influences on response to hypnotic suggestion". [Comment/Discussion] .

## NOTES

"Probably the most consistent finding to emerge from McConkey's review is that hypnotic subjects tend to respond in accordance with what they feel the hypnotist really wants, regardless of conflicting experimental demands" (p. 13).

1982

Raikov, V. L. (1982). Hypnotic age regression to the neonatal period: Comparisons with role playing. International Journal of Clinical and Experimental Hypnosis, 30 (2), 108-116

The present study explored differences in behavior and reflexes following instructions to age regress to infancy or to portray infancy while high hypnotizable Ss were in an actor's role. Additional role enactment controls were provided by professional actors and low hypnotizable Ss. High hypnotizable Ss while hypnotized reproduced realistic newborn reactions, both behavior and reflexes, which were strikingly like new-born infants during actual age regression, but were unable to produce as many during role enactment. Similarly, the low hypnotizable Ss and professional actors were unconvincing.

Negating the theory of age ablation, results are discussed in the light of reactivation of lost memories through the breaking of amnesic barriers during hypnotic age regression.

Spanos, Nicholas P.; Bridgeman, M.; Stam, H. J.; Gwynn, M. I.; Saad, C. I. (1982-83). When seeing is not believing: The effects of contextual variables on the reports of hypnotic hallucinations. Imagination, Cognition and Personality, 2, 195-209.

When administered a hallucination suggestion most high susceptible hypnotic and task-motivated subjects reported that they "saw" the suggested object. When asked what they meant by "saw," however, almost all indicated that they had imagined the object but did not believe that it had actually been present. On the other hand, simulating subjects maintained that the suggested object had been "really there." Simulators were also more likely than non-simulators to provide "life-like" descriptions of the suggested object (e.g., solid rather than transparent, colored, highly vivid). These findings are consistent with the view that hypnotic hallucinations are context-generated imaginings. They also indicate that unique or unusual psychological processes like "trance logic" need not be posited to account for the descriptions of "hallucinatory" experiences proffered by hypnotic subjects.

#### NOTES

It was observed that hypnotized Ss reported more vivid (and longer sustained) imagery than task motivated Subjects. Hypnotized Ss did not differ from high susceptible simulators on vividness of imagery or how long they experienced the imagery, but did report shorter and less vivid imagery than simulators who were low hypnotizables.

#### 1981

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

#### 1980

Bauer, K. E.; McCanne, T. R. (1980). Autonomic and central nervous system responding during hypnosis and simulation of hypnosis. International Journal of Clinical and Experimental Hypnosis, 28 (2), 148-163.

Heart rate, electrodermal responding, respiratory rate, frontalis muscle tension, and occipital electroencephalographic activity were monitored while 6 female Ss were experiencing hypnosis and while 6 other female Ss simulated the experience of hypnosis. Physiological data were collected during 7 sessions on 7 consecutive days. The results indicated no differences in physiological responding

between hypnotized and simulating Ss. Both groups of Ss exhibited significant decreases in heart rate and amount of electroencephalographic alpha activity during their experiences, relative to pre- and posthypnotic or simulating levels. In addition, both groups of Ss exhibited significant increases in electroencephalographic beta activity during their experiences. Both groups of Ss also displayed lowered levels of electrodermal activity, skin conductance, and respiratory rate during their experiences. The changes in these modalities, however, were significant for hypnotized Ss, but were generally not significant for simulating Ss. Both groups of Ss also manifested lowered levels of muscle responding during their experiences, but these changes in responding were not significant for either group of Ss. The results are discussed in terms of several current theories of the nature of the hypnotic experience.

McConkey, Kevin M.; Sheehan, Peter W. (1980). Inconsistency in hypnotic age regression and cue structure as supplied by the hypnotist. International Journal of Clinical and Experimental Hypnosis, 28 (4), 394-408.

Inconsistency in hypnotic age regression was elicited by asking Ss to write a complex sentence, in contexts that varied appreciably in the extent to which they cued Ss that illogical response was appropriate. Hypnotically responsive and unresponsive Ss were assigned to a real or simulating group in application of the real-simulating model of hypnosis and tested in 1 of 3 distinct cue conditions. Cue conditions either followed those of previous studies and communicated that no particular response was appropriate, or communicated that an illogical response was appropriate, or inappropriate. It was hypothesized that cue structure would have a significant impact. Data indicated that cues for logical response had a greater influence on the behavior of Ss than did cues for illogical response when compared with the base response condition; at times, real Ss behaved appreciably more illogically than simulating Ss. Also, detailed analysis of the reports of both groups of Ss indicated distinctive properties of experience that point to the importance of recognizing the complexities of consciousness underlying the experiences of highly susceptible Ss.

1979

Sheehan, Peter W. (1979). Expectancy reactions in hypnosis. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 25-32). Amsterdam: Elsevier/North-Holland Biomedical Press.

## NOTES

Susceptible Subjects are more likely to follow the hypnotist's nonverbalized suggestion when it is counter to their expectation. But not consistently. His article in April 1979 *Journal of Abnormal Psychology* reports 10 studies of this. Such individual differences that exist relate to styles of performance, parameters which have nothing to do with hypnotizability.

1970

Gray, Arne L.; Bowers, Kenneth S.; Fenz, Walter D. (1970). Heart rate in anticipation of and during a negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 18 (1), 41-51.

Gave 10 stimulating control and 10 hypnotic undergraduates a suggestion to negatively hallucinate. Heart rate responses recorded prior to and including the hallucination period indicated consistent differences between groups. Hypnotic Ss responded with heart rate acceleration in anticipation of the hallucination, while controls responded with heart rate deceleration during the same period. It is suggested that these differences reflect differences in the subjective experiences of hypnotic and simulating Ss. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1969

Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73.

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3 in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Greenleaf, Eric (1969). Developmental-stage regression through hypnosis. American Journal of Clinical Hypnosis, 12, 20-36.

Twenty subjects serving as their own controls were given four developmental tasks under conditions of hypnotic regression (R) and hypnotic simulation (S). Scored interview data were correlated with performances under R and S. Findings: (a) The Ss' pattern of responses is best conceptualized as a 'mixed' regression rather than 'true' developmental regression. (b) Even when Ss are used as their own controls, the R condition is productive of a greater mean number of childlike responses than is the S condition, disregarding response patterns. (c) The S condition scores provide measures of a set of relatively independent, the R condition of a set of relatively unitary performance variables; this in the same Ss. (d) Factor analysis yielded three orthogonal factors: 'outcome by test performance,' a personality constellation and a factor describing interpersonal actions. The specific situational variable with greatest impact on test performance was the subject's ability to pretend.

London, Perry; Masden, Charles H., Jr. (1969). Role playing and hypnotic susceptibility in children: II. An extension and partial replication. International Journal of Clinical and Experimental Hypnosis, 17, 37-49.

7-12 yr. olds received 2 role-playing tests in 1 session and London's Children's Hypnotic Susceptibility Scale (CHSS) 1 wk. later. Performances were compared to a previous sample of 42 children who had received the same tests in reverse order of administration. Means of the role test were essentially the same in both samples. 1 of the role tests, Dramatic Acting, was unrelated to hypnotic susceptibility in both samples; the other, Hypnotic Simulation, was uncorrelated with overall susceptibility in the present sample, unlike the previous one, but seemed to have inhibited 1 aspect (Subjective Involvement scores) of performance on the CHSS. Order of administration of the simulation test and CHSS also differentially affected some Overt Behavior item scores; CHSS functioned as a rehearsal for the subsequent simulation performance of low-susceptibles, and the simulation test had the same function for the CHSS performances of high-susceptibles. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Bowers, Kenneth S. (1968). Hypnosis and creativity: A preliminary investigation. International Journal of Clinical and Experimental Hypnosis, 16, 38-52.

24 HIGHLY SELECTED, HYPNOTICALLY TRAINED COLLEGE STUDENTS WERE CAST INTO HYPNOTIC AND HYPNOSIS SIMULATING GROUPS AND GIVEN SUGGESTIONS TO

**BEHAVE CREATIVELY ON THE CONSEQUENCES TEST OF ORIGINALITY. NO DIFFERENCES BETWEEN THE 2 GROUPS APPEARED. THEY DID APPEAR, HOWEVER, ON A CONCEPT FORMATION TASK AS A FUNCTION OF TASK-INVOLVEMENT INSTRUCTIONS, IRRESPECTIVE OF WHETHER SS WERE HYPNOTIZED OR SIMULATING HYPNOSIS. MOREOVER, AWARENESS OF RESPONSE REINFORCEMENT CONTINGENCIES WAS STRONGLY INFLUENCED BY THE INVOLVING SUGGESTIONS. THE NEGATIVE FINDINGS ON THE CREATIVITY TEST WERE ATTRIBUTED TO THE EXCELLENT PERFORMANCE OF THE SIMULATOR SS. IT IS SUGGESTED THAT PERHAPS SUSCEPTIBILITY PER SE INTERACTS WITH ROLE PLAYING INSTRUCTIONS IN GENERATING MORE REGRESSIVE MODES OF THINKING. (SPANISH + GERMAN ABSTRACTS) (2 P. REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Overley, Toner M.; Levitt, Eugene E. (1968). A test of the expected homogeneity of simulator performance. International Journal of Clinical and Experimental Hypnosis, 16, 229-236.**

**Hypothesized that simulator control groups simulate unanimously and successfully any behavior which is under voluntary control. This hypothesis was disproved. The performances on various voluntary behaviors of 2 simulator groups with 17 Ss were more variable than those of a susceptible group. Simulators failed to simulate an average of 2.5 behaviors of 9 employed in both preliminary and experimental phases. Possible reasons for lack of simulator reliability and its implications for use of simulating controls are discussed. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Scheibe, Karl E.; Gray, Arne L.; Kleim, C. Stephen (1968). Hypnotically induced deafness and delayed auditory feedback: A comparison of real and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 16, 158-164.**

**PRELIMINARY RESEARCH INDICATES THAT HYPNOTICALLY INDUCED DEAFNESS MAY REDUCE THE SPEECH INHIBITING EFFECTS OF DELAYED AUDITORY FEEDBACK (DAF). REAL AND SIMULATING HYPNOTIC SS WERE COMPARED WITH RESPECT TO THE IMPROVEMENT IN SPEECH CONSEQUENT TO THE SUGGESTION OF DEAFNESS. RESULTS INDICATE VERY SIMILAR IMPROVEMENTS OF DAF SPEECH FOR BOTH GROUPS. AN INCIDENTAL FINDING IS THAT REAL SS HAD LONGER SIMPLE READING TIMES UNDER HYPNOSIS THAN DID SIMULATING SS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1966**

**Andreasen, A. G.; Singer G. (1966). Hypnosis and hypnotizability: Delusion or simulation?. International Journal of Clinical and Experimental Hypnosis, 14 (3), 257-267.**

**Because Sutcliffe (see 36:4) showed that hypnotic suggestions are not comparable in sensory content with real stimuli, the postulated difference between "pseudoperception" and "simulation" as indexed by reported subjective experiences of hypnotic Ss was tested. From 215 undergraduates, 30 high-susceptibility (HS) and 30 low-susceptibility (LS) Ss made kinesthetic and visual judgments of horizontality. A significant response, not attributable to simulation, was found only for the HS-hypnosis induction group; the effect was not attributable individually to susceptibility, hypnosis induction, or motivation. It is concluded that hypnosis, defined by this significant interaction effect between high susceptibility and hypnosis induction can be interpreted as a pseudoperceptual response to suggestion. (Spanish & German summaries) (28 ref.) (PsycINFO**

Orne, Martin T.; Evans, Frederick J. (1966). Inadvertent termination of hypnosis with hypnotized and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 14, 61-78.

6 highly hypnotizable Ss and 6 unhypnotizable Ss, instructed to simulate hypnosis, were given hypnotic instructions by means of a tape-recording. Continuous measures of subjective hypnotic depth and GSP were recorded to allow E to take the role of technician. After Ss had been hypnotized by the tape-recorder, a light went out, the tape-recorder stopped, and E rushed from the room--apparently in search of a fuse box. The Ss were observed for 30 min. through the 1-way screen. During this time the hypnotic suggestions appeared to lose their effectiveness and the hypnotized Ss gradually awoke. However, 5 of 6 simulating Ss behaved as though they were in hypnosis throughout. 5 of 6 deeply hypnotized Ss assumed that the fuse really had blown, whereas 5 of 6 simulating Ss perceived the "accident" to be part of the experiment. It was concluded that it is necessary to construct a situation in which both groups perceive the power failure to be genuine. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Brady, J. P.; Levitt, E. E. (1964). Nystagmus as a criterion of hypnotically induced visual hallucinations. Science, 146, 85-86.

Hypnotized Ss who report hallucinating a visual situation which would ordinarily elicit optokinetic nystagmus demonstrate nystagmus under these conditions. They and control Ss are unable to feign nystagmus in the waking state, either by imagining the situation or by direct efforts to simulate the eye movements. Thus an objective criterion is provided for the presence of visual hallucinations. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Shor, Ronald E. (1964). A note on shock tolerance of real and simulating hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 12 (4), 258-262.

Prior to the induction of hypnosis, Ss who later in an experiment were actually to be hypnotized selected lower criterion electric shock levels than did Ss who later were only to simulate hypnosis. This is the 1st quantified objective difference found to date between the behavior of Reals and Simulators. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Austin, M. J.; Perry, Campbell.; Sutcliffe, J. P.; Yeomans, N. (1963). Can somnambulists successfully simulate hypnotic behavior without becoming entranced?. International Journal of Clinical and Experimental Hypnosis, 11 (3), 175-186.

It is proposed that in order to avoid confounding subject and treatment differences in experimental studies of hypnosis a "simulating control" group composed of susceptible Ss be used. This study relates to the issue of whether such Ss can successfully simulate hypnosis, without being entranced. Results indicate an affirmative answer. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Damaser, E. C.; Shor, R. E.; Orne, M. T. (1963). Physiological effects during hypnotically requested emotions. Psychosomatic Medicine, 25, 334-343.

4 emotional states were used: fear, calmness, happiness, and depression. The Ss were 17 college undergrads divided into 2 groups (8 hypnotized Ss, 9 simulators). "It was demonstrated that consistent physiological changes occur in response to hypnotically requested emotions, but that similar changes occur just as readily during waking control conditions and can be produced just as clearly by Ss simulating hypnosis." (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Sutcliffe, J. P. (1960). 'Credulous' and 'sceptical' view of hypnotic phenomena. International Journal of Clinical and Experimental Hypnosis, 8 (1), 73-102.

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From Psyc Abstracts 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Yates, Aubrey J. (1960). Simulation and hypnotic age regression. International Journal of Clinical and Experimental Hypnosis, 8 (4), 243-250.

(Author's Discussion) "It is clear from the results reported above that Sutcliffe was correct in hypothesizing that Ss placed in the experimental situation described will attempt to make use of the counting method. It is equally clear that his suggestion that this artifact might account for True's (1949) results is not supported by the results of this experiment. Ss using the method in the waking state do better than chance expectations, but fall far short of the achievement of the Ss hypnotically regressed by True.

"There still remains the problem of explaining the results obtained by True (1949), and of accounting for the discrepancy between his results and those of Best and Michaels (1954). With regard to the former, the present author has suggested in a review of the literature on hypnotic age regression (Yates, in press), that the degree to which earlier habits (in this case "information") may be reactivated is a function of the degree to which those habits have been subsequently interfered with. It is arguable that simple pieces of information, although "forgotten", may lie dormant in the "memory system", but be capable of reactivation under appropriate circumstances, \_because the trace has not been interfered with by subsequent learning.\_ Complex structures, on the other hand, would be more difficult to re-evoked, because such factors as retroactive inhibition would interfere with the structure of the memory trace.

"The discrepancy between the results of True (1949) and Best and Michaels (1954) could be due to the small sample (n = 5) used by the latter compared with the former (n = 50). A more probable explanation lies, however, in differences in the hypnotic procedure used by the authors. Both Yates (in press), and Reiff and Scheerer (1959) have drawn attention to the importance of this variable. Although neither True, nor Best and Michaels, give sufficient details of their procedures, it seems possible at least that True regressed his Ss much more slowly than Best and Michaels. In other words, it may be important gradually to regress Ss back to the age level required under hypnosis, if that period is to be genuinely reinstated" (p. 249).

NOTES

The experimental task involved identifying the day of birthday at age 10, 7, and 4.

1953

Beigel, Hugo G. (1953). Prevarication under hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 32-40.

## NOTES

Author describes three cases in which hypnosis was used to confirm or disconfirm information provided in the waking state. All three cases involved marital relationships and mistrust. "It is interesting that, awakened from the hypnotic state, none of the subjects made the slightest attempt to deny any of the admissions made" (p. 39).

## SKIN/DERMATOLOGY

1993

Everett, John J.; Patterson, David R.; Burns, G. Leonard; Montgomery, Brenda; Heimbach, David (1993). Adjunctive interventions for burn pain control: Comparison of hypnosis and Ativan. Journal of Burn Care and Rehabilitation, 14, 676-683.

Thirty-two patients hospitalized for the care of major burns were randomly assigned to groups that received hypnosis, lorazepam, hypnosis with lorazepam, or placebo controls as adjuncts to opioids for the control of pain during dressing changes. Analysis of scores on the Visual Analogue Scale indicated that although pain during dressing changes decreased over consecutive days, assignment to the various treatment groups did not have a differential effect. This finding was in contrast to those of earlier studies and is likely attributable to the low baseline pain scores of subjects who participated. A larger number of subjects with low baseline pain ratings will likely be necessary to replicate earlier findings. The results are argued to support the analgesic advantages of early, aggressive opioid use via PCA or through careful staff monitoring and titration of pain drugs.

Forbes, E. J.; Pekala, R. J. (1993). Psychophysiological effects of several stress management techniques. Psychological Reports, 72, 19-27.

Progressive muscle relaxation and hypnosis both increased skin temperature and reduced pulse rate, and deep abdominal breathing reduced skin temperature. Hypnotic susceptibility had no effect on the psychophysiological measures.

Kraft, Tom (1993). Using hypnosis with cancer patients: Six case studies. Contemporary Hypnosis, 10, 43-48.

Hypnosis can be used in a number of different ways for helping patients suffering from cancer. As well as pain relief, hypnosis may be used to correct insomnia that does not respond to sleeping tablets; for the reduction in skin irritation and dyspnoea when these are due to organic causes, and for treatment-related over-eating. Some patients will use hypnosis in a symbolic way. When this occurs, just as in dream interpretation, it is important to ask the patient for associations, so that these symbols can be understood. Hypnosis can be an extremely useful addition to the medical armamentarium, and should be employed as an adjunct to standard forms of cancer treatment. This paper reports six case studies in which hypnosis was used to help cancer patients.

Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed

questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

## NOTES

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the subjective sense of altered state --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.

Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this

suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

Zachariae, Robert; Bjerring, P. (1993). Increase and decrease of delayed cutaneous reactions obtained by hypnotic suggestions during sensitization. Studies on dinitrochlorobenzene and diphenylcyclopropenone. *Allergy*, 48, 6-11.

Cutaneous reactivity to challenge with dinitrochlorobenzene (DNCB) and diphenylcyclopropenone (DCP) was studied in 16 subjects following hypnotic suggestions to increase and to decrease response during sensitization. The immunoreactivity to DNCB and DCP was modulated by direct suggestions and guided imagery under hypnosis. Subjects were high in hypnotizability as measured by the Harvard Group Scale of Hypnotic Susceptibility. Measurement of skin reactions to the challenge one month after sensitization was performed double blindly. Results showed a significant (.01) difference in visually scored reactions to DCP and DNCB between the group instructed to increase reaction to DCP and decrease reaction to DNCB and the group given the opposite instructions. A nonsignificant difference (.055) in skin thickness measured by ultrasound was found between the two groups. The study supports previous reports of experimental modulation of immunoreactivity and indicates that the specific immunological processes involved in the development of all allergic reactions may be susceptible to psychological factors.

1992

Ewin, Dabney M. (1992). Hypnotherapy for warts (verruca vulgaris): 41 consecutive cases with 33 cures. *American Journal of Clinical Hypnosis*, 35, 1-10.

Published, controlled studies of the use of hypnosis to cure warts are confined to using direct suggestion in hypnosis (DSIH), with cure rates of 27% to 55%. Prepubertal children respond to DSIH almost without exception, but adults often do not. Clinically, many adults who fail to respond to DSIH will heal with individual hypnoanalytic techniques that cannot be tested against controls. By using hypnoanalysis on those who failed to respond to DSIH, 33 of 41 (80%) consecutive patients were cured, two were lost to follow-up, and six did not respond to treatment. Self-hypnosis was not used. Several illustrative cases are presented. NOTES 1:

NOTES

"I do not consider self-hypnosis necessary, and I believe it may be contraindicated. Once the change in sensation has been acknowledged by an ideomotor signal, I suggest that the subconscious will take care of healing the warts and that the patient should ignore them and get interested in other things. Self-hypnosis would require regularly giving attention to the warts, and a high rate of cure is obtained without it. In their controlled study using DSIH with adults, Johnson and Barber (1978) included daily self-hypnosis and got cures in only 3 of 11 (27%) of the hypnotic group. This is the poorest result in the published literature. Their control group of 11 patients was given waking suggestions to 'practice imagining that the specified wart(s) were tingling for a few minutes each day until they were gone' and got no change in 3 months. Hellier (1951) got remission in 27 of 74 (36%) patients just using sham x-ray, (waking suggestion without any self-hypnosis). Spanos et al. (1988) instructed their hypnotic

group to 'count their warts every day, and after each counting to close their eyes and spend 3 to 4 minutes imagining the warts on their target hand disappearing.' Only 2 of 8 patients (25%) with a single wart cleared, while 9 of 14 (69%) with multiple warts lost one or more warts at 6- weeks' follow-up. My impression is that conscious daily attention to the lesion is contrary to normal body healing of injuries such as cuts, burns, sprains, in which healing progresses best when ignored while undue attention increases suffering" (pp. 3-4).

All Ss were private patients referred for hypnotherapy; most were diagnosed clinically.

"...I found that there were sexual implications in 7 of the 16 miscellaneous warts in patients over 13, so I separated the cases into pre- and postpuberty to evaluate the results" (p. 4).

"An early success was with a medical student (Case 28) with whom I used suggestions of warmth, with the blood vessels dilating and bringing in antibodies, leukocytes, opsonins, etc. Changes were visible in 3 days. This biased me toward using 'warm,' but two of the children (Cases 6 and 9) got no result until I gave them a choice. Using ideomotor signals they chose cold. Only two healed with 'warm,' while five did with 'cold.' All of them had either had the warts cauterized or frozen previously and had a personal feeling about heat and cold. I've learned to give the patient a choice on the first visit" (p. 5).

"Three... were first treated using DSIH without result and later responded to hypnoanalysis. After obtaining an ideomotor signal that there was no more subconscious value to the warts, the suggestion was given that the body's healing processes would take over without any more conscious attention by the patient. No self-hypnosis was prescribed" (pp 7-8).

Gildston, Phyllis; Gildston, Harold (1992). Hypnotherapeutic intervention for voice disorders related to recurring juvenile laryngeal papillomatosis. International Journal of Clinical and Experimental Hypnosis, 40 (2), 74-87.

Recurring juvenile laryngeal papillomatosis is resistant to cure, and thus usually requires multiple operations which may lead to the extensive proliferation of vocal fold scar tissue. Severe hoarseness, sharply lower pitch, and weak loudness levels are common sequelae. Adjunctive hypnotherapy can increase motivation for change, speed up the acquisition of vocal skills, and possibly even facilitate or sustain remission of growths in selected patients. An 8-year-old girl with severe active eruptions went into remission after 16 sessions, and a 12-year-old boy, already in remission at the beginning of the intervention period, remained free of neoplasms throughout the regimen. Whether or not hypnosis contributed significantly to the sanguine results, it is probable that, at the least, the hypnotic intervention facilitated the achievement of certain technical objectives in voice therapy.

Hajek, P.; Jakoubek, B.; Kyhos, K.; Radio, T. (1992). Increase in cutaneous temperature induced by hypnotic suggestion of pain. Perceptual and Motor Skills, 74, 737-738.

Eight patients with atopic eczema and six healthy subjects were given hypnotic suggestion to feel pain in the upper part of the back and in one case on the palm. An average local increase in skin temperature of 0.6 degrees centigrade (detected by thermovision) occurred under this condition. For some patients cutaneous pain threshold was increased before the experiment by means of repetitive hypnotic suggestion of analgesia. These subjects reported feeling no pain subjectively, but the local change in skin temperature was equal in both cases. The results suggest a central mechanism induced by measuring changes in pain threshold in the skin, which changes are independent of local changes in blood flow. Local pain in the middle of the upper part of the back, and in one subject for comparative purposes in the region of the right palm, was induced during a single hypnotic session by specific suggestion which emphasized a subjective feeling of local pain lasting for 6 minutes. In four of the eczema patients long-lasting cutaneous analgesia was induced before this experiment by a different suggestion which stressed the impossibility of conducting pain from the skin to the brain and which

was repeated in ten consecutive hypnotic sessions. The spatial thermal reaction of the skin surface was monitored, with consecutive recordings taken at 20-sec. intervals before and after finishing the hypnotic suggestion of pain. There was a gradual increase in temperature (1.08 degrees Fahrenheit). In the four eczema patients with long-lasting cutaneous analgesia treated equally, the thermal reaction of the skin was similar to that described above although no subjective feeling of pain was reported. These subjects reported feeling only that their skin was getting warmer at the specified place.

**1991**

Hajek, P. R.; Radil, T.; Jakoubek, B. (1991). Hypnotic skin analgesia in healthy individuals and patients with atopic eczema. Homeostasis in Health and Disease, 33, 156-157.

**NOTES**

The cutaneous pain threshold was measured before, during, and after 10 sessions of hypnosis in 14 healthy and 13 atopic eczema patients. A control group of 10 healthy subjects who were not hypnotized was also evaluated. Cutaneous pain threshold increase was correlated with improvement of eczema and was correlated with hypnotizability.

**1990**

Gauld, Alan (1990). The early history of hypnotic skin marking and blistering. British Journal of Experimental and Clinical Hypnosis, 7, 139-152.

**NOTES**

Reviews the history of alleged hypnotic skin marking and blistering from 1785 to 1917. Various early studies are described and brought to bear upon certain long-standing and recurrent controversies. The conclusion is drawn that, even by the end of the period surveyed, the available evidence warranted the belief that such phenomena sometimes occur. However, there were also occasional examples of their occurrence through suggestion without hypnosis, and it remained unclear to what extent hypnosis had played a special role in their production.

Hajek, P.; Jakoubek, B.; Radil, T. (1990). Gradual increase in cutaneous threshold induced by repeated hypnosis of healthy individuals and patients with atopic eczema. Perceptual and Motor Skills, 70, 549-550.

Gradual increase in cutaneous pain threshold was found in healthy subjects and patients with atopic eczema during repeated hypnotic sessions with specific suggestions. This increase was less in the former than in the latter group. Repeated threshold measurements did not influence the threshold. The analgesic effect outlasted the hypnotic sessions by several months. It could be, however, suddenly reduced by appropriate hypnotic suggestion.

**NOTES**

Cutaneous pain threshold was measured in "time in seconds from onset of heat source of defined size, distance from skin, and temperature, to subjective threshold percept of pain" (p. 549). Used two symmetrical locations on both forearms, at healthy areas of the skin. Ten hypnotic sessions were induced in each S three times weekly, each lasting one hour.

Suggestions were the following type: "The "conduction of switch to the brain is interrupted." Your "immunologic system will digest the damaged skin cells like a shark."

Subjects were 14 healthy subjects and 13 patients with atopic eczema treated for years with the usual medications, unsuccessfully or with complications.

There was gradual increase in cutaneous pain threshold across the 10 sessions, especially for the patient group. Control experiments with repeated threshold measurements in repeated sessions without hypnosis showed no changes.

"Time of increases in cutaneous pain threshold was associated with improvement of atopic eczema. Both effects correlated significantly ( $r = 0.8$ ) with hypnotizability as measured by the Stanford scale" (pp. 549-550).

"In 9 patients without further hypnotic sessions a slow spontaneous decay of the cutaneous pain threshold was observed during a 17-mo. period. Special experiments performed with six repeatedly hypnotized healthy subjects showing increased thresholds did prove, however, that the cumulative analgesic effect could be reduced to control values immediately by using the hypnotic suggestion that the 'skin sensitivity returns to normal values.'

"These results suggest a close association between hypnosis and activation and/or deactivation of endogenous analgesic systems (irrespective of whether they are of opioid or nonopioid nature)" (p.550)

Mason, Albert A. (1990, January). A psychoanalyst looks at a hypnotist; or, where the elephant skinned boy took me. [Paper] Presented at the Psychoanalytic Center of California Scientific Meeting.

#### NOTES

"The results of working with hypnotism experimentally in the production of anaesthesia for surgery, dentistry and obstetrics; in controlled series of treatments of asthmatics, skin disorders, and allergic manifestations; as well as its clinical use, have convinced me that it is a delusional state akin to mania which depends on the omnipotent denial of mental pain. The mania is stimulated by the hypnotized subject having phantasies of an omnipotent object that it fuses with and shares in the omnipotence. The hypnotist has similar unconscious phantasies about himself. Both subject and hypnotist projectively identify with each others' phantasies, and together produce phenomena like anaesthesia which can be likened to delusional states. In fact, true hallucinations can also be deliberately produced. "I believe that similar psychotic mechanisms can also occur in life between parents and children and in other relationships, and produce delusional states. These form a continuum from intractable narcissism on the one side, through Christian Science and the denial of evolution in the center, to frank folie a deux and transexualism on the other side. The therapeutic course of these states seems quite dissimilar from that of psychosis arising without the encouragement of external objects."

Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.

Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls.

Theoretical implications are discussed.

#### NOTES

Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's 1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8) .

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

1989

Reid, S. (1989). Recalcitrant warts: Case report. British Journal of Experimental and Clinical Hypnosis, 6, 187-189.

NOTES

Recalcitrant warts which persisted for 5 years despite treatment cleared in 51 days with hypnotherapy. A cause/effect relationship between hypnotherapy and resolution was shown by at first excluding and then including the left hand from the suggestions given.

1988

Noll, Robert B. (1988). Hypnotherapy of a child with warts. Journal of Developmental and Behavioral Pediatrics, 9 (2), 89-91.

NOTES

Child with 82 warts was treated using hypnosis; suggestions for removal from face only resulted in 8 of 16 facial warts disappearing after one treatment and two weeks. (Child had previous experience with hypnosis for pain and anxiety associated with lumbar punctures and bone marrow aspirates.)

Spanos, Nicholas P.; Stenstrom, Robert J.; Johnston, Joseph C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. Psychosomatic Medicine, 50, 245-260.

Two experiments assessed the effects of psychological variables on wart regression. In Experiment 1, subjects given hypnotic suggestion exhibited more wart regression than those given either a placebo treatment or no treatment. In Experiment 2, hypnotic and nonhypnotic subjects given the same suggestions were equally likely to exhibit wart regression and more likely to show this effect than no treatment controls. In both experiments, treated subjects who lost warts reported more vivid suggested imagery than treated subjects who did not lose warts. However, hypnotizability and attribute

measures of imagery propensity were unrelated to wart loss. Subjects given the suggestion that they would lose warts on only one side of the body did not show evidence of a side-specific treatment effect. Tsushima, W. T. (1988). Current psychological treatments for stress-related skin disorders. Cutis, **42**, 402-404.

Surveys current methods used by psychologists in the management of stress-related skin disorders, including hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive behavioral therapy. These techniques offer promise in the treatment of certain dermatologic conditions, but the limited amount of well-controlled and replicated studies of their use suggests that caution be taken in their application.

**1987**

Dobkin de Rios, Marlene; Friedmann, Joyce K. (1987). Hypnotherapy with Hispanic burn patients. International Journal of Clinical and Experimental Hypnosis, **35** (2), 87-94.

This paper examines a culturally sensitive hypnotherapeutic intervention for Hispanic burn patients who suffer symptoms of the post-traumatic stress disorder and discusses the outcome of 27 patients seen by the authors (a medical anthropologist and a clinical psychologist), over a 3.5-year period. Given the difficulties of recent monolingual, Mexican migrants in responding to psychological interventions that are not culturally sensitive, the hypnotherapeutic interventions and procedures developed by the authors provide a plan for systematic desensitization and cultural concordance to make rehabilitation of Hispanic burn patients more effective.

Locke, Steven E.; Ransil, Bernard J.; Covino, Nicholas A.; Toczydlowski, Janice; Lohse, Christopher M.; Dvorak, Harold F.; Arndt, Kenneth A.; Frankel, Fred H. (1987). Failure of hypnotic suggestion to alter immune response to delayed-type hypersensitivity antigens. Annals of the New York Academy of Sciences, **496**, 745-749.

The ability to alter delayed-type hypersensitivity via hypnotic suggestion was tested in 12 highly hypnotizable, untrained subjects and 30 non-hypnotized controls. Subjects were skin tested bilaterally with a standardized panel of delayed hypersensitivity antigens and instructed either to enhance or suppress the skin test response (STR) unilaterally. Compared to controls, STR's showed no effect of hypnotic suggestion with regard to either the area of induration or the degree of inflammation assessed histologically.

Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, **7-8**.

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10 on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

#### NOTES

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel

throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0.

Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

Shertzer, C. L.; Lookingbill, D. P. (1987). Effects of relaxation therapy and hypnotizability in chronic urticaria. Archives of Dermatology, 123, 913-916.

15 patients with chronic urticaria of 7.8 years' average duration. Compared with baseline and control session values, the hypnosis session provided relief of pruritus as measured by 3 self-report parameters. There was no change in the number of hives. All Ss were given a standard test for hypnotizability. Assuming that the results were not biased by their preceding relaxation sessions, we determined that 6 Ss were hypnotizable and nine were non hypnotizable. Ss in both groups improved symptomatically, but hypnotizable Ss had fewer hives and became more symptomatic during the control (testing and history taking) session. Hypnotizable Ss also more frequently related stress as a causative factor. At a follow-up examination five to 14 months after the completion of the experimental sessions, six patients were free of hives and an additional seven reported improvement.

1984

Raynaud, Jeanne; Michaux, Didier; Bleirad, Guilhem; Capderou, Andre; Bordachar, Janine; Durand, Jacques (1984). Changes in rectal and mean skin temperature in response to suggested heat during hypnosis in man. Physiology and Behavior, 33, 221-226.

Rectal temperature, mean skin temperature and heart rate were recorded in 7 subjects during hypnosis, induced either alone or while sensations of heat were suggested. During hypnosis alone, a fall in the heart rate of about 10 beat-min<sup>-1</sup> was the only autonomic response observed; body temperatures were unaltered. In contrast, during hypnosis with suggestion of heat, the following changes occurred: (1) Mean rectal temperature decreased 0-.20 degrees C. (p<.05) within 50 min. Its mean time course differed significantly from that for hypnosis alone (p<0.001). (2) Comparison of individual rectal temperature time sequences showed that in fact this temperature only declined in 4 subjects out of 7, and tended to form a plateau located 0.35 degrees C below the value of the preceding waking state. Despite reinforcement of heat suggestion, the plateau continued until the end of the hypnotic trance. (3) Mean skin temperature tended to rise. (4) When hypnosis with suggestion ceased, both rectal and skin temperatures very slowly returned to their levels during the preceding waking state.

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were

recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho-physiological responses.

**Braun, Bennett G. (1983). Psychophysiological phenomena in multiple personalities and hypnosis. American Journal of Clinical Hypnosis, 26 (2), 124-137.**

#### NOTES

"Conclusion. As can be seen from the above example, the final common pathway, physiologic expression, which is seen in multiple personality is not bizarre when compared with physiologic changes achieved in non-multiples using hypnosis or, in certain cases, non-multiples without the use of hypnosis. A form of hypnosis/autohypnosis\* may be a common denominator. The neurophysiologic changes shown by Putnam et. al. (1982), but not observed by Coons (1982), may well have a similar explanation. The question of the neurophysiologic effect of hypnotic suggestion has not as yet been studied with appropriate controls or safeguards.

"That multiples do show significant changes in their psychophysiological response patterns cannot be denied. To consider that the psychophysiological changes of multiple personality are so rare or different as to make multiples 'freaks' is not only a disservice to them, but to medical science, since it blocks thinking. The study of multiple personality will further our understanding, theorizing, and treatment of mental and physical illness" (p. 134). "\*These terms are being used here in the generic sense" (p. 134).

**Spiegel, David (1983). Hypnosis with medical/surgical patients. General Hospital Psychiatry, 5, 265-277.**

The role of hypnosis as a tool in the treatment of problems commonly encountered among medical and surgical patients is examined. Hypnosis is defined as a change in state of mind far more akin to intense concentration than sleep. Diagnostic implications of differences in hypnotic responsivity are explored, and scales suitable for use in the clinic are examined. Uses of hypnosis in treating anxiety, pain, childbirth, psychosomatic symptoms, seizure disorders, neuromuscular dysfunction, and habits are described and evaluated. The phenomenon of hypnosis is presented as a means of exploring the mind-body relationship in a controlled fashion, providing information of diagnostic importance while at the same time allowing hypnotizable patients to intensify their concentration and interpersonal receptivity in the service of a therapeutic goal.

1982

**Credidio, Steven G. (1982). Comparative effectiveness of patterned biofeedback vs meditation training on EMG and skin temperature changes. Behaviour Research and Therapy, 20, 233-241.**

Examined whether a low arousal, relaxation pattern of frontalis EMG decreases and peripheral skin temperature increases could be attained more effectively through biofeedback or meditation training. 30 21-59 yr old females were randomly assigned to 1 of 3 groups: patterned biofeedback, clinically standardized meditation, or control. Prior to training, Ss were administered the Eysenck Personality Inventory. Each S was seen weekly for 7 sessions. Subjective experiences and time spent practicing at home were also recorded. Results indicate that the meditation group showed significantly lower EMG levels at the end of treatment than did the control group. The biofeedback group had difficulty in patterning the 2 feedback signals simultaneously. Extraverts in the control group had the highest EMG levels. The most positive subjective reports came from Ss in the meditation group. It is suggested

that meditation offers a viable alternative as a relaxation procedure, requiring little time to learn and devoid of any performance criteria levels.

Spanos, Nicholas P.; McNeil, Conrad; Stam, Henderikus J. (1982). Hypnotically 'reliving' a prior burn: Effects on blister formation and localized skin temperature. Journal of Abnormal Psychology, **91** (4), 303-305.

60 Ss who had previously been burned were "hypnotically age regressed" and given both suggestions to "relive" the burn experience and suggestions that a blister was forming. Although 17 Ss reported vividly imagining the burn events, none showed localized skin-coloration changes or evidence of blister formation. Moreover, skin temperature measured before, during, and after age regression indicated no overall suggestion effects. Nevertheless, 1 S did show differential skin-temperature response to the suggestion. This S had showed only moderate hypnotic susceptibility on the Harvard Group Scale of Hypnotic Susceptibility. (10 ref) NOTES 1:

#### NOTES

The male subject who appeared to show changes in response to the suggestion increased temperature differences between the burn site and the contralateral site from .3 degrees C before the imagining period to a maximum of 2.7 degrees C during the imagining period and decreased to 0 degrees C after the imagining period. However, temperature differences between the adjacent sites remained very small (never more than .1 degree C) throughout the session. This subject answered "no" to all seven items on the skin-sensitivity questionnaire. He testified postexperimentally to being only "slightly hypnotized" (score 1), "not at all age regressed" (score 0), and to have experienced imagery that was only 50% as vivid as the real experience. (His HGS:AS score was 8.)

#### 1980

Crosson, B. (1980). Control of skin temperature through biofeedback and suggestion with hypnotized college women. International Journal of Clinical and Experimental Hypnosis, **28** (1), 75-87.

4 groups of 9 college women attempted to raise finger temperature relative to forehead temperature during hypnosis. After a hypnotic induction, each group of Ss received 1 of the following treatments for temperature control: (a) biofeedback, (b) suggestion and imagery, (c) biofeedback plus suggestion and imagery, and (d) a relaxation, false-feedback control. Groups were initially balanced for hypnotic susceptibility. Between-subject differences in baseline temperatures were statistically controlled. After 4 training sessions, only Ss in the groups receiving biofeedback and biofeedback plus suggestion and imagery demonstrated evidence of learned temperature control, and only Ss in the biofeedback group demonstrated a significantly greater ability to control skin temperature than Ss in the control group. Changes in temperature during hypnotic induction did not appear to affect changes during the subsequent treatment. There was no significant correlation between hypnotic susceptibility and temperature control for Ss in any group, contrary to popular assumption. Future research should attempt to ascertain if combined use of biofeedback and hypnosis offers any advantages to the use of biofeedback alone.

#### 1979

Burrows, Graham D.; Collison, D. R.; Dennerstein, L. (Eds.) (1979). Hypnosis 1979. New York: Elsevier/North-Holland Biomedical Press.

Di Piano, Frank A.; Salzberg, H. C. (1979). Clinical applications of hypnosis to three psychosomatic disorders. Psychological Bulletin, **86**, 1223-1235.

Studies of hypnosis in the treatment of skin disorders, headaches, and asthma were reviewed in terms of outcomes and methodological soundness. Some studies focused on changing physiological functions, others on increasing insight in their patients, and still others on altering patients' perceptions of their symptoms. Methodological weaknesses included lack of control groups, nonrandom assignment of patients to treatment conditions, and confounding of treatment effects or lack of control for placebo effects. Additional weaknesses centered around the use of single outcome measures and the failure to assess the specific roles of mediating variables. Most of the studies reviewed showed positive treatment effects. However, there is equivocal evidence that hypnosis can directly influence autonomic functioning. Hypnosis may be valuable in facilitating one's capacity to gain insight into how one's symptoms developed and are maintained. In addition, hypnotic procedures have resulted in some success when used to indirectly alleviate symptoms by altering how individuals perceive their disorders and how these disorders affect their lives.

**1976**

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

**NOTES**

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

**1975**

Clawson, T. A.; Swade, R. H. (1975). The hypnotic control of blood flow and pain: The cure of warts and the potential for the use of hypnosis in the treatment of cancer. American Journal of Clinical Hypnosis, 17 (3), 160-169.

Case histories show that hypnosis can control massive bleeding and pain, and it can remove warts, probably by stopping blood flow to them. We propose that blood flow to cancerous tumors can likewise be controlled, which could destroy them outright, or which control could be a useful adjunct to chemo- or radio-therapy.

**1974**

Hilgard, Ernest R. (1974, October). Visceral control through hypnosis. [Paper] Presented at the International Congress of Physiological Sciences, New Delhi.

NOTE The author reviews evidence of hypnosis and/or suggestion effects on skin: removal of warts, raising blisters, controlling chemically induced inflammation, modifying temperature. He concludes that although there may be dramatic results, the contributions of suggestion and hypnosis 'remain ambiguous.'

**1968**

Reid, Allen F.; Curtsinger, George (1968). Physiological changes associated with hypnosis: The effect of hypnosis on temperature. International Journal of Clinical and Experimental Hypnosis, 16, 111-119.

STUDIED THE PHYSIOLOGICAL EFFECT ON TEMPERATURE OF HYPNOSIS. UNDER NEUTRAL HYPNOSIS, 20 SS EXPERIENCED AN INCREASE OF ORAL TEMPERATURE

AVERAGING .6DEGREES F, WHICH SUBSIDED AFTER TERMINATION OF THE TRANCE. WHEN SKIN TEMPERATURE ON THE FOREHEAD, CHEST, AND HAND WERE MEASURED ON 4 SS, THERE WAS AN EVEN MORE PRONOUNCED INCREASE; MEASUREMENTS ON THE VOLAR SURFACE OF THE FOOT WERE EQUIVOCAL. CONTROL ORAL TEMPERATURE MEASUREMENTS USING RELAXATION WITHOUT HYPNOSIS SHOWED NO SIGNIFICANT INCREASE. IT IS CONCLUDED THAT NEUTRAL HYPNOSIS IS GENERALLY ACCOMPANIED BY AN INCREASE IN ORAL AND SKIN TEMPERATURE. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

Bernstein, Norman R. (1965). Observations on the use of hypnosis with burned children on a pediatric ward. International Journal of Clinical and Experimental Hypnosis, 13 (1), 1-10.

Several cases are described and observations made about the interplay of forces between staff, patient, and therapist, as well as the expectations of the patients to assess how these factors influenced the use of hypnosis. Hypnosis appears to be a particularly useful means for reaching isolated and depressed children with burns and for improving the morale of the staff team working with these children. The results may be along specific lines in terms of pain tolerance and improved eating, or in general improvement of cooperativeness and mood on the part of the child. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Black, Stephen (1964). Mind and body. London: Kimber.

## NOTES

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

Furieux, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Black, Stephen; Edholm, O. G.; Fox, R. H.; Kidd, D. J. (1963). The effect of suggestion under hypnosis on the peripheral circulation in man. Clinical Science, 26, 223-230.

NOTES

"Summary. 1. The effects on the circulation in the forearm and hand of both direct and indirect suggestion under hypnosis of thermal stimuli have been studied. 2. The induction of hypnosis did not

significantly alter the forearm blood flow, but a small reduction in hand blood flow was usually observed. Pulse rate in general slowed slightly as did respiration rate. 3. The effect of body heating on forearm and hand blood flow was not modified by hypnosis. 4. Direct suggestion under hypnosis of body heating or body cooling, with and without body heating, produced only small changes. 5. The changes associated with suggestion were not related to the thermal suggestion. Whatever the suggestion, the usual response was a reduction in hand blood flow and an increase in forearm blood flow. 6. The rise of body temperature with heating was not modified by direct suggestion, under hypnosis, of body cooling. 7. No change in body temperature could be elicited by suggestion. 8. In a few experiments marked changes in forearm blood flow occurred. These appeared to resemble the changes in the circulation produced by emotional stimuli. 9. The smaller changes more frequently observed were also similar to those produced by mild emotional stimuli" (p. 229). [N.B. The Subjects were normal, healthy adults, N = 9, between 21-45 years old; highly hypnotizable, amnesic for trance.]

Paul, Gordon L. (1963). The production of blisters by hypnotic suggestion: Another look. Psychosomatic Medicine, 25 (3), 233-244.

NOTES: Presents a critical evaluation of reported attempts to produce nonherpetic skin blisters through hypnotic suggestion. Even though the majority of these reports are grossly lacking in controls, experimental design, etc., and are subject to alternative explanations, the author concludes that skin anomalies have been produced by suggestion in some instances. Additional studies of psychogenic vascular changes add credence to the possibility of central control of these phenomena. It is also concluded that these reactions do not appear to be limited only to hypnotized Ss.

## SLEEP

2002

Hammond, D. C. (2002). Treatment of chronic fatigue with neurofeedback and self-hypnosis.. NeuroRehabilitation, 16, 1-6..

A 21 year old patient reported a relatively rapid onset of serious chronic fatigue syndrome (CFS), with her worst symptoms being cognitive impairments. Congruent with research on rapid onset CFS, she had no psychiatric history and specialized testing did not suggest that somatization was likely. Neuroimaging and EEG research has documented brain dysfunction in cases of CFS. Therefore, a quantitative EEG was done, comparing her to a normative data base. This revealed excessive left frontal theta brainwave activity in an area previously implicated in SPECT research. Therefore, a novel treatment approach was utilized consisting of a combination of EEG neurofeedback and self-hypnosis training, both of which seemed very beneficial. She experienced considerable improvement in fatigue, vigor, and confusion as measured pre-post with the Profile of Mood States and through collaborative interviews with both parents. Most of the changes were maintained at 5, 7, and 9 month follow-up testing.

1996

NIH Technology Assessment Panel on Integration of Behavioral and Relaxation Approaches into the Treatment of Chronic Pain and Insomnia (1996). Integration of behavioral and relaxation approaches into the treatment of chronic pain and insomnia. Journal of the American Medical Association, 276 (4 (Jul 24-31)), 313-318.

## NOTES

Includes hypnosis as one of the recommended interventions for pain.

1994

**Brown, Gail W.; Riddell, Rodney; Summers, David; Coffman, Brent (1994, August). Use of hypnosis by practitioners in the school setting. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.**

## **NOTES**

**Hypnosis is a therapeutic procedure that is appropriate for some school-age clients. Through the use of hypnosis that utilizes metaphors and imagery, children can be empowered to find unique solutions to their problems. Children enjoy the feeling of power and mastery that they have when able to perform hypnotic phenomena. They like to play magic and can be told that a finger or other body part will become numb. Because a major goal of hypnotherapy is to teach a child to be an active participant in his or her own behalf, the focus is on creating solutions and mastering the situation rather than enduring the problems. Four case studies demonstrate the utility of hypnosis in the treatment of phantom pain and nausea, sleep terror disorder, school phobia, and spider phobia. In each case, treatment goals were realized. Because the solutions were self-generated, the behavioral changes maintained over time and situation.**

**Case #1: Hypnosis was used to help alleviate phantom limb pain and nausea during chemotherapy following amputation of the right leg at the knee due to cancer in a thirteen-year-old male. The client had indicated that he loved nature and enjoyed the mountains. The metaphor described a young tree that has just begun to grow small silvery leaves. The spring floods tear the limbs and branches from the stump. The deep roots and stump of the tree are all that remain. The tree is not the same as before the flood. Its roots are stronger, its base more sturdy compared to the branches and limbs. The young tree has withstood the catastrophe of the torrent of waters and is even stronger than before. To counter the nausea and vomiting associated with chemotherapy a switch mechanism metaphor was used. The client was adroit with computers and had no difficulty picturing a switch located in his brain which could "turn off" the nausea from chemotherapy. A room contained all the unpleasant feelings that were being experienced. In this room is a light of a particular color that represents all the unpleasant sensations. Press the key on the computer that controls the switch to turn off the colored light in that room. Suggestions for healing were also given. Your body has known for years how to heal. Visualize the battle between good and bad cells and the victory of the good cells.**

**Case #2: Hypnosis was used to alleviate sleep terror disorder in a ten-year-old female. The onset of the subject's parasomnic symptomatology appeared to coincide with her starting kindergarten and her family's relocation shortly before. The initial treatment consisted of progressive relaxation, deep breathing, and the visual image of her "secret safe place." An induction utilizing a variety of images was presented. Hiking barefoot on a cool moss covered mountain trail, sitting in an alpine meadow on a warm summer afternoon, and flying proved most effective in facilitating trance. The participant was told to "Visualize all your anxiety and tension as hard grey rocks. Pick up these rocks and place them in your pockets. Go to the front porch of your "secret safe place and on the porch is a "magic hefty bag." Place your hard grey rocks that contain all your anxiety and tension in the magic bag. Once in the bag, the rocks will no longer weight you down, you will be free of any feelings of stress or tension. Your bed is magic; it is covered with a special glue which will keep you in a reclining position until you are fully rested and ready to awaken."**

**Case #3: Hypnosis was used in the treatment of school phobia in a nine-year-old male. The student experienced intense anxiety whenever separation from the primary caretaker occurred. The teacher stated that this boy experienced frequent absences and crying spells that were only relieved by phone calls to his mother or the presence of his mother next to him in class. In preparation for the intervention, the student was asked to draw a picture of how he felt inside during a panic attack. He drew a fire. He also said that only his mother could put that fire out. This information was utilized in creating a metaphor that described a house in a small town. "The mother had left, and a young boy was left alone. While at home, the boy looked out the window and saw several boys trying to burn a**

neighbor's yard! Acting quickly, he called the fire department, grabbed the fire extinguisher and unraveled the garden hose. He was able to extinguish the fire. The neighbors and friends were very happy and praised the boy's performance. When his mother heard the good news, she quickly returned home and held a celebration in his honor." Following the metaphor, hypnotherapy continued with suggestions about fire extinguishers that the subject could use to put out emotional fires.

**Case #4:** Hypnosis was used in the treatment of spider phobia. Diagnosis of phobia was made in this eleven-year-old female when the fear or avoidance behavior was distressing. The child's strained facial expressions occurred even at the thought of seeing what she described as "a creepy, crawly creature with 8 legs." Preparatory to her first induction the participant was read the story of *Charlotte's Web* (White, 1980) to facilitate the imagery for future hypnotic work. In the following session systematic desensitization was accomplished using characters from the story of *Charlotte's Web*. During the third session the subject was age regressed to the first time she remembered seeing a spider. She recalled playing in the woods outside her family home on an island and seeing a large web stretched between two trees with a very large spider in the center of its web. She was then asked to remain at that place to look closely at that spider as it was most likely Charlotte or one of Charlotte's family. Upon closer investigation she saw not only Charlotte but "teeny-tiny babies." The event was reconstructed as a happy experience. The imagery provided by *Charlotte's Web* permitted the subject to fantasize her previous frightful experience and reframe spiders as cute little "teeny-tiny" babies with admirable human qualities.

**1993**

**Becker, Philip M. (1993). Chronic insomnia: Outcome of hypnotherapeutic intervention in six cases. American Journal of Clinical Hypnosis, 36, 98-105.**

Chronic dyssomnia is highly prevalent and has multiple etiologies. Hypnotherapy has been reported as beneficial for insomnia, but the description of the subject populations has been limited. A group of patients was evaluated at a sleep disorders center for a dyssomnia that occurred on at least 3 nights per week for 6 months or more. Six patients accepted hypnotherapy for their persistent psychophysiological insomnia and other sleep disorder diagnoses. Three patients responded to two sessions of structured hypnotherapy. The three responders remained improved at 16-month follow-up. Factors that seemed to contribute to long-term response in this small group of patients included a report of sleeping at least half of the time while in bed, increased hypnotic susceptibility, no history of major depression, and a lack of secondary gain.

**1992**

**Kohen, Daniel P.; Mahowald, Mark W.; Rosen, Gerald M. (1992). Sleep terror disorder in children: The role of self hypnosis in management. American Journal of Clinical Hypnosis, 34, 233-244.**

This paper describes four children, ages 8 to 12 years, with frequent, prolonged, or dangerous disorders of arousal. None had any significant psychological or behavioral problems. Each had a polysomnogram that showed sudden arousals out of slow-wave sleep associated with complex behavior. All responded to a short course of imipramine, 20 to 60 mg at bedtime, followed by and in conjunction with training in relaxation and mental imagery (self-hypnosis). Once the correct diagnosis was made, the treatment strategy was to (1) demystify the symptom complex through education, (2) establish prompt control of the symptoms with the use of imipramine, (3) train the children in self-regulation with self-hypnosis, and (4) discontinue the medication while maintaining control of the arousals. Over a 2-3 year follow-up all children remain asymptomatic. This is the first report of successful use of self-hypnosis for the treatment of polysomnogram- proven disorders of arousal in the

pediatric population. Also reported are seven additional children who were treated equally successfully with hypnosis without the use of medication.

Lippincott, Brian (1992). Owls and larks in hypnosis: Individual differences in hypnotic susceptibility relating to biological rhythms. American Journal of Clinical Hypnosis, 34, 185-192.

In 1986 Coleman developed the Owl and Lark Questionnaire to differentiate morning people from evening people, with owl individuals being more alert during the evening phase and lark individuals being more alert during the morning phase. Rossi has hypothesized that the bimodal peaks of hypnotizability found by Aldrich and Bernstein in 1987 were caused by alterations in owl and lark circadian rhythms. In the current study I used the Harvard Group Scale of Hypnotic Susceptibility, Form A to test compliance with hypnotic suggestions among 42 graduate students at three times of the day: in the morning, in the evening, and, as a control, in the middle of the night. Owls were more hypnotizable than larks in the morning, and larks were also significantly more hypnotizable in the evening than owls. There was no difference between the two groups in the middle of the night. A possible implication of this study is that one fundamental mechanism of therapeutic hypnosis is the entrainment of psychobiological rhythms.

#### NOTES

The author tested Subjects at 8-10 a.m., 4-6 p.m., and midnight to 2 a.m. because they were the times when owls and larks could be most easily differentiated (morning and late afternoon) or were most equal (night). The goal was "to determine if individuals differentiated by the Owl and Lark Questionnaire have different peaks of hypnotizability associated with the rest phases of their biological rhythms." (P. 187).

"To control for practice effects (Cooper, Banford, Schubot, & Tart, 1967), one third of the subjects started rotating at each of the three test times and proceeded in clockwise order (morning-evening-night; evening-night-morning; night-morning-evening).

"There were at least 24 hours between tests to assure that boredom from the testing was not a factor" (p. 188).

DISCUSSION. "Rossi has extended Erickson's naturalistic approach and has hypothesized the entrainment of the ultradian biological rhythms as a possible factor in therapeutic hypnosis. ... Rossi states: 'The ultradian theory of hypnotherapeutic healing proposes that (1) the source of psychosomatic reactions is in stress-induced distortions of the normal periodicity of ultradian cycles and, (2) the naturalistic approach to hypnotherapy facilitates healing by permitting a normalization of these ultradian processes.' (Rossi, 1982, p. 23)" (pp. 189-190).

"If owls and larks were not separated, the results of this study would show no differences in hypnosis. Perhaps this is why Hollander et al. (1988) found no change in hypnotizability using a direct-suggestion measure after a 2-day training in Ericksonian techniques" (p. 190).

#### 1991

Brown, Peter (1991). Ultradian rhythms of cerebral function and hypnosis. Contemporary Hypnosis, 8, 17-24.

As a consequence of his observations of the clinical work of Milton Erickson, Ernest Rossi has proposed an 'ultradian rhythm theory of hypnosis'. Rossi demonstrated that the spontaneous changes in cognition, affect and behaviour which occur as part of the ultradian cycle (which Erickson referred to as 'the common everyday trance') are similar to the changes which occur during hypnosis. A review of studies of the phasic changes in hemispheric function suggests that ultradian changes do parallel the changes found in hypnosis.

## NOTES

Falling asleep and waking up are regulated by two separate mechanisms rather than being opposite poles of one mechanism (Winfree, 1980). Kleitman (1961) suggested a 90-min cycle, the basic rest-activity cycle (BRAC). In addition to physiological alterations, there are alterations in cognition, mood and behavior (Rossi & Cheek, 1988); vigilance (Okawa, Matousek & Petersen 1984); peripheral blood flow (Ramano & Gizdulich, 1980); respiratory amplitude (Horne & Whitehead, 1976); visual evoked potentials (Zimmerman, Gortelmeyer & Wiemann, 1983); pupillary diameter, stability and reactivity to light, and saccadic eye movements (Lavie & Kripke, 1981).

These diurnal variations may relate to hypnotic behavior. There is a recurring increase in daydream and fantasy, as well as visual imagery (Kripke & Sonnenschein, 1978). "There is evidence for a parallel recurring cognitive and emotional cycle with increased emotional responsiveness and a more subjective cognitive processing of information (Evans, 1972; Holloway, 1978; Overton, 1978; Thayer, 1987). Subjects appear to repeat the cycle approximately 16 times per day, with a range of 70-120 minutes. Kripke and Sonnenschein (1978) noted that the subjects were personally unaware of any repeating cycle in their mental lives" (p. 19).

The brainstem arousal mechanisms seem to be implicated in periodic changes in the EEG. Ultradian rhythms are "more easily detected under conditions of increased sleep need, reduced external performance demand and lowered motivation to focus externally (Broughton, 1985)" (p. 20). Sterman (1985) observed that the rhythm was most marked in resting state and disappears during complex visuomotor tasks. Relationship of EEG patterns to attentional patterns indicate there may be two different forms of attention, one for focused awareness (often thought to be associated with trance state) and the other a generalized vigilance (which would be reduced in hypnosis). Ultradian changes in consciousness reflected in the EEG may suggest increased internal absorption associated with visual imagery, a feature of the trance state.

"There has recently been a partial direct confirmation of Rossi's hypothesis. Aldrich and Bernstein (1987 [International Journal of Clinical and Experimental Hypnosis]) reported a bimodal distribution of Harvard Group Scale Hypnotic Susceptibility (HGSHS) scores when they are done at different times throughout the day. They note the parallel of the changes in HGSHS scores and the circadian variations in body temperature which suggest changes in hypnotic responsiveness coinciding with the fluctuations of physiological rhythms.

"Other support comes from some highly original work involving breathing rhythms. There are cyclic alterations in relative air flow between the left and right nostrils with an average period of 2-3 hours (Hasegawa & Kern, 1977). This nasal ultradian rhythm is correlated with an increase in contralateral cerebral hemispheric activity (Werntz, Bickford, Bloom & Shannahoff-Khalsa, 1981, 1983; Klein, Pilon, Prosser & Shannahoff-Khalsa, 1986). The alterations in hemispheric function do appear to be related to changes both in the style of cognition, particularly in an increase in vivid visual imagery, and in performance on specific tasks (Klein et al., 1986). Thus these studies support the notion of an ultradian rhythm of cerebral function which is associated with characteristic physical manifestations mediated by the autonomic nervous system. Whether or not these changes are directly related to the findings reported by Aldrich and Bernstein has yet to be established" (p. 21).

The authors conclude that "the most consistent evidence for ultradian rhythms is demonstrated by the mechanisms of the hypothalamic-limbic system and by brain-stem mechanisms that regulate arousal and attention processes (Parmeggiani, 1987); neuroendocrine regulatory mechanisms (Follenius, Simon, Brandenberger & Lenzi, 1987) and autonomic nervous system function (Bossom, Natelson, Levin & Stokes, 1983; Gordon & Lavie, 1986). These studies also suggest an ongoing dynamic interaction between cortical and subcortical structures throughout the ultradian cycle (Parmeggiani, 1987), and suggest that these interactions may be of great significance in hypnosis" (p. 21).

Clarke, J. H.; Reynolds, P. J. (1991). Suggestive hypnotherapy for nocturnal bruxism: A pilot study. American Journal of Clinical Hypnosis, 33, 248-253.

Although one can find many case reports of hypnotherapy for bruxism, there is a paucity of scientific research on the subject. This study describes the use of suggestive hypnotherapy and looks at its effectiveness in treating bruxism. Eight subjects who reported bruxism with symptoms such as muscle pain and complaints of bruxing noise from sleep partners were accepted into the study. An objective baseline of the bruxing was established using a portable electromyogram (EMG) detector attached over the masseter muscle during sleep. Hypnotherapy was then employed. Both self-reports and posttreatment EMG recordings were used to evaluate the hypnotherapy. Long-term effects were evaluated by self-reports only. The bruxers showed a significant decrease in EMG activity; they also experienced less facial pain and their partners reported less bruxing noise immediately following treatment and after 4 to 36 months.

DeKoninck, J.; Brunette, R. (1991). Presleep suggestion related to a phobic object: Successful manipulation of reported dream affect. Journal of General Psychology, 118, 185-200.

When compared with subjects who received presleep suggestions for negative affect, subjects who received positive affect suggestions had significantly higher levels of positive emotions in their dreams, rated their own dreams as more pleasant, and had significantly lower levels of anxiety, sadness, and aggression. This supports the hypothesis that presleep suggestion can be an effective technique in influencing the affective dimension of the dream.

Evans, Frederick J. (1991). Hypnotizability: Individual differences in dissociation and the flexible control of psychological processes. In Lynn, Steven J.; Rhue, Judith W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 144-170). New York: Guilford Press.

## NOTES

"In summary, some of our recent data suggest that there are a number of interacting reliable correlates of hypnotizability ... . None relate to suggestibility in the traditional sense. ... Hypnotizability is related to the ability to process cognitive information during sleep, to the physiological ease of falling asleep, and to a dimension of subjective sleep characteristics we have labeled the 'control of sleep' (involving ... the ability to fall asleep easily and readily at will, and the tendency to take naps). Additional data have suggested that the concept of absorption can be meaningfully divided into subfactors that reflect the volitional control over the absorption process that correlates with hypnotizability in both normal and patient populations. ... (C)ontrolled absorption correlates significantly with hypnotizability in both normal and patient populations—a result that might be predicted from the concept of multiple pathways as correlates of hypnotizability (J. R. Hilgard, 1970). ... Finally, both the control-of-sleep dimension and hypnotizability relate to the reductions of symptoms and psychopathology even when psychiatric patients are not treated with hypnotic techniques" (pp. 164-165).

Somer, Eli (1991). Hypnotherapy in the treatment of the chronic nocturnal use of a dental splint prescribed for bruxism. International Journal of Clinical and Experimental Hypnosis, 39, 145-154.

A behavioral medicine case is described in which the patient was treated with a combined approach involving both hypnoanalytic and hypnobehavioral techniques. A 55-year-old man with bruxism was referred after 10 years of craniomandibular treatment because of his dependency on a dental splint prescribed for nocturnal use. A projective hypnoanalytic exploration helped to uncover and

consequently resolve an earlier conflict that had been reactivated in the patient's work situation and which had become a constant source of mental and muscular tension. The hypnoanalytic exploration was followed by a cognitive-behavioral hypnotic intervention that was tape-recorded and prescribed for bedtime practice. Pre- and posttherapy psychological, physiological, and self-report measurements corroborated the patient's sense of well being that came with his newly found ability to sleep without the dental splint. The importance of considering multiple etiological factors in the treatment of such psychosomatic disorders as bruxism is discussed.

1990

Badia, Pietro (1990). Memories in sleep: Old and new. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and cognition (pp. 67-76). Washington, DC: American Psychological Association.

#### NOTES

Reviews literature. Conclusion: First, with reinforcement for responding, control of learned behavior can be maintained reliably by stimuli presented during sleep. Second, when stimuli are presented 4 min or more apart, behavioral control results in little or no change in sleep structure, in daytime sleepiness, or in perceptions of sleep quality. Neither perceived wakefulness nor wakefulness as it is scored on the sleep record are necessary for responding, although stimulus/response events typically result in brief EEG or EMG change. Third, within-subject, within-night variance in responsiveness is complexly related to time of night, sleep stage, and REM/NREM cycle.

Evans, Frederick J. (1990). Behavioral responses during sleep. In Bootzin, Richard R.; Kihlstrom, John F.; Schacter, Daniel L. (Ed.), Sleep and Cognition (pp. 77-87). Washington, DC: American Psychological Association.

#### NOTES

Subjects were 19 male student nurses who met a criterion of having EEG alpha density of at least 40% during an eyes closed, waking condition. They slept in the laboratory for two nights in succession, while being monitored by an EEG, and were told only that sleep cycles were being studied. Suggestions were presented while they were sleeping, e.g. "Whenever I say the word itch, your nose will feel itchy until you scratch it" "Whenever I say the word pillow, your pillow will feel uncomfortable until you move it." Then they were tested by Experimenter saying the cue word ("itch" or "pillow") during subsequent REM periods later that night and again on the next night. (The suggestions were not repeated on the second night; but two new suggestions were given on the second night when possible.)

After the Subjects awakened in the morning, they were interviewed to test their memory for the events that had occurred, and also cue words were presented in the context of a word association test to assess memory indirectly by observing behavioral and physiological responses. A more detailed inquiry was made after the second night.

The results were as follows. Ss responded to a mean of 21% of cue words administered. Ss continued to demonstrate REM sleep for at least 30 seconds for 71% of all cues administered, indicating that they were not aroused by the cue. When a suggestion was successfully completed (i.e., without eliciting alpha activity) it was not repeated. However, the cue words were tested in several subsequent REM periods. Cue word testing occurred immediately (during the same REM period as the suggestion) on the same night, as well as in a later REM period, and during REM on Night 2 (after the suggestion had been given during Night 1).

Correct responses were given for 20% of immediate, 23% of delayed, and 23% of carry-over conditions. Ss did not remember the suggestion, verbal cues, or their responses when they awoke. Since Ss often responded to the cue the next night without repetition of the suggestion itself, the authors

inferred amnesia rather than forgetting had occurred. Responses were not elicited by repeating the cue word in the waking state, but appeared to be specific to the sleep condition.

Six Ss returned five months later for a third night of testing. Four had shown carryover response on Night 2 to a Night 1 suggestion. When verbal cues were presented (without re-administering the suggestion) those 4 Ss responded, even though there was no intervening waking memory about the procedure or the suggestions. Some Ss responded even more frequently than during the original two nights; hypnotic depth did not seem to account for the increased responsivity. Experimenters attempted to reverse the amnesia observed during the waking condition by using hypnosis, age regression, and other hypnotic techniques, with some positive effect. The author speculates that perhaps the techniques originally used to probe morning recall were not sufficiently sensitive. He also raises the question of whether this waking state amnesia is related to the amnesia for night dreams when people awaken in the morning.

The relationship between hypnotizability and sleep suggestibility was analyzed. Hypnotizability was measured with the Harvard Group Scale, several weeks later, by Experimenters who were blind to the Ss' rate of responding to suggestions given during sleep. More hypnotizable Ss slept through the verbal stimuli more than low hypnotizable Ss; so they slept longer and more cues could be tested. Ss who responded most frequently to sleep-induced suggestions were more responsive to hypnosis. Analysis of response rate percentage (which controls for higher number of cues administered when Ss slept longer) showed that correlations between sleep suggestibility and hypnotizability were higher for percentage of delayed responses than for percentage of immediate responses.

Analysis by type of item on the hypnotizability scales suggested that the correlation with sleep suggestibility was due to the hallucinatory-reverie and the posthypnotic- dissociative clusters of hypnotic behavior, which are more difficult kinds of items. Correlations were significant for carry-over responses but not for immediate responses. These items represent phenomena experienced by Subjects who can be deeply hypnotized. The author reports that this relationship observed between hypnotizability and response to sleep-induced suggestions was not significant in a later study by Perry et al. (1978).

This author raises a question about why high hypnotizable subjects sleep better than low hypnotizables. The 6 Ss who were least susceptible accounted for 48% of all awakenings that occurred during the 2 experimental nights; the 6 Ss who were most hypnotizable accounted for only 26% of the awakenings ( $p < .01$ ).

Because sleep learning ("hypnopedia") has been extensively practiced in Russia and Eastern Europe, especially for language learning, the author investigated language learning with nine subjects. (Hoskovec, 1966, and Rubin, 1968, have reviewed the hypnopedia literature, which suggests that only "suggestible" subjects respond; it is not clear whether "suggestible" refers to hypnotizable, or whether expectation of success is cultivated by information given in the waking state.) The nine Ss had responded to the suggestions at least twice while remaining asleep, had no waking recall of the suggestions, but were given pre-sleep instructions (increasing expectancy) that they would learn during sleep.

The verbal association material ("A is for apple; P is for palace;" etc.) was given during EEG sleep stages 2, 4, and REM. (Eight letter-word stimuli pairs were given, two per sleep stage whenever possible.) When they awakened, Ss were asked to check "any familiar word" on a list of 10 words beginning with the letter A, with the letter P, etc. So the probability was .10 for each of the eight lists that they might check one correct word by guessing. They also responded to two dummy lists containing letter-word pairs not used during sleep.

None of the dummy list words were checked, whereas 28% of the administered words were correctly checked; also, Ss selected the correct letter (without identifying the word and with instructions not to "guess") in an additional 17% of all lists. Words were rarely recalled from Stages 2 and 4, but Ss often recognized letters from those stages. False positives (incorrectly recalled words or letters) was almost

never observed. Furthermore, no control Subjects (people who had not received a presleep set that they would recall) recalled any words correctly.

It was observed that whenever words presented during REM were later recalled, a transient slower frequency alpha (10.25 Hz vs. 9.64 Hz,  $p < .01$ ) had been evoked within 30 sec after the presentation of the stimuli during sleep.

Total recall of words correlated with the Harvard Group Scale of Hypnotic Susceptibility .69 and the Stanford individually administered scale .42, for the 7 Ss administered hypnotizability tests.

The author concludes that under optimal conditions, sleep learning of relatively easy material can occur with subsequent waking recall.

## 1989

Kramer, Richard L. (1989). The treatment of childhood night terrors through the use of hypnosis - a case study: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37 (4), 283-284.

Night terrors are nocturnal episodes of intense autonomic arousal which are manifested by loud shouting or screaming in terror. The sufferer is not awake and is generally completely amnesic for the episodes. Night terrors and other sleep disturbances, such as somnambulism, are disorders of arousal (Broughton, 1968; Fisher, Kahn, Edwards, & Davis, 1973; Guilleminault, 1987). A 10-year-old white male was treated for a 6-year-long bout of night terrors. The hypnotic induction consisted of the finger lowering technique where the middle 2 fingers were raised and the individual was asked to watch the fingers as they "go to sleep." He was given suggestions for dropping off to sleep gradually and for rotating cycles of sleep. The regularity and continual movement of the cycles of sleep were emphasized. He was also given direct suggestions for not dropping too quickly into an extremely deep stage of sleep. He has not had a recurrence of night terrors since that time (approximately 2 years). Psychodynamic issues are discussed as is the need for further research.

Stanton, Harry E. (1989). Hypnotic relaxation and the reduction of sleep onset insomnia. International Journal of Psychosomatics, 36, 64-68.

A hypnotic relaxation technique was compared to stimulus control and placebo conditions as a means of reducing sleep onset latency (SOL). Forty-five subjects were matched on their baseline SOL as measured through sleep diaries. They were randomly assigned to one of the three groups and experienced four weekly sessions of 30- minutes' duration, with demand effects being controlled through the use of counter- demand instructions. Data generated by the study suggested that the particular hypnotic relaxation treatment used was effective in helping Ss sleep more quickly. Neither stimulus control nor placebo groups recorded similar improvement.

## 1988

Gabel, Stewart (1988). The right hemisphere in imagery, hypnosis, rapid eye movement sleep, and dreaming: Empirical studies and tentative conclusions. Journal of Nervous and Mental Disease, 176, 323-331.

Reviews studies that have addressed the issue of whether there is an increased activation or efficiency of right-hemispheric processes during imagery, hypnosis, REM sleep, and dreaming. Evidence strongly supports the notion of increased right- hemispheric activation in simple imaginal or visual states during usual consciousness. There are also studies supporting this view of REM sleep, dreaming, and hypnotic phenomena. It is concluded, however, that the lack of adequate studies, contradictory or negative findings, and moderating variables (e.g., task difficulty, cognitive style) make it difficult to draw definitive conclusions concerning right-hemispheric processes.

1987

Nadon, Robert; Laurence, Jean-Roch; Perry, Campbell (1987). Multiple predictors of hypnotic susceptibility. Journal of Personality and Social Psychology, 53, 948-960.

Report two experiments in which various measures thought to be related to hypnotizability were analyzed by stepwise discriminant analysis.

Absorption and preference for an imagic style of thinking predicted hypnotizability. Addition of 2 other variables in Experiment 2--a Sleep-Dream score derived from Evans's Cognitive Control of Sleep Mentation subscale and Gibson's Dream Questionnaire, and the Belief in the Supernatural subscale of the Taft Experience Questionnaire--increased the correct classification of the medium-hypnotizable subjects from chance levels to 74%. Argue for a confirmatory and hierarchical approach in future studies to explore correlates of hypnotizability more fully. NOTES 1:

#### NOTES

The following notes were made at an SCEH presentation: [Robert Nadon, Hypnotizability: A Correlational Study Involving Experiential, Imagery, and Selective Attention Variables.]

Author used a number of variables that have related to hypnotizability in single measure studies to predict with a multiple  $r$ . 30 male and 30 female Ss, given Harvard (?) then screened on Form A, and finally on Form C. Classed as Low (0-2), Medium (5-10 without amnesia), and High (11-12 with amnesia).

Independent Variable Triserial  $r$  % Correctly Classified Sheehan (1967) short Betts  $-.69^{**}$  57  
Preference for Imagery Mode of Thought

(Isaacs 1982)  $.64^{**}$  57 Tellegen's Absorption  $.58^{**}$  Personal Experience Questionnaire  $.51^{**}$  80

(Evans 1982) Concordia Fantasy Questionnaire Pavio Stroop Random Number Generation Task  
Modified Van Nuys Meditation Task 8 Auditory attention tasks

1986

Belicki, Kathryn; Belicki, Denis (1986). Predisposition for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. Journal of Clinical Psychology, 42 (5), 714-718.

The relationships of nightmare frequency to hypnotic ability, vividness of visual imagery, and the tendency to become absorbed in fantasy-like experiences were examined. Subjects were 841 undergraduate university students who participated in group tests of hypnotic ability, after which they estimated the number of nightmares that they had experienced in the prior year. In addition, 406 of the subjects completed Marks' Vividness of Visual Imagery Questionnaire, and Rotenberg and Bowers' Absorption scale. Of the subjects, 76% reported experiencing at least one nightmare in the prior year; 8.3% indicated one or more per month. Individuals with frequent nightmares scored higher on hypnotizability, vividness of visual imagery, and absorption.

#### NOTES

620, Belicki & Bowers, 1982 ABSTRACT: Investigated the role of demand characteristics in dream change by comparing dream report change following pre- and postsleep administrations of instructions to pay attention to specific dream content. This design was based on the assumption that if presleep instructions merely distort dream reports rather than influence actual dreams, report change should be observable following a postsleep instruction. 42 undergraduates were prescreened with the Harvard Group Scale of Hypnotic Susceptibility (Form A), which allowed experimenters to examine the role of hypnotizability in dream change. Significant differences were observed only following the presleep instructions. It is concluded that report distortion as a result of paying attention to a dimension of dream content was insufficient to account for dream report change following presleep instructions. Hypnotic ability correlated significantly with the amount of dream change.

Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.

## NOTES

Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.

Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical (primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).

With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.

Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven

also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses.

The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and

reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from

thalamus; low level of awareness as in twilight sleep or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus

reticular activating system influences; associated with increased inhibitory thalamic and septal-hippocampal impulses radiating upward to the

cortex. In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit.

The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory septal-hippocampal complex which generates theta-wave activity, thus accounting for the close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1 sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are

unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self- concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

" ... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103).

The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

1984

Nugent, William R.; Carden, Nick A.; Montgomery, Daniel J. (1984). Utilizing the creative unconscious in the treatment of hypodermic phobias and sleep disturbance. American Journal of Clinical Hypnosis, 26 (3), 201-205.

An Ericksonian hypnotherapeutic procedure is designed to access and direct creative unconscious processes toward the creation and implementation of satisfactory solutions to recurrent problem behaviors. The use of the procedure is described in 3 cases. Two of the cases involve treatment of severe hypodermic needle phobias. The third case involves use of the procedure in treatment of a somnambulistic sleep disturbance. Possible curative forces tapped by the procedure, suggestions for its continued use, and suggestions for further investigation of the procedure are also discussed.

## NOTES

The procedure involved: 1. Pretrance discussion of unconscious mental processes 2. Hypnosis, followed by "Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that [desired therapeutic outcome], and as soon as your unconscious knows that you will [desired therapeutic outcome] it can signal by [appropriate ideomotor signal]" 3. Post-ratification. Example: "'Now your unconscious mind can do what is necessary, in a manner fully meeting all your needs as a person, to insure that you remain comfortably awake and alert anytime you receive an injection in the future, and as soon as your unconscious knows you will remain comfortably awake and alert when receiving an injection it can signal by lifting your right hand into the air off the chair.' This suggestion was [their] communicative effort to access and direct unconscious processes to the creation and implementation of altered behavioral responses to injections. Three minutes after the suggestion, B's right hand lifted jerkily into the air. She was then awakened and experienced a complete amnesia for the trance period" (p. 203).

"[They] then carried out a procedure to ratify the therapeutic change. This process presumably further develops expectancy of change, confirms change at the unconscious level, and puts doubt into any conscious beliefs contrary to positive change. This step is standardly carried out as was done with B. [They] had B sit with her hands resting on the arms of the chair. [They] told her they would ask her unconscious mind a question that only it would know the answer to. It could answer 'yes' to the question by lifting her left hand, 'no' by lifting her right hand, and 'I don't know' or 'I don't want to

answer' by lifting both hands. Then the question was asked, 'In the future, will B remain comfortably awake and alert anytime she receives an injection or a blood test?' After a few minutes her left hand jerked momentarily into the air. After some discussion about the ideomotor response and her trance experience they dismissed her with the prescription to 'await the surprising results'" (p. 203).

The authors cite as a source for their work two books: Erickson, Rossi, and Rossi, *Hypnotic Realities*, 1976, pp. 226-230; also Erickson & Rossi, *Hypnotherapy*, 1979.

1983

Woolfolk, Robert L.; McNulty, Terrence F. (1983). Relaxation treatment for insomnia: A component analysis. *Journal of Consulting and Clinical Psychology*, 51 (4), 495-503.

Four relaxation treatments for sleep onset insomnia were compared with a waiting-list control. Treatments were varied in the presence or absence of muscular tension-release instructions and in the use of either images or somatic sensations as foci of attention. Analysis of data from 44 insomniacs recruited from the community showed all treatment conditions to be superior to no treatment in reducing latency of sleep onset and ratings of fatigue. The presence of muscle tension-release was unrelated to outcome. There was a nonsignificant trend for visual imagery treatments to be superior to somatic- focusing treatments in reducing sleep onset latencies. Treatments employing visual focusing were superior to somatic-focusing treatments in reducing the number of nocturnal awakenings. At 6 months follow-up only the imagery treatments showed significant improvement over pretreatment levels on latency of sleep onset. Visual- focusing treatments produced significantly greater reductions in sleep onset latency at follow-up than did the somatic-focusing treatments. Results are discussed in light of previous research addressing the mechanisms underlying the treatment of insomnia by relaxation methods.

1982

Belicki, Kathryn; Bowers, Patricia (1982, October). Dimensions of dissociative processing, absorption and dream change following a presleep instruction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

NOTES

Subjects' tendency to have things pop into their mind when asked to imagine, image them, or to do a divergent thinking task is correlated with behavior change out of awareness (dissociated), change in dream content in response to indirect suggestion - the request to pay attention to a certain element in their dreams. Effortless imagining (as opposed to working at it), a particular type of dissociative phenomenon, is associated with dream change.

Stam, Henderikus J.; Spanos, Nicholas P. (1982). The Asclepian dream healings and hypnosis: A critique. *International Journal of Clinical and Experimental Hypnosis*, 30 (1), 9-22.

The present paper critically evaluates the popular contention that the dream healings which occurred in antiquity at the Asclepian temples resulted from the unwitting use of hypnosis. This contention is found wanting and it is argued instead that these reported healings can be understood better by considering them in their cultural context.

1981

Nardi, T. J. (1981). Treating sleep paralysis with hypnosis. *International Journal of Clinical and Experimental Hypnosis*, 29 (4), 358-365.

The use of hypnosis in the management of sleep paralysis is described and discussed. 2 cases are presented in which autohypnosis was used to desensitize the patients to the anxiety that accompanied their sleep paralysis. The autohypnosis also provided a means of terminating the attacks. Follow-up data suggests that this approach may serve to decrease the frequency of sleep paralysis attacks.

1980

Bauer, K. E.; McCanne, T. R. (1980). An hypnotic technique for treating insomnia. International Journal of Clinical and Experimental Hypnosis, 28 (1), 1-5.

A technique for treating insomnia with short-term hypnotherapy is presented. 2 cases are presented to illustrate the clinical application of the technique. The treatment procedure, which incorporates the demand characteristics of the therapeutic setting, positive expectancies, a reduction in physiological arousal, and a reduction of excessive cognitive activity is discussed in terms of current theories of insomnia.

Schneck, Jerome M. (1980). Hypnotherapy for narcolepsy. International Journal of Clinical and Experimental Hypnosis, 28 (2), 95-100.

The effective use of hypnotherapy for control of narcoleptic sleep episodes experienced by a 40-year-old woman is described. Measures included posthypnotic suggestions for deliberate and automatic hand movements by the patient, serving as signals to ward off sleep attacks. Such signals within visual imagery were also incorporated into treatment. Narcolepsy and the narcoleptic tetrad are described in pertinent detail. The hypnotic measures presented here can serve as a guide for efforts by other therapists to deal with this problem. So far as the present author knows, hypnotherapy for narcolepsy has not been discussed previously in scientific literature.

1979

Crasilneck, Harold B. (1979). Hypnosis in the control of chronic low back pain. American Journal of Clinical Hypnosis, 22, 71-78.

Twenty-nine patients were referred because of low back pain. Five were excluded on psychological grounds because they were highly masochistic, extremely depressed, or manifested a low frustration tolerance. Of the 24 in the treatment group, 18 of the patients had surgery two or more times, and six one time. In each case low back pain returned within three to six months after surgery. Twenty of the patients were addicted to or excessively dependent on medications including acetaminophen, secobarbital, codeine phosphate, oxycodone hydrochloride, and morphine sulphate. Common factors among the patients included (1) consistent pain which was primarily organic in origin, (2) analgesic dependence, (3) insomnia, (4) reactive depression, (5) excessive interpersonal dependence, and (6) a fear of becoming a lifelong 'backache cripple.' Twenty patients responded positively; four patients failed to respond to the repeated hypnotic induction techniques and were considered failures. Sixteen reported an average of 80% relief during the first four sessions, and all 20 patients reported an average of 70% relief (based on verbal estimates by patients) by the sixth session. Fifteen voluntarily discontinued medication by the third week of therapy, and the rest were withdrawn by their physicians during the ensuing four weeks. Most patients were seen daily the first week, three times the second week, twice the third week, and thereafter as necessary. The mean number of out-patient sessions was 31 over an average of nine months. All patients were taught self-hypnosis. None of the individuals retained their addiction, and only occasionally did they require analgesics. Patients were seen by their referring physicians as needed during the course of hypnotherapy, and frequent consultations between the therapists created a combination of treatments best suited for each patient. It is concluded that

hypnosis may be utilized maximally as an important adjunct to other therapeutic methods in the treatment of low back pain.

Turner, Ralph M.; Ascher, L. Michael (1979). Controlled comparison of progressive relaxation, stimulus control, and paradoxical intention therapies for insomnia. Journal of Consulting and Clinical Psychology, 47 (3), 500-508.

Assessed the effectiveness of treatment programs based on progressive relaxation, stimulus control, and paradoxical intention in the context of sleep difficulties for 50 volunteer Ss. The results indicate that each of the therapeutic procedures significantly reduced sleep complaints in contrast to placebo and waiting list control groups. No differences were observed among the 3 active techniques. (1 1/2 p ref).

1977

Schneck, Jerome M. (1977). Sleep paralysis and microsomatognosia with special reference to hypnotherapy. International Journal of Clinical and Experimental Hypnosis, 25, 72-77.

Sleep paralysis is described in connection with a patient whose episodes incorporated the experience of her entire body feeling extremely small. The psychological implications of the paralysis and her microsomatognosia are discussed. Comparisons are made with other perceptual distortions involving the sense of change in body size. The characteristics of sleep paralysis and associated personality patterns are delineated. This material is discussed with special reference to experiences of patients in hypnosis, especially hypnotherapy and hypnoanalysis.

1972

Kratochvil, Stanislav; Macdonald, Hugh (1972). Sleep in hypnosis: A pilot EEG study. American Journal of Clinical Hypnosis, 15 (1), 29-37.

Six highly susceptible Ss were hypnotized and allowed to sleep in the laboratory during the night. Hypnotic rapport was tested after each of two awakenings, and simple suggestions were also administered in different stages of sleep. After awakening, hypnotic rapport was still present. In sleep, the Ss did not react to suggestions in stages 3 and 4. They sometimes reacted in stage 2, but usually woke up either during listening or during responding to the suggestion. In stage REM the Ss usually responded well to the suggestions; they sometimes woke up and sometimes not. The results are taken as a proof that hypnosis can continue after periods of sleep which occur during hypnosis. The question whether hypnosis and sleep can occur simultaneously or only alternately is discussed.

1970

Kratochvil, Stanislav (1970). Sleep hypnosis and waking hypnosis. International Journal of Clinical and Experimental Hypnosis, 18, 25-40.

Subjected 6 highly susceptible female students to a short-term training procedure to induce 2 different types of hypnosis: (a) a sleep hypnosis, and (b) an active waking hypnosis. Ss behavior in both types, during the carrying out of 11 standard suggestions, was rated by 2 independent Os. The behavior in both artificially induced types of hypnosis differed significantly at the 1% level in the expected direction. The failure to obtain more dramatic results is attributed to the shortness of training, to the implicit demands concerning activity, or to Ss' personality traits, which may lower the intrapersonal variability. The relevance of the results for the Pavlovian theory of hypnosis is discussed: They do not support the hypothesis that behavioral characteristics which resemble sleep are intrinsic phenomena of

the hypnotic state. (Spanish & German summaries) (34 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1967

Dittborn, J. M.; O'Connell, D. N. (1967). Behavioral sleep, physiological sleep and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 15, 181-188.

A SLEEP-INDUCTION PROCEDURE REQUIRING MANUAL RESPONSE TO A REPETITIVE AUDITORY SIGNAL WAS ADMINISTERED TO 52 SS WHO HAD CLEAR ALPHA ACTIVITY IN THEIR WAKING EEG AND WHOSE HYPNOTIZABILITY WAS KNOWN. THE OCCURRENCE OF SLEEP WAS DEFINED BY PHYSIOLOGICAL, BEHAVIORAL, AND SUBJECTIVE CRITERIA. NEITHER THE TENDENCY TO DEVELOP EEG SLEEP NOR THE ABILITY OF SOME SS TO RESPOND WHILE IN EEG SLEEP WAS RELATED TO HYPNOTIZABILITY. HYPNOTIZABILITY WAS RELATED TO A TYPE OF DISSOCIATION BETWEEN EEG SLEEP AND BOTH BEHAVIORAL AND SUBJECTIVE SLEEP SHOWN BY 5 SS, ALL HIGHLY HYPNOTIZABLE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1966

Hoskovec, J. (1966). Hypnopedia in the Soviet Union: A critical review of recent major experiments. International Journal of Clinical and Experimental Hypnosis, 14, 308-315. (Abstract in Psychological Abstracts 41: 149, and in American Journal of Clinical Hypnosis, 1967, 4, 295)

Major Soviet hypnopedia (sleep-learning) experiments were conducted by Balkhashov (1965); Khil'chenko, Moldavskaya, Kol'chenko, and Shevko (1965); Kulikov (1964); Svyadosch (1962); Zavalova, Zukhar', and Petrov (1964); Zukhar', Kaplan, Maksimov, and Puskna (1965). The results of these experiments show that learning during sleep is possible when a 'suggested set' to perceive and remember the learning material during sleep is involved. Selection of Ss according to hypnotizability or primary suggestibility seems to be an important prerequisite. The influence of hypnopedia on the mental health of Ss is evaluated. (Author's abstract, in AJCH.)

Tart, Charles T. (1966). Some effects of post-hypnotic suggestions on the process of dreaming. International Journal of Clinical and Experimental Hypnosis, 14, 30-46.

2 highly hypnotizable Ss were studied for 43 nights in order to assess the feasibility of controlling various aspects of their Stage 1 dreaming. Using posthypnotic suggestion they were caused to awaken at either the beginning or end of their Stage 1 dream periods, dream all night, and not dream at all. The experimental procedure was effective in producing awakenings at the beginnings and end of dream periods; its effect on Stage 1 dream time was unclear and, if present, was rather small. Earlier reports of the efficacy of posthypnotic suggestion in affecting Stage 1 dream content were confirmed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Domhoff, Bill (1964). Night dreams and hypnotic dreams: Is there evidence that they are different?. International Journal of Clinical and Experimental Hypnosis, 12, 3, 159-168.

The evidence against equating night dreams and hypnotic dreams is reviewed in the light of 2 developments in dream research--Dement and Kleitman's (1957a; 1957b) physiological and behavioral indicators of dreaming and Hall's (1951; 1963) quantitative studies of dream content. It is concluded that: the equivalence of the EEG patterns of the hypnotic trance and the "dream" stage of

sleep (Stage I) cannot be ruled out; the psychologically-important question of content differences between night and hypnotic dreams has never been examined in a controlled, quantitative manner. (48 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Karmanova, I. G. (1964). Fotogennaia katalepsiia [Photogenic catalepsy]. Moscow, USSR: Leningrad Izd. Naule. (Reviewed in American Journal of Clinical Hypnosis 1966, 3, 228)**

#### NOTES

The author analyses the phenomenon of photogenic catalepsy from the evolutionary phylogenetic approach, including the phenomenon as demonstrated in the cock, frog, guinea-pig and dog. The following points of view are discussed: the physiological changes, electroencephalography and electromyography in animals, and clinical narcolepsy in man. (Review in AJCH.)

**1963**

**Dittborn, Julio M.; Munoz, L.; Aristeguita, A. (1963). Facilitation of suggested sleep after repeated performances of the sleep suggestibility test. International Journal of Clinical and Experimental Hypnosis, 11, 236-240.**

The sleep suggestibility test (SST) was individually administered to a group of young volunteer soldiers. There was increased susceptibility with each successive SST administration. It was possible to transform suggested sleep into somnambulistic hypnosis in a majority of Ss. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**King, C. D. (1963). The states of human consciousness. New York, NY: University Books. (Reviewed in American Journal of Clinical Hypnosis 7, 1964, 96.)**

#### NOTES

From the book review by Stanley Abrams, AJCH: [The book] "is more philosophical and mystical than scientific. ... [and describes] the four states of consciousness: sleep, waking, awakesness, and objective consciousness. ... For man to attain completeness and normalcy he must achieve the state of awakesness. According to the author, however, only a relatively few have approached this stage of consciousness and his description of it is quite vague. When one has reached awakesness he is able to understand and actually perceive the world in a novel and unique manner. ... The final stage of awareness, objective consciousness, is characterized as the experiencing of cosmic phenomena in the same fashion as external reality is understood in the awakened state. The author indicated that this stage has not as yet been attained by man, but it does lie within his potential. ... The only treatment of hypnosis is the author's statement that the waking state is the same as the hypnotic state because suggestibility exists in both" (p. 96).

**1961**

**Mishchenko, M. (1961). The hypnotic condition as a process of nervous excitation. In Proc. Third World Congress of Psychiatry, Montreal, Canada, I. (pp. 704-708). (Abstract in American Journal of Clinical Hypnosis 1964, 7, 101.)**

Subjects were selected with certain predispositions for the hypnotic state and studied in the waking, hypnotic and experimental sleep states by motor conditioned reflexes modified to a specific function of the frontal system. Excitable, active students of music and literature were found most excitable as subjects, subjects tending to be passive showed no hypnotic responses. Experimental sleep abolished the motor-conditioned reflexes, quite contrary to hypnotic findings. (M.H.E. abstract in AJCH).

1960

Andreev, B. V. (1960). Sleep therapy in the neuroses. New York: Consultants Bureau. (Reviewed by Milton H. Erickson in American Journal of Clinical Hypnosis, 1962, 4, p. 203)

#### NOTES

The book summarizes research on sleep therapy conducted at the Pavlov Clinic for Nervous Diseases, at the Pavlov Institute of the Academy of Sciences of the USSR. It provides a history of sleep therapy, which M. H. Erickson states "is as old as antiquity," and details about the Russian research. Hypnosis and suggestion were two of many different procedures used to prolong sleep. 200-item bibliography.

Barretto, Alberto L. (1960). Sugestiones nocturnas para corregir los malos habitos infantiles [Nocturnal suggestions used to correct bad habits in children]. Revista de la Latino-Americana Hipnologia Clinica, 1 (2), 29-32. (Abstracted in American Journal of Clinical Hypnosis, 1961, 4, 65)

The article discusses a method of nocturnal suggestions (during sleep) as a simple and effective method for the correction of bad habits in children (enuresis, nail biting, finger sucking, excessive use of candies, poor appetite, etc.).

Diamant, J.; Dufek, M.; Hoskovec, J.; Kristof, M.; Pekarek, V.; Roth, B.; Velek, M. (1960). An electroencephalographic study of the waking state and hypnosis with particular reference to subclinical manifestations of sleep activity. International Journal of Clinical and Experimental Hypnosis, 8, 199-212.

#### (Author's Conclusions)

EEG records have been investigated in 10 patients in a waking state and under hypnosis. It was shown that no differences existed between these two states in terms of EEG. EEG signs of decreased wakefulness can be demonstrated in some of the patients, but these were also present without hypnosis. This latter effect appears to be subclinical sleep activity (Roth), frequently seen particularly in neurosis. Reactibility to external stimuli under hypnosis was also, in most cases, equivalent to reactions in the waking state. The authors incline to the view that EEG data does not support the concept that the nature of hypnosis and sleep is qualitatively the same.

1959

Platonov, K. I. (1959). The word as a physiological and therapeutic factor: The theory and practice of psychotherapy according to I. P. Pavlov. ( 2nd). Moscow: Foreign Languages Publishing House.

#### NOTES

On pp. 75-76 the author discusses conditioning in hypnosis. Most of the theoretical material is in the first part of the book; the rest consists of case studies. He presents the position that the activity of the cortex and subcortex are different during states of waking and suggested sleep.

Note: Much of the Russian research done during "suggested sleep" involves subjects who are hypnotized for a long period of time--sometimes hours. Routinely, in treatment, they would give corrective suggestions and then tell the person to "sleep" and would leave them in the "sleep" for an hour or longer.

"Thus, it appears from the foregoing that the basic peculiarities of the activity of the cerebral cortex manifesting themselves in the state of suggested sleep are as follows: 1. In addition to the division of the cerebral hemispheres into sections of sleep and wakefulness typical of the hypnotic sleep of an animal,

there is also a functional dissociation of the two signal systems and within the second signal system. 2. The activity of the second signal system under these conditions is not only confined to the narrow framework of the rapport zone, but is also frequently of a passive nature being directly dependent on the verbal influences of the hypnotist. Outside these influences there is no (or hardly any) activity. 3. A considerable increase in the coupling function with respect to the stimuli of the second signal system is noted at the same time in the rapport zone. This especially favours the formation of new cortical dynamic structures under the verbal influences of the hypnotist, these structures representing the physiological basis for effectuating the suggested actions and states.

"The foregoing peculiarities manifest themselves in the fact that the entire external second signal activity of the subject is reduced only to direct answers to the questions of the hypnotist with no independent reactions to any influences, including verbal, coming from other people (so-called isolated rapport). This is understandable, since the activity of the second signal system lying outside the rapport zone is inhibited" (pp. 73-74).

"As to the problem of the peculiarities of the conditioned reflex activity during suggested sleep, it will be noted that this problem has not been very extensively studied as yet. Nevertheless, the data of various authors are of indubitable interest, since they have revealed a number of specific peculiarities in the state of the higher nervous activity under these conditions.

"According to these data the conditioned reflex activity in suggested sleep undergoes certain changes. Thus, S. Levin observed in his early studies (1931) that in children under conditions of suggested sleep the motor and secretory conditioned reflexes elaborated earlier in the waking state grew very much weaker and that there was a dissociation both between the motor and secretory conditioned reflexes and between the unconditioned reflexes of salivation and mastication; he also observed the transitional (phasic) states--paradoxical, ultraparadoxical and inhibitory phases, all the way to the onset of complete sleep" (pp. 74-75).

Platonov indicates that conditioned reflexes may disappear during suggested sleep (Povorinsky & Traugott, 1936). Arousal from suggested sleep results in gradual restoration of the reflexes, with speech reactions inhibited first and restored last. Pen & Jigarov (1936) also showed that there is a weakening of conditioned reflexes, with increased latency, in suggested sleep. These authors showed that it is impossible to form new conditioned reflexes in deep states of suggested sleep, and the conditioning is difficult in lighter states.

"Y. Povorinsky's data (1937) indicate that the conditioned reflexes elaborated in the waking state have a longer latent period during suggested sleep and in some subjects they are completely absent. Under these circumstances, the reactions to the verbal influences of the hypnotist are retained even during the deepest suggested sleep. The more complex and ontogenetically later conditioned bonds of the speech-motor analyzer are inhibited first as the subject lapses into a state of suggested sleep and are disinhibited the last as the subject awakens from this state" (p. 75).

"B. Pavlov and Y. Povorinsky observe (1953) that the conditioned bonds reinforced by the words of the hypnotist are formed during suggested sleep faster than in the waking state. In this case, during the somnambulistic phase of suggested sleep verbal reinforcements, as a rule, provoke a stronger and longer reaction with a shorter latent period than a direct first signal stimulus" (p. 76). The conditioning that occurs during suggested sleep does not manifest during waking periods unless suggestions are given during the sleep to react after wakening. The author takes this to be evidence that conditioned reflex activity can be modified by verbal suggestions.

During the somnambulistic stage of suggested sleep, subjects are less adept at performing addition. This indicates that inhibition has spread to the second signal system. However, inhibition of different sensory systems seems to vary from person to person. Krasnogorsky (1951) reported one subject did not react to light, but hearing seemed to be more sensitive than in the waking state.

"All of the above testifies to the considerable changes in the character of cortical activity regularly occurring during suggested sleep and determining, on the whole, the specific nature of higher nervous activity, the systematic study of which should be the object of further research" (p. 77).

1956

Barber, Theodore Xenophon (1956). 'Sleep' and 'hypnosis': A reappraisal. Journal of Clinical and Experimental Hypnosis, 4, 141-159.

#### NOTES

"Summary.

"Some recent experiments and a reevaluation of the electroencephalographic findings indicate that the term 'hypnosis' has subsumed at least two more or less distinct phenomena: (a) 'hypnosis' preceded by 'trance-inducing suggestions' which is closely related to 'light sleep' and (b) 'hypnosis' without 'trance-inducing suggestions' which is often a 'waking' state.

"From this viewpoint we can begin to reevaluate the contradictory physiological experiments comparing sleep and hypnosis, the most favorable conditions for producing hypnosis, amnesia and decreased suggestibility in very deep hypnosis, and the reports of waking and sleeping hypnosis. We can also reappraise such thorny problems in hypnotic theory as the production of hypnosis by artificial means, autohypnosis, and animal hypnosis.

"The argument presented calls for further research. We should investigate (a) suggestibility during extreme relaxation; (b) response on hypnotic tests when the subject is told, "Go to sleep and I'll be back later to give you some tests'; (c) deep trance phenomena during sleep; (d) hypnotizability of good sleepers and insomniacs; (e) beneficial suggestions during sleep; (f) physiological functions during 'light sleep' and hypnosis; (g) the response of 'sleep-walkers' to standard hypnotic tests; (h) the relationship of 'light sleep' dreams to hypnotically induced dreams; and (i) the relationship of sleep amnesia to hypnotic amnesia" (pp. 153-154).

1954

Koster, S. (1954). Experimental investigation of the character of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 42-54.

#### NOTES

In waking, hypnosis, and sleep states 6 subjects were tested for knee-jerk height, key pressing to metronome signal, doing sums, recalling a story, etc. The Summary states:

"1. The height of the knee-jerk of all 6 subjects both in T and in "S" was much lower than in (W), the average height of all knee-jerks computed of the 6 subjects was both in T and in "S" only 39% of the average height in (W).

2. The [arm] catalepsy in T and in "S" continually existed.

3. The subjects in T and in "S" could hear well and perform active movements, though they reacted somewhat more slowly, and less forcibly than in (W) and sometimes only after some provocations.

4. The subjects both in T and in "S" could not only hear well, but could also present more or less complicated psychic impressions, reproducing them later again in "S" and also after the end of the experiment" (p. 50).

The author concluded, "Hypnosis is a sleeping-condition, but a special one. The specific difference consists of the fact that the subject's many impressions, which he would observe in a waking-condition, he does not observe now, and does not react to, aside from impressions coming to him through the hypnotist. It can then be said that there is not an absence but a decrease of the active relation with the outer world. This is exactly the same state as the one during sleepwalking and the writer must repeat

after all his investigations, what has already been stated: Essentially there is no difference between the condition of a hypnotized person and that of a sleepwalker" (p. 51).

1947

Kaufman, M. R.; Beaton, L. (1947). A psychiatric treatment in combat. Bulletin of the Menninger Clinic, **11**, 1-14.

## NOTES

Describes use of hypnosis in treating "combat fatigue" in field conditions during the Pacific campaign of WWII. Hypnosis was utilized for sleep and rest in tent hospitals in or near combat to avoid chemical sedation as well as for reliving and mastering traumatic events. The milieu was one of expectant recovery with patients pitching tents, digging foxholes and serving as litter bearers. Psychiatric admissions were 12.8% of the total with return to duty rates varying with intensity of combat and duration of campaign with over half returned to combat duty. Four detailed cases are reported.

## SMOKING

2001

Barber, Joseph (2001). Freedom from smoking: Integrating hypnotic methods and rapid smoking to facilitate smoking cessation. International Journal of Clinical and Experimental Hypnosis, **49** (3), 257-266.

Hypnotic intervention can be integrated with a Rapid Smoking treatment protocol for smoking cessation. Reported here is a demonstration of such an integrated approach, including a detailed description of treatment rationale and procedures for such a short-term intervention. Of 43 consecutive patients undergoing this treatment protocol, 39 reported remaining abstinent at follow-up (6 months to 3 years post treatment).

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. ([[available online:] <http://www.iuniverse.com/bookstore/marketplace>])

## NOTES

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

2000

Green, Joseph P.; Lynn, Steven Jay (2000, August). Hypnosis and suggestion-based approaches to smoking cessation: An examination of the evidence. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, D. C..

This article reviews 59 studies of hypnosis and smoking cessation from the point of view of whether the research provides support for hypnosis as an empirically supported treatment (Chambless and Hollon, 1998). Whereas hypnotic procedures generally yield higher rates of abstinence relative to wait list and no treatment conditions, hypnotic interventions are generally comparable to a variety of nonhypnotic treatments. The evidence for whether hypnosis yields outcomes superior to placebos is mixed. In short, hypnosis can not be considered to be a specific and efficacious treatment for smoking cessation.

Furthermore, in many cases, it is impossible to rule out cognitive/behavioral and educational interventions as the source of positive treatment gains associated with hypnotic treatments. Hypnosis can not, as yet, be regarded as a well-established treatment for smoking cessation. Nevertheless, it seems justified to classify hypnosis as a "possibly efficacious" treatment for smoking cessation. - Abstract taken from *Psychological Hypnosis: A Bulletin of [Amer Psychol Assn] Division 30*. Fall, 2000.

**1999**

Capafons, A. (1999). Applications of emotional self-regulation therapy. In Kirsch, I.; Capafons, A.; Cardega, E.; Amigs, S. (Ed.), Clinical hypnosis and self-regulation: Cognitive-behavioral perspectives (pp. 331-349). Washington, D.C.: American Psychological Association.

This chapter reviews the main applications of emotional self-regulation therapy, which have received empirical support: smoking reduction, obesity, fear of flying, drug addictions, and premenstrual distress and dysmenorrhea. The logic of each treatment and main empirical results are summarized.

**1997**

Bayot, A.; Capafons, A.; Cardega, E. (1997). Emotional self-regulation therapy: A new and efficacious treatment for smoking.. American Journal of Clinical Hypnosis, 40 (2), 146-156.

We described emotional self-regulation therapy, a recently-developed suggestion technique for the treatment of smoking, and present data attesting to its efficacy. Of the 38 individuals who completed treatment, 82% (47% of the initial sample) stopped smoking altogether and 13% (8% of the initial sample) reduced their smoking. A follow-up at 6 months showed that 66% (38% of the initial sample) of those who had completed the treatment remained abstinent and reported minimal withdrawal symptoms or weight gain. In a no-treatment comparison group, only 8% reduced their smoking or became abstinent.

Johnson, David L. (1997). Weight loss for women: Studies of smokers and nonsmokers using hypnosis and multicomponent treatments with and without overt aversion. Psychological Reports, 80 (3, Pt 1), 931-933.

Study 1 compared 50 overweight adult female smokers (mean age 37.7 yrs) and 50 nonsmokers (mean age 41.2 yrs) in an hypnosis-based, weight-loss program. Smokers and nonsmokers achieved significant weight losses and decreases in Body Mass Index. Study 2 treated 100 women either in an hypnosis only (n = 50) or an overt aversion and hypnosis (n = 50) program. This multicomponent follow-up study replicated significant weight losses and declines in Body Mass Index. The overt aversion and hypnosis program yielded significantly lower posttreatment weights and a greater average number of pounds lost. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1995**

Capafons, A.; Amigs, S. (1995). Emotional self-regulation therapy for smoking reduction: Description and initial empirical data.. International Journal of Clinical and Experimental Hypnosis, 43 (1), 7-19.

Self-regulation therapy (Amigs, 1992) is a set of procedures derived from cognitive skill training programs for increasing hypnotizability. First, experiences are generated by actual stimuli. Clients are then asked to associate those experiences with various cues. They are then requested to generate the experiences in response to the cues, but without the actual stimuli. When they are able to do so quickly and easily, therapeutic suggestions are given. Studies of self-regulation therapy indicate that it can be used successfully to treat smoking.

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

#### 1993

Page, Roger A.; Handley, George W. (1993). The use of hypnosis in cocaine addiction. American Journal of Clinical Hypnosis, 36, 120-123.

An unusual case is presented in which hypnosis was successfully used to overcome a \$50-0 (five grams) per day cocaine addiction. The subject was a female in her twenties. Six months into her addiction, she acquired a commercial weight-control tape that she used successfully to stop smoking cigarettes (mentally substituting the word "smoking"), as well as to bring her down from her cocaine high and allow her to fall asleep. After approximately 8 months of addiction, she decided to use the tape in an attempt to overcome the addiction itself. Over the next 4 months, she listened to the tape three times a day, mentally substituting the word "coke." At the end of this period, her addiction was broken, and she has been drug free for the past 9 years. Her withdrawal and recovery were extraordinary because hypnosis was the only intervention, and no support network of any kind was available.

Spiegel, David; Frischholz, Edward J.; Fleiss, Joseph L.; Spiegel, Herbert (1993). Predictors of smoking abstinence following a single-session restructuring intervention with self hypnosis. American Journal of Psychiatry, 150, 1090-1097.

Examined the relation of smoking and medical history, social support, and hypnotizability to outcome with Spiegel's smoking-cessation program. A consecutive series of 226 smokers were treated with the single-session approach and followed up for 2 years. With a total abstinence criterion, 52% success was found after 1 week, and 23% abstinence at 2 years. Hypnotizability and having been previously able to quit smoking for at least a month significantly predicted the initiation of abstinence. Hypnotizability and living with a significant other person predicted 2-year maintenance. The results are superior to those of spontaneous efforts to stop smoking and suggest it is possible to predict which patients are most likely to respond and which patients are least likely to respond to such a brief intervention.

#### 1992

Spanos, Nicholas P.; Simulates, Ann; de Faye, Barbara; Mondoux, Thomas J.; Gabora, Natalie J. (1992-93). A comparison of hypnotic and nonhypnotic treatments for smoking. Imagination, Cognition and Personality, 12, 23-43.

Three experiments administered variants of Spiegel's (1970) smoking cessation procedure to smokers in hypnotic and nonhypnotic treatments. Follow-up periods were from twelve to twenty-four weeks depending on the experiment. Complete abstinence was an infrequent outcome in all three

experiments. Greater-than-control reductions in smoking for treated subjects were obtained in two of the experiments but, in both cases treatment and control subjects failed to differ significantly before the end of the follow-up period. Hypnotic and nonhypnotic treatments produced equivalent smoking reductions in all studies, and neither hypnotizability nor questionnaire assessments of motivation to quit correlated significantly with treatment outcome. Implications are discussed. NOTES 1:

#### NOTES

When the experimenters compared number of treatments they simply compared two sessions of Spiegel's one-session treatment with four sessions of it. The authors make the point that perhaps they should vary the four sessions.

"In all three of the present experiments the abstinence rates associated with the Spiegel treatment were very low. Our abstinence rates were similar to those reported in one earlier study [4 - Perry et al.], but substantially lower than those reported in three other studies [2, 22, 25]. The reasons for these discrepancies between studies remains unclear, but experiment 3 suggests that these discrepancies cannot be accounted for simply in terms of whether the subjects were drawn from a university or nonuniversity population, and experiment 2 suggests that the discrepancies are unrelated to the number of treatment sessions administered to subjects.

"The finding that hypnotic and nonhypnotic subjects in all three experiments attained equivalent reductions in smoking is consistent with other comparison studies in this area which indicate that hypnotic treatments are no more effective than various nonhypnotic procedures at inducing reductions in smoking [22, 25, 30]. More generally, these findings are consistent with comparison studies on a wide variety of clinical disorders (headache pain, warts, phobias, obesity) which indicate that hypnotic treatments are no more effective than nonhypnotic ones at producing therapeutic change (see [3] for a review).

"The failure to find significant correlations between smoking reduction and hypnotizability among treated subjects is also consistent with the findings of most studies in this area [3], but the reasons why significant correlations between these variables are found in some studies and not others remains unclear. Spanos [3] suggested that significant correlations between these variables are particularly likely when hypnotizability testing is integrated into the treatment protocol. Under these circumstances subjects are likely to form strong expectations about treatment success on the basis of their self-observed responses to the hypnotizability scale. Such expectations may, in turn, influence subjects' motivations to comply with the treatment regimen, the self-statements they make concerning their likelihood of quitting, etc. In all of the present experiments hypnotizability was assessed at the end of the follow-up period and, therefore, could not influence subjects' expectations of treatment success" (pp. 40-41).

Spiegel, David (1992, October). Hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Dr. Spiegel announced that this was a last minute substitution for Fred Frankel's presentation on Hypnotizability.

We have ongoing a major replication of the study that we published on group therapy with terminally ill breast cancer patients. The matched control patients get educational materials but not psychotherapy. We are looking at NKC cytotoxicity and delayed hypersensitivity.

Tasks: spend 15 minutes discussing list of problems; 15 minutes discussing things like, "What is your spouse doing that doesn't help; what can we do to help it?" We get drop in NKC cytotoxicity immediately afterward, returning after 24 hrs to usual levels. Controls don't drop in NKC cytotoxicity. This measure of stress may be a predictor of survival time.

In Fawzy's study of group therapy with melanoma patients, they noted a significant difference at 6 months in interferon augmented activity of NK, which didn't hold up at a year. But at 6 years there were 10 of 40 deaths in control group vs 3 of 40 deaths in treated group. This is a vigorous effect.

Cohen's study of colds in New England J. of Med is another good clinical study.

There are two broad areas of relevance of hypnotizability to healing: 1. Hypnotizability as a trait: do highs differ in way they regulate body or mind? 2. Is there something you do when in hypnotized state that is different? Studies of treatment of warts with hypnosis are important 3. Transition between states, e.g. circadian rhythms; is there a shift in wakefulness between trance and nontrance states that affects health?

Psychiatric Diagnosis and self regulation. High hypnotizability is associated with certain psychiatric disorders (dissociative reaction, PTSD, MPD, etc.). Schizophrenics score much lower than normals (av. = 4 vs 7; replicated with the Hypnotic Induction Profile (HIP). Stanford Hypnotizability Scales show no difference in means, but do show a difference in range). I don't know what this means. But schizophrenics can falsely pass some Stanford Scale items, e.g. amnesia which they don't however reverse; so schizophrenics' hypnotizability scores may be inflated on Stanford scales. We don't see extremely high scores in schizophrenics.

Psychoactive medication doesn't affect scores of schizophrenics, but improves scores of anxiety neurotics (by reducing anxiety). Frischholz has an article coming out in a psychiatry journal that confirms this.

There is a lot of evidence that patients with dissociative disorders are more hypnotizable than other groups. Frischholz et al couldn't replicate Frankel's finding of higher scores in phobics. Pettinati et al found higher scores in bulimia and I haven't seen anything to counter that. Another idea is that high hypnotizables are very good at internal regulation

Spiegel & Ken Kline selected Ss who could regulate gastric activity. They got an 80% increase in gastric acid output while imagining eating; got 40% decrease in output when imagining something pleasant that wasn't imagining eating. Injected with pentagastrin, which induces gastric output, they still got a decrease in gastric acid output in the relaxation condition.

This suggests that hypnotizability should be a selection criterion for some research. See also Katz et al. 1974 (?) with acupuncture; and McGlashan, Evans & Orne on the placebo response.

Herbert Spiegel found that 2/3 of highs but 1/3 of lows were cured of phobia. Eye roll sign on the HIP, living with spouse/lover, rating self as hypnotizable, and giving a postcard follow-up response at one week post treatment were associated with 89% rate abstinence at 2 years follow-up, when only 23% overall of 223 were abstinent. Absence of those positive predictors was associated with only a 4% rate of abstinence.

1991

Court, John (1991). Lord of the trance. Journal of Psychology and Christianity, 10 (3), 261-265.

A verbatim account of hypnotically-based therapy utilizing Christian imagery serves as the basis for illustrating some of the benefits of this approach where therapist and client share the same value system. The interactions challenge some of the familiar objections to Christian involvement with hypnosis.

Holroyd, Jean (1991). The uncertain relationship between hypnotizability and smoking treatment outcome. International Journal of Clinical and Experimental Hypnosis, 39, 93-102.

Literature on the relationship between hypnotizability and smoking treatment outcome was reviewed. 91 private patients treated for smoking with hypnotherapy participated in an investigation designed to correct problems in some of the earlier research. 43% quit smoking by the end of treatment but only

16% abstained at least 6 months. Neither immediate quitting nor continued abstinence correlated with hypnotizability. Other variables hypothesized to predict smoking cessation also were not correlated with outcome: number of treatment sessions, need to smoke, motivation to quit, and gender. The low abstention rate may have impeded verification of a relationship between hypnotizability and treatment outcome.

## NOTES

In the Discussion, the author notes that the low overall abstention rate works against finding the predicted relationships, as did restricted range on the hypnotizability measure. "Secondly, the present research design in effect tested the potency of hypnosis (hypnotizable patients) against nonhypnotic treatment (nonhypnotizable control patients) in a research design recommended by Orne (1977). Intensive nonhypnotic involvement with the nonhypnotizable individuals over several sessions may have worked against finding differences between low and high hypnotizables" (p. 99).

"Patients generally did not complete the recommended four sessions ... and they generally were non-adherent to recommended follow-up telephone contact. The observed relationship between initial quitting and number of treatment sessions may exist because people who are responding to treatment stay in treatment longer, or because more treatment sessions provide a more potent intervention, or both" (p. 99). "Treatment contracts between patients and therapist increased the number of sessions that patients completed but did not increase their abstinence rate" (p. 100).

## 1990

Suedfeld, Peter (1990). Restricted environmental stimulation and smoking cessation: A 15-year progress report. International Journal of the Addictions, 25, 861-888.

The first successful use of restricted environmental stimulation therapy (REST) as a method of smoking cessation was reported in this journal in 1972. Since then, close to 20 papers and articles have further investigated this application. The results have been consistently positive and have further shown that--unlike most techniques--REST combines synergistically with other effective treatment modalities. The effect of REST seems to target primarily the major problem with other known treatments in this area: It substantially reduces the relapse rate among clients who quit smoking at the end of treatment. Furthermore, REST is safe, has no known adverse side effects, and is easily tolerated by most participants. Nevertheless, the method has not found wide acceptance among practitioners. This paper explores and answers some of the concerns that may be involved in its relative lack of popularity.

## NOTES

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## NOTES

Provides a thorough review of REST (restricted environmental stimulation technique) and smoking cessation, with analysis of why the technique has not been widely adopted, how to set up a lab (including costs and equipment), and the political considerations surrounding REST research (many of which would apply to hypnosis). The author describes how sensory restriction got a bad reputation in Hebb's lab. But both "brainwashing" and intensive interrogation rely primarily on overstimulation and intense stimulus bombardment; these are occasionally interrupted for brief periods to arouse fear and uncertainty about their resumption.

The optimal approach in treatment of smokers seems to be to combine an approach that maximizes immediate cessation rates, with REST which maximizes continuing maintenance rates. Tikalsky (1984) reported that combining REST with self-management training and the establishment of a social support group, there was a 6-month abstinence rate of 88%. (This was a clinical treatment study rather than a controlled experiment.)

"The estimated maintenance rates after REST converge at about 50%, about twice as high as those commonly accepted as characterizing the literature (see, e.g., Hunt and Bessalec, 1974; Shumaker & Grunberg, 1986). The unusually high maintenance rates (percentage of subjects who were abstinent at every follow-up throughout 12 months, using as the baseline those who had quit at end of treatment) are in most--although not all--cases combined with only average quit rates (using total number of followed-up subjects as the baseline), indicating that the initial impact of REST is less impressive than its effect on long-term maintenance" (p. 872).

Why is REST underutilized? Some say it is a placebo. But there is evidence that "expectancy has but little effect on objectively quantifiable (as opposed to subjective) measures in REST (Barabasz & Barabasz, 1990; Suedfeld, 1969b; Suedfeld, Landon, Epstein, & Pargament, 1971)" (p. 873). See also Suedfeld & Baker-Brown (1986).

How does REST work? "In REST, the normal flow of exogenous stimuli is suddenly and very drastically reduced. As a result, attention can be (in fact, must be, if the processing of information is a basic human need) refocused to the ongoing internal generation of physiological, cognitive, affective, memorial, imaginal, and other stimulation. This enables REST participants to concentrate on working out personal problems, including (if so desired) those related to the continuation or termination of their smoking habit" (p. 874).

Second, the removal of specific smoking-related cues interrupts automatic, overlearned response sequences so most clients report that they no longer smoke mechanically, and conditioned cravings for a cigarette are extinguished in many Ss.

It appears from the literature that low-arousal treatments such as hypnosis and meditation are reinforced by REST. REST should improve conditioning or cognitive change therapies because it improves learning and memory, and research supports this assumption. REST also should facilitate the acceptance of information ('messages') because it decreases defenses against novel or dissonant information, but that has not proven true in research to date.

1988

Jeffrey, L. K.; Jeffrey, T. B. (1988). Exclusion therapy in smoking cessation: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36 (2), 70-74.

This study investigated the effect of exclusion therapy on the outcome of a 5-session treatment protocol for smoking cessation. A total of 120 Ss were randomly assigned to a group hypnotic and behavioral program which required 48 hours of pretreatment abstinence from use of tobacco products, or to an identical treatment which encouraged, but did not include, this pretreatment stipulation. Results indicated there were no significant differences between groups in dropout rates or number of Ss abstinent from smoking. For all Ss, including dropouts, the abstinence rate was 59.2% upon completion of treatment. It was 45.5% and 36.7% at 1- and 3-month follow-up, respectively.

Neufeld, V.; Lynn, Steven Jay (1988). A single-session group self-hypnosis smoking cessation treatment: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36 (2), 75-79.

This study was designed to assess the efficacy of a manual-based, single-session group of self-hypnosis intervention. At 3 months follow-up, 25.92% of the total number of participants (14 male, 13 females) reported continuous abstinence, and at 6 months, 18.52% of the participants reported continuous abstinence. Reported social support and motivation to quit were both associated with successful outcome. Comparison of the current data with other findings reported by the American Lung Association (Davis, Faust, & Ordentlich, 1984) suggests that treatment effects may not be solely attributable to the use of a maintenance manual, education, and attention. Limitations of the research

associated with issues of experimental control, generalizability of the findings, and outcome measures are discussed.

Williams, J. M.; Hall, D. W. (1988). Use of single session hypnosis for smoking cessation. Addictive Behaviors, 13, 205-208.

Twenty volunteers for smoking cessation were assigned to single-session hypnosis, 20 to a placebo control condition, and 20 to a no-treatment control condition. The single-session hypnosis group smoked significantly less cigarettes and were significantly more abstinent than a placebo control group and a no-treatment control group at posttest, and 4-week, 12-week, 24-week, and 48-week follow-ups.

1987

Gmur, M.; Tschopp, A. (1987). Factors determining the success of nicotine withdrawal: 12-year follow-up of 532 smokers after suggestion therapy (by a faith healer). International Journal of Addictions, 22, 1189-1200.

In 1973, 532 heavy smokers were questioned prior to treatment by the faith healer Hermano and requestioned 4 months, 1 year, 5 years, and 12 years after the therapeutic ritual. From the moment of treatment, 40% of the subjects remained nonsmokers (with no relapse) after 4 months, 32.5% after one year, 20% after 5 years, and 15.9% after 12 years. At the time of the follow-up, 37.5% of the Ss were nonsmokers, the majority of them having stopped smoking again after suffering a relapse. To investigate factors determining success, Ss who for 12 years had uninterrupted abstinence were compared with those who for 12 years had continued to smoke almost without interruption. Personality factors, sociodemographic features, and characteristics of smoking behavior showed no demonstrable connection with the tendency to relapse. On the other hand, it did prove possible to explain 16% of the variance in the responses to treatment: in particular, high alcohol consumption, markedly addictive smoking, rare attendance at church, and the attitude that 'you have to believe in the treatment' were found to be conducive to relapse and addiction.

1986

Barabasz, Arreed F.; Baer, Lee; Sheehan, David V.; Barabasz, Marianne (1986). A three-year follow-up of hypnosis and restricted environmental stimulation therapy for smoking. International Journal of Clinical and Experimental Hypnosis, 34, 169-181.

Clinical follow-up data were obtained from 307 clients. Clinicians' experience level, contact time, and procedural thoroughness varied in 6 interventions for smoking cessation. An additional intervention combined hypnosis with restricted environmental stimulation therapy (REST). The major results suggest positive treatment outcomes to be related to greater hypnotizability, absorption, hypnotist experience level, procedural thoroughness, and client-therapist contact time. The least effective intervention (4% abstinence at 4-month follow-up) involved intern trainees using a short, single-session approach. The most effective procedure (47% abstinence at 19-month follow-up) involved the combination of hypnosis and REST. Data interpretation limitations are discussed.

Lambe, R.; Osier, C.; Franks, P. (1986). A randomized controlled trial of hypnotherapy for smoking cessation. Journal of Family Practice, 22, 61-65.

NOTES

242 patients who were smokers (49% of all patients in this group family practice) were contacted, and 180 (74%) who were interested in hypnosis as a method of helping them quit were included in the study. These 180 were randomly assigned to control and hypnosis groups. Of the 90 assigned to hypnosis: 50% 45 had at least 1 hypnosis session

7% 6 quit smoking before hypnosis 20% 18 declined hypnosis 23% 21 were lost to follow-up [This gives some idea about volunteer participation in research.]

1985

Jeffrey, Timothy B.; Jeffrey, Louise K.; Greuling, Jacquelin W.; Gentry, William R. (1985). Evaluation of a brief group treatment package including hypnotic induction for maintenance of smoking cessation: A brief communication. International Journal of Clinical and Experimental Hypnosis, 33 (2), 95-98.

Hypnotic, cognitive, and behavioral interventions were used in a 5-session treatment program to assist 35 Ss with maintenance of smoking cessation. 63% of the treated Ss discontinued smoking, and 31% maintained abstinence for 3 months ( $p < .005$ ). These results include 13 dropouts, all of whom were smoking at 3 months follow-up. No S in the waiting-list-control group quit smoking. The results demonstrate that a brief, group treatment program, including hypnotic techniques, can be effective for smoking cessation.

1980

Holroyd, Jean (1980). Hypnosis treatment for smoking: An evaluative review. International Journal of Clinical and Experimental Hypnosis, 28 (4), 341-357.

17 studies of hypnosis for treatment of smoking published since 1970 were reviewed. Abstinence after 6 months posttreatment ranged from 4% to 88%. Effectiveness of treatment outcome was examined in terms of: S population, individual versus group treatment, standardized versus individualized suggestions, use of self-hypnosis, number of treatment sessions and time span covered by the treatment, and use of adjunctive treatment. At 6 months follow-up, more than 50% of smokers remained abstinent in programs in which there were several hours of treatment, intense interpersonal interaction (e.g., individual sessions, marathon hypnosis, mutual group hypnosis), suggestions capitalizing on specific motivations of individual patients, and adjunctive or follow-up contact. The 17 studies are presented in sufficient detail to permit clinicians to follow the published procedures, and recommendations are made for future research.

Powell, Douglas H. (1980). Helping habitual smokers using flooding and hypnotic desensitization techniques: A brief communication. International Journal of Clinical and Experimental Hypnosis, 28 (3), 192-196.

A subgroup of individuals who were helped to stop smoking by hypnosis or other means returned to consuming a few cigarettes a day. A flooding and hypnotic desensitization technique assisted 4 of 7 individuals who resumed smoking in becoming and remaining abstinent for a 6- to 9-month follow-up period.

1979

Pederson, Linda L.; Scrimgeour, William G.; Lefcoe, Neville M. (1979). Variables of hypnosis which are related to success in a smoking withdrawal program. International Journal of Clinical and Experimental Hypnosis, 27 (1), 14-20.

65 habitual smokers were randomly assigned to one of 4 groups: live-hypnosis plus counseling, videotape-hypnosis plus counseling, relaxation-hypnosis plus counseling, and counseling alone. The content and mode of presentation of the hypnosis session varied among the first 3 groups. At 6 months posttreatment, the live-hypnosis plus counseling group contained significantly more abstainers than the other 3 groups. The importance of the specific content of the hypnosis session and the presence of the hypnotherapist for the effectiveness of the procedure is discussed.

Perry, Campbell; Gelfand, Robert; Marcovitch, Phillip (1979). The relevance of hypnotic susceptibility in the clinical context. Journal of Abnormal Psychology, 88 (5), 592-603.

Despite experimental evidence that hypnotic susceptibility is a relatively stable characteristic of the individual, and one that is very difficult to modify, clinical investigators tend to see susceptibility as irrelevant to therapeutic outcome. Such investigators view motivational and interpersonal variables as more essential to the therapeutic change. The evidence for the clinical relevance of hypnotizability is sparse and contradictory. Most existing studies stem from medical hypnosis and indicate that susceptibility plays an important role in the successful treatment of such conditions as clinical pain, warts, and asthma. Two studies are reported that seek to pursue a contrary finding reported by Perry and Mullen, who found that susceptibility was unrelated to the successful treatment of a socially learned behavior (cigarette smoking). Both studies confirmed the earlier finding of a lack of relation. In Study 1, however, stepwise multiple regression analysis located three inventory items concerning the motivation of cigarette smokers. The combination of items was found to predict outcome for 67.39% of 46 clients treated either by hypnosis or by rapid smoking. The finding was replicated in Study 2, which utilized a combined hypnosis - rapid smoking technique and employed a different therapist. The outcome for 9 of the 13 quitters and 37 of the 62 nonquitters across the two studies could be predicted by the three motivational questionnaire variables.

1978

Stanton, Harry E. (1978). A one-session hypnotic approach to modifying smoking behavior. International Journal of Clinical and Experimental Hypnosis, 26, 22-29.

Recent literature reviewing attempts to modify smoking behavior through the use of hypnosis is outlined, and an approach utilizing only 1 treatment is described. This single session includes: (a) the establishment of a favorable "mental set" on the part of the patient, (b) a hypnotic induction, (c) ego-enhancing suggestions, (d) specific suggestions directed toward the cessation of smoking, (e) an adaption of the "red balloon" visualization, and (f) success visualization. Of 75 patients treated by this technique, 45 ceased smoking. 6 months after the treatment session, 34, or 45%, were still nonsmokers, attesting to the efficacy of the method.

1977

Barkley, R. A.; Hastings, J. E.; Jackson, T. L., Jr. (1977). The effects of rapid smoking and hypnosis in the treatment of smoking behavior. International Journal of Clinical and Experimental Hypnosis, 25 (1), 7-17.

29 Ss were assigned to one of 3 treatment conditions and treated for their cigarette smoking over a 2-week period. These conditions were: group rapid smoking, group hypnosis, and an attention-placebo control group. All treatments produced significant reductions in average daily smoking rates during the treatment phase but all Ss returned to near baseline levels of smoking by the 6-week follow-up. The rapid smoking and hypnosis groups did not differ from the control group in smoking rates at treatment termination or at the 6-week follow-up. They also did not differ from the control group in

the number of Ss abstaining from smoking by treatment termination but did differ at follow-up. Eventually, at the 9-month follow-up, only Ss from the group rapid smoking condition had significantly more abstainers than the control group. The results suggested that rapid smoking can work as effectively in group procedures as previous individualized approaches had demonstrated. Group hypnosis, while less effective than some previous individualized approaches had indicated, was nevertheless only marginally less effective than the group rapid smoking procedure. The use of abstinence rates as opposed to average rates of smoking was strongly recommended as the best measure of treatment effectiveness for future research in this area.

1976

Watkins, Helen H. (1976). Hypnosis and smoking: A five session approach. International Journal of Clinical and Experimental Hypnosis, 24, 381-390.

An individualized method of treatment aimed at the reduction of smoking is described which is based on a study of the motivations of each client. Specialized suggestions and specifically-tailored fantasies are then initiated to undermine rationalizations and reinforce the person's commitment to stop smoking. A number of different techniques are mobilized within a hypnotic, "concentration-relaxation" approach and are combined with behavior therapy procedures to achieve strong counter-motivations to smoking. 78% of those who finished the program stopped smoking, and 67% were still not smoking at the end of 6 months. The individuals who were most resistant to the treatment appeared to be those who were using smoking as a way of controlling anger.

1975

Mullen, G.; Perry, C. (1975). The effects of hypnotic susceptibility on reducing smoking behavior treated by a hypnotic technique. Journal of Clinical Psychology, 31, 498-505.

In order to examine the relationship between hypnotizability and treatment outcome in which hypnosis is used, 54 people ages 19-47 who undertook to stop smoking were studied. Although it is logical that there should be a relationship, clinical anecdotal material published by people who used hypnosis (Freud, Weitzenhoffer, Lazarus, Sheehan, Orne) suggests that may not be the case. Hypnotic susceptibility was evaluated with a clinical procedure developed by Orne and O'Connell (the DRP). Patients were taught self hypnosis using a brief procedure developed by Herbert Spiegel. Baseline smoking rate and three-month follow-up with postcards mailed every week were employed as measures. Success in the treatment program was defined as a 50% reduction in smoking behavior. After 3 months, 7 people were abstinent, 10 had reduced smoking to criterion level (50%), 16 people had discontinued the investigation, and 21 did not change. Considering only the 15 most and 15 least hypnotizable, 12 of the 15 high susceptibles had reduced smoking by at least 50%, as compared to 5 of the 15 of the low susceptibles. (chi square = 4.88, df = 1, p<.05).

1972

Suedfeld, Peter; Landon, P. Bruce; Pargament, Richard; Epstein, Yakov M. (1972). An experimental attack on smoking (attitude manipulation in restricted environments, III). International Journal of the Addictions, 7 (4), 721-733.

Forty male cigarette smokers were Ss in a study which involved 24 hr of sensory deprivation (SD) and a brief anti-smoking message. On a measure of belief instability (errors in scaling the extremeness of statements about smoking), SD Ss showed more instability than controls; but the scores of Ss who heard the message were about equal, regardless of SD. Agreement with antismoking statements was highest in the SD-no message and message-no SD groups. While the message induced belief instability

and attitude change under normal circumstances, it had the opposite effect in SD. This may have been due to the stimulus value of the message and/or to the overt nature of the manipulation attempt. In spite of this, three months later SD Ss (regardless of message) reported smoking significantly less than controls. The results relate the known cognitive effects of SD to its effects on persuasibility, further explore the cognitive uncertainty model of attitude change, and indicate the potential usefulness of SD as a technique for bringing about significant attitudinal and behavioral change.

1970

Dengrove, Edward; Nuland, William; Wright, M. Erik (1970). A single-treatment method to stop smoking using ancillary self-hypnosis: Discussion. [Comment/Discussion] .

#### NOTES

Discusses H. Spiegel's (see PA, Vol. 45:Issue 1) smoking treatment method comparing it to behavior therapy and suggesting modifications to treat smokers not responding to the method as described. It is suggested that certain psychological conditions must become active for nonsmoking status to be achieved or maintained including: (a) recognizing the consequences of smoking to be imminent, (b) identifying oneself as a nonsmoker, (c) expecting and wanting to participate in a satisfying future, and (d) adopting a way by which the individual can gain control over smoking. The technique outlined deals with these 4 dynamic aspects and makes a significant contribution to the treatment of the smoker's problem. (German & Spanish summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Hall, J. A.; Crasilneck, H. B. (1970). Development of a hypnotic technique for treating chronic cigarette smoking. International Journal of Clinical and Experimental Hypnosis, 18, 283-289.

4 hypnotic sessions were found successful, in the majority of cases, in eliminating cigarette smoking without undersirable substitution symptoms. Patients were strongly motivated by the referring physicians and by various nonhypnotic techniques incorporated into the treatment program. Examples are given of the specific nature of both the hypnotic and the nonhypnotic suggestions employed. (German & Spanish summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kline, Milton V. (1970). The use of extended group hypno-therapy sessions in controlling cigarette habituation. International Journal of Clinical and Experimental Hypnosis, 18, 270-282.

Results of the present experimental approach to the treatment of smoking habituation tend to be consistent with the view of smoking habituation as a dependence reaction, parallel to drug addiction, and with the concept that habituation must be examined as a psychosomatic entity. Therapeutic approaches must take into account the psychophysiological characteristics of deprivation behavior. Hypnosis, and particularly extended periods of hypnotherapy involving the reduction and control of deprivation behavior, seems to offer a promising approach to the therapeutic treatment of smoking habituation. (German & Spanish summaries) (17 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Nuland, William; Field, Peter B. (1970). Smoking and hypnosis: A systematic approach. International Journal of Clinical and Experimental Hypnosis, 18, 290-306.

Compared 2 methods of helping cigarette smokers stop smoking using 181 patients. After 6 mo., 60% of those treated with an active, personalized approach were not smoking. This approach emphasized: (a) the feedback, under hypnosis, of the S's own reasons for quitting, (b) maintaining contact with

the S by telephone, (c) use of meditation during hypnosis to obtain individualized motives, and (d) self-hypnosis. Only 25% of Ss were successfully treated by an earlier hypnotic procedure that did not systematically employ these features. (German & Spanish summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 18 (4), 235-250.

Discusses the 1st 615 patient-smokers who were treated with a single 45-min session of psychotherapy reinforced by hypnosis. Technique of treatment, including rationale of approach, induction procedure, assessment of hypnotizability, and training instructions to stop smoking are presented in detail. 6-mo follow-up study results are discussed. Of 44% who returned a questionnaire, hard-core smokers stopped for at least 6 mo. Another 20% reduced their smoking to varying degrees. Results of a 1-session treatment compare favorably with, and often are significantly better than, other longer-term methods reported in the literature. It is suggested that every habitual smoker who is motivated to stop be exposed to the impact of this procedure, or its equivalent, so that at least 1 of 5 smokers can be salvaged. (French & Spanish summaries). (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Spiegel, Herbert (1970). A single-treatment method to stop smoking using ancillary self-hypnosis: Final remarks in response to the discussants. International Journal of Clinical and Experimental Hypnosis, 18 (4), 268.

Reexamines the major points of the author's papers (see PA, Vol. 45:Issue 1) on smoking modification. Data inclusion, therapy length, Ss' ability to change, and use of multiple therapists and tape recordings as reinforcement are discussed. It is concluded that the method should be used to "sharpen our techniques that we can relatively quickly learn who has the capacity to change for given goals, and then to help evoke the desired change as efficiently as possible." (PsycINFO Database Record (c) 2003 APA, all rights reserved)

1964

Stein, C. (1964). A displacement and reconditioning technique for compulsive smokers. International Journal of Clinical and Experimental Hypnosis, 12 (4), 230-238.

A procedure for reducing total anxiety in chronic smokers while ostensibly directed toward permissive alteration of the smoking pattern is presented. In light trance the motivated patient is taught: (a) elementary respiratory relaxation (natural sigh), (b) displacement of emphasis from inhaling smoke to exhaling clean fresh air, (c) enhancement of satisfaction from other pleasurable factors -- touch, shape, color, aroma, flame, smoke clouds, and taste, (d) to puff, hold smoke in mouth, inhale fresh air through nose and exhale through mouth. In most cases practice in stressing positive qualitative smoking pleasure soon results in automatic quantitative reduction of cigarette consumption. 5 brief case reports are presented.

1956

Hershman, Seymour (1956). Hypnosis and excessive smoking. Keywords: addiction, medical, smoking

NOTES

"Conclusion: Several methods are described wherein psycho-biologic techniques can be used with hypnotic procedures to treat excessive cigarette smoking with relatively permanent results. These

techniques include symptom substitution, reeducation, reconditioning, reassurance and persuasion. The use of fantasy evocation, visual imagery, etc. by means of the hypnotic state produces an increase in the patient's responsiveness to therapy.

"Several case histories have been presented to illustrate some of the various techniques and their reactions. These procedures can readily be made available to a vast number of people with gratifying results. It is felt that all professional people in the therapeutic fields should be aware of the excellent use which can be made of hypnosis, and should acquaint themselves with hypnotic techniques in order to utilize them to the best interests of their patients. It is important to note that psychodynamic orientation is essential to the proper utilization of hypnosis and that the training received by the stage entertainer lacks this important element" (p. 29).

## **SOCIAL CONTROL**

**1991**

**Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1991, August). Is the hypnotized subject lying?. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.**

To determine whether or not hypnotized subjects misrepresent or lie about their hypnotic experiences, electrodermal skin conductance responses were measured while groups of deeply hypnotized subjects and simulators responded to questions about their experiences to a series of suggestion. 89% of the responses of the hypnotic subjects met the criteria for truthfulness, while 65% of the responses of the simulators indicated deception. Differences between "reals" and simulators were highly significant. The relevance of the results for the nature and theory of hypnosis is discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

**Wagstaff, Graham F. (1991). Hypnosis and harmful and antisocial acts: Some theoretical and empirical issues. Contemporary Hypnosis, 8, 141-146.**

## **NOTES**

The author analyses paper in same issue of this journal: Gibson, H. B. (1991). Can hypnosis compel people to commit harmful, immoral and criminal acts?: A review of the literature. He presents a critique from the point of view of "state" theorists, and concludes: "Where does this leave us? The area seems to be a potential minefield for any unsuspecting dissociationist. Personally, I think that both parsimony, and what empirical evidence there is, point to a non-state approach to this issue. However, despite the inevitable uncertainties and differences of opinion, there is perhaps a very obvious and important lesson to be gained by all from studies in this area. It has been fashionable to write off experimental studies on this topic on the grounds that subjects in these studies generally perceive the situation as 'safe'; this is not only the case in hypnosis research but also in general social-psychological work on obedience (see, for example, Orne & Holland, 1968; Mixon, 1974). Some have questioned this assumption that subjects only obey the experimenter when they perceive the situation to be safe (see Barber, 1969; Milgram, 1974), but what often goes unnoticed is the significance of this assumption in itself. If labeling a situation as 'hypnosis', or even just an 'experiment', can make subjects think that any apparently harmful act they are requested to perform is safe, think of the implications; here, in itself, is a potentially powerful, even lethal, mechanism by which people in hypnotic contexts may be induced to perform harmful and antisocial acts. They perform them because, given the context, they think it is safe to do so! In the study of Orne and Evans the venomous snake the subjects were instructed to grasp was placed behind an 'invisible' glass screen, and the acid they were instructed to throw at the experimenter had been, allegedly unknown to them, replaced by a harmless

liquid; one wonders, however, if writers would be so dismissive if the liquid that Orne and Evans' subjects threw at the experimenter had actually burned him, or the snake that they picked up had actually killed them" (pp. 144-45).

1990

Coe, William C. (1990). Are the Conclusions Valid? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 237-239.

#### NOTES

The authors confounded variables, e.g. hypnotic susceptibility and monetary incentive (in Study IV), and Study IV was different from the other 3 studies, so that any differences/similarities between these studies can't be attributed to susceptibility level, degree of incentive, or interaction between them.

A simulator design would clarify why 50% of Ss in Study IV did not resist and lost \$100; also, postexperimental interviews focusing on Ss' reasons for resisting or not resisting would be helpful. Did nonresisters actually believe that they would receive \$100 for resisting?

The Subject population was not homogeneous in occupation, and students are financially poorer than others--which would affect incentive strength. Were those who resisted the ones who could use the money the most?

Small sample sizes obviating statistical tests is a problem. Coe nevertheless evaluates 4 variables in terms of the 'power' of their effects on hypnosis: 1. Susceptibility level. Studies I, II, and III all show correlations between hypnotizability and compliance with resistance, suggesting that high hypnotizables are not as susceptible to resistance manipulation; however across studies, highs in one study seem to comply at the same rate as lows in another study, and as many as 50% of high hypnotizables in the strong incentive (\$100) study were able to resist suggestions. 2. View of the Hypnotist. Coe states that one can't evaluate the question with the data given. One would need an experimental condition that would also create a negative view of the hypnotist, as all samples tended to view the hypnotist positively. 3. View of Resistance Instructor. Again, one would need a research design that separates the effects of hypnotic susceptibility from effects of Ss' views of the resistance instructor. "Nevertheless, Study IV suggests that for high susceptibles the view of the resistance instructor has little effect. Three resisters viewed him as positive, whereas the other three viewed him as negative; further, nearly all of the nonresisters viewed him as neutral" (p. 238). 4. Degree of Incentive. This too was confounded with susceptibility level, as "the higher value was only offered to the very high susceptibles in study IV. Half of them took it, half did not" (pp. 238-239).

Coe also remarks that "the expectational effects on subjects of being in an experiment have not been addressed adequately. It is possible that the experimental paradigm as currently presented is incapable of providing an unambiguous answer to the question of coercion. In naturalistic settings subjects may react quite differently than they do when they know they are participating in an experiment" (p. 239).

Spiegel, David (1990). Theoretical and empirical resistance to hypnotic compliance. Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 243-245.

#### NOTES

Does hypnosis bypass the will, facilitate coercion? The hardest thing for trauma victims to do is to admit helplessness. Furthermore, it is interesting that these same dissociative phenomena seem to be elicited by traumatic experience, the stark imposition of involuntariness (Stutman & Bliss, 1985; Spiegel, Hunt, & Dondershine, 1988). What, then, are we to make of experiments that purport to show that hypnotizable and hypnotized individuals comply with hypnotic instructions irrationally? At some

level this challenges our comfortable belief that we always act in our enlightened self-interest, unaffected by unwanted influence. If that can happen even once, our pride of self-ownership is reduced.

Taken as a whole, the studies show that high hypnotizables comply with hypnotic instructions, even in the face of resistance instructions, whereas low hypnotizables are less likely to, especially when conditions foster a relatively less negative view of the resistance instructor. As the authors note, subjects always viewed the hypnotist more positively than the resistance instructor, which in itself suggests the nonrational influence intrinsic to hypnosis. Free will is not abrogated, it is simply not exercised. The Ss are fundamentally choosing whether or not to comply. Half of the highs in Study IV resisted the hypnotic instruction. However, hypnotized individuals tend to narrow the focus of attention, thereby reducing their ability to consider alternatives such as the resistance instruction.

William James (1890) believed that all ideas were invitations to action. Why, then, do we not act on every idea we have, he pondered on a snowy morning while lying in bed. He observed that he would try to get himself to arise by picturing himself doing so. "Why, then, am I still in bed?" He realized that he was editing the primary idea, reflecting on how cold it was, how long it would take to light a fire, and how much time he had until his classes. In a state characterized by a narrowing of the focus of attention, we are less likely to edit the primary idea, and therefore more likely to act. In the experiments presented, the resistance instructor attempts to act as an external editor on the primary hypnotic instruction. Those capable of focusing attention sufficiently disattend to the editing and comply. These studies show that, thankfully, hypnosis is less than automatic submission to instruction but, interestingly, more than simple conscious response to new information.

Weitzenhoffer, Andre M. (1990). Are induced automatisms necessarily coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 245-246.

## NOTES

"For the sake of maintaining historical accuracy, I would like first to remark that the ability of hypnotized Ss to resist suggestions was probably never a central issue in the Nancy-Salpetriere controversy. The main quarrel was about other fundamental matters (Crocq, 1900; Barrucand, 1967). It also needs to be said that Pierre Janet should not be seen as representing the Salpetriere in the above controversy. Very little of his extensive writings reflect the ideas of Charcot with whom he was associated for only 4 years (1889- 1893) (Barrucand, 1967; Ellenberger, 1970). Lastly, let it be noted that the association of automatism with hypnotic behavior antedates Bernheim. Despine wrote about it at length as early as 1868, and Charcot (1882) clearly stated before Bernheim that automatic responses to suggestions were characteristic of induced somnambulism. This was at least one view they shared.

Referring to the material quoted from my 1978 paper, the authors assert Bernheim's definition of automatism implies a subject responding to a suggestion qua suggestion is "unable to resist" it. But all the definition says is that the will does not directly enter into the production of automatisms. It does not say the will cannot effectively intrude at some point or other. This definition, quoted out of context, was part of a more extensive discussion of what the nature of an automatism was for Bernheim. The discussion also went into details regarding the conditions under which Bernheim understood automatisms can occur and hold sway. In this greater context, Bernheim (1888a, 1888b) viewed the occurrence of automatisms as normally subject to control by the ego processes responsible for volitional activities. He saw the degree to which a person's behavior can be controlled by automatisms initiated by suggestions to be a function of the extent to which certain ego processes become inactive, ineffective, or cooperatively permit the automatisms to occur. Bernheim recognized that both cognitive and relational factors played an important part in the latter case. Bernheim (1888a, 1888b) also stated

that data he had collected showed subjects could resist suggestions to varying degrees, with only 17%, who made up the class of somnambules, being totally incapable of resisting" (pp. 245-246). "Stating the matter more concretely, I doubt many people would speak of an individual having been 'coerced' into producing a knee-jerk reflex under appropriate stimulation. Should the situation be any different in the case of other reflexes and, more particularly, the reflex ideodynamic action presumed to underlay suggested acts (Weitzenhoffer 1978, 1989)? I do not think so. It seems to me that what the authors have really and directly examined in their article is the extent to which the classical suggestion effect can be countered by conscious, voluntary control" (p. 246).

1988

Coons, P. M. (1988). Misuse of forensic hypnosis: A hypnotically elicited false confession with the apparent creation of a multiple personality. International Journal of Clinical and Experimental Hypnosis, 36 (1), 1-11.

A case is presented in which there was flagrant misuse of forensic hypnosis. The patient, a woman in her early 30s, was accused of shooting her 2 children. During a hypnotic interview, the police hypnotist used an extremely suggestive interrogative technique, and the suspect produced an apparent secondary personality who confessed to the shootings. Subsequently the prosecutor tried to enter the "hypnotic confession" as evidence against the defendant. The evidence was dis-allowed because of the manner in which it was obtained and because of the lack of verification from other sources. The literature regarding the use of forensic hypnosis is reviewed as is the literature regarding multiple personality and the experimental production of multiple personality-like phenomena.

1986

Sands, Steven (1986, August). The use of hypnosis in establishing a holding environment to facilitate affect tolerance and integration in impulsive patients. Psychiatry, 49.

This paper is concerned with the use of hypnosis in establishing a facilitating and holding environment in the treatment of impulsive behavior across a range of diagnoses. The reason for this cross-diagnostic viewpoint is to underscore the common sources of such action and the needs to be met in its treatment. Illustrations from work with two patients are presented: One was a hypomanic and bulimic woman who was successful in her profession; the other was an underemployed and sometimes unemployed schizophrenic man. Both were inclined to self-defeating impulsive action---bulimia in the woman, assault in the man.

1981

Conn, J. H. (1981). The myth of coercion through hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 29 (2), 95-99.

A brief history of coercion through hypnosis is presented. Hypnosis is not an external "force," which can be used to overcome a subject's "will power." It can be used as an alibi, a folie a deux, a neurotic compromise, a legitimatization, or rationalization of behavior, as well as being genuine, involuntary, automatic hypnosis. Unwitting simulation occurs frequently. Laboratory crimes and stage hypnosis are "make believe" performances occurring in a completely protected situation. Neither a long-term relationship, nor an attempt to distort perception is a necessary or sufficient cause of coercion. The possibility of "motivated helplessness," a "self-fulfilling prophecy" or a "believed in efficacy" must be considered. Coercion through hypnosis is a myth which will not disappear so long as it is fostered by uninformed hypnotists, who believe that all initiative and self-determination is surrendered by the subject to an "all powerful" hypnotist.

1975

Spear, J. E. (1975). The utilization of non-drug induced altered states of consciousness in borderline recidivists. American Journal of Clinical Hypnosis, 18, 111-126.

Utilizing non-drug induced altered states of consciousness, various modes of interior reflection, behavior modification and reprogramming of conscious attitudes and values were utilized with 49 borderline recidivists. Such offenders were so determined by the Department of Corrections, Probation and Parole Office, District II. No coercion was used to induce such individuals to enter the program and there was no reprisal for stopping therapy at any time. Over a two and one-half year period the recidivist rate among this group was less than 5%. It is suggested that non-drug induced altered states of consciousness combined with indirect as well as symbolic techniques may prove to be the most effective means of criminal rehabilitation.

#### NOTES

Berderline recidivists were "individuals, who, in the opinion of the P.O. [probation officer] were, in all probability, to be returned to prison within a few months, or less, if there wasn't a major change in attitude and actions" (p. 111). Therapy employed closed circuit TV with bi-directional audio and induction of altered state of consciousness using an ophthalmology-type rotary prism. Therapy involved (s) recall of relaxed state when under stress, (2) exploration of early conditioning events, (3) self evaluation during the ASC, (4) use of symbolic mental exercises and mental practice for similar circumstances in normal waking state, (5) suggestions for setting goals and ideals, (7) a type of logotherapy, (7) 'nudging' the person to examine their relationship with their concept of God. The author noted in the parolees: (1) low levels of self esteem, (2) depression, (3) going into deep levels of altered states once trust was established with the therapist.

1954

Howarth, Edgar (1954). Postscript to a new theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 2, 91-92.

#### NOTES

Referring to a theory of internal and external signalling systems, the author describes situations in which an individual's behavior comes under other than willed control by virtue of external circumstances. "In normal behavior the individual provides his own 'will' and may, to some extent, choose among a variety of alternative action sequences on the basis of guiding integrations between the second (externally directed) signalling system and the primary (internally directed) signalling system. ... it appears that a considerable degree of control may be obtained by the 'top' semantic command system over internal process, particularly those 'inhibited' by the cranial and sacral subdivisions of the 'autonomic' nervous system. .. [In anecdotal case reports] control was gained over breathing, heart rate and bladder and the person may feign death for several days. In such cases surface wounds do not exude other than lymph. The method for such control remains for experimental examination, but a necessary part of the procedure seems to be the use of mild occasional reward during a prolonged period of fasting. Solitary confinement is also necessary and both deserts and prison cells are reported ... to have been used" (pp. 91-92).

1953

Beigel, Hugo G. (1953). Prevarication under hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 32-40.

## NOTES

Author describes three cases in which hypnosis was used to confirm or disconfirm information provided in the waking state. All three cases involved marital relationships and mistrust. "It is interesting that, awakened from the hypnotic state, none of the subjects made the slightest attempt to deny any of the admissions made" (p. 39).

Guze, Henry (1953). The phylogeny of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (3), 41-46.

## NOTES

"The continuity of hypnotic phenomena from infrahuman through human organisms has created an array of problems in interpretation" (p. 41). "Unfortunately, most investigators in animal hypnosis have concerned themselves mainly with states of immobility. Because of this, they have neglected to recognize that hierarchical and group reactions of animals are just as fit in the category of hypnotic behavior" (pp. 41-42). "It is postulated in this paper that hypnosis or hypnotizability is a phylogenetically derived characteristic strongly akin to emotional readiness. It differs in expression from organism to organism within a species and from species to species" (p. 45).

Marcuse, F. L. (1953). Anti-social behavior and hypnosis. Journal of Clinical and Experimental Hypnosis, 1, 18-20.

## NOTES

"The problem of whether an individual under hypnosis can be caused to commit an act contrary to his or her moral code must be paraphrased to ask whether an individual under hypnosis can be caused to commit an act which is socially and objectively reprehensible. When the question is so phrased and suitable technique is used, it is the writer's opinion that the answer is yes" (p. 20).

## SOCIAL PRESSURE

1994

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimate the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

## SOCIAL PSYCHOLOGY

1997

Kihlstrom, John F. (1997). Convergence in understanding hypnosis? Perhaps, but perhaps not quite so fast. International Journal of Clinical and Experimental Hypnosis, 45 (3), 324-332.

The study of hypnosis has been plagued by conflict. Although a more recent trend has been the search for convergence among disparate points of view, two highly salient issues remain contentious: the question of whether hypnosis involves alterations in consciousness, and the nature and correlates of individual differences in hypnotic response. Theoretical convergence is a laudable goal, but not at the expense of obscuring the complexity of hypnosis as a state of altered consciousness, a cognitive skill, and a social interaction. Perhaps the best prescription for convergence in hypnosis is the cautious conviction advocated by Kenneth S. Bowers and so clearly exemplified in his own research. - Journal Abstract

#### NOTES

"Modern cognitive psychology and cognitive science have come to a point where, at long last, they are prepared to take seriously the problem of consciousness, and of the relations between conscious and unconscious mental life (e.g., Kihlstrom, in press). Hypnosis has something unique to contribute to this discussion, but it will not do so if it achieves convergence by ignoring the alterations of consciousness that lie at the core of the experience of hypnosis" (p. 328). "Hypnosis is a complex phenomenon, simultaneously a social interaction, with hypnotist and subject interacting in a larger sociocultural context, and a state of altered consciousness, involving basic cognitive mechanisms underlying perception, memory, and thought. When we do eventually achieve consensus on a theoretical account of hypnosis, that account will have to invoke the constructs of both cognitive and social psychology" (p. 329).

Lynn, Steven Jay (1997). Automaticity and hypnosis: A sociocognitive account. International Journal of Clinical and Experimental Hypnosis, 45 (3), 239-250.

This article provides an overview of a new theory of suggested involuntariness in hypnosis, developed in conjunction with Irving Kirsch. The theory is based on the following ideas. First, high hypnotizable participants enter hypnosis with a conscious intention to feel and behave in line with suggested experiences and movements. Second, people who are easily hypnotized hold firm expectations that they will succeed in following the suggestions of the hypnotist. Third, the intention and expectation in turn function as response sets in the sense that they trigger the hypnotic response automatically. Fourth, given the intention to feel and behave in line with the hypnotist's suggestions, hypnotized individuals show no hesitation to experience the suggested movements as involuntary because (a) these movements are actually triggered automatically, and (b) the intention to cooperate with the hypnotist as well as the expectation to be able to do so create a heightened readiness to experience these actions as involuntary. - Journal Abstract

Nadon, Robert (1997). What this field needs is a good nomological network. International Journal of Clinical and Experimental Hypnosis, 45 (3), 314-323.

Research in the field of hypnosis lacks a coherent structure on which to build. This lack of a mature nomological network stems from fundamental disagreements concerning the construct validity of hypnotizability, which in turn stem in part from different research practices across laboratories. For these reasons, the field has had less impact on psychology and medicine than is warranted by the numerous sophisticated scientific studies that have been conducted during the past three decades. - Journal Abstract

#### NOTES

Author refers to Cronbach & Meehl, 1955, for these definitions. "Construct validity is ordinarily studied when the tester has no definite criterion measure of the quality with which he is concerned,

and must use indirect measures. Here the trait or quality underlying the test is of central importance, rather than either the test behavior or the scores on the criteria" (p. 282, C & M). "Scientifically speaking, to 'make clear what something is' means to set forth the laws in which it occurs. We shall refer to the interlocking system of laws which constitute a theory as a nomological network' (p. 290, C & M, emphasis omitted). Author suggests that progress in developing a nomological network is dependent upon standardization of research procedures, such as the hypnosis scales used, the inductions used, and the description of hypnosis given to research subjects. He recommends using the Harvard Group Scale of Hypnotic Susceptibility, Form A, the Stanford Hypnotic Susceptibility Scale, Form C, and the Waterloo-Stanford Group C Scale of Hypnotic Susceptibility "perhaps with agreed-on modifications to include subjective experience as is the case with the CURSS" (p. 321).

Nash, Michael R. (1997). Why scientific hypnosis needs psychoanalysis (or something like it). International Journal of Clinical and Experimental Hypnosis, 45 (3), 291-300.

The author contends that some contemporary hypnosis theories are restricted and narrow in scope, rendering them unnecessarily isolated from mainstream models of human development, psychopathology, and personality functioning. They seem to explain hypnosis and little else. The author contrasts this with psychoanalysis, which, although sometimes overly expansive, does nonetheless lend itself to the generation of specific hypothesis via careful deduction from a general theory of human behavior and experience. For illustrative purposes, the author criticizes the sociocognitive perspective of hypnosis contending that at present it is too narrowly inductive in focus, overvalues social influence, and has its own problems with reification. The author suggests remedies for these difficulties. - Journal Abstract

Ruehle, Beth L.; Zamansky, Harold S. (1997). The experience of effortlessness in hypnosis: Perceived or real. International Journal of Clinical and Experimental Hypnosis, 45 (2), 144-157.

Hypnotized individuals who successfully respond to a suggestion typically report that the response requires little or no cognitive effort. It is important, however, to distinguish between whether this effect occurs in actual effort or is only perceived. In addition, the authors distinguish between cognitive effort expended to initiate a response and that required to maintain it. The authors examine the different predictions of four theories-compliance theory, sociocognitive theory (Lynn & Rhue, 1991), Hilgard's (1986) neodissociation theory, and Bowers's (1992) theory of dissociated control-regarding both of these distinctions. Experimental evidence bearing on the various predictions is examined. Additionally, the authors propose a number of design modifications that may help sort out the variables contributing to the effortlessness of the hypnotic response. -- Journal Abstract

1995

Ganaway, George K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. International Journal of Clinical and Experimental Hypnosis, 43 (2), 127-144.

It is contended that prevailing exogenous trauma theory provides in most cases neither a sufficient nor a necessary explanation for the current large number of diagnosed cases of dissociative identity disorder (multiple personality disorder) and related dissociative syndromes purported to have arisen as a response to severe early childhood physical and sexual abuse. Relevant aspects of instinctual drive theory, ego psychology, object relations theory, self psychology, social psychological theory, sociocultural influences, and experimental hypnosis findings are drawn on to demonstrate the importance of adopting a more integrative theoretical perspective in the diagnosis and treatment of severe dissociative syndromes. Further cooperative experimental and clinical research on the etiology, prevalence, and clinical manifestations of the group of dissociative disorders is strongly encouraged.

Sarbin, Theodore R. (1995). On the belief that one body may be host to two or more personalities. International Journal of Clinical and Experimental Hypnosis, 43 (2), 163-183.

The belief in the validity of the multiple personality concept is discussed in this article. Two scaffolding constructions are analyzed: dissociation and repression. As generally employed, these constructions grant no agency to the multiple personality patient. The claim is made that the conduct of interest arises in discourse, usually with the therapist as the discourse partner. In reviewing the history of multiple personality and the writings of current advocates, it becomes clear that contemporary users of the multiple personality disorder diagnosis participate in a subculture with its own set of myths, one of which is the autonomous actions of mental faculties. Of special significance is the readiness to transfigure imaginings into remembering of child abuse, leading ultimately to the manufacture of persons. The implications for both therapy and theory of regarding the patient as agent in place of the belief that the contranormative conduct is under the control of mentalistic faculties are discussed.

1994

Epstein, Seymour (1994). Integration of the cognitive and the psychodynamic unconscious. American Psychologist, 49 (8), 709-724.

Cognitive-experiential self-theory integrates the cognitive and the psychodynamic unconscious by assuming the existence of two parallel, interacting modes of information processing: a rational system and an emotionally driven experiential system. Support for the theory is provided by the convergence of a wide variety of theoretical positions on two similar processing modes; by real-life phenomena--such as conflicts between the heart and the head; the appeal of concrete, imagistic, and narrative representations; superstitious thinking; and the ubiquity of religion throughout recorded history--and by laboratory research, including the prediction of new phenomena in heuristic reasoning.

Mulhern, Sherrill (1994). Satanism, ritual abuse, and multiple personality disorder: A sociohistorical perspective. International Journal of Clinical and Experimental Hypnosis, 42 (4), 265-288.

During the past decade in North America, a growing number of mental health professionals have reported that between 25% and 50% of their patients in treatment for multiple personality disorder (MPD) have recovered early childhood traumatic memories of ritual torture, incestuous rape, sexual debauchery, sacrificial murder, infanticide, and cannibalism perpetrated by members of clandestine satanic cults. Although hundreds of local and federal police investigations have failed to corroborate patients' therapeutically constructed accounts, because the satanic etiology of MPD is logically coherent with the neodissociative, traumatic theory of psychopathology, conspiracy theory has emerged as the nucleus of a consistent pattern of contemporary clinical interpretation. Resolutely logical and thoroughly operational, ultrascientific psychodemonology remains paradoxically oblivious to its own irrational premises. When the hermetic logic of conspiracy theory is stripped away by historical and socio/psychological analysis, however, the hypothetical perpetrators of satanic ritual abuse simply disappear, leaving in their wake the very real human suffering of all those who have been caught up in the social delusion.

Spanos, Nicholas P. (1994). Multiple identity enactments and multiple personality disorder: A sociocognitive perspective. Psychological Bulletin, 116, 143-165.

People who enact multiple identities behave as if they possess 2 or more selves, each with its own characteristic moods, memories, and behavioral repertoire. Under different names, this phenomenon occurs in many cultures; in North American culture, it is frequently labeled multiple personality

disorder (MPD). This article reviews experimental, cross-cultural, historical, and clinical findings concerning multiplicity and examines the implications of these findings for an understanding of MPD. Multiplicity is viewed from a sociocognitive perspective, and it is concluded that MPD, like other forms of multiplicity, is socially constructed. It is context bounded, goal-directed, social behavior geared to the expectations of significant others, and its characteristics have changed over time to meet changing expectations.

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimate the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

1992

Bowers, Kenneth S. (1992). Imagination and dissociation in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 40 (4), 253-275.

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

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Coe, William C. (1992). Hypnosis: Wherefore art thou?. International Journal of Clinical and Experimental Hypnosis, 40 (4), 219-237.

The present paper focuses on the influences of social-political needs of various groups with interests in hypnosis (i.e., stage hypnotists, lay hypnotists, licensed practitioners, and researchers). While hypnosis is a specific topic of interest to groups with varying needs, it also serves as an example for other topics in psychology that may overlap the needs of other groups -- especially practitioners and researchers. The identity given to hypnosis varies depending upon which particular group of persons is offering the identity, and the nature of the identity reflects each group's biases and needs. These various identities, however, are not always acceptable, in part or in whole, by the other groups, as the needs of one or more may be in conflict with those of others.

Kirmayer, Laurence J. (1992). Social constructions of hypnosis. International Journal of Clinical and Experimental Hypnosis, 40 (4), 276-300.

Both clinical and experimental views of hypnosis are social constructions that reflect the biases and interests of practitioners and scientists. Each perspective offers useful metaphors for hypnosis. Underlying clinical uses of the term hypnosis are states of mind associated with imaginative reverie and automatic behavior based on procedural knowledge. Social discourse and narratives shape hypnotic experience, but they are themselves influenced by mechanisms of attention and automaticity. Study of hypnosis must proceed on both social and psychological fronts to account for the experience and clinical efficacy of hypnosis.

#### NOTES

"In accord with Coe, Sarbin, and other social-psychological theorists, I will argue that hypnosis, like all higher mental phenomena, is fundamentally social in nature. To accept this, however, does not obviate the role of distinctive processes of attention, imagery, and imagination. Hypnosis is a socially constructed context and ritual for evoking imaginative enactment and involuntary of "automatic" modes of experience and behavior. Contemporary social-psychological theorists have failed to sufficiently explore the nature of enactment. A satisfactory account of hypnosis must go much deeper into the cognitive and social construction of experience; only then can involuntary behavior be properly distinguished from self-deception and self-authorship from cultural construction" (p. 277).

Nadon, Robert; Dywan, Jane; Adams, Barbara (1992, October). The social psychology of depth reports: Skirting the important data. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Radke & Spanos used a new 7-point scale that permitted Ss to say they passed an item but were not hypnotized, and only 25% (instead of 88% on usual 4-point scale) said that they were hypnotized.

Do we delude ourselves in thinking reports of hypnotic depth just reflect scale wording, or is something genuine being measured? Radke & Spanos found that breaking down Ss into low, medium, and high hypnotizable groups, the mediums are the ones who are affected by scale manipulations.

Perry, Campbell (1992). Theorizing about hypnosis in either/or terms. International Journal of Clinical and Experimental Hypnosis, 40, 238-252.

The present paper addresses 3 issues raised by Coe (1992). First, it maintains that the "altered state" issue of the 1960s remains buried in current dichotomous classifications of hypnosis theories as involving either "special processes" or the social- psychological position. Given the current diversity of the field, it appears imprudent to classify theorizing in either/or terms; additionally, despite a history of using the term "altered state" in a circular way, it is not an inherently circular formulation. It can be used descriptively simply to point to the observation that some individuals in hypnosis report subjective alterations. A second issue broached concerns the metaphorical status of the term "hypnosis"; it is accepted as a misleading metaphor inherited from 19th century investigators such as Braid, Faria, Puysegur, and Liebeault. Provided that it is recognized that this metaphor refers to a "domain" (E. G. Hilgard, 1973) of characteristically elicited behaviors, no problem ensues in retaining this metaphor derived from nocturnal sleep. A subsequent discussion of current conceptualizations of hypnosis indicates considerable agreement among investigators; there is much consensus that hypnosis is an individual differences phenomenon, in which imagination may, in some individuals, become so intense and so vivid, as to take on "reality value," to the extent that a hypnotized person may have difficulty in distinguishing fantasy from reality. The S abilities of imagery/imagination, absorption, dissociation, and automaticity (which may be proved to be an index of dissociation) are proposed as being the main ingredients of the hypnotic experience. Finally, a synergistic approach is proposed as a means of progressing beyond the current impasse of either/or theorizing.

Spanos, Nicholas P. (1992, October). Multiple identity enactments: A social psychological perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Frequency of reports of multiple personality disorder has varied over the centuries. The diagnosis is limited now to North America; and some therapists see more than others. Contemporary cases report severe child abuse, but this was much less so at the turn of the century.

There is an older syndrome, called demonic possession, which shares all of these characteristics. Demonic possession was diagnosed for almost 2000 years and the disorder included: secondary (demonic) selves, and the patient being amnesic during the personality take-over by a demon. The diagnosis was more prevalent during some periods (when Christianity was proselytizing but not when it was a state religion; then again in the 16th Century when Christianity was breaking up and both Catholics and Protestants had interest in it--each inspired by the other group). Demonic possession was more often found by some experts than others; and often was diagnosed as something else initially- - e.g. psychosomatic problems. Symptoms that were ambiguous were more definitive when patients were then seen by expert.

Some symptoms--convulsions, increased strength, and insensitivity to pain--were common across Europe. But in Catholic countries the possessed manifested a secondary personality: the demon, with a different voice, spoke through the person. This rarely happened in Protestant countries, where there were convulsions, amnesias, extra strength, etc. but no alter personality.

Why were there such different symptoms in Catholic and Protestant countries? The main difference was that Catholic countries used exorcism--getting information from the demon (name, when the demon entered the body, why, how long demon planned to stay). The exorcist didn't address the possessed person directly; he would say "I'm not talking to Mary; I'm talking to the demon." If the demon didn't reply, they would use brimstone, etc. to elicit a reply.

In Protestant countries it was believed that exorcism was inappropriate, because that would mean going to the Devil for help. They used prayer and fasting, but no attempt to communicate with the Demon. Hence, in France 20 nuns had secondary personalities, whereas in Protestant Salem, none of them had secondary personalities.

Often demon possession would occur to several people, with one person saying an image is attacking someone else, and then that second person would be possessed--so people would respond to social context, experience being possessed in terms of what that meant to them. Demonic possession was maintained by the community, so it was a social phenomenon.

Reports of ritual abuse then occurred, with witches talking about mockery of the Catholic mass, etc. Modern historians say these were fantasies, and that there were no witches' Sabbaths or ritual abuse of children.

One could infer that a therapist may be carrying out a secularized exorcism when he diagnoses multiple personality disorder.

To examine the contribution of social context to the reports of alternate personalities, we conducted a series of experiments.

We experimentally studied people instructed to simulate "an accused murderer remanded for psychiatric evaluation," and to behave as a criminal would. [They were hypnotized?] We used the interview employed with hypnotized Ss calling for a different part of themselves to speak. Of these simulators, 80% reported a secondary personality, and almost 100% claimed amnesia.

We took the people who displayed a secondary personality and amnesia and gave them psychological tests. They gave different pictures on the semantic differential [for the different personalities?].

A second experiment looked at how students would develop an alter personality. They were hypnotized and age regressed "to a past life," and were told about reincarnation. We then studied those who reported a past life. For half we told them people with a past life were likely to be born of a different race, etc. (because that is rarely reported spontaneously). Those who were told this were more likely to incorporate that information in their report of a past life experience.

In a third study, we told them that people in past eras, being less enlightened, tended to punish their children more. Those given this information were more likely to report abuse than those who were uninstructed.

A fourth study looked at how a hypnotist could influence the belief that it is a real past life rather than fantasy. They varied what Ss were told: Group 1 was told reincarnation is real. Group 2 was told reincarnation is fantasy. Group 3 was not told anything.

The first group reported a stronger belief that it was real than fantasy. (Oddly, the neutral group was nearly as high.) The Fantasy group had lower mean rating for credibility.

Woody, Erik Z.; Oakman, Jonathan; Drugovic, Mira (1992, October). Fleshing out a two-component view of individual differences underlying hypnotic responsiveness. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES

Balthazar and I pointed out that different psychological processes are implicated in hypnotizability scale items, depending on the difficulty of the item. One process is more important on easy items, the other on difficult items.

We correlated an external variable as a function of difficulty of the items. Used the Absorption scale as the non-hypnotic measure for the latent correlation (biserial correlations). As item difficulty increases, the correlation with Absorption increases (from .2 to .5).

This suggests a high level of Absorption is needed to pass difficult items on the hypnotizability scale. We argued that Absorption is connected to true hypnotic responsiveness.

Now we are looking for indicators of easy item responsiveness. Last year I tried to explain anomalies in the data, anomalies that disappeared with a full complement of Ss.

Another possible external variable to correlate with item difficulty is a social compliance type of attribute, but in the history of hypnosis those variables are not found. Therefore we used a model from alcohol research that investigates an expectancy type of suggestion.

In that model, Ss drank two drinks that were alcohol free, but one drink purportedly had alcohol. Ss were told that large amounts of alcohol affect changes in perception, and that we were testing whether small amounts did. They were tested for "feeling of sluggishness in limbs," etc. They rated a list of experiences they might be having. The 109 Ss had been tested on Harvard A scale in separate research. Ratings in the alcohol model had high internal consistency; this suggestion score correlated with hypnotizability in .2-.3 range.

The pattern of latent correlations would be predicted to be a graph with a negative slope, which the researchers obtained.  $R = -.77$

The easier the hypnosis item, the stronger the correlation with the expectancy measure. The easiest Harvard A scale items tap little more than those expectancy effects, and the hardest items have almost nothing to do with the expectancy effect.

What does this mean? We thought it was evidence of a social influence factor. Further work suggests we need to be more specific.

We measured the other putative variables: 1. Compliance Questionnaire (Gudjonsson, 1989); it evaluates the tendency to comply with requests, and to obey instructions; e.g., "I tend to go along even when someone is wrong." It has correlated with a measure of social conformity. 2. Suggestibility Questionnaire (which we developed). Items were based on interviews in which Ss told about everyday suggestible things--e.g. "When I hear about an illness I tend to get it. When someone tells me they smell something, I tend to also."

These Compliance and General Suggestibility tests correlated .12 and .07 respectively with the alcohol expectancy measure; nor did they correlate with each other. They do not measure the same trait. Also, though they correlated .18 and .26 with hypnotizability, neither variable showed the spectral pattern on latent correlation analysis.

Thus, we need to be more specific in linking the alcohol expectancy measure to hypnosis.

Most items on Harvard A scale are motor items of either direct suggestion or inhibition (challenge) type. The relationship of alcohol expectancy to direct motor items is strong; the relationship is weaker with motor challenge items (for which another process must be important).

We can think of will vs automatic control of behavior, as in the theory presented by Normal and Shallice. For well-learned behavior there are two levels of control: 1. low level - doesn't require conscious attention and control 2. higher level - relevant to initiation of action, planning

Direct motor suggestion response requires little attentional effort and the role of will is not important. There exists ambiguity for indeterminacy of the role of will and attention. Ambiguity offers an opportunity to attribute one's action to hypnosis. What happens in alcohol expectancy is different, but an ambiguous experience is happening due to "alcohol" in the drink--ambiguous experience is interpreted according to the context.

This differs from the neodissociation theory explanation, according to which the suggested behavior is enacted voluntarily but the voluntary aspect is separated from consciousness. To me, for simple motor acts the causality is inferred rather than perceived. For simple motor acts, no such higher level control is needed.

Motor challenge items have instructions to "try" to overcome; S must exert will. "Try to raise your arm" is different from "Raise your arm." The S could remain role consistent and not try; ambiguity is maintained and the S could look to the context for an explanation.

In the Normal and Shallice model, hypnosis weakens the higher system relative to the lower system. The S might be trying to exert will but experience it as less [influential] than in the normal state. Such capacity would not be tapped by an alcohol expectancy measure.

We think of individual differences in hypnotizability as multiple processes, like a tree that consists of more than one healthy branch but has plenty of dead wood to be pruned out.

1991

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

## NOTES

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model.... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

Van Dyck, Richard; Zitman, Frans G.; Linssen, A. Corry G.; Spinhoven, Philip (1991). Autogenic training and future oriented hypnotic imagery in the treatment of tension headache: Outcome and process. International Journal of Clinical and Experimental Hypnosis, 39, 6-23.

The aim of the present study was (a) to investigate the relative efficacy of autogenic training and future oriented hypnotic imagery in the treatment of tension headache and (b) to explore the extent to which therapy factors such as relaxation, imagery skills, and hypnotizability mediate therapy outcome. Patients were randomly assigned to the 2 therapy conditions and therapists. 55 patients (28 in autogenic therapy and 27 in future oriented hypnotic imagery condition) completed the 4 therapy sessions and 2 assessment sessions. Patients were to practice at home. No significant main effect or interaction effects for treatment condition or therapist was revealed. A significant effect for time in analyzing scores for headache pain, pain medication usage, depression, and state anxiety was found. In the self-hypnosis condition, pain reduction proved to be associated with depth of relaxation during home practice (as assessed with diaries) and capacity to involve in imagery (as assessed with the Dutch version of the Creative Imagination Scale). After statistically controlling for relaxation and imagery, hypnotizability scores (assessed by Stanford Hypnotic Clinical Scale) were significantly correlated with ratings of pain reduction. Results are discussed in the context of the neo- dissociation and social-cognitive models of hypnoanalgesia. The clinical relevance and the methodological shortcomings of the present study are also critically assessed. NOTES 1:

## NOTES

"Unexpectedly, pain reduction occurring in AT [autogenic training] appears to be brought about by different means than in hypnotic treatment. Not only imagery skills and hypnotizability, but also level of relaxation were unrelated to pain reduction achieved during AT. Since the first two therapy sessions of AT and hypnosis were identical and in both treatment conditions patients are explicitly instructed to relax, the absence of a relationship between depth of relaxation and pain reduction in AT cannot be easily explained" (p. 19).

1990

Fellows, Brian J. (1990). Current theories of hypnosis: A critical overview. British Journal of Experimental and Clinical Hypnosis, 7, 81-92.

The present state of theory in hypnosis is reviewed and observations are made concerning future prospects. The state- non-state issue continues to dominate theoretical debate, although no satisfactory reply has yet been made to T. X. Barber's criticisms of the 'hypnotic trance' concept. The impact of social-psychological theory has been considerable and the results of Spanos's hypnotic training programme could have significant implications for our understanding of hypnosis. Future theorizing should see a move towards a more integrated sociocognitive approach. Neodissociation theory has generally not fulfilled its early promise and is encumbered with the 'hidden observer' concept. The role of imaginative processes continues to be a dominant theme in hypnosis theory, although the relatively small correlation between imaginative and hypnotic abilities remains a problem. The links between hypnosis, sleep and relaxation deserve further research, although, as theories of hypnosis, their scope seems limited. Suggestibility and role enactment theories have shown few signs of development in recent years. Theoretical problems over the interpretation of hypnosis need to be more widely recognized and the use of question-begging terminology curtailed. One advantage of the imagination hypothesis is that it provides a bridge, or a point of convergence, between state and non-state approaches (Spanos & Barber, 1974). It also handles certain hypnotic phenomena very well. For example, the known facts of age regression can be readily interpreted, together with the oddities of age progression and past life regression, as imaginative reconstructions (Barber, 1979). However, other phenomena, such as amnesia and analgesia, are less easily explained.

Kihlstrom, John F.; McConkey, K. M. (1990). William James and hypnosis: A centennial reflection. Psychological Science, 1, 174-178.

For William James, hypnosis was both an experimental technique for creating divisions of consciousness, and a laboratory model of naturally occurring disorders of awareness. James' treatment of consciousness in hypnosis presages contemporary interests in dissociation and implicit cognition, and underscores the role of the self in conscious mental life. At the same time, James recognized the complexity of hypnosis as an interpersonal process. In the end, James' views suggest how a rapprochement between the cognitive and social approaches to hypnosis might be achieved.

Sherman, S. J.; Lynn, S. J. (1990). Social-psychological principles in Milton Erickson's psychotherapy. British Journal of Experimental and Clinical Hypnosis, 7, 37-46.

In this article we will suggest that social-psychological principles may be used to understand M. H. Erickson's psychotherapeutic approach. In addition to using an array of indirect suggestive approaches, Erickson exploited clients' reactance, increased their perceptions of control and mastery, altered the accessibility of thoughts and memories, and modified thoughts and behaviours. To

accomplish these therapeutic goals, Erickson used the following techniques: seeding, priming, confusion, script enactment, framing, explanation, and perspective modification.

1989

Lynn, Steven J.; Rhue, Judith W.; Weekes, John R. (1989). Hypnosis and experienced nonvolition: A social-cognitive integrative model. In Spanos, N.P.; Chaves, J.F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 78-109). Buffalo, NY: Prometheus.

#### NOTES

The authors present a model to account for the subjective experience of nonvolition. The model rests on four observations: (1) nonvoluntary responses "have all of the properties of behavior that is typically defined as voluntary" (p. 108); (2) "hypnotizable subjects can resist suggestions when resistance is defined as consistent with the role of a 'good' hypnotized subject" (p. 108); (3) "Hypnotic behaviors are neither reflexive/automatic ... nor manifestations of innate stimulus-response connections" (p. 108); (4) "Hypnotic performances consume attentional resources ... in a manner comparable to nonhypnotic performances" (p. 108). They continue, "At the same time, many of the cognitive operations and affective reactions that accompany hypnotic responding are not readily accessible to consciousness" (pp. 108-109).

Zane, Nolan W. S. (1989). Change mechanisms in placebo procedures: Effects of suggestion, social demand, and contingent success on improvement in treatment. Journal of Counseling Psychology, 36, 234-243.

Investigated the treatment effects of three social influence variables frequently implicated in psychotherapy placebos. Socially anxious male Subjects participated in an experimental treatment for reducing dating anxiety. Subjects were either given or not given specific suggestions for decreasing social anxiety, placed in conditions of high or low social demand, and received feedback indicating either high or moderate success on the therapy task. Results support the importance of social influence variables in therapeutic change. Contingent success had its greatest impact on personal attributes; suggestion affected skill behaviors; and social demand effects were found in the self- evaluation of heterosocial performance. Various social influences appear to mediate change differently and do not exert the generic effects commonly assumed to be characteristic of therapy placebos. Implications for outcome research are discussed.

1988

Fowler, Keith (1988). Hypnotic transformation---three studies of theatrical role-playing: A brief communication. International Journal of Clinical and Experimental Hypnosis, 36, 249-255.

In order to provide student actors with an effective technique for dramatic characterization, a transformation procedure was devised, which incorporated hypnosis with Chekhov's (1953) technique of centering. 3 studies involving the procedure are described. Results suggest that in 25 of 26 Ss, hypnosis may have facilitated actors' apparent adoption of new personae.

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to

self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

Hilgard, Ernest R. (1988). Response to contextual demands an insufficient account of hypnotic phenomena. [Comment/Discussion] .

#### NOTES

The author refers to one of his papers for a critique of the Spanos position that demand characteristics of the hypnotic situation account for hypnotic phenomena such as amnesia, analgesia, and "trance logic." The paper is Hilgard, E. R. (1987). Research advances in hypnosis: Issues and methods. *International Journal of Clinical and Experimental Hypnosis*, 35, 248-264.

Spanos, Nicholas P.; Gwynn, Maxwell I.; Della Malva, C. Lori; Bertrand Lorne D. (1988). Social psychological factors in the genesis of posthypnotic source amnesia. *Journal of Abnormal Psychology*, 97 (3), 322-329.

Three experiments assessed the role of social psychological variables in source amnesia. Experiment 1 found that low-hypnotizable subjects instructed to simulate partial amnesia were more likely to exhibit source amnesia than high-hypnotizable hypnotic or task-motivated subjects. Experiment 2 found equivalent rates of source amnesia in low-hypnotizable simulators and high-hypnotizable hypnotic subjects. In addition, the findings of Experiment 2 failed to support the idea that the instructions for partial amnesia given to simulators cued for the occurrence of source of amnesia as well as for the occurrence of partial amnesia. In Experiment 3, preliminary instructions that legitimated source amnesia as a role-appropriate response produced significantly more posthypnotic source amnesia than did neutral or no instructions. Together, the findings of the 3 experiments support the relation of source amnesia to experimental demands and subjects' expectations.

#### 1987

Gfeller, Jeffrey D.; Lynn, Steven Jay; Pribble, W. Eric (1987). Enhancing hypnotic susceptibility: Interpersonal and rapport factors. *Journal of Personality and Social Psychology*, 52 (3), 586-595.

This research supported the hypothesis that hypnosis can be thought of as a set of potentially modifiable social-cognitive skills and attitudes. A low-interpersonal- training treatment devised by Gorassini and Spanos (1986) was compared with a treatment designed to modify not only cognitive factors but also to augment rapport with the trainer and diminish resistance to responding (high-interpersonal training). Fifty percent of the initially un hypnotizable subjects in the high-interpersonal condition tested as being highly susceptible to hypnosis (high susceptibles) at posttest on the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962); 25% of the un hypnotizable subjects in the low-interpersonal condition responded comparably. Eighty-three percent of the medium-susceptibility (medium susceptibles) subjects tested as being highly susceptible at posttest in both conditions. Practice-alone control subjects' performance was stable across testings. The study was the first to demonstrate that treatment gains generalize to a battery of novel, demanding, suggestions (generalization index) that have been found to differentiate highly susceptible subjects from

unhypnotizable simulating subjects. The importance of rapport was evidenced by the finding that rapport ratings paralleled group differences in hypnotic responding and that rapport correlated substantially with susceptibility scores at posttest and with the generalization index. Whereas initial hypnotizability scores correlated significantly with retest susceptibility scores, initial hypnotizability failed to correlate significantly with the generalization index.

Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

NOTEThe author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259).

The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

Monteiro, Kenneth P.; Zimbardo, Philip G. (1987). The path from classroom seating to hypnotizability--a dead end: A brief communication. International Journal of Clinical and Experimental Hypnosis, 35, 83-86.

It has been proposed that classroom seating behavior predicts brain functioning involved in hypnotizability and in other cognitive processes. The present authors attempted to test this hypothesis and to replicate some earlier findings. The relationships between classroom seating preference, actual seating location, and hypnotizability in male and female students were investigated. No relationship was found between any of the seating measures and hypnotizability. These findings lend no support for the hypothesis that classroom seating predicts hypnotizability. This failure to replicate is discussed in relationship to the lack of theoretical grounding for the seating-hypnosis connection. NOTES 1:

#### NOTES

The authors review the literature, then present and test specific hypotheses that right-side seating preferences would be correlated with hypnotizability for males, while actual seating on the right side of the class would be associated with higher hypnotizability scores for females. This pattern should be more robust for right-handed than for left-handed students. They found no support for these hypotheses. They suggest that other measures of cognitive processing may correlate with a social behavior such as classroom seating. Monteiro & Zimbardo (unpublished ms.) found that the variables of field independence and field sensitivity predicted actual seating behavior in males and seating preference in females.

#### 1986

Spanos, Nicholas P.; Cross, Wendi P.; Lepage, Mark; Coristine, Marjorie (1986). Glossolalia as learned behavior: An experimental demonstration. Journal of Abnormal Psychology, 95, 21-23.

60 Ss listened to a 60-s sample of glossolalia (defined to them as pseudolanguage) and then attempted to produce glossolalia on a 30-s baseline trial. Afterward, half of the Ss received two training sessions that included audio- and videotaped samples of glossolalia interspersed with opportunities to practice glossolalia. Also, live modeling of glossolalia, direct instruction, and encouragement were provided by an experimenter. Both the trained subjects and untreated controls attempted to produce glossolalia on a 30-s posttest trial. About 20% of subjects exhibited fluent glossolalia on the baseline trial, and training significantly enhanced fluency. Seventy percent of trained subjects spoke fluent glossolalia on

the posttest. Our findings are more consistent with social learning than with altered state conceptions of glossolalia.

Spanos, Nicholas P.; Robertson, Lynda A.; Menary, Evelyn P.; Brett, Pamela J. (1986). Component analysis of cognitive skill training for the enhancement of hypnotic susceptibility. Journal of Abnormal Psychology, 95, 350-357.

Four treatments to enhance the hypnotic responsiveness of subjects who pretested as low in hypnotic susceptibility were compared. Complete skill training included information aimed at encouraging (a) positive attitudes, (b) the use of imagery strategies, and (c) an interpretation of hypnotic behavior as active responding. Partial training included only components (a) and (b). Both training packages enhanced attitudes toward hypnosis to an equivalent degree. However, complete training was much more effective than either partial training or no treatment at enhancing behavioral and subjective responding on two different posttest scales of hypnotic susceptibility. More than half of the subjects who received complete training, but none of the partial training or control subjects, scored in the high-susceptibility range on both posttests. Subjects explicitly instructed to fake hypnosis and those in the complete skill-training treatment exhibited significantly different patterns of posttest responding. Findings support social psychological perspectives that emphasize the importance of contextual factors in hypnotic responding.

Sweeney, Carol A.; Lynn, Steven Jay; Bellezza, Francis S. (1986). Hypnosis, hypnotizability, and imagery-mediated learning. International Journal of Clinical and Experimental Hypnosis, 34, 29-40.

The relationship between hypnotizability, imagery utilization ability, and hypnosis was examined in a study described to Ss (N = 157) as an 'imagery experiment.' In Session 1, the Tellegen Absorption Scale (Tellegen, 1976) was completed and the imagery-mediated paired-associate learning task was administered as a baseline measure. In Session 2, either hypnosis, task motivation, or no treatment instructions were administered and the learning task was repeated with a different word list (each 15 high, 15 low imagery pairs). In Session 3, the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) was administered. Overall, recall was superior for high imagery words. Hypnotizability was not associated with imagery-mediated recall. Recall performance, however, was correlated with Tellegen Absorption Scale scores. Interestingly, learning and recall performance decreased between Sessions 1 and 2 for hypnotized Ss but remained the same for task motivated and control Ss. The decrease in performance was mediated by less concern for performance and diminished anxiety. Self-reports of imagery utilization did not differ among groups of Ss.

## NOTES

The authors review literature on the relationship between hypnotizability, hypnosis, and imagery abilities, noting that results are conflicting. One reason for differing results may be that imagery scales are self-report measures, subject to reporting bias of varying types. The imagery-mediated paired-associate learning paradigm, using high and low imagery paired associates, may address that reporting bias issue.

This investigation used 157 Ss grouped into high (9-12), medium (5-8), and low (0-4) hypnotizability levels on the basis of the Harvard Scale. Given the fact that high imagery words are usually recalled more easily than low imagery words (Paivio, 1971), a relationship observed between hypnotizability and imagery-mediated recall would elucidate the role of imagery utilization for memory functions.

The experimental conditions included hypnosis, task motivation, and a no treatment control condition, in order to evaluate the possible enhancement effects of hypnosis on imagery utilization for memory

functions. The task motivation group was included to control for motivational factors, and the no treatment control condition to control for the practice effects of repeated testing.

The word pair stimuli were from Paivio et al (1968): 30 pairs consisting of 15 high and 15 low imagery noun pairs. Each Subject participated in three experimental sessions.

Session 1. Ss were told that they were in an experiment on imagery to remember pairs of words. They completed the Tellegen Absorption Scale, then were given instructions for using imagery for recalling words, and for rating vividness and clarity of each image immediately after it was formed. Finally they performed the learning task.

Session 2. Ss received either hypnosis, task motivation instructions ("try to form good interacting images of the word pairs" with exhortation to score as high as possible), or control (Like Session 1). No one in hypnosis group refused the induction (despite the fact that they were not forewarned in Session 1 that the experiment might involve hypnosis). Ss completed a questionnaire on the percentage of word pairs they used images to remember, how easy it was to block out or ignore distractions, how vivid and clear were images of words during recall, how concerned they were about their performance, and how much anxiety, if any, they experienced during the experiment.

Session 3. The Harvard Scale was administered. Three Ss declined to participate in the Harvard Scale administration.

The results were analyzed with a 3 x 2 x 2 x 2 repeated-measures ANOVA: hypnotizability, instruction (hypnotic induction, task motivation, no treatment), session (1 and 2), and pair imagery (high and low). The expected enhanced memory performance of high hypnotizables with high imagery words in the hypnosis condition did not emerge in the results. However, the expected stimulus-imagery effect was observed (a higher proportion of high imagery words than low imagery words recalled). The expected higher imagery ratings for hypnotized high hypnotizable Ss also was not found. Furthermore, there was a significant interaction effect for recall session by hypnotizability: low hypnotizable Ss rated imagery less vivid in Session 2 than in Session 1, while highs rated it more vivid in Session 2 than in Session 1. Thus, low hypnotizable Ss' imagery ratings actually decreased between Recall Session 1 and 2, while high hypnotizable Ss' imagery ratings increased between Recall Session 1 and 2.

While the Absorption Scale correlated with the Harvard (.28,  $p < .001$ ) and with various measures of recall, hypnotizability did not correlate with any of the recall measures. The questionnaires administered during Session 2 suggested that hypnotized Ss were less concerned and anxious than the no treatment control Ss, and less concerned than the Ss receiving task motivation instructions.

In their Discussion, the authors speculate that the strong stimulus-imagery effects might have made it unlikely for them to find differences between high, medium, and low hypnotizable Ss in imagery-based paired associate learning. They suggest including word pairs that range across the continuum of imagery ratings in future research. They also speculate that differences between hypnotizability levels might be found (as 'T Hoen reported in 1978 publication) if Ss were required to respond in a shorter time interval, or if hypnotizability were measured by a scale with more cognitive items than the Harvard Scale--both conditions in 'T Hoen's research protocol.

"The most striking finding of the present research is that instead of facilitating performance in an imagery-mediated recall task, hypnosis resulted in a decrement in recall relative to control conditions. In the hypnotic condition, the amount of learning actually decreased from one session to the next (waking-hypnosis) but remained equivalent in the task motivation (waking-task motivation) and no treatment groups (waking-waking)" (p. 37). The authors note that it is not possible to determine from their research design whether hypnosis interfered with the learning task, the retrieval task, or both.

"The findings suggest that hypnotizability may be related to reported vividness and clarity of imagery but unrelated to the actual ability to utilize imagery in an imagery-mediated paired-associate learning task. ... Although high hypnotizables' self-report ratings of imagery and vividness increased, their recall performance was not accordingly enhanced. The disparity between subjective and objective

measures underscores the importance of including both types of measures in studies of imagery abilities" (pp. 37- 38).

To a considerable degree, this study controlled for Ss' expectancies regarding hypnosis better than some earlier studies. This study differs from earlier research in that (1) Experimenters didn't test hypnotizability prior to the imagery-mediation task; and (2) the study was defined as an experiment on imagery, and hypnosis was not mentioned until just before the induction in Session 2.

"In conclusion, the present results indicate that, under certain conditions, hypnosis may decrease Ss' motivation and performance. No support was provided for the ability of hypnosis to facilitate imagery utilization and performance on an imagery-mediated task. The results are compatible with the views proffered [sic] by theoreticians who have emphasized the importance of expectancies and the experimental context (e.g., Barber, 1979; Coe & Sarbin, 1977; M. T. Orne, 1951, 1959; Spanos, 1982)" (p. 38).

Zamansky, Harold S.; Clark, Lorene E. (1986). Cognitive competition and hypnotic behavior: Whither absorption?. International Journal of Clinical and Experimental Hypnosis, 34, 205-214.

According to the widely held absorption notion, the successful response to hypnotic suggestions requires S to focus attention on the content of these suggestions and to avoid incompatible and contradictory cognitive activities. This assumption was tested by exposing high, middle, and low hypnotizability Ss continuously to incompatible suggestions and images as they attempted to respond to the direct suggestions of the hypnotist. Performance under these circumstances was substantially as effective as in baseline sessions (without incompatible suggestions) for the high and medium hypnotizable Ss. On the other hand, fewer than half of the low hypnotizability Ss responded successfully. The results are viewed as compatible with both a social enactment and a neodissociation interpretation of hypnosis.

#### NOTES

Subjects were 58 volunteer students divided into 12 high (8-12), 26 medium (5- 7) and 20 low (<5) hypnotizables on the basis of the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A). Depending on the number of suggestions passed during the SHSS:A, 2-4 'target suggestions' were selected from among those each S passed. All Ss had passed at least one of the target suggestions.

The target suggestions that had been successfully passed were readministered with incompatible suggestions and imagery being given to the S. For example, the S might be asked to practice the opposite response, to note and remember the movements and muscles used to produce the response, to think that they should be able to resist the suggestion, to picture themselves performing the opposite response by recalling the earlier practice experience. For example, while giving a suggestion for arm rigidity, the Experimenter might say "Picture yourself bending your arm" or "Imagine what it would be like to bend your arm." The S was even encouraged to perform another competing response , e.g. to bend the other arm, and to try to use that experience in resisting the target suggestion. The S was requested to verbalize the incompatible thoughts out loud while performing the target suggestion. Nevertheless, the direct suggestion also was interspersed, as, "You will find, nevertheless, that your right arm won't bend."

**RESULTS.** All 12 highs passed at least one target item and 10 passed all of the target items. 23 of 26 medium suggestible Ss passed at least one item and 17 passed all of them. Only 8 of 20 low hypnotizable Ss passed at least one target suggestion; 7 passed all of them however. Usually the low hypnotizables had only one or two target items, since they passed few items on the original SHSS:A test.

In their Discussion, the authors state, "Despite popular opinion, therefore, it appears that it is not necessary for the good hypnotic S to be fully 'absorbed' or to be 'imaginatively involved' (J. R.

Hilgard, 1979) in the direct suggestions of the hypnotist to perform these suggestions successfully. ... It is the responses of the lows that were quite clearly degraded by the presence of conflicting thoughts and images" (p. 209).

As a control study, the authors tested 11 other Ss who had low hypnotic susceptibility, to determine whether the effect found with lows (that they could resist) was actually a function of test-retest unreliability. They administered 1-2 target suggestions without contradictory suggestions two or more times. The results were that, once a S had passed a suggestion once, they continued to pass it (even when it was administered 3-4 times). "If anything, the suggestions sometimes appeared to gain in effectiveness with repetition" (p. 210).

The authors did another control study with 17 highs, 9 medium Ss, and 8 lows, in which the conflicting suggestion was given by a hypnotist who did not know the hypnotizability of the S: after S was hypnotized, hypnotist A wrote the "target" on a slip of paper, left the room, and hypnotist B entered and gave the conflicting suggestions for that target. All 17 highs and 7 of the 9 medium hypnotizable Ss passed, but only 2 of 8 lows were able to do so.

The authors conclude, "It may well be that processes such as absorption and imaginative involvement may facilitate the successful response to hypnotic suggestions, but, clearly, the utilization of such processes is not essential for the successful hypnotic performance of high and medium hypnotizability Ss" (p. 212).

1985

Banyai, Eva I.; Meszaros, Istvan; Csokay, Laszlo (1985). Interaction between hypnotist and subject: A social psychophysiological approach (preliminary report). In Waxman, David; Misra, Prem C.; Gibson, Michael; Basker, M. Anthony (Ed.), Modern trends in hypnosis (pp. 97-108). New York: Plenum Press.

There is a vast amount of literature demonstrating that hypnotic susceptibility is a stable personality trait. In the course of our practice of teaching beginners to hypnotize, however, it occurred to us that hypnotists without sufficient previous training frequently measured a lower level of hypnotic susceptibility than the true score. It has to be emphasized that hypnosis is a special altered state of consciousness which develops as a result of an interaction between a hypnotist and a subject. The failure of beginners to induce hypnosis could be explained by considering an insufficient participation of the hypnotist in this interaction. The purpose of the present study was to analyze the necessary and sufficient subjective, behavioral and physiological alterations in both participants of the hypnotic interaction. During successful and unsuccessful hypnotic inductions the subjective experiences, behavioral manifestations and physiological indicators including respiration, ECG, EMG, EOG, GSR and bilateral fronto- occipital EEG leads, were recorded simultaneously in the hypnotists and the hypnotized subjects. The results indicate that hypnotic induction is successful if a mutual "tuning" of the other person occurs not only on the subjective and behavioral levels, but first of all on the psychophysiological level.

Spanos, Nicholas P.; Weekes, John R.; Bertrand, Lorne D. (1985). Multiple personality: A social psychological perspective. Journal of Abnormal Psychology, 94, 362-376.

The part of an accused murderer remanded for pretrial psychiatric evaluation was role played by 48 college students. Role players were assigned to interview treatments that varied in how extensively they cued for symptoms of multiple personality. The most explicit treatment (i.e., Bianchi treatment, n = 16) included a hypnotic interview that was used in diagnosing a suspect in the "Hillside strangler" rape- murder cases as suffering from multiple personality. A less explicit hypnotic treatment (n = 16) and a nonhypnotic treatment (n = 16) were administered to the remaining role players. Most subjects

in the Bianchi treatment displayed the major signs of multiple personality (e.g., adoption of a different name, spontaneous posthypnotic amnesia). In a later session subjects who role played as multiple personalities performed very differently on psychological tests administered separately to each role-played identity. Those who failed to enact the multiple personality role performed similarly when tested twice. Findings are discussed in terms of a social psychological formulation that emphasizes the roles of active cognizing, contextual cueing, and social legitimization in the genesis of multiple personality.

Spanos, Nicholas P.; de Groot, Hans P.; Tiller, Dale K.; Weekes, John R.; Bertrand, Lorne D. (1985). 'Trance logic,' duality, and hidden observer responding in hypnotic, imagination control, and simulating subjects: A social psychological analysis. Journal of Abnormal Psychology, 94 (4), 611-623.

Tested the hypothesis that a tolerance for logical incongruity characterizes hypnotic responding and is related to reports of duality experiences during age regression and hidden-observer responding during suggested analgesia. 30 undergraduates (the "reals") with high scores on a responsiveness-to-suggestion scale were randomly assigned to hypnotic or imagination control treatments, while 15 undergraduates with low scores were assigned to a simulation treatment in which they were instructed to fake hypnosis. Ss were assessed on 6 indicators of logical incongruity, given age-regression suggestions and perception tasks, administered a suggestion for analgesia and hidden observer instructions, and interviewed. Results do not support the hypothesis. The differences in responding that did emerge between reals and simulators were accounted for by the different task demands to which Ss were exposed. These behavioral differences, which have been previously interpreted in terms of intrinsic characteristics of hypnosis, may instead reflect a combination of between-treatments differences in demands and between- Ss differences in the interpretation of those demands and in the ability to fulfill them.

1984

Spanos, Nicholas P.; McNeil, Conrad; Gwynn, Maxwell I.; Stam, Henderikus J. (1984). Effects of suggestion and distraction on reported pain in subjects high and low on hypnotic susceptibility. Journal of Abnormal Psychology, 93 (3), 277-284.

84 18-30 year old undergraduates high or low in hypnotic susceptibility (the Carleton University Responsiveness to Suggestion Scale) immersed an arm in ice water on 2 separate trials. Within susceptibility levels, Ss were randomly assigned to 3 groups, with an equal number in each group. Between trials, Ss in 1 group were administered a suggestion to imagine their hand as numb and insensitive, those in a 2nd group practiced a distraction task to be used during the 2nd trial (shadowing words), and those in a 3rd group (controls) received no special instructions. The suggestion significantly lowered rated pain in high but not in low susceptibles. Contrary to dissociation accounts of hypnotic susceptibility and suggested analgesia, low susceptible shadowers showed as much reduction in rated pain as high susceptibles given suggestion. The social psychology of the experimental pain assessment situation is discussed.

Spanos, Nicholas P.; Tkachyk, M.; Bertrand, L. D.; Weekes, J. R. (1984). The dissipation hypothesis of amnesia: More disconfirming evidence. Psychological Reports, 55, 191-196.

Hypnotic subjects were administered a suggestion to forget a previously overlearned word list. Before cancellation of the suggestion they were challenged twice to try and recall the words. Subjects in one group received a second challenge immediately after response to the first. Those in the second group were given a 15-min. delay before their second challenge. Subjects in both groups showed less amnesia

after the second challenge than after the first, but the length of delay between challenges had no effect on amnesia scores. These findings are inconsistent with the hypothesis that hypnotic amnesia involves an involuntary blockage of memory that decays spontaneously with time.

1983

Council, James R.; Kirsch, Irving; Vickery, Anne R.; Carlson, Dawn (1983). 'Trance' versus 'skill' hypnotic inductions: The effects of credibility, expectancy, and experimenter modeling. Journal of Consulting and Clinical Psychology, 31 (3), 432-440.

A hypnotic induction procedure based on social learning principles (skill induction) was compared with a traditional eye-fixation/relaxation trance induction, a highly credible placebo induction, and a no-induction base-rate control. The trance induction surpassed the skill induction only on the Field Inventory, a measure of hypnotic depth that contains items corresponding to suggestions contained in the trance induction. Experimenter modeling was not found to enhance the effectiveness of the skill induction. Skill and trance inductions elicited slightly higher behavioral scores on the Stanford Hypnotic Susceptibility Scale: Form C than did the placebo induction. However, this difference was not obtained on other measures of hypnotic responsibility and depth. Significant correlations were found between expectancy, absorption, and responsiveness on all dependent measures. Multiple regression analyses indicated that the relationship between absorption and responsivity was mediated by expectancy. The results are interpreted as supporting the hypotheses that hypnotic responses are elicited by the expectancy for their occurrence and that induction procedures are a means of increasing subjects' expectancies for hypnotic responses.

#### NOTES

Trance induction resulted in a higher score on subjective experiences (cognitive & perceptual distortions) but not higher suggestibility scores than cognitive- behavioral skill induction. 2) Trance and cognitive-behavioral inductions got slightly higher scores in suggestibility than placebo biofeedback induction. 3) All inductions did better than a "no induction" control group on subjective and behavioral indices of hypnosis.

One of the goals of this research was to examine the contribution of experimenter modeling to the behavioral skill induction that "trains the subject in hypnosis skills and requires the subject's conscious cooperation in learning cognitive strategies that will enhance hypnotic responsivity" (p. 432). Another goal was to assess the contribution of "a subject's expectancies for the occurrence of behaviors perceived as being involuntary" (p. 433). A third goal was to determine whether congruence between a subject's beliefs about hypnosis and the rationale for a particular induction would increase expectancy. Two different skill inductions were employed (one with, one without a model). Subjects were asked to predict their performance, based on a description of the induction that they would receive. The contributions of credibility and expectancy were assessed using a highly credible placebo (pseudo biofeedback of EEG theta rhythm).

The investigation used only subjects who had never experienced hypnosis.

Independent variables included Rotter's (1966) Internal-External Locus of Control Scale, Rotter's (1967) Interpersonal Trust Scale, and Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Mediating variables included a measure of induction credibility based on Borkovec and Nau (1972), and a 20-item inventory measuring expectancies for hypnotic performance. Dependent variables included 20 standard hypnotic suggestions taken from the Stanford Hypnotic Susceptibility Scale, Form C; the Creative Imagination Scale; ratings of the 'realness' or experienced intensity of each suggestion; and the Field Inventory of Hypnotic Depth (Field, 1965).

The authors conclusion reads as follows: "The results of this study may be summarized as follows: (a) Traditional trance hypnotic inductions and cognitive- behavioral skill inductions were shown to be

equally effective in eliciting experiential and behavioral responses to hypnotic suggestions, although trance subjects reported a somewhat greater alteration in conscious experience. (b) Experimenter modeling was not found to be an effective component of the skill induction package. (c) Subjects' expectancies for hypnotic responses, reported prior to hypnotic induction, bore a very strong relationship to hypnotic responsiveness. (d) A highly credible placebo induction resulted in levels of expectancy and hypnotic responsiveness generally comparable to those produced by trance and skill hypnotic inductions. (e) Absorption was significantly correlated with expectancy, but was not found to be significantly related to responsiveness once variance due to expectancy was taken into account. Thus the relationship between absorption and hypnotic responsiveness appears to be mediated by expectancies.

"In sum, these results suggest that various hypnotic inductions elicit expectancies for responding to hypnotic suggestions and that these expectancies are sufficient to elicit hypnotic responses. Further studies are needed to determine the nature of the relationship between absorption and hypnotic response expectancies" (p. 439).

Spanos, Nicholas P.; Gwynn, Maxwell I.; Stam, Henderikus J. (1983). Instructional demands and ratings of overt and hidden pain during hypnotic analgesia. Journal of Abnormal Psychology, 92 (4), 479-488.

Sixteen highly hypnotizable subjects rated the intensity of cold pressor pain during a baseline trial and again during three hypnotic analgesia trials. During each analgesia trial, subjects were instructed to give overt reports that reflected consciously experienced pain and covert reports that reflected the intensity of "hidden" pain. Treatment instructions administered before the first analgesia trial did not specify the relationship between overt pain and covert pain. Instructions given before the remaining two analgesia trials indicated that hidden pain would be either more intense or less intense than overt pain. Until they were given explicit information about the relative intensities of the pain, subjects reported no differences in the magnitude of overt and covert pain, contrary to the dissociation hypothesis of hypnotic analgesia. Consistent with social psychological formulations of the hidden observer phenomenon, subjects reported both higher covert than overt pain and lower covert than overt pain depending on the instructions they were administered.

Wagstaff, Graham F. (1983). Comment on McConkey's "Challenging hypnotic effects: The impact of conflicting influences on response to hypnotic suggestion". [Comment/Discussion].

## NOTES

"Probably the most consistent finding to emerge from McConkey's review is that hypnotic subjects tend to respond in accordance with what they feel the hypnotist really wants, regardless of conflicting experimental demands" (p. 13).

1982

Spanos, Nicholas P.; Bridgeman, M.; Stam, H. J.; Gwynn, M. I.; Saad, C. I. (1982-83). When seeing is not believing: The effects of contextual variables on the reports of hypnotic hallucinations. Imagination, Cognition and Personality, 2, 195-209.

When administered a hallucination suggestion most high susceptible hypnotic and task-motivated subjects reported that they "saw" the suggested object. When asked what they meant by "saw," however, almost all indicated that they had imagined the object but did not believe that it had actually been present. On the other hand, simulating subjects maintained that the suggested object had been "really there." Simulators were also more likely than non-simulators to provide "life-like"

descriptions of the suggested object (e.g., solid rather than transparent, colored, highly vivid). These findings are consistent with the view that hypnotic hallucinations are context-generated imaginings. They also indicate that unique or unusual psychological processes like "trance logic" need not be posited to account for the descriptions of "hallucinatory" experiences proffered by hypnotic subjects.

## NOTES

It was observed that hypnotized Ss reported more vivid (and longer sustained) imagery than task motivated Subjects. Hypnotized Ss did not differ from high susceptible simulators on vividness of imagery or how long they experienced the imagery, but did report shorter and less vivid imagery than simulators who were low hypnotizables.

### 1981

An attempt was made to relate hypnotic susceptibility to an objective measure of compliance in a real-life setting. Hypnotic susceptibility scores for 235 college graduates, who graduated between the years 1971-1979, were compared to their records for alumni annual giving. Those who had made at least 1 contribution to the college since graduation were significantly higher in hypnotic susceptibility than those who had made no contribution. The results suggest that willingness to respond to a persuasive appeal may be related to a person's susceptibility to hypnosis.

### 1979

Provides a social psychological interpretation of the interrelations among demonic possession, mesmerism, and hysteria. It is argued that the reciprocal role relationship of mesmerist and magnetized S in the 18th and 19th centuries involved the secularization of the role relation that had existed between exorcist and demonically possessed. The commonalities between these 2 sets of social roles are delineated, some of the variables leading an individual to learn and enact the possessed role are outlined, and several lines of historical evidence pertaining to the influence of the exorcist-demonic relationship on the mesmeric relationship are outlined. The influence of the possessed role in shaping the role of the hysterical patient is also discussed. The use of hysteria as a modern explanatory concept in histories of possession and mesmerism, however, is criticized. (198 ref).

### 1978

Coe, William C. (1978). The credibility of posthypnotic amnesia: A contextualist's view. International Journal of Clinical and Experimental Hypnosis, 26 (4), 218-245.

This paper attempts to demonstrate how the contextual view rather than the formist-mechanistic view may be more helpful in understanding posthypnotic amnesia. As a point of departure, the criterion for credible posthypnotic amnesia is defined as Ss' phenomenal experiences which are observed indirectly through their counterfactual statements expressed with a high degree of conviction. To make sense of such self-reports, concepts flowing from contextualism, the view of man as an active person in an everchanging series of contexts, are employed. Concepts such as plots, reinforcement contingencies, trust, belief systems, involvement, ambiguousness, and self-observation may be postulated in understanding how people come to believe in their own counterfactual reports and to convince others of their credibility. Recent research on source amnesia, disrupted retrieval, and breaching posthypnotic amnesia is also critically evaluated. The conclusion is reached that the data are not compelling and their interpretations have been overstated.

Hearn, Greg (1978, November). Susceptibility and the process of social interaction in the hypnotic context. [Unpublished manuscript] (Submitted as a partial requirement for the B. S. degree with honours in psychology at the Univ of Queensland)

The hypothesis was tested that the process of social interaction between hypnotist and subject is dependent upon the susceptibility level of subjects. Using Interaction Process Analysis (Bales, 1950), the interaction patterns of 16 high susceptibles and 16 low susceptibles were analyzed. Susceptibility level had been pretested with the HGSHS:A. The hypnotist was then instructed on how to control for differences in the process of interaction which were isolated and the initial hypnotic session was repeated on a new sample. This time the performance and interaction patterns of six high susceptibles and six low susceptibles were compared. Results suggested that trait differences give rise spontaneously to differences in the process of interaction and some combination of these effect the subjects final hypnotic performance. Hence it is argued that an interactionist framework would aid the understanding hypnotic responsivity.

1974

Spanos, Nicholas P.; Barber, Theodore Xenophon (1974). Toward a convergence in hypnosis research. American Psychologist, 29 (7), 500-511.

#### NOTES

The authors believe that there is general agreement that "responding to suggestions involves at least two interrelated factors. The first can be conceptualized as a willingness on the part of the subject to cooperate with the experimenter in fulfilling the aims of the suggestions. The second can be described as a shift in cognitive orientation from an objective or pragmatic perspective to one of involvement in suggestion-related imaginings" (p. 500).

They suggest that the two major theoretical positions lead to different approaches to research. "The construct trance or hypnotic state, despite its inherent vagueness and lack of amenability to operational definition, continues to dominate state conceptualizations of hypnosis. This construct seems to refer to a state that differs, not simply quantitatively, but in some basic, qualitative way, from waking states and from states of sleep. As Bowers (1966) noted, 'Most [present-day] investigators interested in hypnosis believe that there is an hypnotic state which fundamentally differs from the waking state [p. 42].' This belief makes it much more likely that it will be state theorists who will conduct studies aimed at establishing a physiological basis for the hypothesized fundamental alteration. The state theorists are also more likely than the nonstate theorists to pursue research that might indicate that hypnotic performance involves unique or highly unusual changes in perceptual functioning or in cognitive functioning, such as trance logic (Orne, 1959). Although studies of this type have generally produced negative or inconclusive findings (Barber, 1979, 1970a, 1973; Barber & Ham, 1974; Hilgard, 1972; Johnson, 1972; Johnson, Maher, & Barber, 1972; Sarbin & Slagle, 1972), they have on occasion yielded some provocative results (Graham, 1979).

"On the other hand, the guiding assumption of the nonstate theorists -- that the good hypnotic subject is not fundamentally different from the normal individual who is cooperating in a social situation in which he is asked to experience suggested effects -- will lead these investigators to continue their studies of situational and social-psychological antecedents of hypnotic performance. The nonstate investigators may be expected to probe further into the effects of such variabls as how the situation is defined to the subject, what attempts are made to remove fears and misconception, and how the suggestions are worded (Barber & DeMoor, 1972; Spanos, 1973). The basic assumption of the nonstate theorists will also continue to influence their conceptualization of hypnotic performance as a set of socially influenced cognitive skills or abilities. However, despite these differences in the research proclivities of state and nonstate investigators, theoretical convergences of the type outlined in this article indicate that a good deal of the future research carried out by proponents of both paradigms will dovetail in focusing on the role of imaginative processes in hypnotic performance" (pp. 508-509).

1967

Barber, Theodore Xenophon (1967). Reply to Conn and Conn's 'Discussion of Barber's 'Hypnosis as a causal variable...'. International Journal of Clinical and Experimental Hypnosis, 3, 111-117.

A REPLY TO J. H. CONN AND R. N. CONN (SEE 42:1). IT IS MAINTAINED THAT (1) INVESTIGATORS HAVE NOT AS YET SUCCEEDED EITHER IN DENOTING THE HYPNOTIC STATE WITHOUT CIRCULARITY OR IN DEMONSTRATING THAT IT PLAYS A ROLE IN ELICITING THE PHENOMENA THAT ARE TO BE EXPLAINED; AND (2) RECENT EXPERIMENTS HAVE SHOWN THAT S'S TESTIMONY THAT HE IS "IN" OR "OUT" OF HYPNOSIS IS DEPENDENT UPON MANY DENOTABLE ANTECEDENT VARIABLES INCLUDING WHAT S BELIEVES HYPNOSIS IS SUPPOSED TO INVOLVE AND WHETHER E IMPLIES TO S THAT HE JUDGES HIM TO BE "IN" OR "OUT." IT REMAINS TO BE DEMONSTRATED THAT S'S TESTIMONY IS ALSO FUNCTIONALLY RELATED TO THE PRESENCE OR ABSENCE OF THE HYPNOTIC STATE. (SPANISH + GERMAN SUMMARIES) (16 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Conn, J.H.; Conn, R.N. (1967). Discussion of T. X. Barber's 'Hypnosis' as a causal variable in present day psychology: A critical analysis. International Journal of Clinical and Experimental Hypnosis, 15 (3), 106-110.

T. X. BARBER'S (SEE 39:2) STATEMENT THAT THE TERM HYPNOSIS BE ABANDONED PRESUPPOSES THAT IT MUST BE RIGIDLY DEFINED AND THAT A PROPER DEFINITION MUST DENOTE "NECESSARY AND SUFFICIENT" CONDITIONS. NEITHER PROPOSITION IS VALID SINCE HYPNOSIS IS ESSENTIALLY A HUMAN RESPONSE. BARBER'S VARIABLES ARE ENDOWED WITH A FLEXIBILITY DENIED TO HYPNOSIS. THE SCIENCE OF VARIABLES IS OPPOSED TO THE AMBIGUOUS TERM HYPNOSIS BECAUSE IT DENOTES TOO MANY VARIATIONS IN TECHNIQUE AND RESPONSE. NEVERTHELESS, THE OBJECTIVE SCIENCE OF VARIABLES MAY ONLY APPEAR OBJECTIVE BECAUSE IT OMITTS AREAS OF LIFE TO WHICH ITS METHODS DO NOT APPLY. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Van der Walde, P. H. (1967). Trance states and ego psychology. International Journal of Clinical and Experimental Hypnosis, 15 (3), 95-105.

ANALYZES THE BASIC CHARACTERISTICS OF HYPNOSIS, WHICH COMPRISE INDIVIDUAL, INTERPERSONAL, AND CULTURAL VARIABLES. THESE ELEMENTS ARE UTILIZED IN A TRANSCULTURAL COMPARISON TO DEMONSTRATE THAT TRANCE PHENOMENA ARE GOAL-ORIENTED BEHAVIORS WHICH ARE EXPRESSED BY INDIVIDUALS WITHIN A GIVEN CULTURE BY METHODS WHICH ARE CULTURALLY SANCTIONED FOR ACHIEVING THOSE ENDS. THE DIFFERENCES BETWEEN TRANCE STATES CAN BE UNDERSTOOD TO REPRESENT CULTURAL VARIANTS OF SIMILAR PSYCHOLOGICAL MECHANISMS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

Sarbin, Theodore R.; Lim, Donald T. (1963). Some evidence in support of the role-taking hypothesis in hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 98-103.

A study was conducted to test the hypothesis that hypnosis is a form of role-taking behavior. Independent measures of hypnotizability as measured on the Freidlander-Sarbin Scale and role-taking ability (improvisations) as judged by the Dramatics Department faculty were found to be significantly

related. Those rated high in role-taking were above the mean in hypnotizability, but some high on hypnotizability were low in dramatics ability. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Orne, Martin T. (1962). On the social psychology of the psychological experiment, with particular reference to demand characteristics and their implications. American Psychologist, 17 (11), 776-783.

#### NOTES

"In summary, we have suggested that the subject must be recognized as an active participant in any experiment, and that it may be fruitful to view the psychological experiment as a very special form of social interaction. We have proposed that the subject's behavior in an experiment is a function of the totality of the situation, which includes the experimental variables being investigated and at least one other set of variables which we have subsumed under the heading, demand characteristics of the experimental situation. The study and control of demand characteristics are not simply matters of good experimental technique; rather, it is an empirical issue to determine under what circumstances demand characteristics significantly affect subjects' experimental behavior. Several empirical techniques have been proposed for this purpose. It has been suggested that control of these variables in particular may lead to greater reproducibility and ecological validity of psychological experiments. With an increasing understanding of these factors intrinsic to the experimental context, the experimental method in psychology may become a more effective tool in predicting behavior in nonexperimental contexts" (p. 783).

Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

1959

Rosenberg, Milton J. (1959). A disconfirmation of the descriptions of hypnosis as a dissociated state. International Journal of Clinical and Experimental Hypnosis, 7 (4), 187-204.

#### NOTES

"SUMMARY. An experiment is described in which each of a group of hypnotic subjects received a posthypnotic suggestion reversing his affective response on an attitude issue of high interest. The consequent changes in the subjects' affect-related beliefs are compared to 'belief-changes' achieved by members of a group of subjects who were required to role-play the occurrence of 'affect reversal'.

"The data are interpreted as disconfirming the description of hypnosis as a dissociated state. Some reasons for the persistence of the dissociation description of hypnosis and some theoretical implications of the demonstration of non-dissociation are briefly discussed" (pp. 202-203).

The 11 hypnotic subjects were capable of achieving posthypnotic amnesia. Direct suggestions were given, in the opposite direction from attitudes detected with a 'cognitive structure test'. "For example one of the subjects, having expressed strong negative affect toward Negroes moving into white

neighborhoods, was given exactly the following hypnotic instructions: 'When you awake you will be very much in favor of Negroes moving into white neighborhoods. The mere idea of negroes moving into white neighborhoods will give you a happy, exhilarated feeling. You will have no memory for this suggestion having been made until the signal to remember is given'" (p. 193).

Wilcox, Warren; Faw, Volney (1959). Social and environmental perceptions of susceptible and unsusceptible hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 7 (3), 151-160.

## NOTES

### "Summary

1. The purpose of this study was to test the hypothesis that hypnotic susceptibility was positively related to the perception of fundamental aspects of the social and environmental milieu and, further, to consider the nature of hypnosis itself.
2. Ss for this study, 44 women and 36 men, were employed from a previous study (Faw and Wilcox, 1958). A mass hypnotic technique was used and susceptibility was operationally defined by the use of rating scales. The susceptible were found to have better personality adjustment than the unsusceptible.
3. New for this study were self-rating scales of the Ss' perception of parents, personal worries and problems, social activities as group or individually oriented, social activities in school, and physical care. The rating scales were administered several months prior to and independently of the hypnotic induction.
4. Interpretation of results support the hypothesis that the susceptible perceived their social and environmental milieu in more positive terms than did the unsusceptible. The susceptible perceived their parents in significantly stronger affectional and supportive relationships than did the unsusceptible. The susceptible were less concerned about adjustment to the opposite sex, not as worried about personal appearance, were more group oriented and more likely to engage in social activities than were the unsusceptible. Susceptible males were less frequently hospitalized than were unsusceptible males while susceptible females were more frequently hospitalized than were unsusceptible females.
5. Hypnosis was defined as a tendency to accept suggestions and to actualize, maintain and affirm them in the form of perceptual experiences activated by the stimulus situation as interpreted by the S and formulated by the hypnotist. The suggestions arouse expectancies or personal hypotheses which become a gauge to test the efficacy of the suggestions. Perceptualization is shaped by motives and past stimulation of the social and environmental milieu" (p. 158).

## 1958

Barber, Theodore Xenophon (1958). Hypnosis as perceptual-cognitive restructuring: II. "Post"-hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 6 (1), 10-20.

## NOTES

The author presents "experimental evidence indicating that there is no essential difference between 'hypnotic' behavior and 'post-hypnotic' behavior" (p. 11).

### "Summary and Conclusions

"When 'somnambulistic' subjects were told to 'wake up' after they were given a 'post-hypnotic suggestion' and 'amnesia for the suggestion' they behaved as follows:

1. They opened their eyes and became relatively more aware of their surroundings.
2. They were aware that the signal for the 'post-hypnotic- behavior had special significance for them.

3. They were 'set' to 'obey the hypnotist's suggestions' from the moment they were told to 'wake up,' until they were convinced that their interpersonal relationship with the operator was no longer that of subject and hypnotist.

4. When the 'post-hypnotic suggestion' was uncomplicated and fitted into the normal pattern of behavior, the subjects carried it out without 'going deeper into trance,' i.e., without becoming relatively more 'detached' from their surroundings. However, when the 'post-hypnotic suggestion' was of such a nature that it was necessary for the subjects to 'go deeper into trance' to properly carry it out, the subjects did 'go deeper into trance.'

"Whether the subjects did or did not have amnesia for the 'post-hypnotic suggestion' was not important. 'Amnesic' and 'non-amnesic' subjects carried out the 'post-hypnotic' behavior in essentially the same way.

"These experiments indicate that:

1. If the operator properly manipulates the situation, the 'good' hypnotic subject is 'set' to carry out the operator's commands in the 'post-hypnotic' period in the same way as during 'hypnosis.'

2. If, in order to properly carry out the 'post-hypnotic suggestions,' it is necessary for the subject to 'go deeper into trance' -- i.e., to become relatively inattentive to stimuli not emanating from the operator -- the good subject will do so.

3. There is no essential- difference between the subject's behavior in the 'hypnotic' period and in the 'post-hypnotic' period.

4. If we are to continue speaking of 'suggestions' to be carried out in the post-hypnotic period we should term them 'post'-hypnotic 'suggestions'" (pp. 19-20).

Schneck, Jerome M. (1958). Relationships between hypnotist-audience and hypnotist-subject interaction. Journal of Clinical and Experimental Hypnosis, 6 (4), 171-181.

## NOTES

### "Summary

"Patients discussing or entering hypnotherapy are frequently influenced in their attitudes by some measure of direct or indirect contact with popular exhibitions of hypnosis. Expectations, interpretations, general behavior, and transference relationships are affected as a result. Previous papers by others have discussed and described popular exhibitions from the view of dangers and deception based on undeclared use of trained hypnotic subjects. The present paper is a study of a popular exhibition of hypnosis by a well known entertainer. Admixtures of good and rewarding entertainment method and poorly managed hypnotic technique are described. Stress is placed on the major approach involving impression by implication rather than elicitation of phenomena and clarification of claims with demonstration by challenge. The result is one of impressing the audience in regard to possible behavior under hypnosis without the actual proof of such claims. This is accomplished through reliance on the suggestibility and gullibility of the audience owing to its lack of experience and information. In most instances then, hypnotist-subject interaction is reduced to the most simple essentials. Stress is placed on the hypnotist-audience relationship. In some of the demonstrations there were varying degrees of subtle interplay between hypnotist-subject and hypnotist-audience relationships with the fostering of audience-subject identification and subject-hypnotist identification via coentertainer status. The hypnotist was capable at times of capitalizing on what he apparently sensed were the needs and likely reactions of certain subjects in connection with some forms of post-hypnotic behavior. The quality of the performance was mixed from an amusement point of view. Errors in technique occurred to a surprising degree in view of the hypnotist's extensive experience. Some entertaining highlights supported the performance. The relationship between hypnotist-audience and hypnotist-subject interaction are of interest within the larger context of interpersonal relations involving small and large groups.

1953

Glasner, Samuel (1953). Research problems in the educational and social psychological applications of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (2), 42-48.

#### NOTES

The author reviews literature in which hypnosis is used as an experimental research method in two general areas: hypnosis in learning and recall, and hypnosis in social psychology. "In summary, the application of hypnosis to research in the fields of educational and social psychology is practically virgin territory. Imaginative investigators should be able to develop numerous interesting experiments in these two great areas" (p. 47).

Glasner, Samuel (1953). Two experiments in the modification of attitude by the use of hypnotic and waking suggestion. Journal of Clinical and Experimental Hypnosis, 1, 71-75.

#### NOTES

Author's Conclusions: "In the light of the results, the following conclusions would appear to be justified:

1. Prestige suggestion can effect changes in an individual's response to an attitudes test.
2. Repeated prestige suggestion produces no more marked effect than does a single suggestion in changing social attitudes. However, the results seem to be more lasting with repeated suggestion.
3. Repeated hypnotic suggestion is considerably more effective than repeated waking suggestion in modifying social attitudes. But waking suggestion also seems to have some effect.
4. The effects of both hypnotic and waking suggestion vary greatly with different individuals.
5. The effect of repeated prestige suggestion in changing social attitudes apparently does not follow the pattern of the usual learning curve.
6. The changes noted seem to represent changes in basic attitude, and not merely changes in the response to a particular test" (P. 74).

The attitudes involved nationality preferences ("Negro, Turk, Hindu, or Chinamen" p. 71). The prestige suggestion, given in light hypnosis, was "The results on the test I gave you were rather disappointing. Most people think that we in the South are deeply prejudiced against the colored races. But that is a mis-understanding of our position. Certainly we University people have no actual dislike of Negroes, Chinamen, or Hindus. And it is our hope, in giving this test, to demonstrate our true attitude, which is far more tolerant than most people give us credit for. I am therefore going to give you the test again. I want you, of course, to give your honest preferences. But where you find a choice difficult, give the 'underdog' the benefit of the doubt. Do you understand? Give the 'underdog' the benefit of the doubt!" (p. 72).

#### SOCIAL SUPPORT

1993

Spiegel, David; Frischholz, Edward J.; Fleiss, Joseph L.; Spiegel, Herbert (1993). Predictors of smoking abstinence following a single-session restructuring intervention with self hypnosis. American Journal of Psychiatry, 150, 1090-1097.

Examined the relation of smoking and medical history, social support, and hypnotizability to outcome with Spiegel's smoking-cessation program. A consecutive series of 226 smokers were treated with the single-session approach and followed up for 2 years. With a total abstinence criterion, 52% success was found after 1 week, and 23% abstinence at 2 years. Hypnotizability and having been previously able to quit smoking for at least a month significantly predicted the initiation of abstinence.

Hypnotizability and living with a significant other person predicted 2-year maintenance. The results are superior to those of spontaneous efforts to stop smoking and suggest it is possible to predict which patients are most likely to respond and which patients are least likely to respond to such a brief intervention.

1992

Wickramasekera, Ian (1992, August). Hypnotic ability as a risk factor for psychopathology and pathophysiology. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

Eighty-three patients with psychophysiological disorders seen prior to therapy were tested on the seven risk factors of the High Risk Model. Thirty-two percent of these patients were high on hypnotic ability, and hypnotic ability was unrelated to all of the other six risk factors. Mean social support and coping skills were significantly below the norm. Mean catastrophizing, negative affect (neuroticism), major life change and minor hassles were significantly above the norm. There are positive and significant correlations between hassles, negative affect and catastrophizing. There are also positive and significant correlations between coping skills and number and level of satisfaction with social support. There are negative and significant correlations between coping skills, catastrophizing, negative affect and hassles. There are also negative and significant correlations between satisfaction with social support, catastrophizing, and hassles. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

1990

Matheson, G.; Drever, J. M. (1990). Psychological preparation of the patient for breast reconstruction. Annals of Plastic Surgery, 24, 238-247.

#### NOTES

Reviews over 100 women who had undergone rectus abdominis musculocutaneous flap reconstruction, the psychological issues motivating the patient for surgery, and psychological problems to be considered by the surgeon. A method of psychological preparation that was used and a report on the evaluative study of the program is included, and a protocol and verbalization for hypnotic relaxation is included.

Somer, E. (1990). Brief simultaneous couple hypnotherapy with a rape victim and her spouse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 1-5.

This paper presents a case involving a rape victim and her emotionally affected spouse. Although the assault occurred before the couple met, the husband was too upset to concentrate when the victim wanted to share her rape-related feelings, nor could he provide the much needed empathy and support. This, apparently, was due to his difficulties in handling his own rage. Simultaneous couple hypnotherapy was used to allow the victim to share her experience under conditions safe for both her and her spouse. As he imagined in trance the rape account described by his age-regressed wife, he learned to identify his emotions and experience them in a controlled manner. During subsequent sessions, the husband was encouraged to include himself in his wife's abreaction and reshape the traumatic scene for both of them. The husband's rescuing behavior and the expressions of violent anger towards the perpetrator had several positive consequences. Not only did they change the abandonment component of the victim's traumatic memory, but they also helped the husband deal in better ways with his own feelings of anger. It also provided the couple with a helpful coping mechanism they later effectively applied under different circumstances.

1989

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

1986

Wickramasakera, Ian (1986). A model of people at high risk to develop chronic stress-related somatic symptoms: Some predictions. Professional Psychology: Research and Practice, 17, 437-447.

Certain measurable high-risk factors that predispose people to develop functionally based somatic disorders are identified. These risk factors compose a multidimensional model that encompasses variables involved in the predisposition, the precipitation, and the buffering of stress-related symptoms. These high-risk factors are (a) high or low hypnotic ability, (b) habitual catastrophizing cognitions and pessimistic belief systems, (c) autonomic lability or neuroticism, (d) multiple major life changes or multiple minor hassles over a short period of time, and (e) a deficit in support systems or coping skills or both.

1984

Wideman, Margaret V.; Singer, Jerome E. (1984). The role of psychological mechanisms in preparation for childbirth. American Psychologist, 39, 1357-1371.

Psychoprophylactic (Lamaze) preparation for childbirth consists of six to eight classes held during the last trimester of pregnancy. These classes include instruction in the anatomy and physiology of gestation and parturition, respiration techniques, controlled neuromuscular relaxation, visual focusing, and the training of a labor coach. Although the techniques are based upon psychological principles, they have remained largely unstudied by either psychologists or physicians. This article presents a brief history of the development of the training regimen and critically examines the few empirical studies that have been conducted. Because explanations for the efficacy of the preparation, if it exists, are equivocal, literature on the explicit components of the training--that is, information, respiration techniques, conditioned relaxation, cognitive restructuring, and social support--in situations other than child delivery are reviewed and their implications for the Lamaze method discussed. However, because there exist several, more implicit factors that may affect the type of child delivery a prepared woman experiences, the literature concerning social comparison, the effects of commitment and conformity, perceived control, and endorphin secretion are also discussed as they

may apply to psychoprophylactic preparation. Problems associated with the study of childbirth preparation are presented, and suggestions for the direction of future research are made.

1976

Dempster, C. R.; Balson, P.; Whalen, B. T. (1976). Supportive hypnotherapy during the radical treatment of malignancies. International Journal of Clinical and Experimental Hypnosis, 24, 1-9.

#### NOTES

"In summary, the radical treatment of malignancies presents a number of hypnotherapeutic opportunities. Not only can hypnotherapy help alleviate disease-related symptoms, but it can also limit some of the distressing side-effects of the treatments. The patient can gain needed hope by having the impact of his disease lessened. The hypnotherapeutic relationship also provides a useful base from which to deal with the issues of terminal illness, of death, and of dying.

"Implications for the future basically revolve around the issue of supportive hypnotherapy during radical treatment. As the use of chemotherapy of malignancies increases, there will be many opportunities for successful hypnotherapeutic interventions" (pp. 7-8).

#### SEIZURES / EPILEPSY

2002

Gravitz, M.A. & Page, R.A, (2002). Hypnosis in the management of stress reactions.. In Everly, G.S.; Lating, J.M. (Ed.), A clinical guide to the treatment of the human stress response. (2nd, pp. 241-252). New York: NY: Kluwer/Plenum.

Reviews the history and current modes of hypnosis-based treatments of a variety of stress reactions.

2000

Breuer, William C. (2000). Physically focused hypnotherapy: A practical guide to medical hypnosis in everyday practice. Louisville, KY: SPRF Inc., 1810 Sils Avenue, Louisville, Kentucky, 40205.

#### NOTES

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**1995**

**Bryant, Richard A.; Somerville, Ernest (1995). Hypnotic induction of an epileptic seizure: A brief communication. International Journal of Clinical and Experimental Hypnosis, 43 (3), 274-283.**

**This case study investigated the utility of hypnosis to precipitate a seizure in a patient with refractory epilepsy. The patient was twice administered a hypnotic induction and a suggestion to age regress to a day when he was distressed and suffered repeated seizures. The patient did not respond to the first hypnotic suggestion; however, an epileptic seizure was observed in the second hypnotic session. Videorecording and subdural electroencephalograph recording confirmed that he suffered an epileptic seizure. Postexperimental inquiry revealed that the patient used deliberate cognitive strategies to avoid**

seizure onset in the first session but adopted a more constructive cognitive style in the second session. Findings are discussed in terms of emotions, hypnosis, and cognitive style as mediating factors in the experimental precipitation of epileptic seizures.

1993

Litwin, R. G.; Cardena, E. (1993, August). Dissociation and reported trauma in organic and psychogenic seizure patients. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Early detection and differential diagnosis of non-epileptic seizures (NES) versus epileptic seizures (ES) is a major clinical issue in comprehensive epilepsy centers. Recent research suggests that differences in dissociative experiences between NES and ES patients may prove useful for diagnostic purposes. Non-epileptic seizures are frequently conceptualized as a dissociative response to past emotional trauma or abuse; dissociation in ES occurs as a result of electrophysiological abnormalities, most often associated with the temporal lobes. The purpose of this study was to evaluate the effectiveness for the differential diagnosis of NES from ES of several measures of dissociation and of a self-report measure for physical and sexual abuse. Four quantitative measures of dissociation were utilized in this study: the dissociative disorders interview schedule (DDIS), dissociative experience scale (DES), Tellegen absorption scale (TAS) and the Stanford Hypnotic Clinical Scale (SHCS). The incidence of sexual and physical abuse was obtained from structured questions in the DDIS. Forty-one patients being evaluated for intractable seizures participated in this study; 13 ES patients with non-temporal lobe involvement (ES/NTL), 18 ES patients with temporal lobe focus (ES/TLE) and 10 patients with NES spells of psychiatric origin. The main researcher was blind to these diagnoses until the study was completed. Results show a trend toward greater incidence of dissociative experiences in the NES versus ES group on the DDIS, TAS and DES, although these differences tended to be modest and not statistically significant, perhaps given the small N of the study. There were no significant trends or differences in dissociative experiences reported by ES/NTL patients versus ES/TLE patients. Contrary to the study's hypothesis, ES patients were slightly more susceptible to being hypnotized than NES patients. As hypothesized, a significant difference was that NES patients reported physical and sexual abuse of higher incidence and longer duration than did ES patients. Logistic regression analysis for prediction of NES using the DES, TAS and SHCS instruments correctly predicted only 10% of NES patients. However, exploratory logistic regression analysis using the demographic variables of gender, months of sexual abuse and years of recurrent seizures suggest that these characteristics may be specific and sensitive in the prediction of NES. Being a female, having a higher incidence and longer duration of abuse and fewer years of recurrent seizures all predicted significantly the existence of non-epileptic seizure events, allowing for a 95% accuracy in diagnostic prediction. Our findings reinforce prior research indicating that dissociation is an important symptom component of both ES and NES events. The trend toward more prevalent dissociative experiences in the NES group suggests that in depth examination of these differences and of key demographic variables may help differentiate between these two groups. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1993, Vol. 2, No. 3.)

1991

Persinger, M. A.; Makarec, Katherine (1991-92). Interactions between temporal lobe signs, imaginings, beliefs and gender: Their effect upon logical inference. Imagination, Cognition and Personality, 11, 149-166.

**Rotton's Paralogic Test, Wilson-Barber's Inventory of Childhood memories and Imaginings (ICMI) and the PPI (Personal Philosophy Inventory) were administered to 100 male and 100 female university students. Both sexes displayed moderately strong (0.50) correlations between content-selected and factor analyzed clusters of possible temporal lobe signs, exotic beliefs and the numbers of childhood imaginings. Although there were no sex differences between the accuracy of logical statements that contained paranormal or neutral content, males who displayed more temporal lobe signs were more accurate for logical items that contained paranormal content. Females who displayed more imaginings were more accurate for valid than for invalid items. Accuracy for items with paranormal content increased with exotic beliefs but not with conservative religious beliefs for both sexes. The relationship between exotic beliefs and accuracy for items with paranormal content was especially strong for females. These results suggest: 1) gender differences in the neurocognitive processes that contribute to logical problem solving and 2) accuracy may depend upon the degree to which the subject matter is commensurate with the person's history of enhanced temporal lobe signs, capacity for fantasy and imaginings and beliefs in exotic concepts.**

## **NOTES**

**Review of related literature indicates that Personal Philosophy Inventory (PPI) temporal lobe signs are correlated with temporal lobe EEG alpha but not occipital lobe alpha (Makarec & Persinger, 1990), with increased suggestibility (Persinger & DeSano, 1986; Ross & Persinger, 1987), with creativity and proneness towards fantasy (Persinger & DeSano, 1986; Ross & Persinger, 1987; Makarec & Persinger, 1987), and with reports of psi experiences and beliefs in such things as reincarnation and aliens in UFOs ('exotic themes') (Persinger & Makarec, 1987; Persinger & Makarec, 1990).**

**This experiment was designed to answer four questions: " 1) Do imagery and temporal lobe signs emerge from the same source of variance?; 2) Do males and females differ significantly in their incidence of imaginings and temporal lobe signs?; 3) Do males and females differ in their ability to solve logical problems?; and 4) Is the accuracy of problem solving affected by the subject matter of the problem and the problem solver's temporal lobe signs and capacity for imagery?" (p. 151).**

**The PPI consists of 140 true-false items that were selected with a goal of discerning temporal lobe signs within a normal population. One 30-item subscale has items that are similar to experiences reported by patients with verified electrical foci in the temporal lobes, albeit milder (the TLS or temporal lobe sign scale). Of these 30 items, 16 refer to ictal-like experiences (the CPES, or complex partial epileptic signs), and 14 refer to interictal-like behaviors (ILB). CPES items are items like "Sometimes an event will occur that has special significance for me only," and "While sitting quietly, I have had uplifting sensations as if I were driving over a rolling road." ILB items are items like "People tell me I blank out sometimes when people are talking," and "When I lose an argument I spend a lot of time thinking about what I should have said."**

**Wilson and Barber's Inventory of Childhood Memories and Imaginings (ICMI) has 52 true-false items that include reports of paranormal experiences (5 items), moderate imaginings (18 items) such as 'When I was a child I enjoyed fairytales,' and extreme imaginings (15 items) such as 'When I was a child or teenager, at times I was afraid my imagining would become so real to me that I would be unable to stop it.'**

**Rotton's Paralogic Test [unpublished, at Florida International University, Miami] has 16 syllogisms, each with major premise, minor premise, and conclusion. "The person must decide if the argument is valid (n = 8) or invalid (n = 8). Half of each of the valid and invalid arguments refer to mundane material while the other half of the arguments refer to paranormal-related material. An example of the former is 'If a president is a crook, he would be impeached; Congress did not impeach Nixon. Therefore Nixon is not a crook' and 'If flying saucers really existed, somebody would have photographed one. Nobody has ever photographed a flying saucer. Therefore, flying saucers do not exist'" (p. 153).**

Correlations were computed separately for males and females. Both groups increased in accuracy for paranormal items as their belief in things like reincarnation and UFOs ('exotic concepts') increased. Males with a higher number of temporal lobe signs demonstrated more accuracy for logic test items with paranormal (psi) content than logic test items with mundane content.

"The single most important correlation was between exotic beliefs and the interaction term for the Rotton scale; the coefficient was unusually strong (0.54) and highly statistically significant ( $p < 0.001$ ) for females only. Because of the manner in which the interaction term was calculated, this correlation meant that females who reported more exotic beliefs were also more accurate for valid items that contained paranormal content only" (p. 159).

In their Discussion, the authors write, "The significant positive correlations between exotic beliefs and the clusters of CPES items and extreme Wilson-Barber imagining items are expected associations according to Bear's concept of sensory-limbic hyperconnectionism [Temporal Lobe Epilepsy: A Syndrome of Sensory-Limbic Hyperconnectionism, *Cortex*, 15, pp. 357-384. It would predict that concepts (or word trains) that are unusual, strange or infrequent would be charged with emotional significance and personal value. Ideas that generate substantial imagery, such as time- travel, reincarnation and alien intelligence, would be particularly prone to this affective infusion from limbic sources.

Induction of such unique or intensified affective states, especially during childhood, would facilitate the development of more frequent or more extreme periods of dissociation in the adult. We have collected (unpublished) clinical evidence to suggest that the emergence of this pattern is found in the propensity for creative thinkers, including writers, poets, musicians, artists and scientists, to have had developmental histories that could have promoted temporal lobe lability without overt seizure activity; clusters of such "promoters" include mild physical abuse, febrile episodes, minor head injuries and likely hypoxic periods during extreme physical exertion (competitive athletics)" (pp. 161-162).

Another conclusion of the study is that males and females do not differ in their accuracy in solving syllogisms, but "the neurocognitive processes, as inferred from inventories of temporal lobe signs or childhood imaginings, by which the two sexes arrive at solutions may be quite different" (p. 162).

1988

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. *International Journal of Clinical and Experimental Hypnosis*, 36, 96-106.

In an earlier study, DeBenedittis and Sironi (1986) demonstrated that during depth EEG studies, electrophysiological correlates of hypnotic behavior emphasize the role of the limbic system in mediating the trance experience. In the case of a young man who was affected by medically resistant temporal lobe epilepsy and who was a potential candidate for surgical treatment, diagnostic depth EEG in hypnotic and non- hypnotic conditions offered a unique opportunity to stimulate limbic structures. This permitted an evaluation of the subjective and behavioral responses, as well as of the electrophysiological correlates. During hypnosis, repeated stimulations of the left and the right amygdala produced arousal from the hypnotic state each time, whereas the stimulation of other cerebral structures (e.g., temporal neocortex, Ammon's horn) or pseudostimulations were ineffective on the hypnotic state. These data represent the first experimental, controlled evidence of the amygdala's effects on the arousal from the hypnotic state in man, thus suggesting that hypnotic behavior is mediated, at least in part, by a dynamic balance of antagonizing effects of discrete limbic structures--the amygdala and the hippocampus.

NOTES

The patient was a 30-year-old man who had suffered from medically resistant psychomotor temporal lobe epilepsy since age 7; a diagnostic EEG showed right temporal seizure focus, concomitant with

independent, contralateral, temporal spiking abnormalities. Hypnotizability was measured at 6 on the SHSS:C; the patient was given two training sessions in hypnosis, with suggestions for "dissociation, rehearsal and reframing of spontaneous seizure events, desensitization of their negative emotional impact, and amnesia" (p. 99).

Electrodes were implanted in deep cerebral structures (amygdala, Ammon's horn) and corresponding superficial areas of temporal cortex, with confirmation of placement by X-ray. Two weeks later the patient's brain was stimulated on two consecutive days, first in the waking state (Session 1) and then in hypnosis (Session 2). (Antiepileptic medication was discontinued three days before the stimulation sessions.) False (placebo) stimulations were randomly provided along with the true stimulations.

The false (placebo) stimulations did not result in subjective or behavioral changes in either the waking or the hypnosis condition.

In the waking condition, a psychomotor seizure was produced by stimulation of Right amygdala and Left Ammon's horn; stimulation of Left amygdala evoked only the aura patient usually had before a seizure, or a brief lapse of consciousness. Stimulating the temporal neocortex did not evoke seizure activity.

In the hypnosis condition, arousal from hypnosis into the waking condition occurred with stimulation of amygdala (either Right or Left). Stimulation of the temporal neocortex or of the Right Ammon's horn did not arouse the patient. Stimulation of Left Ammon's horn led to abortive seizures, such that it could not be determined whether the hypnotic state had been interrupted. Stimulating the Right amygdala "triggered a psychomotor attack similar to that recorded during the waking stimulation, but with reduced emotional involvement" (p. 100). For the Left Ammon's horn, "waking stimulation always induced clinical seizures with prolonged after-discharge, whereas hypnotic stimulation evoked only abortive seizures, without after-discharge" (p. 100).

In their Discussion, the authors note that animal experimental literature suggests that stimulation of the cortico-medial amygdala facilitates arousal functions, of the baso-lateral amygdala diminishes arousal and produces sleep, and lesions of the amygdala lead to 'amygdala hangover' (Weiskrantz, 1956). "The animal with amygdala destruction appears tame and placid, with reduced social reactivity, insensitive to environmental changes and reluctant to initiate new behavior, unless highly motivated (Isaacson, 1976)" (p. 101-102).

In contrast, the animal research on hippocampus suggests it is involved in inhibitory functions (Isaacson, 1976), and may be the 'internal inhibitor' theorized by Pavlov (1955) to be responsible for animal hypnosis. With lesions, animals are more willing to undertake new behaviors, less inactive, less distractible during goal-oriented behavior (Isaacson, 1976). "Moreover, normal hippocampograms show typical, slow (theta) synchronous activity opposed to the arousal desynchronized activity of the electroencephalogram. During hypnosis, desynchronization of the normal, slow activity of the hippocampal Ammon's horn has been registered as compared with the waking hippocampogram, opposite to the slow synchronous activity of the amygdala" (p. 102).

The authors note that their results are at variance with the finding by Crasilneck et al. (1956) that their patient, during brain surgery for an epileptogenic focus, aroused from hypnosis each time they stimulated the hippocampus. They explain the discrepancy as due to the fact that the hippocampus was not simply stimulated, but in fact there was 'coagulation' of a hippocampal vessel each time. Quoting from Crasilneck et al. "'The patient did not complain of pain during this [brain] excision [in hypnosis] except on one noteworthy occasion, when a blood vessel of the hippocampal region was being coagulated. The patient suddenly awoke from the hypnotic trance ... She was immediately rehypnotized. ... The surgeon then purposefully 'restimulated' the same region of the hippocampus. Once again, the patient abruptly awakened from trance... [p. 1607].'"To the present authors, the description appears misleading and responsible for subsequent misinterpretation of the observation. Because on the first occasion the hypnotic arousal effect followed 'coagulation' of the hippocampal region, it may be assumed that 'restimulation' is a misnomer for repeated coagulation. From this it

may be inferred that the arousal effect observed by Crasilneck et al. (1956) could probably be ascribed to a hippocampal microlesion rather than to hippocampal stimulation. This could explain the apparent discrepancy" (p. 104).

Loewenstein, R. J.; Putnam, F. W. (1988). A comparison study of dissociative symptoms in patients with complex partial seizures, MPD, and posttraumatic stress disorder. Dissociation, **1**, 17-23.

Depersonalization and dissociative symptoms have been widely reported in chronic seizure disorder patients, especially those with temporal lobe involvement and complex partial seizures (CPS). It has been theorized that development of multiple personality disorder may be related to temporal lobe pathology. We administered the Dissociative Experiences Scale (DES) to 12 male patients with severe chronic epilepsy, primarily of the complex partial type. Patients had epilepsy from 1 to 30 years. Most were being evaluated for intractable seizures occurring several times per week. DES data on the epileptic patients were compared with DES data on 9 male MPD patients and 39 PTSD patients. MPD and PTSD patients were significantly different from CPS patients in median DES scores and all DES subscale scores. MPD and PTSD patients were far more similar on the DES, although MPD patients had a significantly higher score on the dissociation/psychogenic amnesia subscale of the DES. The authors conclude that there is little data to support a relationship between MPD, dissociation, and epilepsy.

1987

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, **64**, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

## NOTES

"Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson- Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most

strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

1986

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

#### NOTES

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

Experimental Protocol: 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia; arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of Clinical and Experimental Hypnosis*) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

"In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), *Biofeedback: Behavioral medicine*. New York: Grune & Stratton, Pp. 147-165.

Serman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), *Biofeedback: Behavioral medicine*. New York: Plenum, 1977, Pp. 167-200.

1984

Cocores, James A.; Bender, Andrew L.; McBride, Eugene (1984). Multiple personality, seizure disorder, and the electroencephalogram. *Journal of Nervous and Mental Disease*, 172, 436-438.

Used the EEG to study multiple personality in a 48-yr-old ambidextrous male admitted for alcohol detoxification and individual psychotherapy. Despite conflicting reports in the literature, no changes in the EEG were found that could not be ascribed to the normal changes seen in transitions from various states of alertness. The problems of differentiating multiple personality as a psychiatric entity in itself from those cases arising as a result of chronic partial or partial-complex epilepsy are discussed.

1981

Gravitz, Melvin A. (1981). Non-verbal hypnotic techniques in a centrally deaf brain-damaged patient. *International Journal of Clinical and Experimental Hypnosis*, 29, 110-116.

Non-verbal techniques across several sensory dimensions were utilized with a brain-damaged centrally deaf 36-year-old female patient who had been referred for hypnotherapeutic relaxation. These included optical fixation on the therapist's hand with gradual thumb and fore-finger closure, vibratory stimuli, light shoulder pressures, arm stroking, manually facilitated air currents, and reinforcing homework assignments. With hypnotherapy, the patient's physical and emotional behavior was reported by her to have improved to a significant degree.

Gross, Meir, M. D. (1981). Hypnosis for dissociation -- diagnostic and therapeutic. Journal of the American Society of Psychosomatic Dentistry and Medicine, 28 (2), 49-56.

#### NOTES

Dissociative disorders might be at times very difficult to diagnose and treat, especially since they are very similar to epilepsy in general and to temporal lobe epilepsy in particular. Amnesia, fugue, changing personality and depersonalization are part of both disorders. Patients who suffer from dissociative disorders might be diagnosed and treated for epilepsy with anticonvulsive medications without any beneficial results. These patients are labeled as epileptics and have to face the social stigmata associated with being epileptic. The wrong label could even reinforce the sick role and make it become fixed and chronic.

Hypnosis was used to diagnose the dissociative disorder by using the hand levitation technique for the differential diagnosis. It was found by the author that patients who suffer from dissociative disorders would get into spontaneous hypnotic trance during the hand levitation. Hypnosis was used also for successful therapy of these patients.

Seven cases are presented in which the hand levitation technique was used to diagnose the dissociative disorder. They were also treated by hypnotherapy. Their treatment by hypnosis is discussed. The purpose of this paper is to introduce the hand levitation technique for the differential diagnosis of dissociative disorder and to emphasize the effectiveness of hypnotherapy in the treatment of this disorder. Sorting out the cases of dissociative disorders from the epileptics is very important clinically, since it can save many patients from the anguish of having to take anti-convulsants unnecessarily and having to face the social stigmata of being labeled as epileptic.

1963

Masserman, J. H. (1963). Current psychiatric therapies. New York NY: Grune & Stratton. (Reviewed in American Journal of Clinical Hypnosis, 1964, 6, 278-279)

#### NOTES

Contains a chapter on 'Hypnotic studies of patients with convulsions'

Slater, Roger C.; Flores, Louis S. (1963). Hypnosis in organic symptom removal: A temporary removal of an organic paralysis by hypnosis. American Journal of Clinical Hypnosis, 5 (4), 248-255.

#### NOTES

"Summary and Conclusions. A detailed case study is reported on the use of hypnosis with beneficial results in an instance of eventually proved organic brain disease. Three other confirmatory case reports of organic disease definitely benefitted by the use of hypnosis are briefly cited.

" The first patient had been adequately studied repeatedly for organic brain disease. Because the studies led to an uncertain indefinite unconfirmed suspicion of psychogenic epilepsy, the patient was returned with a recommendation for continued treatment and observation by the author, a general practitioner. Hence, she was, after still further study for organic disease, treated symptomatically by hypnosis with beneficial results. This led to the erroneous conclusion that the patient's disability was

probably functional. A sudden fatal outcome of the actual but unrecognized brain disease led to a correct but post- mortem diagnosis of astrocytoma of the brain, Grade IV.

"This report and those given to supplement it raise significant questions about the importance and value of hypnosis in organic disease. These include the challenging question of the extent to which the use of hypnosis can potentiate the natural corrective forces of the body; the need to recognize the value of hypnosis in effecting beneficial results in organic disease; the need to qualify the reliability of hypnosis as a differential diagnostic procedure in relation to psychogenic and organic disability; and the possibility and extent of the amelioration or actual correction of known organic illness" (p. 254).

**1959**

Crasilneck, Harold B.; Hall, James A. (1959). Physiological changes associated with hypnosis: A review of the literature since 1948. International Journal of Clinical and Experimental Hypnosis, 7 (1), 9-50. (Abstracted in Psychological Abstracts, 61: 6626)

## NOTES

Topic headings include:

Experimental Techniques (Depth, Type of suggestion, Other variables)

Cardiovascular Effects (Clinical reports, Blister formation, Bleeding, Peripheral vasomotion, Heart rate, EKG changes, Blood pressure, Hematological changes)

Respiration

Urogenital System

Gastrointestinal System

Metabolism and Temperature

Endocrine System

Central Nervous System (Electroencephalography, Epilepsy, Age regression, Galvanic skin response, Muscle control, Electromotive changes, Multiple sclerosis, Cold adaptation, Exocrine glands, Reflexes, Russian reports)

Special Senses (Hearing, Taste)

**1957**

Moss, C. Scott (1957). A forced hypnoprojective fantasy used in the resolution of pseudo-epileptic seizures. Journal of Clinical and Experimental Hypnosis, 5 (2), 59-66. (Abstracted in Psychological Abstracts, 58: 5812)

## NOTES

A dream that occurred in natural sleep was used as the starting point for exploration in hypnosis, e.g. suggesting that the patient was seated in a movie theater and would see an element that had been in the dream, projected on the movie screen; then would see substitute pictures which had for him the same meaning as that element. "... as in the dream, commitments to reality [in hypnosis] are minimized and there are evidences of the archaic drive-oriented primary process and a loss of distance form the fantasy so that it becomes a transitory hallucinatory experience. In addition, the censorship function is reduced but not eliminated so that this case study is highlighted by the defensive symbolic substitutions provoked by the persistent demands of the therapist" (pp. 64-65).

## STATISTICS

**1997**

Green, Joseph P. (1997). Hypnotizability, the dissociative experiences scale, HGSHS: A amnesia, and automatic writing: Is there an association?. International Journal of Clinical and Experimental Hypnosis, 45 (1), 69-80.

The present study examined whether participants (N = 112) selected on the basis of high and low dissociative ability (Dissociative Experiences Scale [DES]; Bernstein & Putnam, 1986), high and low/simulating hypnotizability (Harvard Group Scale of Hypnotic Susceptibility, Form A [HGSHS:A]; Shor & Orne, 1962), and past performance on the HGSHS:A amnesia item differentially passed an automatic writing suggestion administered during a follow-up experiment. Results from a loglinear analysis supported a single main effect for hypnotizability. Low hypnotizable, simulating participants were more than six times as likely to pass the automatic writing suggestion than high hypnotizable participants. Results found dissociation status and past performance on an ostensibly dissociative suggestion (i.e., amnesia) to be independent of passing the automatic writing suggestion. Findings are discussed in light of other research regarding the relation between the DES and hypnotizability.

1996

Allen, John J. B.; Law, Heather; Laravuso, John J. (1996). Items for assessing posthypnotic recognition amnesia with the HGSHS:A and the SHSS:C. International Journal of Clinical and Experimental Hypnosis, 44 (1), 52-65.

A procedure for assessing posthypnotic recognition amnesia is described. A set of items for the Harvard Group Scale of Hypnotic Susceptibility, Form A and for the Stanford Hypnotic Susceptibility Scale, Form C were developed and analyzed for reliability and their ability to discriminate individuals who demonstrate posthypnotic amnesia. Recognition amnesia could be assessed as reliably as recall amnesia, and posthypnotic recognition amnesia identified a select subgroup of high hypnotizable individuals who had higher scores on the screening scales. These items may prove useful for assessing posthypnotic recognition amnesia in conjunction with widely used scales of hypnotic susceptibility.

Dixon, Mike; Labelle, Louise; Laurence, Jean-Roch (1996). A multivariate approach to the prediction of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 44 (3), 250-264.

The present study examined the relation between various self-report measures and two measures of hypnotizability within a multivariate framework. A group of 748 participants was tested on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A), the Tellegen Absorption Scale (TAS), as well as the Preference for an Imagic Cognitive Style (PICS) questionnaire. One hundred ninety of these participants also completed the Paranormal Experiences Questionnaire (PEQ). Data were analyzed using hierarchical multiple regression equations, and the results of the analyses indicated that both the TAS and PICS accounted for significant amounts of unique variance in each of two 373-member samples of HGSHS:A scores. A further sub-sample of participants (n = 161) was tested on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) to see if these results would generalize to another measure of hypnotizability. Hierarchical multiple regression analyses revealed that although the PEQ predicted significant amounts of unique SHSS:C variance over and above that predicted by the TAS, the PICS failed to do so. This inconsistency in results may be due in part to the generally low intercorrelation between the different hypnotizability scales and points to the need to develop new predictor variables that are orthogonal to each other. - Journal Abstract

Weitzenhoffer, Andre M. (1996). Catalepsy tests: What do they tell us?. International Journal of Clinical and Experimental Hypnosis, 44 (4), 307-323.

In a survey of 200 clinicians regarding their use of catalepsy tests, three fourths of the respondents indicated that they used these tests. In light of this response, and considering both the scientific importance of being able to identify the presence of hypnosis and the fact that catalepsy may account for up to eight of the other indications of hypnosis in use, it is relevant to inquire into the reliability and validity of catalepsy tests. It was found that of the three tests of catalepsy currently in use, only one has the potential for being a test of hypnosis proper and can also justifiably be said to be "of catalepsy." This one test, however, has many serious weaknesses that need to be eliminated if it is to be truly useful. - Journal Abstract

1995

Jacobs, Andrea L.; Kurtz, Richard M.; Strube, Michael J. (1995). Hypnotic analgesia, expectancy effects, and choice of design: A reexamination. International Journal of Clinical and Experimental Hypnosis, 43 (1), 55-69.

Previous research by Stam and Spanos suggests that if waking analgesia is followed by hypnotic analgesia, subjects refrain from maximally responding during the waking trial so they report less pain under hypnosis (i.e., a "holdback effect"). This hypothesis was re-examined using more stringent controls. Thirty-six highly susceptible subjects chosen by a combination of the Harvard Group Scale of Hypnotic Susceptibility, Form A and the Stanford Hypnotic Susceptibility Scale, Form C were randomly assigned to one of three treatment groups (waking analgesia followed by hypnotic analgesia, waking analgesia followed by waking analgesia, or hypnotic analgesia followed by waking analgesia). Each group received three 60-second immersions of cold pressor pain stimulation (baseline, Immersion 1, Immersion 2) and rated pain using a magnitude estimation and a category rating scale. The obtained results failed to support the hypotheses of a holdback effect or a "reverse-order holdback effect." Properties of within-subjects and between-subjects designs were considered in explaining the superiority of hypnotic analgesia over waking analgesia typically found in within-subjects models.

1994

Levitt, Eugene E. (1994). The one-tailed test: A statistical editorial. International Journal of Clinical and Experimental Hypnosis, 42 (1), 4-6.

#### NOTES

The writer concludes, "The point of these illustrations is that a one-tailed test is rarely appropriate in a pure science experiment. The researcher must present justification for the use of a one-tailed test beyond merely a directional hypothesis. This becomes an urgent requisite when the experimental finding is significant only when tested with a single tail, which is ordinarily true when one-tailed tests are used" (p. 6).

Nash, Michael R. (1994). Memory distortion and sexual trauma: The problem of false negatives and false positives. International Journal of Clinical and Experimental Hypnosis, 42 (4), 346-362.

Logically, two broad types of mnemonic errors are possible when adult psychotherapy or hypnosis patients reflect on whether they were sexually abused or not as a child. They may believe that they were not abused when in fact they were (false negative error), or they may believe they were abused when in fact they were not (false positive error). The author briefly reviews the empirical evidence for the occurrence of each of these types of errors, and illustrates each with a clinical case. Further, in considering the incidence, importance, and clinical implications of these errors, the author contends that clinical efficacy in no way assures that a false negative or a false positive has been avoided. A plea

is made for theorists and researchers to acknowledge that both categories of errors can occur and to conduct future clinical and laboratory research accordingly.

Oakman, J.; Woody, E. Z. (1994, October). Theoretical implications of a typological conception of hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

Analyses suggest a typology rather than continuous dimensions of hypnotic ability. One implication is that hypnotic ability is due to a developmental influence dividing people into two types, like forks in the road. For example consider the link between trauma, dissociation, and hypnotizability. Trauma may be one of the developmental paths toward hypnotic ability. Another pathway into hypnotic ability is early childhood imaginal involvements.

A problem of the developmental models is that there are low correlations between fantasy proneness and hypnotizability. The models make no assertions about covariation of these traits in a normal population, so the correlations are irrelevant in this example. Only when there is a high base rate [of high hypnotizable type?] would the correlation of hypnotizability be high.

Other implications of the typology view: 1. It would challenge existing measures of hypnotizability, which assume a sum of small influences. New measures of hypnotic ability may need to be created. Existing items are poor. We need to delete easy items and add more challenging items to the scales. Also we could add items from Openness to Experience scales, etc. Item content need not be homogenous; internal consistency is not necessary, and should be low. Ratings of a flat nose, short limbs and epicanthal fold have a zero correlation in the general population, but go together in Downs' syndrome. 2. It would require a revision in our thinking. We may need to drive a wedge between theories of hypnotizability and theories of hypnosis. Whether current theories are more applicable to the high type or the low type hypnotizability is not yet known. 3. Or we can explore how type members differ from non-type members. Meehl argues that types discovered by his methods are "causal promissory notes."

## 1993

Baker, Sharon L.; Kirsch, Irving (1993). Hypnotic and placebo analgesia: Order effects and the placebo label. Contemporary Hypnosis, 10 (3), 117-126.

Hypnotic and placebo pain reduction were compared in a sample of subjects whose hypnotic susceptibility was broadly representative of the general population. Replicating the order effect reported by Stam and Spanos in 1987 for highly hypnotizable subjects, hypnosis produced more pain relief than a 'pain-reducing analgesic' placebo only when the hypnosis trial followed the placebo trial. When the placebo was described to subjects as a 'hypnotic drug' that 'increases suggestibility', no differences were found regardless of order of presentation. Both hypnotizability and pain reduction were correlated with subjects' expectancies, and the partial correlation between hypnotizability and pain reduction, with expectancy controlled, was non-significant. These data suggest that, for most subjects, hypnotic analgesia is analogous to a placebo effect, although it may be more useful than a placebo because its administration does not require deception.

## 1992

Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. International Journal of Clinical and Experimental Hypnosis, 40, 21-43.

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum. Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

## NOTES

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum---which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5 " (p. 27).

"In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance . He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965); Hilgard's general factor would probably correspond better to the Tellegen genuine

responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales. Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the instructions used to introduce the particular hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

Green, Joseph P.; Lynn, Steven Jay; Carlson, Bruce W. (1992). Finding the hypnotic virtuoso -- another look: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (2), 68-73.

Student volunteers who scored 9 (N = 20), 10 (N = 19), 11 (N = 26), and 12 (N = 15) on a live-administered Harvard Group Scale of Hypnotic Susceptibility (HGSHS:A) of Shor and E. Orne (1962) were retested with the individually administered Stanford Hypnotic Susceptibility Scale (SHSS:C) of Weitzenhoffer and Hilgard (1962). There appeared to be a break in HGSHS:A's predictive ability at 11 suggestions passed. Whereas a majority of Ss who passed at least 11 HGSHS:A suggestions retested in SHSS:C "virtuoso" range (i.e., passed at least 11 suggestions), a relatively small percentage of Ss who passed fewer than 11 HGSHS:A suggestions retested as SHSS:C virtuosos. These results are generally consistent with previous research (Register & Kihlstrom, 1986) using a standard taped-recorded (sic) HGSHS:A induction.

Stone, Mark H. (1992, October). Rasch scaling of hypnotizability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

NOTES: The author calibrated responses to the Stanford Scales of hypnotizability, which have not been used much by clinicians. Much of the data collected by Hilgard and Weitzenhoffer on the development of those scales was not published.

Rasch measurement techniques analyzed item data taken from the individual Form A and B manuals. The Rasch measurement involves natural Log odds, adjusted by variance of the respective persons. Thorndike's text explains this procedure taken from Wright & Stone, 1979, Best Test Design.

The calibration of items on Forms A and B of the Stanford scales indicates they differ greatly on difficulty and order of items. Items 1, 2, 3 are among the most difficult. Yet, items should follow item difficulty order.

For practicing clinicians, the mean and SD are inadequate to guide treatment. The practitioner wants to know how the patient responds to each item, compared with what would be expected (Like a Chi square). When data from misfit analysis is combined with clinical observation, we would get more understanding [of the patient's capabilities].

Not only are the 12 items not in order of difficulty, but there is redundancy. We could shorten the scale by selecting only items that span the same range of item difficulty: 4, 8, 10, 11, 2, 1 or 7, and 3. This

would give a screening scale with wider range measured, more finely graduated, better suited to diagnosing misfit. We could connect seemingly disparate scale items.

Form C has a perfect correlation between order of difficulty and order of administration, except for 12 which must be administered earlier.

Forms I and II [the Profile scales] deviate from the administration order and the difficulty order.

Only Form C seems to be located in the way the author would want, a Guttman type scale (which is Like Rasch's analysis).

1990

Edmonston, William E., Jr.; Moscovitz, Harry C. (1990). Hypnosis and lateralized brain functions. International Journal of Clinical and Experimental Hypnosis, 38, 70-84.

Bilateral EEG measures were obtained on 16 high hypnotizable Ss (scores of >8 on the Harvard Group Scale of Hypnotic Susceptibility, Form A, Shor & E. Orne, 1962), while performing hemisphere-specific tasks during hypnosis and a no-hypnosis control condition. Conditions and tasks were presented in counterbalanced order, and Ss served as their own controls. The data call into question the right hemisphere activation interpretation of lateralized brain function during hypnosis; rather, the data suggest a lack of task appropriate activity during hypnosis. The failure to attend to baseline activity measurements and the use of ratios to evaluate interhemispheric lateralization may contribute to potential misinterpretations of data. It is critical that activity changes of the separate hemispheres be taken into account in the interpretative process.

Tenenbaum, Steven J.; Kurtz, Richard M.; Bienias, Julia L. (1990). Hypnotic susceptibility and experimental pain reduction. American Journal of Clinical Hypnosis, 33 (1), 40-49.

We exposed 24 subjects high in hypnotic susceptibility and 24 subjects low in hypnotic susceptibility to a cold-pressor pain stimulus under either hypnotic or waking conditions, using each of two pain-reduction strategies (analgesia and distraction) separately. Trance depth level was held constant for hypnotized subjects. We used pain-tolerance levels as measures of pain, and we analyzed them by survival analysis. High susceptibles reported significantly lower pain ratings and kept their hands immersed longer in the cold water than low-susceptible subjects. There were no significant differences between hypnotic and waking condition subjects or between the different strategies. We have discussed the results in terms of a relationship in the literature between choice of experimental design (between-subjects or within-subjects) and the effectiveness of a hypnotic induction for suggested pain reduction.

#### NOTES

High hypnotizable Subjects scored 25 or above on the Wilson & Barber (1977) Creative Imagination Scale--the CIS (out of 40) and 4 or above on the Morgan & Hilgard (1979) Stanford Hypnotic Clinical Scale--SHCS (out of 5); Lows scored 15 or lower on the CIS and 2 or lower on the SHCS. Depth ratings during hypnosis were 7.4 for Highs, 2.3 for Lows; Tellegen Absorption scores were 25 and 18, respectively.

Subjects were assigned to either waking suggestion group or hypnosis group to avoid carryover effects across sessions, hence there were four groups: highs/waking procedure, highs/hypnotic procedure, lows/waking procedure, lows/hypnotic procedure. Each group was taught two strategies--analgesia or distraction--in a counterbalanced order, with administration of the Absorption Scale during a 15 minute rest in between the two procedures.

For hypnotic inductions, Experimenters provided an audiotape of an induction based on the SHCS, and had Ss report trance depth. When self-reported depth became less than baseline, following either

strategy training period, deepening procedures were used to re-establish the earlier depth level. Analgesia testing was not done blind as to subgroup membership and/or susceptibility.

The analgesia condition involved a suggestion of numbness in the hand and arm exposed to the cold pressor (Bassman & Wester, 1983). The distraction condition involved a suggestion to imagine a pleasant beach scene (Turk, Meichenbaum, and Gnest, 1984).

The number of individuals dropping out (removing their hands from the bath) at any one time period was measured, providing 'survival curves.' Pain tolerance was the same for Highs and Lows during baseline; also pain tolerance was the same for the hypnotic group as for the waking group. However, Low hypnotizable Ss removed their hands from the cold water faster than High hypnotizables: after 90 seconds only 60% of Lows, compared with 85% of Highs, remained. The same results occurred for distraction.

"In summary, both treatments allowed subjects to tolerate the cold pressor longer. There were no significant differences between subjects receiving or not receiving a hypnotic induction, and high-susceptibility subjects appeared to derive significantly greater benefit from treatment than did low-susceptibility subjects, as reflected by their tendency to tolerate exposure to the cold bath for greater lengths of time" (p. 46).

"High-susceptible subjects appeared to derive significantly greater benefit from treatment than did low-susceptible subjects, as reflected by their tendency both to tolerate exposure to the cold bath for greater lengths of time and to produce lower pain ratings" (p. 46).

"One issue that remains unresolved concerning the relationship between susceptibility and pain reduction is whether susceptibility is a transsituational capacity that is accessed by suggestion, or as Spanos, Hodgins, Stam, and Gwynn (1984) have asserted, simply an expectancy effect created by the susceptibility screening process, in which susceptibility screening appeared to act as a 'primary effect,' generating a successful experience related to hypnosis. The hypothesis that susceptibility is a capacity that can be accessed by suggestion is supported by the bulk of the literature on susceptibility and pain reduction, including research generated by both social-cognitive and neo-dissociation theorists (e.g., Hilgard, 1975; Spanos & Hewitt, 1980). In addition, susceptibility has proved to be a relatively stable trait, resistant to clinically significant modification (Crouse & Kurtz, 1984; Hilgard, 1975).

"Empirical resolution of this question would seem to require extension and replication of the Spanos, Hodgins, Stam, and Gwynn (1984) study, including exploration of whether screening at the end of the treatment phase of a suggestion experiment wipes out the relationship between susceptibility and successful suggestion for other hypnotic phenomena, such as amnesia, hallucination, time distortion, and so forth" (pp. 47-48).

Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100.

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to-easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions. Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

1989

Balthazard, Claude G.; Woody, Erik Z. (1989). Bimodality, dimensionality and the notion of hypnotic types. International Journal of Clinical and Experimental Hypnosis, 37 (1), 70-89.

The notion of hypnotic types -- of qualitative differences in the mechanisms by which people respond to hypnotic suggestions -- is examined with respect to the kind of evidence that has traditionally been seen to support it. Bimodality in the distribution of hypnosis scores has been taken as evidence for two "types" of hypnotizability. It is argued that little can be said about the nature of underlying processes from the distribution of raw scores. The relationship of factor analytic results to possible underlying typologies is examined. It is concluded that the present evidence simply does not allow an evaluation of the merits of current typological formulations.

Spiegel, David; Bloom, J. R.; Kraemer, H. C.; Gottheil, E. (1989, October 14). The beneficial effect of psychosocial treatment on survival of metastatic breast cancer patients: A randomized prospective outcome study. Lancet, 888-891.

The effect of psychosocial intervention on time of survival of 86 metastatic breast cancer patients was studied using randomized prospective design. The one-year treatment consisted of weekly supportive group therapy with training in self-hypnosis for pain management, and resulted in significant reductions in mood disturbance and pain. Both the treatment and control groups had routine oncologic care. At ten-year follow-up, only three of the original 86 patients were still alive, and death records were obtained for the other 83. Survival from the time of randomization and onset of intervention was 36.6 (sd = 37.6) months for the treatment group, compared with 18.9 (sd = 10.8) months for the control group, and this difference was highly significant ( $Z = 3.94$ ,  $p < .0001$ ) using the Cox life table regression model. Kaplan-Meier survival analysis indicated that the divergence in survival began at 20 months after entry into the study, or 8 months after the treatment intervention ended. These unexpected findings suggest that intensive psychosocial support affects the course of the illness, although the mechanism by which it does so is not clear.

1985

Balthazard, Claude G.; Woody, Erik Z. (1985). The 'stuff' of hypnotic performance: A review of psychometric approaches. Psychological Bulletin, 98, 283-296.

Reviews psychometric investigations into the nature of the processes that underlie hypnotic performance and examines issues that underlie psychometric investigations of hypnosis scales, such as the Stanford Hypnotic Susceptibility Scale. The issues addressed are dimensionality and the problem of difficulty factors, the interpretation of factorial dimensions, and componential alternatives to the factor analytic approach. It is argued that hypnotic performances are most likely overdetermined in that they reflect the combined influence of a plurality of processes. The relevance of various componential models, each reflecting a different contemporary theoretical perspective toward hypnosis, and some of the implications of such models for future research are discussed. (77 ref).

Silverman, Lloyd H. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Rejoinder to Oliver and Burkham and to Porterfield. Journal of Abnormal Psychology, 94 (4), 647-8.

Considers the replies of A. L. Porterfield (see PA, vol 73:11991) and J. M. Oliver and R. Burkham (see PA, vol 73:11985) to the critique of the present author (see PA, vol 73:12007). The original criticisms are seen as valid. A critical deficiency in the design of Porterfield and S. L. Golding's (see PA, vol 73:11992) study is viewed as disqualifying it as a fair attempt at replication. It is suggested that

although Oliver and Burkham's (see PA, vol 69:1571) study was well-designed, statements made in their write-up are unwarranted. (12 ref)

1983

Myers, S. A. (1983). The Creative Imagination Scale: Group norms for children and adolescents. International Journal of Clinical and Experimental Hypnosis, 31 (1), 28-36.

This study presented the responsiveness of 1302 children and adolescents (ages 8-17) to the Creative Imagination Scale (CIS) of Wilson and Barber (1978) and Barber and Wilson (1978/79). The normative features of CIS were highlighted in the data analysis. Since items on CIS have been found to be related, a MANOVA was used for the analysis. There were significant differences in both sex and age. Females at each age level, 8 through 17, scored higher on CIS than males of the same age. Ss of ages 9, 10, and 11 obtained the highest scores, but only differed significantly from the scores for 15-year-old Ss. The other age groups did not differ significantly from each other. In addition, the stability of CIS was confirmed. The author would recommend CIS for Ss 9 years old through adult years, however, CIS should be administered individually to Ss 12 and 15 years old, due to peer pressure.

Smith, Howard V.; Forrest, Derek W.; Sheehan, Eugene P. (1983). Suggested improvement, music, and the visual acuity of myopes: A reply.

NOTES

This is a reply to Wagstaff, G.F. suggested improvement of visual acuity: A statistical reevaluation. IJCEH, 1983, 31, 239-240. Here, the authors suggest yet a third way of analysing the data initially presented by Sheehan, Smith, & Forrest in 1982 (A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes, IJCEH, 30, 138-146).

Wagstaff, Graham F. (1983). Suggested improvement of visual acuity: A statistical reevaluation. International Journal of Clinical and Experimental Hypnosis, 31 (4), 239-240.

NOTES

This is a re-analysis of data presented by Sheehan, E.P., Smith, H.V., & Forrest, D.W. (1982), A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes. International Journal of Clinical and Experimental Hypnosis, 40, 138-146. "In sum, a more appropriate conclusion to be drawn from Sheehan et al.'s (1982) results is that suggestions for improving visual acuity have little effect, but listening to music actually appears to reduce sensitivity. This reinterpretation of Sheehan et al.'s (1982) result is purely a comment on their conclusions, not their methodology.

1981

Tellegen, Auke (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on 'Role of the feedback signal in electromyograph biofeedback: the relevance of attention' by Qualls and Sheehan. Journal of Experimental Psychology: General, 110, 217-226.

High and Low Absorption Ss differ in set rather than in capability for attending to external or internal stimuli, as Qualls and Sheehan suggest. Trait x Treatment interaction for Absorption illustrates concept of personality dispositions being inherently interactive functional units. Provides a content analysis of Absorption scale (subscales) and relates absorption to other constructs in psychology. "It is not the internal versus external focus per se that play a decisive role but the subject's experiential versus instrumental set. For example, with two treatment levels, one would expect to obtain an

Absorption x Treatment interaction even if both treatment conditions required an external attentional focus, as long as they contrasted an experiential and an instrumental set" (pp 223-224).

Yanchar, R. J.; Johnson, H. J. (1981). Absorption and attitude toward hypnosis: A moderator analysis. International Journal of Clinical and Experimental Hypnosis, 29 (4), 375-382.

2 factors which have been found to correlate to a small degree with susceptibility are (a) an individual's attitude toward being hypnotized and (b) an individual's capacity for subjective involvement in an experience (absorption). The present study was an attempt to replicate previous findings by Spanos and McPeake (1975) and to extend these findings to determine if there was a significant interaction between these 2 factors in their relationship to susceptibility. 99 Ss (65 females and 34 males) completed the absorption questionnaire of Tellegen (1979) and the attitude questionnaire of Barber and Calverley (1966). Their hypnotic susceptibility was assessed with the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Attitude and absorption were found to have small positive correlations with susceptibility, results which corroborate previous research. The multiple regression analyses indicated that there were no significant interactions between the factors of attitude, absorption, and sex.

1980

Bornstein, P. H.; Rychtarik, R. G.; McFall, M. E.; Winegardner, J.; Winnett, R. L.; Paris, D. A. (1980). Hypnobeavioral treatment of chronic nailbiting: A multiple baseline analysis. International Journal of Clinical and Experimental Hypnosis, 28 (3), 208-217.

3 highly hypnotizable Ss were administered a hypnobeavioral treatment package in an attempt to alleviate chronic nailbiting behavior. The combined hypnotic and behavioral procedures included standard induction and deepening techniques, motivation enhancement, time-projection, self-reinforcement, aversion-relief, coping self-instructions, and posthypnotic suggestion. A multiple baseline design across Ss was employed as a means of evaluating the treatment intervention. Results for all Ss indicated immediate and dramatic increase in fingernail lengths concomitant with the introduction of treatment. At 3-month follow-up, 1 S demonstrated a moderate reversal effect while the remaining 2 Ss continued to indicate substantial progress. These findings were discussed with regard to the efficacy of hypnobeavioral treatment strategies and utilization of single-case experimental designs in future hypnotherapy research.

O'Grady, K. E. (1980). The Absorption Scale: A factor-analytic assessment. International Journal of Clinical and Experimental Hypnosis, 28 (3), 281-288.

95 female and 53 male introductory psychology students were administered the Tellegen Absorption Scale (Tellegen & Atkinson, 1974); the Repression-Sensitization Scale (Byrne, Barry, & Nelson, 1963); the F Scale (Adorno, Frenkel-Brunswick, Levison, & Sanford, 1950); the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970); the Nowicki-Strickland Locus of Control Scale (Nowicki & Duke, 1974); and the Marlowe-Crowne Social Desirability Scale (Crowne & marlowe, 1964). A principal axis analysis of the inter-correlations indicated that 3 major factors could account for the bulk of variance among the 6 inventories. Inspection of the correlation matrix and the factor loadings showed that the Absorption Scale shared a quite modest amount of variance with the remaining scales, and that it appeared to represent a dimension entirely different than those found in the other measures. These results offer strong support to the notion that the Absorption Scale is tapping a relatively new personality dimension.

1978

Connors, J. R.; Sheehan, P. W. (1978). The influence of control comparison tasks and between-versus within-subjects effects in hypnotic responsivity. International Journal of Clinical and Experimental Hypnosis, 26, 104-122.

Type of experimental design (between- versus within-subjects) and type of control task were examined for their differential effects on the magnitude of objective and state report test scores associated with response to items on the Stanford Hypnotic Scale of Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). In an integrated program of work exploring design effects in hypnotic research, Ss in each of 7 comparison conditions that involved hypnosis and 4 separate comparison conditions that did not involve hypnosis were tested twice on successive occasions. Three of the control tasks used (waking, imagination, and imagination [alert] instruction) were counterbalanced with hypnosis to analyze possible order effects associated with hypnotic test conditions. Data indexed the patterns of between-versus within-subjects effects associated with standard control tasks and also highlighted the order effects that accompanied them. Imagination instructions, in particular, pose specific difficulties that require attention when Ss are tested as their own controls.

1976

Barber, Theodore Xenophon (1976). Pitfalls in human research: Ten pivotal points. Overview and recommendations. In Pitfalls in human research: Ten pivotal points.

#### NOTES

Be aware of underlying paradigm and how it influences every aspect of the research. Make assumptions more explicit. 2. Person who plans the study should be different from person who is responsible for data analysis. 3. Person who plans the study should not be person who serves as experimenter and collects the data. 4. Investigator should serve as "pilot" subject to gain insight into how the Ss view the experimental design, to tighten the design, and to change experimental instructions that are not clear to the Ss. 5. Use a tight experimental script or protocol that clearly specifies how the experimenter is to carry out each phase of the study, and that considers the various contingencies that may arise. 6. Give the experimenters sufficient supervised practice in implementing the protocol and in correctly and honestly recording the data. The experimenters should carry out pilot studies under supervision. 7. Understand the many kinds of data analyses that lead to misleading conclusions and the kinds of analyses that can be used appropriately with specified sets of data. 8. Judge the research on the validity of the design and procedures that are used to answer the questions that are posed rather than on the outcome or the results that are obtained. 9. Teachers should place much more emphasis on the value of carefully following the prescribed procedures and carefully and honestly recording the data. 10. Check often to see if the experimenters are faithfully implementing the experimental protocol and are carefully and honestly recording the data--e.g. by making tape recordings or video tapes, using one-way mirrors to observe, or by sending stooges, who give predetermined responses.

1971

Starr, Fay H. (1971). The remarriage of multiple regression and statistical inference: A promising approach for hypnosis researchers. American Journal of Clinical Hypnosis, 13, 175-179.

A multiple linear regression computer program is described as a general purpose procedure for the testing of hypotheses in hypnosis research. The claim is made, with supporting evidence, that virtually any hypothesis can be tested with the procedure, if the researcher's theory can be placed in the form of a predictive equation where one or more sources of information are used to predict some measure of

hypnosis. The hypothesis, stated in the null form, is applied algebraically as a restriction upon the predictive equation, thus yielding a second restricted, predictive equation. The squared multiple correlation coefficients of the two equations are compared in testing the hypothesis. Certain advantages, pedagogical and logical, are claimed, among which is the thought that if science is genuinely concerned with the description, modification, and prediction of behavior, here is a technique which keeps these goals in sight as hypotheses are used to test theories.

1964

Furneau, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## STRESS

Wood, Gary J.; Bughi, Stefan; Morrison, John; Tanavoli, Sara; Tanavoli, Sohrab; Zadeh, Homayoun H. (2003). Hypnosis, differential expression of cytokines by T-cell subsets, and the hypothalamo-pituitary-adrenal axis. American Journal of Clinical Hypnosis, 45 (3), 179-196.

Tested the hypothesis that hypnosis can differentially modulate T-cell subsets, and that this effect is mediated by changes in hypothalamo-pituitary-adrenal (HPA) mediators. Seven healthy, highly hypnotizable volunteers (aged 24-42 yrs) participated in 3 1-day sessions, a baseline and 2 intervention sessions. Hypnosis intervention entailed a standardized induction, suggestions for ego strengthening and optimally balanced functioning of the immune and neuroendocrine systems, and post-hypnotic suggestions for stress management and continued optimal balance of bodily systems. Blood samples were analyzed for T-cell activation and intracellular cytokine expression (Interferon [IFN]-gamma, Interleukin-2 [IL-2], Interleukin-4,) and HPA axis mediators (ACTH, cortisol, and beta-endorphin). The proportion of T-cells expressing IFN-gamma and IL-2 were lower after hypnosis. T-cell activation response to polyclonal stimulation was positively correlated with ACTH and beta-endorphin, while IFN-gamma expression was correlated with levels of cortisol. Further controlled studies utilizing hypnosis with patients in treatment are warranted in order to examine whether an altered T-cell response can be replicated in the presence of disease. (PsycINFO Database Record (c) 2003 APA, all rights reserved)

2002

Cardena, Etzel; Maldonado, Jose; Van der Hart, Onno; Spiegel, David (2002). Hypnosis (for posttraumatic conditions). [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.

## NOTES

Authors discuss how hypnosis can be used "to stabilize the patient by providing techniques to enhance

relaxation and establish cues to induce a calm state outside of the therapeutic context. Specific suggestions may also be used to enhance ego strength and a sense of safety, to contain traumatic memories, and to reduce or at least control better such symptoms as anxiety or nightmares. ... [and] to intensify the therapeutic relationship, which can then be used for therapeutic purposes. 2) In the second stage of working-through and resolving traumatic memories, various hypnotic techniques can be used to help pace and control the investigation, integration and resolution of traumatic memories. ... 3) Finally, the goals of the third stage include achieving a more adaptive integration of the traumatic experience into the patient's life, maintaining more adaptive coping responses, and furthering personal development. Hypnotic techniques can be helpful in providing strategies to intentionally focus and shift attention as necessary; they can also be helpful in self integration through, for instance, rehearsals in fantasy of a more adaptive self-image, of new activities, and so on" (Bulletin of Division 30, Psychological Hypnosis, Fall, 2002, Vol. 11, No. 3, P. 15).

Kiecolt-Glaser, Janice K.; Marucha, Phillip T.; Atkinson, Cathie; Glaser, Ronald (2001). Hypnosis as a modulator of cellular immune dysregulation during acute stress. Journal of Consulting and Clinical Psychology, 69 (4), 674-682.

To assess the influence of a hypnotic intervention on cellular immune function during a commonplace stressful event, the authors selected 33 medical and dental students on the basis of hypnotic susceptibility. Initial blood samples were obtained during a lower stress period, and a second sample was drawn 3 days before the first major exam of the term. Half of the participants were randomly assigned to hypnotic-relaxation training in the interval between samples. Participants in the hypnotic group were, on average, protected from the stress-related decrements that were observed in control participants' proliferative responses to 2 mitogens, percentages of CD3-super(+) and CD4-super(+) T-lymphocytes, and interleukin 1 production by peripheral blood leukocytes. More frequent hypnotic-relaxation practice was associated with higher percentages of CD3-super(+) and CD4-super(+) T-lymphocytes. These data provide encouraging evidence that interventions may reduce the immunological dysregulation associated with acute stressors. (PsycINFO Database Record (c) 2002 APA, all rights reserved) (journal abstract)

1998

Easterlin, Barbara L.; Cardena, Etzel (1998-99). Cognitive and emotional differences between short- and long-term Vipassana meditators. Imagination, Cognition and Personality, 18 (1), 69-81.

This study compared perceived stress and cognitive and emotional differences between two groups of Buddhist mindfulness [Vipassana] meditators. Nineteen beginning and twenty-four advanced meditators carried electronic pagers for five days and responded to daily random signals by completing an Experience Sampling form (ESF) containing items related to the dependent variables. As compared with beginners, advanced practitioners reported greater self-awareness, positive mood, and acceptance. Greater stress lowered mood and self-acceptance in both groups, but the deleterious effect of stress on acceptance was more marked for the beginners. These findings validate in a naturalistic setting some of the effects described in traditional Buddhist texts on mindfulness.

NOTES

"Meditation can be defined as the deliberate deployment of mental attention to obtain a particular patterning of consciousness. The aim of such control may be the stabilization of the stream of thought, greater relaxation, the attainment of an altered state, or the development of insights into the nature of mind [12]. Mindfulness meditation has sometimes been contrasted with concentration meditation as one of two main forms of meditation practice [13, 14]. The usual distinction is that mindfulness

involves opening awareness to all contents and processes of mind, whereas concentrative forms of meditation involve shutting out all stimuli extraneous to a single object of attention" (p. 70). Long-term meditators averaged 103 months and 85 days of retreat training. They did not differ from short-term meditators on measures of absorption, neuroticism, trait anxiety, or cognitive style; however they evidenced greater self-awareness and acceptance. The short-term meditators actually had more than a year of meditation experience so that differences between groups are not likely to be due to self-selection. The authors conclude that "meditation brings about sustainable changes in people's lives, above and beyond relaxation. ... [and] that greater conscious awareness through mindfulness techniques such as Vipassana meditation, increases acceptance, positive mood, and the ability to dispassionately observe one's mental states. These results have implications for clinical issues such as pain management and psychotherapy, in which acceptance and awareness are necessary ingredients for therapeutic change" (p. 78). JH

Wickramasekera, Ian E.; Kolm, Paul; Pope, Alan; Turner, Marsha (1998). Observation of a paradoxical temperature increase during cognitive stress in some chronic pain patients. Applied Psychophysiology and Biofeedback, 23 (4), 233-241.

A total of 224 chronic pain somatoform disorder patients without obvious pathophysiology or psychopathology were found to have colder hands than nonpatients. A paradoxical temperature increase (PTI) in response to a cognitive stressor (mental arithmetic) was noted in a subset of these chronic pain patients. Patients were defined as "PTI" responders if, during cognitive stress, an increase in digital temperature occurred over a prior eyes closed resting condition. It was found that 49.4% of males and 42.6% of females in a total sample of 224 patients demonstrated PTI. The PTI patients had significantly colder hands than non-PTI patients prior to stress. A concurrent SCL measure of sympathetic activation found no difference between the PTI and non-PTI groups either at baseline or during cognitive stress. It appears from this data that PTI is specific to the peripheral vascular system of these patients and may be a marker of psychophysiological dissociation or trauma blocked from consciousness.

1997

Enqvist, Bjorn; Fischer, Kerstin (1997). Preoperative hypnotic techniques reduce consumption of analgesics after surgical removal of third mandibular molars: A brief communication. International Journal of Clinical and Experimental Hypnosis, 45 (2), 102-108.

The effects of hypnosis in connection with surgery have been described in many clinical publications, but few controlled studies have been published. The aim of the present study was to evaluate the effects of preoperative hypnotic techniques used by patients planned for surgical removal of third mandibular molars. The patients were randomly assigned to an experimental (hypnotic techniques) or a control (no hypnotic techniques) group. During the week before the surgery, the experimental group listened to an audiotape containing a hypnotic relaxation induction. Posthypnotic suggestions of healing and recovery were given on the tape together with advice regarding ways to achieve control over stress and pain. The control group received no hypnotic intervention. Only one surgeon who was not aware of patient group assignments performed all the operations. Thirty-six patients in the control group were compared to 33 patients in the experimental group. Anxiety before the operation increased significantly in the control group but remained at baseline level in the experimental group. Postoperative consumption of analgesics was significantly reduced in the experimental group compared to the control group. Journal Abstract.

Faymonville, M. E.; Mambourg, P. H.; Joris, J.; Vrijens, B.; Fissette, J.; Albert, A.; Lamy, M. (1997). Psychological approaches during conscious sedation. Hypnosis versus stress reducing strategies: A prospective randomized study. Pain, 73 (3), 361-367.

Stress reducing strategies are useful in patients undergoing surgery. Hypnosis is also known to alleviate acute and chronic pain. We therefore compared the effectiveness of these two psychological approaches for reducing perioperative discomfort during conscious sedation for plastic surgery. Sixty patients scheduled for elective plastic surgery under local anesthesia and intravenous sedation (midazolam and alfentanil upon request) were included in the study after providing informed consent. They were randomly allocated to either stress reducing strategies (control: CONT) or hypnosis (HYP) during the entire surgical procedure. Both techniques were performed by the same anesthesiologist (MEF). Patient behavior was noted during surgery by a psychologist, the patient noted anxiety, pain, perceived control before, during and after surgery, and postoperative nausea and vomiting (PONV). Patient satisfaction and surgical conditions were also recorded. Peri- and postoperative anxiety and pain were significantly lower in the HYP group. This reduction in anxiety and pain were achieved despite a significant reduction in intraoperative requirements for midazolam and alfentanil in the HYP group (alfentanil: 8.7 +/- 0.9 microg kg(-1)/h(-1) vs. 19.4 +/- 2 microg kg(-1)/h(-1), P < 0.001; midazolam: 0.04 +/- 0.003 mg kg(-1)/h(-1) vs. 0.09 +/- 0.01 mg kg(-1)/h(-1), P < 0.001). Patients in the HYP group reported an impression of more intraoperative control than those in the CONT group (P < 0.01). PONV were significantly reduced in the HYP group (6.5% vs. 30.8%, P < 0.001). Surgical conditions were better in the HYP group. Less signs of patient discomfort and pain were observed by the psychologist in the HYP group (P < 0.001). Vital signs were significantly more stable in the HYP group. Patient satisfaction score was significantly higher in the HYP group (P < 0.004). This study suggests that hypnosis provides better perioperative pain and anxiety relief, allows for significant reductions in alfentanil and midazolam requirements, and improves patient satisfaction and surgical conditions as compared with conventional stress reducing strategies support in patients receiving conscious sedation for plastic surgery.

The effects of hypnosis, context reinstatement, and motivational instructions on accuracy of recall for factual information and facial recognition accuracy following a stressful event were assessed. None of the three techniques had a significant effect on factual memory or susceptibility to suggestion as assessed by true-false and multiple-choice tests. However, participants high in hypnotic susceptibility showed somewhat better memory on the true-false test, and hypnosis affected performance on the two photograph line-ups. In addition, hypnosis appeared to enhance facial recognition accuracy for participants who were low in anxiety, but not for those high in anxiety. Finally, there was evidence of a curvilinear relationship between self-reported anxiety at time of retrieval and facial recognition accuracy. -- Journal Abstract

Sapp, Marty; Farrell, Walter C. Jr.; Johnson, James Jr.; Kirby, Renee Sartin; Pumphrey, Khyana K. (1997). Hypnosis: Applications for rehabilitation counselors. Journal of Applied Rehabilitation Counseling, 28 (2), 43-49.

This article describes how the rehabilitation counselor can employ hypnosis. Hypnosis can be employed as a useful tool in working with individuals who have experienced a disability. It can be used to reduce anxiety and stress related to returning to work; it can help clients learn to reduce stress and to modify themselves, even if their environments cannot change; and it can be used to increase the self-esteem of clients with disabilities.

Wickramasekera, Ian; Pope, Alan T.; Kolm, Paul (1996). On the interaction of hypnotizability and negative affect in chronic pain: Implications for the somatization of trauma. Journal of Nervous and Mental Disease, 184 (10), 628-635.

The high risk model of threat perception predicts that high hypnotizability is a risk factor for trauma-related somatization. It is hypothesized that high hypnotizability can increase experimentally induced threat or negative affect, as measured by skin conductance level, in a linear or dose-response manner. This hypothesized interaction of hypnotic ability and negative affect was found in a consecutive series of 118 adult patients with chronic pain symptoms. Larger increases in skin conductance levels during cognitive threat were significantly related to higher levels of hypnotizability. In addition, individuals with high hypnotizability retained higher skin conductance levels than individuals with low hypnotizability after stress. The clinical implications of the interaction of hypnotizability and negative affect during threat perception and delayed recovery from threat perception are discussed in terms of cognitive mechanisms in the etiology and therapy of trauma-related dissociative disorders.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners" course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

Wickramasekera, Ian (1995). Somatization: Concepts, data and predictions from the high risk model of threat perception. Journal of Nervous and Mental Disease, 183, 15-23.

83 consecutive patients with chronic somatic complaints seen prior to therapy were tested on the 8 risk factors of the High Risk Model of Threat Perception. The model identifies 3 predisposing factors (hypnotic ability, catastrophizing, and negative affectivity) that amplify the probability that 2 triggering variables (major life change and minor hassles) will generate psychological or somatic symptoms unless the impact of the triggers and predisposers are buffered. 32% were high and 28% were low on hypnotic ability, which is more highs and lows than would be expected in a normal population. In the high and low hypnotic ability somatizers, the distribution of somatic and psychological symptoms is significantly different from the moderate group. Counterintuitively, hypnotic ability and major life change were orthogonal to all of the other risk factors.

1994

Marmar, Charles (1994, October). Peritraumatic dissociation and PTSD. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Following trauma there is a tendency to more dissociation and vulnerability. We completed 3 recent studies. In 1991 Spiegel and Cardena presented review that found: 1. Early childhood abuse is associated with profound dissociation. 2. Repeated abuse is more important and profound than single

abuse for producing dissociation. 3. Dissociation in childhood and perhaps in adulthood has been viewed as an adaptive attempt to cope, to take distance in time, place, and person; does that confirm long term adaptation, or is it a risk factor? 4. Dissociation is not limited to childhood trauma; it occurs in adults exposed to overwhelming trauma. 5. In adults with PTSD, there is an increase in hypnotizability, which is interesting because most Axis I disorders are associated with reduced hypnotizability.

Peritraumatic dissociation is defined as an immediate dissociative response to trauma. We developed a scale that robustly captures the phenomena. The scale has both self report and rater versions.

Authors used this measure in many studies: combat trauma, accident trauma, victims of terrorism. The scale predicts who will be a PTSD patient 5 months later, even after controlling for initial response in first week (how many symptoms they had) and for the degree of trauma.

**Study 1 (Am. J. Psychiatry, June 1994)**

Studied 251 male Vietnam Theater Veterans, mean age 41 at time of study. Had high combat exposure and high risk for PTSD. Rater version of Peritraumatic Dissociative Experiences Questionnaire was used. There was a lot of variability in response, but one underlying dimension resulted from the factor analysis (and this factor accounts for 40- 50% of the variance).

Author hypothesized that those who have a greater response to trauma will have more problems later, and would predict stress symptoms but not necessarily psychopathology. The score correlates highly with: Mississippi Scale for PTSD .51; Horowitz's scales; Impact of Events Scale (Intrusion .53, Avoidance .60); MMPI derived PTSD .42; Dissociative Experiences Scale (recall of time of event) .41; and War Zone Stress Exposure .48.

MMPI-2 clinical scales had almost no correlation with this scale (using partial r's, and controlling for MMPI-2 PTSD scores).

Prediction of PTSD case classification from this scale, after taking into consideration other predictors: War Zone Stress War Zone Stress, DES War Zone Stress, DES, PDEQ-RV Kappa is .63

You know much more about who will be a case taking into consideration the DES and DEQ than just knowing the amount of stress. Peritraumatic stress is strongly associated with PTSD but not with psychopathology.

**Study 2**

Replicated Study 1 using 77 female veterans. Females Ss were more highly educated, older, more likely to be in a health profession role (trauma was working with death and dying, exposure to sex abuse and harassment, given even less support than the males). Yet women have had a better course of recovery, though rates were the same (30% developed PTSD after return from war).

Correlation with Impact of Event Scale (Intrusion .41 and Avoidance .40), but correlations with MMPI-2 are low (and with other PTSD scales are lower than with the males). Hierarchical multiple regression models show R squared doesn't increase with DES but does with PDEQ to Intrusion (less so to Avoidance).

This study replicates the same pattern, with peritraumatic dissociation strongly related to PTSD symptoms years later, and not to general psychopathology, even after accounting for the nature of the stress and for the degree of dissociation.

**Study 3**

After the 1989 Loma Prieta earthquake in Northern California we studied emergency services personnel involved in the collapse of a freeway in Oakland. 1000 rescue workers were involved. The workers (police, fire personnel, paramedics, CALTRANS road workers) involved one I-880 cohort and a replication cohort, with two control groups (smaller scale incidents like attending a child drowned in swimming pool, removing someone from a wrecked auto). In all 3 samples, 90% were male.

What characteristics of the person or their exposure account for which workers go on to cope and which will later have PTSD symptoms? Predictors: IES-I IES-A IES-H M-PTSD SCL-GSI.

Variables most associated with problems 1.5 to 3 years afterward were years of experience, exposure, adjustment (measured by the Hogan Personality Inventory measure of adjustment), social support, DES, and PDEQ. Regression analyses used the best predictors first: forced exposure, adjustment, years experience, locus of control, social support. For Intrusion scores there were modest but significant increments by the DES and PDEQ; for avoidance scores, there were very significant contributions (.072 and .078).

There is a robust relationship between the DES and PDEQ and how much hyperarousal there is afterward (.104 and .110 %). DES measures a trait, PDEQ measures a state; yet the latter continues to contribute even after accounting for variance by the DES.

The PDEQ also has been found to predict among rape victims who will have PTSD. This was replicated in different cultures and different language groups.

**FUTURE DIRECTIONS.** Authors plan to examine people with moderate to high exposure after the L.A. earthquake. They gathered personality and coping style data on the rescue workers to answer the question: what characterizes those who are more vulnerable to dissociative tendencies during trauma? There are treatment implications: given that those who develop the most profound response are the ones who will have more PTSD later, what are the implications?

Uncovering the trauma that caused the PTSD is often associated with re-dissociation. There is a question of how this should be managed.

The authors will attempt to see if they can predict in advance if a person would dissociate if exposed. Do those who dissociate have more childhood abusive environments? Hypothesis: there may be an interaction of childhood trauma and combat trauma that produces PTSD.

Spiegel, David (1994, October). Acute stress disorder and dissociation in DSM-IV. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

#### NOTES

Starting with the theme on hysteria introduced by Frankel (1994), and Cardena (1994) on trance disorder [Spiegel notes that] in the West our problem is of individuality, so fragmentation of personality is our disorder. There is cultural content in the delusions of schizophrenia, and cultural content in dissociative disorders. We have further evidence of trauma being involved in dissociation. Trauma is the experience of being made into an object, and the core problem is helplessness (not anxiety or fear), and discontinuity in experience. Dissociation permits people to retain control of their minds when they have lost control of their bodies. The discontinuity of dissociation reflects the discontinuity of experience.

[This presentation included the material presented at an earlier meeting and is not reported in full here.]

The difficulty is the problem of lack of identity rather than too many identities.

Wickramasekera, Ian (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. American Journal of Clinical Hypnosis, 37, 22-33.

The electrodermal response to cognitive threat of un hypnotized female patients with somatic symptoms and high on both hypnotic ability and neuroticism (H-H) was found to be significantly higher ( $p < .01$ ) than that of a matched group of female patients moderate on hypnotic ability and low on neuroticism (M-L). On verbal report the H-H and the M-L groups did not differ, but they were significantly different on a measure of self-deception (L scale) or repression. The above findings are consistent with predictions from the High Risk Model of Threat Perception (HRMTP), which states that people in the H-H group are both chronically and acutely more reactive to threat than the people

in the M-L group. This finding may have important theoretical, clinical, and financial implications for the diagnosis, therapy, and prevention of somatization disorders seen in primary medical care.

Wickramasekera, Ian; Pope, Alan T.; Kolm, Paul (1994, August). Chronic pain, hypnotic ability and skin conductance level. [Paper] Presented at the annual meeting of the American Psychological Association, Los Angeles.

The High Risk Model predicts that high hypnotic ability is a risk factor for the development of stress related psychophysiological disorders. It was hypothesized that greater threat perception as measured by skin conductance level (SCL) would be associated with higher levels of hypnotic ability. In a consecutive series of 118 adult patients with chronic pain symptoms, larger increases in SCL during cognitive stress were significantly related to higher levels of hypnotic ability. In addition, high hypnotic ability individuals retained higher SCL than low hypnotic ability individuals after stress. The clinical implications of high hypnotic ability for threat perception and recovery from thereat perception are discussed in terms of cognitive mechanisms in the etiology and therapy of chronic stress related disorders. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall 1994, Vol. 3, No. 3.)

1993

Spiegel, David; Koopman, Cheryl; Classen, Catherine; Freinkel, Andrew (1993, October). Dissociation, trauma, and DSM-IV Acute Stress Disorder. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

This represents a progress report on the research in our laboratory, which is different from traditional approaches that link childhood trauma to current problems. We say if there is a link between dissociation and trauma, one should find the symptoms in people who have trauma.

### Earthquake Research:

They examined data from Loma Prieta earthquake; Stanford had \$164 million damage. Oct 1989. [Presents data that he has presented before.] There was a drop in dissociative symptoms over 4 months. McFarlane found that numbing was the best predictor of later PTSD symptoms, and we find that too.

Most trauma researchers have focused on anxiety because that is what they are interested in; they have ignored dissociative experiences, because such symptoms are designed not to be noticed.

Andrew Frankel and Cheryl Koopman studied 15 journalists who saw Robert Alton Harris' execution-volunteers who reported on the execution, to whom the event did not personally threaten. 40% reported depersonalization experiences, 2/3 felt detached or estranged from others, 27% had problems remembering everyday activities, etc. Dissociative symptoms were especially high in TV journalists, lowest in radio journalists, and in the middle range in newspaper reporters.

### Oakland Fire Research:

Koopman & Classen looked at immediate psychopathology and later problems. They studied people of low, medium, and high exposure as defined by distance from the fire, which related strongly to both dissociative and anxiety symptoms.

There were strong relationships between the Mississippi PTSD scale scores and anxiety and dissociative symptoms (.50 and .59 respectively). People who reported recent life stress in the intervening period had higher PTSD and dissociative symptoms. The combination of initial dissociation and subsequent stress was additive in their relationships to PTSD.

People who had higher dissociation scores tended to do higher risk things (e.g., cross police barriers). This may explain how clinicians see patients who appear to get themselves re-victimized.

### Law Office Shooting Research:

We followed up on the 1993 shooting of 14 people (8 fatally) in a law office in San Francisco. Survivors filled out dissociation questionnaires in the office (N = 36). They had high scores on the Impact of Event Intrusion Scale. The more they thought they or colleagues were in danger, the higher their scores on anxiety and dissociation measures and on Impact of Event scale.

**Dissociation Definition:**

These studies led to a project, with Etzel Cardena, in trying to revise DSM-III-R, which doesn't capture the symptoms [of post traumatic dissociation]. In DSM-IV there will be the diagnosis of 308.3 Acute Stress Disorder, characterized as: A. Same as DSM-III-R, except it doesn't require that the trauma be "unusual" B. Requires 3 of 5 dissociative symptoms. C, D, and E are classic dissociative symptoms F, G, and H are delimiting factors (e.g., causes significant impairment, length of time, not due to other factor).

Also, the multiple personality disorder (MPD) diagnosis has been changed to Dissociative Identity Disorder. The problem for these patients is not in having more than one personality, but not having one functioning personality.

Walker, Leslie G.; Johnson, Vanessa C.; Eremin, Oleg (1993). Modulation of the immune response to stress by hypnosis and relaxation training in healthy volunteers: A critical review. Contemporary Hypnosis, 10, 19-27.

**NOTES**

They review literature on modulation of the immune response to stress with relaxation and/or hypnosis, and raise the following questions and conclusions: 1. It is not clear which dependent variables should be studied. 2. There is a need to clarify which independent variables are responsible for particular effects. 3. There is the question of moderator variables. 4. There is room for many more case studies, including single case research (given the uncertainties discussed and the costs of controlled studies). 5. There is evidence that pathways exist whereby the brain could alter or modulate aspects of immune reactivity. [They describe assigning 20 healthy volunteers randomly to experimental or control group. The experimental group received 3 weeks progressive relaxation and cue-controlled relaxation training, with hypnosis before exposure to an experimental stressor--video recording and playback of a doctor-patient role play. They evaluated not only the biochemical and immunological effects of relaxation training but also the effect in modulating the biological responses to stress.] 6. They concentrated on studies with healthy volunteers because there are already known immunological changes in patients who have tumors. However people with a healthy immune system may have a natural limit in how much they can improve their immune response with interventions like hypnosis.

Wickramasekera, Ian (1993, August). Some psychophysiological and clinical implications of the coincidence of hypnotic ability and neuroticism during threat perception. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

**NOTES**

Although not addressing hypnosis specifically, this is a comprehensive review of literature on memory for negative emotional events relevant to issues of hypnosis and memory. The final conclusion is that emotional events are indeed remembered differently than neutral or ordinary events and are well retained with respect to the event itself and concerning central, critical detail (not peripheral detail). Such memories seem less susceptible to forgetting. There is evidence for dissociation between memory for emotional information and memory for specific event information. There is also evidence of amnesia or memory impairment effects after high-arousal events, with memory increasing as more time passes after the event. The functional amnesia effects are probably due to an interaction between

altered encoding operations and the specific retrieval circumstances aiding consciously and unconsciously controlled reconstructive processes. There is little evidence to support Loftus' contentions that emotional stress is bad for memory.

Claridge, Karen (1992). Reconstructing memories of abuse: A theory-based approach. Psychotherapy, 29, 243-252.

The recovery of traumatic memories is an important part of therapy with survivors of abuse. This article describes a conceptual framework for memory reconstruction based on Horowitz' (1986) theory of stress response syndromes. The client's history of intrusive symptoms provides a way to anticipate the nature of the trauma, even when no memory of it exists. Ongoing intrusive symptoms are used to retrieve memory fragments, and their emotional impact is used to build the client's emotional tolerance. Emphasis is placed on preparing for memories by identifying what the client will need when the memories return, building coping skills, and beginning to restructure cognitions at the "what if" stage of remembering. Case material is used to illustrate.

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

Mittleman, K. D.; Doubt, T. J.; Gravitz, Melvin A. (1992). Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water. Aviation, Space & Environmental Medicine, 63, 689-695.

The efficacy of self-induced posthypnotic suggestion to improve thermogenic responses to head-out immersion in 25 degrees C water was evaluated in 12 males. An online computerized system permitted the change in body heat storage to be used as the independent variable and immersion time as the dependent variable. Two one- hour hypnotic training sessions were used. There were no differences in rates of heat production, heat loss, mean skin temperature, or rectal temperature between control and hypnotic immersions. Individual hypnotic susceptibility scores did not correlation with changes in thermal status. Ratings of perceived exertion during exercise were similar for both immersions, but perceived sensation of cold was lower during the second rest period of the hypnotic immersion. Three subjects used images of warm environments during their hypnotic immersion and lost heat at a faster rate than during control immersions. These results indicate that brief hypnotic training did not enhance the thermogenic response to cool water immersion.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Perry, Nancy W. (1992, Summer). How children remember and why they forget. The Advisor (Published by American Professional Society on the Abuse of Children), 5 (3), 1-2; 13-16.

## NOTES

'My memory is the thing I forget with.' (a child's definition, cited in Grossberg, 1985, p. 60)" (p. 1).

"Unlike the simpler forms of memory retrieval, free recall is strongly age-related... the recall skills of preschool children develop gradually" (p. 2). "...in some cases, younger children can provide more accurate information than adults (Lindberg, 1991). For example, if an event is particularly salient (as sometimes happens in cases of trauma), recall may be exceptionally good (Brainerd & Ornstein, 1991; Lindberg, 1991)" (p. 13).

"Children have limited ability to use memory strategies. For this reason, children often know more than they can freely recall" (p. 13).

"The use of rehearsal as a memory strategy is almost automatic for adults. ... Ten-year-olds also commonly use rehearsal to aid memory. Young children, however, have not mastered rehearsal (Harris & Liebert, 1991).

"Another memory strategy is imagery, which involves (1) mentally picturing a person, place, or object, or (2) visually associating two or more things that are to be remembered. Children develop imagery much later than other memory strategies. Indeed, some people never learn this memory strategy (Flavell, 1977)" (p. 13).

"... stress alone may not impair memory processes. Indeed, stress can lead to arousal, heightened attention, and improved encoding (Deffenbacher, 1983). However, stress that results from intimidation may lead to either impairment in encoding or problems in recalling or reporting memories" (p. 14).

"Because the effect of suggestion on material that has been well encoded tends not to be significantly different across age groups (Cohen & Harnick, 1980), it may be that younger children's inferior performance on suggestive tasks results from inferior encoding" (p. 15).

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. Hospice Journal, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special

consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

Wickramasekera, Ian (1992, August). Hypnotic ability as a risk factor for psychopathology and pathophysiology. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

Eighty-three patients with psychophysiological disorders seen prior to therapy were tested on the seven risk factors of the High Risk Model. Thirty-two percent of these patients were high on hypnotic ability, and hypnotic ability was unrelated to all of the other six risk factors. Mean social support and coping skills were significantly below the norm. Mean catastrophizing, negative affect (neuroticism), major life change and minor hassles were significantly above the norm. There are positive and significant correlations between hassles, negative affect and catastrophizing. There are also positive and significant correlations between coping skills and number and level of satisfaction with social support. There are negative and significant correlations between coping skills, catastrophizing, negative affect and hassles. There are also negative and significant correlations between satisfaction with social support, catastrophizing, and hassles. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

#### 1991

Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

Palan, Bhupendra M.; Lakhani, Jitendra D. (1991). Converting a 'threat' into a 'challenge': A case of stress-related hemoptysis managed with hypnosis. American Journal of Clinical Hypnosis, 33 (4), 241-247.

A 24-year-old patient was treated using hypnosis for chronic repeated episodes of hemoptysis. The symptom episodes were related to academic examinations (perceived as a threat by the patient). Clinical examinations and laboratory investigations failed to indicate an organic cause for hemoptysis. He did not respond to empirical treatment trials. These negative findings suggested the psychosomatic nature of the illness. We used hypnotherapeutic ego-strengthening and guided-imagery approaches. This reduced his acute anxiety but failed to check hemoptysis. Use of explorative hypnotic dreaming revealed an emotional trauma as the possible cause of origin of the symptoms. We restructured the trauma experience during hypnotic regression. We advised him to skip the upcoming examination and conducted a total of six therapeutic sessions. The patient continued using self-hypnosis throughout the follow-up period of 3 years during which he remained symptom free and achieved remarkable academic progress. He now perceives an examination as a challenge.

Sapp, Marty (1991, August). The effects of hypnosis in reducing anxiety and stress in adults with neurogenic impairment. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

A repeated measures design was utilized to investigate the effects of hypnosis in reducing anxiety and stress in 16 adults with neurogenic impairment. Seven sessions were used to measure the efficacy of hypnosis. Session one was used to obtain a baseline level of anxiety and stress and to initiate hypnosis. Sessions three and six were used to obtain repeated measures of these emotions. Sessions two, four, and five were the treatment sessions. Session seven was used to conduct a four week follow-up on the effects of hypnosis. Levels of anxiety were measured by the State-Trait Anxiety Inventory, while stress was measured by the State-Trait Anger Expression Inventory. The results indicated a statistically significant decrease in anxiety and stress. Hypnosis also significantly increased levels of self-esteem. Finally, follow-up data demonstrated that the treatment gains were maintained. NOTES 1: NOTES

Hypnotizability was not related to treatment outcome. The average Barber Susceptibility Scale score was 3, which indicates that the subjects were fairly low in hypnotizability level.

Spiegel, David (1991, August). New directions in traumatic stress research. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

#### NOTES

Trauma is the experience of being made into an object of someone else's rage. It is a sudden discontinuity in experience: our physical and mental state can be changed radically. The experience of loss of control is what is most horrifying, more than fear of death. Guilt, (blaming oneself) helps deny the loss of control. People who experience trauma distance from the information but the cortex maintains the traumatic memories.

Author reviewed literature on effective interventions with trauma victims. 1. Harbor & Pennebaker: Contrast how earthquake victims can talk about it but rape victims often are isolated. The importance of having someone listen raises the question of usefulness of only writing about the trauma. 2. Greenberg: Studied 103 trauma cases; employed a clever methodology, using 2 control groups (but it is difficult for the imaginary control group to be free of associating to their own traumas). I believe the health findings, but it troubles me that there were intrusions (thoughts); the control group utilization [of health services?] went up. 3. Kilpatrick: It is important not to blame the victim for being traumatized. But there may be some people who for sociological or other reasons do not get out of dangerous situations. 4. Terri Orbach: There is a process of "going public" about the trauma, like in Alcoholics Anonymous disclosures. Trauma victims create an account and they go to someone else to tell about it.

Summary of what seems important about treatment: There are three means of working with trauma, with thinking, writing, and talking. If you just think but don't talk, assault rate goes up (Pennebaker); and if you don't talk with someone else you feel worse physically. In simply writing about the trauma, there may be an increase of mental intrusions, or avoidance. What seems to be beneficial is not just making sense to oneself about the experience cognitively, but the traumatized person must get feedback from another individual that they are not transformed as a person.

Stanton, Harry E. (1991). The reduction in secretarial stress. Contemporary Hypnosis, 8, 45-50.

30 secretaries from a large business firm were matched on their stress thermometer scores and one member of each pair was allocated at random to either an experimental group or a control group which discussed stress management procedures. The experimental group had two treatment sessions in

which they learnt a technique of induction, deepening and ego-enhancement which included (1) physical relaxation; (2) mental calmness; (3) disposal of unwanted mental and physical 'rubbish'; (4) removal of a negative barrier; and (5) enjoyment of a special place. The stress thermometer was administered on two further occasions, one immediately after completion of the second training session and one as a follow-up 2 months later. In addition, on these two occasions, subjects completed anecdotal reports, recording their impressions of the experiment. After completion of this first stage of the study, control group secretaries experienced the same two treatment sessions as had the experimental group. Results indicated that stress level was significantly lower both immediately after treatment and at the two-month follow-up.

Witz, Marylou; Kahn, Stephen (1991). Hypnosis and the treatment of Huntington's Disease. American Journal of Clinical Hypnosis, 34, 79-90

Describes two cases treated with a wide variety of hypnotic interventions. One was treated for 9 years and the other for 10 sessions. Hypnotic techniques and daily self-hypnosis appeared to ameliorate both physical and psychological difficulties, thereby enhancing the quality of life that remained for the patients. They noted that the increased sense of control that both patients experienced seemed to undercut the cycle of physical symptoms exacerbating psychological symptoms and these in turn increasing physical symptoms. The sense of control over physical symptoms clearly reduced anxiety and depression over the inevitable course of the disease, thereby facilitating tension reduction and overall adjustment to the disease. This reduced stress level may have in turn affected the disease itself. What is unmistakable is that the quality of life was greatly enhanced.

1990

Ader, Robert; Felton, David; Cohen, Nicholas (1990). Interactions between the brain and the immune system. In Cho, Arthur K.; George, Robert; Blaschke, Terrence (Ed.), null (30, pp. 561-602). Palo Alto, CA: Annual Reviews Inc..

## NOTES

(From the SUMMARY) "Without attempting to cover all the literature, we have used stress effects and conditioning phenomena as illustrations to point out that behavior can influence immune function. We have also described data indicating that the immune system can receive and respond to neural and endocrine signals. Conversely, behavioral, neural, and endocrine responses seem to be influenced by an activated immune system. Thus, a traditional view of immune function that is confined to cellular interactions occurring within lymphoid tissues is insufficient to account for changes in immunity observed in subhuman animals and man under real world conditions.

"These data question seriously the notion of an autonomous immune system. ... The immune system is, indeed, capable of considerable self-regulation, and immune responses can be made to take place in vitro. The functions of that component of adaptive processes known as the immune system that are of ultimate concern, however, are those that take place in vivo. There are now compelling reasons to believe that in vivo immunoregulatory processes influence and are influenced by the neuroendocrine environment in which such processes actually take place ... . The immune system appears to be modulated, not only by feedback mechanisms mediated through neural and endocrine processes, but by feedforward mechanisms as well. The immunologic effects of learning, an essential feedforward mechanism, suggest that, like direct neural and endocrine processes, behavior can, under appropriate circumstances, serve an immunoregulatory function in vivo. Conceptually, the capacity to suppress or enhance immune responses by conditioning has raised innumerable questions about the normal operation and modifiability of the immune system via neural and endocrine processes.

"We do not yet know the nature of all the channels of communication between the brain and the immune system or the functional significance of the neural and endocrine interrelationships that have been established....

"This integrated circuitry has extensive ascending and descending connections among the regions cited. These regions also share many similarities. They are sites intimately involved in visceral, autonomic, and neuroendocrine regulation. The cortical and limbic forebrain regions mediate both affective and cognitive processes and may be involved in the response to stressors, in affective states and disorders such as depression, in aversive conditioning, and in the emotional context of sensory inputs from the outside as well as the inside world. From an immunologic perspective, these regions are the sites in which lesions result in altered responses of cells of the immune system; they are the regions that respond to immunization or cytokines by altered neuronal activity or altered monoamine metabolism; and they are the regions that possess the highest concentration of glucocorticoid receptors and link some endocrine systems with neuronal outflow to the autonomic and neuroendocrine systems. Thus, this circuitry is the major system of the CNS suspected to play a key role in responding to immune signals and regulating CNS outflow to the immune system" (pp. 587-589).

Andrews, Vivian H.; Hall, Howard R. (1990). The effects of relaxation/imagery training on recurrent aphthous stomatitis: A preliminary study. Psychosomatic Medicine, 52, 526-535.

Recurrent aphthous stomatitis (RAS) is one of the most common diseases of the oral mucosa. Although etiology remains unknown, immunological and emotional disturbances have been implicated in the pathogenesis of RAS. No consistently effective therapeutic regimen has been found. The present study investigates the voluntary modulation of RAS employing hypnosis-like relaxation/imagery training procedures. A multiple baseline design was used to evaluate change in frequency of ulcer recurrence. The role of psychological distress, ratings of perceived pain, and hypnotizability in the treatment of RAS were also examined. Results suggest that the relaxation/imagery treatment program was associated with a significant decrease in the frequency of ulcer recurrence for all subjects. Psychological distress was examined for relationship to ulcer recurrence and symptomatic changes with treatment, but no pattern was found. Finally, little support was found for the role of high hypnotic ability in the treatment of RAS.

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

## NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream,

a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.]

"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).

"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.

"The finding that blunterners experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunterners are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunterners experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the

current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

Evans, Frederick J.; Stanley, R. O. (1990). Psychological interventions for coping with surgery: A review of hypnotic techniques. Australian Journal of Clinical and Experimental Hypnosis, 18, 97-105.

Illness, hospitalization, and surgery pose many severe stresses for many patients, to the extent that their ability to understand and cope with what is happening may be significantly reduced. Many of these stresses result from the nature and significance of patients' surgical procedures and post-operative treatment. This paper reviews the range of psychological interventions aimed at helping patients cope with pre- and post-operative treatment regimens. The range and content of hypnotic interventions are examined in detail. It is concluded that more rigorous research studies are required to determine the relative effectiveness of different types of interventions and to evaluate the effects of patients' psychological characteristics on the effectiveness of these interventions.

Pekala, Ronald J.; Forbes, Elizabeth J. (1990, Spring). Subjective effects of several stress management strategies: With reference to attention. Behavioural Medicine, 39-43.

This study assessed variations in reported attentional experience associated with several stress management techniques (hypnosis, progressive relaxation, deep abdominal breathing) and baseline (eyes closed) as a function of hypnotic susceptibility. Three hundred nursing students experienced the stress management conditions and afterward completed a self-report inventory, the Dimensions of Attention Questionnaire (DAQ), in reference to each condition. The DAQ quantifies 12 aspects of attentional experience in a reliable and valid manner. The results demonstrated that progressive relaxation, hypnosis, and deep abdominal breathing are characterized by differences in reported attentional experience that are further moderated by an individual's hypnotic susceptibility. The clinical implications of these results are discussed.

#### NOTES

"Significant main effects were found for conditions for perspicacity, absorption, and control, with progressive relaxation associated with increased perspicacity and absorption, but with decreased control vis-a-vis hypnosis.

"Significant main effects for groups were found for perspicacity, locus, direction of attention, absorption, control, and vigilance. ... [Post-hoc comparisons] revealed that high susceptibles (vis-a-vis low susceptibles) reported increased perspicacity, absorption, a more inward-focused attention, more feelings of being out of their bodies, and decreased control and vigilance. High-mediums were also different from lows (in the same direction) for all of the above comparisons except for direction of attention. Low-mediums, along with lows, were different from highs for absorption and control.

"Significant interactions between conditions and groups were found for absorption, control, and vigilance. Whereas low susceptibles reported significantly increased absorption but significantly decreased control and vigilance during progressive relaxation than during hypnosis, high susceptibles reported no significant differences between relaxation and hypnosis for absorption, control, or vigilance" (p. 41).

The authors describe the differences found for deep abdominal breathing on p. 41.

"The interaction effects suggest that the experience of hypnosis and progressive relaxation are moderated by a person's hypnotic susceptibility--low susceptibles experience significantly greater absorption, but decreased control and vigilance during progressive relaxation than during hypnosis, although there are no such differences for high susceptibles. This suggests that progressive relaxation may be a 'better' procedure than hypnosis to use with low susceptibles, at least if one wants to increase absorption and decrease vigilance and control" (p. 42).

The authors also note that "deep abdominal breathing is associated with increased 'calmness of mind,' in reference to a baseline condition, as demonstrated by increased attentional detachment and equanimity, and decreased vigilance and density (the 'amount' of thoughts going through one's mind)" (p. 42).

Somer, E. (1990). Brief simultaneous couple hypnotherapy with a rape victim and her spouse: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38 (1), 1-5.

This paper presents a case involving a rape victim and her emotionally affected spouse. Although the assault occurred before the couple met, the husband was too upset to concentrate when the victim wanted to share her rape-related feelings, nor could he provide the much needed empathy and support. This, apparently, was due to his difficulties in handling his own rage. Simultaneous couple hypnotherapy was used to allow the victim to share her experience under conditions safe for both her and her spouse. As he imagined in trance the rape account described by his age-regressed wife, he learned to identify his emotions and experience them in a controlled manner. During subsequent sessions, the husband was encouraged to include himself in his wife's abreaction and reshape the traumatic scene for both of them. The husband's rescuing behavior and the expressions of violent anger towards the perpetrator had several positive consequences. Not only did they change the abandonment component of the victim's traumatic memory, but they also helped the husband deal in better ways with his own feelings of anger. It also provided the couple with a helpful coping mechanism they later effectively applied under different circumstances.

1989

Palan, B.M.; Chandwani, S. (1989). Coping with examination stress through hypnosis: An experimental study. American Journal of Clinical Hypnosis, 31, 173-180.

Fifty-six volunteer medical students participated in three groups balanced for number of subjects, performance at last examination, and hypnotizability. The hypnosis and waking groups attended eight group sessions once a week with general ego- strengthening and specific suggestions for study habits, with a ninth session of age progression and mental rehearsal. Subjects in these two groups practiced self-suggestions (in self-hypnosis or waking respectively) daily for the study period of 9 weeks. The control group experienced sessions of passive relaxation induced by light reading for the same period of time. The hypnosis group improved significantly in coping with examination stress, but there was no significant change in performance on examinations by any of the groups.

Sanders, B.; McRoberts, G.; Tollefson, C. (1989). Childhood stress and dissociation in a college population. Dissociation, 2, 17-23.

Two studies are reported demonstrating that individual differences in dissociation in college students are positively related to differences in self-reported stressful or traumatic experiences in youth. In Study 1, differences in the degree of stress or unpredictable physical violence experienced in childhood or early adolescence were shown to be related to scores on the Dissociative Experiences Scale (DES). Study 2 replicated these relationships and extended them to another dissociation measure, the Bliss

scale. Study 2 also demonstrated that both dissociation measures correlate positively with reported physical and psychological abuse. These findings for a nonclinical population are discussed in relation to the etiology of dissociation in clinical groups.

Soskis, D. A.; Orne, E. C.; Orne, M. T.; Dinges, D. F. (1989). Self-hypnosis and meditation for stress management: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37, 285-289.

In a 6-month follow-up study, telephone interviews were conducted with 31 male executives who were taught either a self-hypnosis or meditation exercise as part of a stress-management program. Use of and problems with the 2 exercises were similar, with the percentage of Ss using the techniques falling over 6 months from 90% to 42%. The exercises were used primarily for physical relaxation, refreshing mental interludes, aiding sleep onset, and stress-reduction. Problems with the exercises chiefly involved difficulty in scheduling even brief uninterrupted practice times and discomfort with the techniques. The incorporation of these issues into the clinical teaching of self-hypnosis may be useful.

Stanton, Harry E. (1989). Hypnosis and rational-emotive therapy--a de-stressing combination: A brief communication. International Journal of Clinical and Experimental Hypnosis, 37 (2), 95-99.

It has been suggested that teacher stress might be reduced through cognitive restructuring which is aimed at improving the rationality of their thinking. To test this hypothesis, 40 high school teachers were paired on their level of reasonable thinking, operationalized in terms of scores on the Teacher Idea Inventory (Bernard, Joyce, & Rosewarne, 1983), and allocated at random to one of 2 groups. They also completed the Face Valid Stress Test. The experimental group participated in 4 weekly treatment sessions involving a hypnotic induction and suggestions derived from key elements of Rational-Emotive Therapy. These focused on the reduction of what Ellis (Ellis & Grieger, 1977), the originator of this treatment, calls "irrational thinking." The control group spent the same amount of time discussing stress reduction methods. Both the Face Valid Stress Test and the Teacher Idea Inventory were re-administered at the end of this period and again 12 months after conclusion of the experiment. Results indicated that both the experimental and control groups significantly reduced their levels of irrational thinking and stress, although the former's improvement was more marked, particularly at the 12-month follow-up.

Wickramasekera, Ian (1989). Enabling the somatizing patient to exit the somatic closet: A high-risk model. Psychotherapy: Theory, Research and Practice, 26 (4), 530-544.

Problems in establishing a therapeutic alliance make somatizing patients poor candidates for psychotherapy. A logical analysis is presented of the conspiracy of silence between the somatizing patient, the medical doctor, and the health insurance industry regarding the psychosocial factors contributing to somatization. Alternatives are sought to repeated biomedical tests and therapies that are clinically unproductive and iatrogenic. Two psychophysiological pathways are proposed that are promising to reduce the distance between the medical doctors' and the psychologists' procedures. The new profile of illness has produced a paradigm shift with implications for an expansion of the definition of the word "physician".

1988

Tsushima, W. T. (1988). Current psychological treatments for stress-related skin disorders. Cutis, 42, 402-404.

Surveys current methods used by psychologists in the management of stress-related skin disorders, including hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive behavioral therapy. These techniques offer promise in the treatment of certain dermatologic conditions, but the limited amount of well-controlled and replicated studies of their use suggests that caution be taken in their application.

1987

Bongartz, Walter (1987, October). Influence of hypnosis on white blood cell count and urinary level of vanillyl mandelic acid. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

They hypothesized that hypnosis benefits to immunology are due to alterations in white blood cell counts (WBC). Found that (1) blood samples before and after hypnosis with relaxation scenes led to significant decrease in WBCs compared to watching film of Mesmer or doing mental arithmetic, and (2) Vanillyl Mandelic Acid also was reduced.

After physical exercise, video game, or reading, within 20', the WBCs return to pre-relaxation levels, i.e. they hadn't left the bloodstream. Key to understanding this result: only 50% of WBCs are in circulation, and others adhere to vessel walls; the experience of hypnotic relaxation leads to less sympathetic nervous activation and less epinephrine or hormonal response. WBCs also increased over a day period with mental arithmetic, but remained the same with hypnosis.

This research is only preliminary and exploratory.

Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

Shertzer, C. L.; Lookingbill, D. P. (1987). Effects of relaxation therapy and hypnotizability in chronic urticaria. Archives of Dermatology, 123, 913-916.

15 patients with chronic urticaria of 7.8 years' average duration. Compared with baseline and control session values, the hypnosis session provided relief of pruritus as measured by 3 self-report parameters. There was no change in the number of hives. All Ss were given a standard test for hypnotizability. Assuming that the results were not biased by their preceding relaxation sessions, we determined that 6 Ss were hypnotizable and nine were non hypnotizable. Ss in both groups improved symptomatically, but hypnotizable Ss had fewer hives and became more symptomatic during the control (testing and history taking) session. Hypnotizable Ss also more frequently related stress as a

causative factor. At a follow-up examination five to 14 months after the completion of the experimental sessions, six patients were free of hives and an additional seven reported improvement.

1986

Cerny, M. (1986). Hypnosuggestive interventions in emotional stress and in stress disorders. Activitas Nervosa Superior, 2, 141-143.

This paper represents a review of results using the PSA technique (Posthypnotic Suggestion evoked by Autostimulation) as a means of protection against stress. The best results were obtained in Ss with high susceptibility. This fact limits the practical use of the PSA method. However, this method can serve as a model approach in another more exact study of psychophysiological self-regulatory mechanisms in relation to coping with stress.

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

Wickramasakera, Ian (1986). A model of people at high risk to develop chronic stress-related somatic symptoms: Some predictions. Professional Psychology: Research and Practice, 17, 437-447.

Certain measurable high-risk factors that predispose people to develop functionally based somatic disorders are identified. These risk factors compose a multidimensional model that encompasses variables involved in the predisposition, the precipitation, and the buffering of stress-related symptoms. These high-risk factors are (a) high or low hypnotic ability, (b) habitual catastrophizing cognitions and pessimistic belief systems, (c) autonomic lability or neuroticism, (d) multiple major life changes or multiple minor hassles over a short period of time, and (e) a deficit in support systems or coping skills or both.

1985

Eichelman, Burr (1985). Hypnotic change in combat dreams of two veterans with posttraumatic stress disorder. American Journal of Psychiatry, 142 (1), 112-114.

Presents the cases of 2 veterans (aged 57 and 37 yrs) whose recurrent and traumatic combat dreams were dispelled with hypnosis and the dream substitution technique. This technique was based on the hypothesis that incorporation of hypnotically rehearsed dreams into nocturnal dreams would demonstrate to Ss that they had control over nocturnal dream content. Dream substitutions were rehearsed in hypnotic trance and subsequently dreamed at night; afterward, Ss' original traumatic dreams ceased. (8 ref).

Gottschalk, Louis A. (1985). Hope and other deterrents to illness. American Journal of Psychotherapy, 39, 515-524.

Reviews animal and human research demonstrating that events during early development influence vulnerability to physical and mental illness. In addition, effectiveness of coping methods used to deal with problems of living can affect susceptibility to illness. The intervening mechanisms between stressful life experiences and illness appear to involve physiological homeostasis and immune competence.

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimeditation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

Krenz, Eric W. (1984). Improving competitive performance with hypnotic suggestions and modified autogenic training: Case reports. American Journal of Clinical Hypnosis, 27, 58-63.

Although traditionally trainers of athletes have emphasized physiological refinements for the optimal performance of complex motor skills, research has revealed that heightened levels of stress and anxiety may adversely affect performance. As a result, many athletic training programs, taking into consideration the complex interrelationship of the mind and the body, include "mental training" in an attempt to reduce the negative effects of excess stress. These programs have incorporated various psychological interventions such as post hypnotic suggestions, sensory conditioning, and mental imagery and rehearsal. Modified Autogenic Training, a teaching model based on Standard Autogenic Training, synthesizes the strengths of hypnotic techniques to achieve optimal athletic performance. Athletes trained in these concepts can manage unexpected incidences during competition. The concepts of Modified Autogenic Training are described and four case studies are reported.

Stam, Henderikus J.; McGrath, Patricia A.; Brooke, Ralph I. (1984). The effects of a cognitive-behavioral treatment program on temporomandibular pain and dysfunction syndrome. Psychosomatic Medicine, 46, 534-545.

Sixty-one patients, clearly diagnosed as suffering from temporomandibular pain and dysfunction syndrome (TMPDS), were randomly assigned to one of three groups, (1) hypnosis and cognitive coping skills, (2) relaxation and cognitive coping skills, or (3) a no-treatment control group. All patients were evaluated with a standard hypnotic susceptibility scale prior to treatment. The two treatment groups received four weekly sessions of their respective treatments. Patients in the hypnosis and relaxation groups reported equivalent decrements in pain, abnormal sounds in the temporomandibular joint, and

limitations of jaw mobility. Hypnotic susceptibility was significantly correlated with reductions in reported pain for the treatment groups. Patients' age and the duration of pain prior to treatment were not related to treatment outcome. Patients who dropped out of treatment had fewer limitations in jaw movement but did not differ on any other variable from patients who remained in treatment. These findings are discussed in relation to the hypothesis that TMPDS is a stress related muscular pain and dysfunction.

1982

Hall, Marian D. (1982-83). Using relaxation imagery with children with malignancies: A developmental perspective. American Journal of Clinical Hypnosis, 25 (2-3), 143-149.

Developmental theory has been the foundation for this program of relaxation-imagery therapy with its goal of increasing the efficacy of immune mechanisms, thus increasing the survival rate of children with malignancies and/or improving the comfort and quality of their lives. Three basis constructs--the impact of social stress, the positive development of attachment and the negative effects of separation and loss, and the stages of concept formation relating to the functioning of the human body, the processes of disease and death--are basic approaches to the use of imagery-relaxation as an integral part of a comprehensive care plan.

Stoyva, J. M.; Anderson, C. (1982). A coping-rest model of relaxation and stress management. In Goldberger, L.; Breznitz, S. (Ed.), Handbook of stress: Theoretical and clinical aspects (pp. 745-763). New York: The Free Press.

## NOTES

"Patients with psychosomatic or stress linked disorders are likely to show signs of high physiological arousal, and they are likely, under stress, to react strongly in the symptomatic system and to show evidence of being deficient in the ability to shift from the coping to the rest mode (e.g., slowness of habituation to, and recovery from, stressful stimulation). A corollary inference is that such patients ... show activity in the symptomatic system for a higher percentage of the time that [sic] do normal subjects. We suggest that this defect in the capacity to shift to a rest condition is the principal reason that various relaxation procedures have so often proved successful in the alleviation of stress related symptoms" (p. 748).

The authors refer to a number of different stress management procedures. Among those associated with primary focus on the rest phase they include: Relaxation training (progressive relaxation, autogenic training, EMG feedback, meditation [Zen, TM]), Specific biofeedback (hand temperature, electrodermal response [EDR], EMG from particular muscle group), and Systematic desensitization. Among those associated with primary focus on coping phase are: Assertiveness training, Social skills retraining and motor skills retraining, Self-statements, Imagery (Guided waking imagery, autogenic abreaction, covert reinforcement and covert sensitization, behavior rehearsal). These various procedures may reflect three dimensions or aspects of the stress response, with some addressing physiology and others addressing cognition or behavior change.

"Rachman (1978) ... found it useful to divide the phenomenon of fear into physiological, cognitive, and behavioral components. Similarly, Davidson and Schwartz (1976) conceptualized relaxation as consisting of somatic, cognitive, and attentional components. Phillips (1977) argued that pain, such as headache pain, can be viewed as consisting of cognitive, behavioral, and physiological aspects (and that, consequently, we should not expect high correlations between headache pain and a particular physiological measure such as forehead EMG level). ...

"... In discussing contemporary studies of dreaming, they [Stoyva and Kamiya (1968)] proposed that there is no single, totally valid indicator of dreaming as a mental experience. Instead, there are several

imperfect indicators of the dream experience--verbal report, rapid eye movements, and certain electroencephalographic (EEG) stages. ... Discrepancies among the indicators can serve to generate hypotheses" (p. 749).

The authors discuss different ways of retraining the capacity to rest: relaxation training (including biofeedback, etc.), systematic desensitization; and of reshaping the coping response: assertiveness training, social skills and motor skills retraining, self-statements, imagery techniques; and discuss controllability. These notes cover only a very small part of their extensive review, the material most relevant to hypnosis and suggestion.

"Although imagery techniques are often employed by stress management therapists, one approaches this area with ambivalence. In part, this uneasiness springs from the unsettling awareness that imagery techniques have been embraced by a freewheeling assortment of lay psychologists such as Emil Coue, Dale Carnegie, and Norman Vincent Peale, not to mention a diverse throng of contemporary 'mind controllers' and self-styled healers. A more serious source of uneasiness is ignorance of the specific processes at work. What are the mechanisms by which imagery affects the stress response?" (p. 756).

"There is intriguing recent evidence that simply the illusion of control may exert beneficial effects. Stern, Miller, Ewy, and Grant (1980) noted that subjects who were led to believe by means of bogus information feedback that they were successfully lowering their heart rates showed a reduction in stress type symptoms, especially those of a cardiovascular nature. It seems possible that the feeling of control may be an important part of what we have called 'placebo responding.' Stoyva (1979b) suggested that this phenomenon is probably not a unitary entity but, rather, a cluster of processes, of which the feeling of developing control over factors affecting one's disorder is an important and potentially manipulable component of therapeutic interventions" (p. 758).

Woolfolk, Robert L.; Lehrer, Paul M.; McCann, Barbara S.; Rooney, Anthony J. (1982). Effects of progressive relaxation and meditation on cognitive and somatic manifestations of daily stress. Behaviour Research and Therapy, 20 (5), 461-467.

Compared meditation and progressive relaxation with self-monitoring control as treatments for symptoms of stress. 34 Ss were assigned to either the progressive relaxation, the meditation, or the self-monitoring control group and were given 5 sessions of training. All Ss self-monitored stress symptoms throughout the study and had their behavior rated weekly by a spouse/roommate. Results show that the progressive relaxation and mediation treatments significantly reduced stress symptomatology over time.

1981

Fling, Sheila; Thomas, Anne; Gallaher, Michael (1981). Participant characteristics and the effects of two types of meditation vs. quiet sitting. Journal of Clinical Psychology, 37 (4), 784-790.

Randomly assigned 61 undergraduate volunteers to Clinically Standardized Meditation (CSM), quiet sitting (SIT), or wait list1 and 19 others to Open Focus (OF) or wait list2. Ss were tested before training and again 8 weeks later. All groups but wait list2 decreased significantly on Spielberger's trait anxiety. All groups became nonsignificantly more internal on Rotter's locus of control. On the Myers-Briggs Type Indicator, meditation volunteers were more introverted than extraverted, intuitive than sensing, feeling than thinking, and perceiving than judging. All groups became more intuitive, approaching significance for CSM only. OF became significantly more extraverted than both CSM and SIT, and CSM significantly more so than wait list1. Practice time correlated with anxiety reduction for the combined treatment groups. More evidence was found for correlations of practice time and outcome with growth motivation than with either new experience motivation or expectancy of benefit.

Worthington, Everett L.; Shumate, Michael (1981). Imagery and verbal counseling methods in stress inoculation training for pain control. Journal of Counseling Psychology, 28 (1), 1-6.

Investigated 3 elements of stress inoculation training, a therapeutic package for helping clients control anxiety, anger or pain. 96 undergraduate females were tested twice for ice water tolerance. In a 3 design, the independent variables were the presence or absence of (a) pleasant imagery, (b) a conceptualization of pain as a multistage process, and (c) planned, explicit self-instructions. A multivariate analysis of covariance using the (transformed) pretest tolerance rating and 2 self-ratings of pain. Imagery users (Is) controlled their pain better than nonimagery users (NIs). There was a significant interaction of Imagery and Conceptualization. NIs had longer tolerance and less self-reported pain at withdrawal when they heard no conceptualization. The Is did not derive additional benefit from hearing the conceptualization. Self-instruction did not affect pain control. Results suggest that pleasant imagery effectively relieves pain and may account for much of the effectiveness of stress inoculation training. (23 ref)

1980

Puente, Antonio E.; Beiman, Irving (1980). The effects of behavior therapy, self-relaxation, and transcendental meditation on cardiovascular stress response. Journal of Clinical Psychology, 26 (1), 291-295.

#### NOTES

Compared Behavior Therapy (BT), self-relaxation (SR), transcendental meditation (TM), and a waiting-list control group (WL) on measures of cardiovascular and subjective stress response. Male and female respondents (N = 60) to an ad for therapy were evaluated in assessment sessions before and after treatment. The results indicate that BT and SR were more effective than either TM or WL in reducing cardiovascular stress response. These data were interpreted as resulting from therapeutic suggestion and positively reinforced client progress.

Reiser, Martin; Nielson, Michael (1980). Investigative hypnosis: A developing specialty. American Journal of Clinical Hypnosis, 23, 75-84.

#### NOTES

Author describes his involvement with the Los Angeles Police Department, using hypnosis for "enhancing the recall of key witnesses whose memories of the crime were poor" (p. 75). In 1975, the author and other experts in hypnosis trained 11 lieutenants and 2 captains to use hypnosis. The author describes the training program and a one-year demonstration project, during which volunteer witnesses and victims were interviewed by the hypnotist investigators. "In 77% of cases, important information was elicited that had not been available by routine interrogation. Approximately 16% of cases were solved with the aid of hypnosis" (p. 76). "Follow-up with the involved witnesses and victims has not revealed any instance of ill effects stemming from the hypnosis program, while 39.8% of the hypnosis subjects reported some relief or benefit resulting from the hypnosis session" (p. 77). Jean Holroyd

1978

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

Shipley, R. H.; Butt, J. H.; Horowitz, B.; Farbray, J. E. (1978). Preparation for a stressful medical procedure: Effect of amount of stimulus preexposure and coping style. Journal of Consulting and Clinical Psychology, 46, 499-507.

Anxiety during the stressful medical procedure of endoscopy was studied as a function of the number of prior viewings of an explicit preparation videotape and of repression-sensitization coping style. Sixty naive patients viewed a videotaped endoscopy either zero, one, or three times. Dependent measures included heart rate, behavioral ratings, tranquilizer required, and self-report. On each dependent measure, three viewings generally resulted in the least distress; one, more distress; and zero, the most distress. Most comparisons reached statistical significance. These results are interpreted as resulting from extinction and/or habituation of anxiety. The repression-sensitization factor interacted with heart rate change. Sensitizers showed a monotonic decrease in heart rate as a function of number of tape exposures. Repressors showed an inverted-U-shaped function, with one viewing producing the highest heart rate; this is interpreted as resulting from a disruption of repressing defenses by one tape exposure followed by extinction of fear by three exposures.

1977

Grant, Guy (1977). The psychophysiology and hypnotherapeutic management of cancer. Australian Journal of Clinical Hypnosis, 5, 35-49.

Reviews research on psychophysiology of cancer, effect of stress on host resistance, cancer prediction from personality traits, psychological theories of cancer aetiology, and psychological characteristics of patients with different types of neoplasms. The hypnotherapy of cancer patients is outlined in terms of its effect upon the malignancy, relief of discomfort, and psyche of the cancer patient. Recommends direction of hypnotherapeutic treatment of cancer patients.

Novaco, Raymond W. (1977). Stress inoculation: A cognitive therapy for anger and its application to a case of depression. Journal of Consulting and Clinical Psychology, 45 (4), 600-8.

Clinical interventions for anger disorders have been scarcely addressed in both theory and research in psychotherapy. The continued development of a cognitive behavior therapy approach to anger management is presented along with the results of its application to a hospitalized depressive with severe anger problems. The treatment approach follows a procedure called "stress inoculation," which consists of three basic stages: cognitive preparation, skill acquisition and rehearsal, and application practice. The relationship between anger and depression is discussed.

1976

Goleman, Daniel J.; Schwartz, Gary E. (1976). Meditation as an intervention in stress reactivity. Journal of Consulting and Clinical Psychology, 44 (3), 456-466.

Meditation and relaxation were compared for ability to reduce stress reactions in a laboratory threat situation. Thirty experienced meditators and 30 controls either meditated or relaxed with eyes closed or with eyes open and then watched a stressor film. Stress response was assessed by phasic skin conductance, heart rate, self-report, and personality scales. Meditators and the meditation condition habituated heart rate and phasic skin conductance responses more quickly to the stressor impact and experienced less subjective anxiety. Meditation can produce a psychophysiological configuration in stress situations opposite to that seen in stress-related syndromes. Research is indicated on clinical applications and on the process whereby meditation state effects may become meditator traits.

Smith, Jonathan C. (1976). Psychotherapeutic effects of transcendental meditation with controls for expectation of relief and daily sitting. Journal of Consulting and Clinical Psychology, 44 (4), 630-637.

Two experiments were conducted to isolate the trait-anxiety-reducing effects of transcendental meditation (TM) from expectation of relief and the concomitant ritual of sitting twice daily. Experiment I was a double-blind study in which 49 anxious college student volunteers were assigned to TM and 51 to a control treatment, "periodic somatic inactivity" (PSI). PSI was carefully designed to match the form, complexity, and expectation-fostering aspects of TM but incorporated a daily exercise that involved sitting twice daily rather than sitting and meditating. In Experiment 2 two parallel treatments were compared, both called "cortically mediated stabilization" (CMS). Twenty-seven volunteers were taught CMS1, a treatment that incorporated a TM-like meditation exercise, and 27, CMS2, an exercise designed to be the near antithesis of meditation. Results show 6 months of TM and PSI to be equally effective and 11 weeks of CMS1 and CMS2. to be equally effective. Differences between groups did not approach significance ( $p > .6$ ). The results strongly support the conclusion that the crucial therapeutic component of TM is not the TM exercise.

1974

Bloom, Richard F. (1974). Validation of suggestion-induced stress.

Sixty college men, divided into three equal groups, each attended two induced stress sessions in which their physiological, psychological and performance reactions were measured. Their responses were compared to determine if valid stress reactions could be induced through suggestion in an altered state (in this case, hypnosis), and also to determine the validity of such reactions if the subject had never before experienced that stress situation. It was demonstrated that valid stress reactions can be induced in an individual with the aid of suggestions, especially if the real stress situation has been experienced before. If no previous experience with that real situation exists, the subject still exhibits stressful reactions; however, the closest resemblance to real stress is found in the subjective or psychological measures, less similarity is found in the physiological measures, and the least similarity is found in the performance measures.

1973

Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)

## NOTES

Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2: This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)

1971

McAmmond, D. M.; Davidson, P. O.; Kovitz, D. M. (1971). A comparison of the effects of hypnosis and relaxation training on stress reactions in a dental situation. American Journal of Clinical Hypnosis, 13, 233-242.

## NOTES

Compared the effectiveness of relaxation, hypnosis, and a control condition in reducing in dental phobics the reaction to pressure-algometer stimulation and the injection of anesthesia. For subjects with high baseline skin-conductance levels, relaxation was most effective in reducing stress reactions. Hypnosis did not differ from the control condition. For subjects with a medium or low skin-conductance baseline, relaxation was not effective. The hypnosis group rated their treatment as most effective, and the controls rated their treatment as least effective. Five-month follow-up indicated that all subjects in the hypnosis group returned for dental treatment and that 5 of 10 in the control group and only 1 of the relaxation group returned for care.

1970

Bowers, Kenneth S.; Kelly, P. (1970). Stress, disease, psychotherapy, and hypnosis. Journal of Abnormal Psychology, 490-505.

Presents evidence for the importance of suggestion and hypnotic ability in the healing or amelioration of various somatic disorders. It is argued that even in some treatment interventions that are not explicitly hypnotic, suggestion and hypnotic ability may be hidden factors that help to promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

Evans, Michael B.; Paul, Gordon L. (1970). Effects of hypnotically suggested analgesia on physiological and subjective responses to cold stress. Journal of Consulting and Clinical Psychology, 35 (3), 362-371.

Relative effects of suggested analgesia and hypnotic induction were evaluated with regard to reduction of stress responses (self-report, heart rate, pulse volume) to the physical application of ice-water stress. Four groups (N = 16 each) of undergraduate female Ss, equated on hypnotic susceptibility, were run individually, receiving (a) hypnotic induction plus analgesic suggestion, (b) hypnotic induction alone, (c) waking self-relaxation plus analgesic suggestion, or (d) waking self-relaxation alone. The major findings were that suggestion, not hypnotic induction procedures, produced reductions in the self-

report of distress, and that the degree of reduction was related to hypnotic susceptibility in both "hypnotic and "waking" conditions. Neither suggestion nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of hypnotic phenomena, results are related to other literature, suggesting that an adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

1968

Nuland, William (1968). The use of hypnotherapy in the treatment of the postmyocardial infarction invalid. International Journal of Clinical and Experimental Hypnosis, 16 (3), 139-150.

DEALS WITH THE PSYCHOLOGICAL ASPECTS OF CONVALESCENCE AND REHABILITATION OF PATIENTS FOLLOWING CORONARY INFARCTION. THE FOCUS IS ON THE SITUATIONAL FACTORS WHICH THE PATIENT ENCOUNTERS DURING CONVALESCENCE THAT SERVE TO PROLONG AND REINFORCE THE INVALIDISM. IT IS CONCERNED ESPECIALLY WITH THE VALUE OF HYPNOTHERAPY AS COMPARED WITH OTHER PSYCHOTHERAPEUTIC METHODS IN TREATING THESE CASES. THE ANXIETY AND EMOTIONAL STRESS WHICH CAN BE RELIEVED THROUGH THE USE OF HYPNOSIS IS DIRECTED PRIMARILY TOWARD REDUCING EMOTIONAL TURMOIL WHICH RESULTS FROM THE CORONARY ATTACK WITH THE CONSEQUENT FEAR OF PHYSICAL ACTIVITY AND OF SUDDEN DEATH. SPECIFICALLY, HYPNOSIS IS USED EFFECTIVELY IN REASSURANCE, REEDUCATION, DESENSITIZATION, GUIDANCE, AND OTHER DIRECT SUPPORT TECHNIQUES IN ACCORDANCE WITH THE PATIENT'S SYMPTOMS AND NEEDS. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1958

Duncan, Irma W.; Dressler, Robert L.; Lyon-James, Sara; Sears, Alden B. (1958). The search for an index of hypnosis. Journal of Clinical and Experimental Hypnosis, 6 (2), 95-108.

NOTES

"Blood and urine samples were obtained from 18 university students at the beginning and end of two experimental sessions, one with and one without hypnosis. Some of the subjects relaxed during the sessions; others imagined or hallucinated a traumatic experience.

"Of a variety of measurements made, urinary volumes and 17-ketosteroids, the eosinophil count and psychogalvanometer recordings appear to give useful information about any changes due to the hypnosis. The biochemical changes caused by the experimentally produced emotions seem to depend on the individual and his past experience rather than the hypnosis. The data suggest that if the experience hallucinated is known to the subject, the biochemical changes indicate a relaxed state during the hypnosis. The psycho-galvanometer recordings may indicate an agitated state while the biochemical indices suggest a relaxed state" (pp. 106-107).

1954

Wheeler, William M.; Little, Kenneth; Dorcus, Roy M.; Clemens, Theodore L.; Sternberg, Thomas H.; Zimmerman, Murray C. (1954). The effects of psychological stress as measured by a decrease in the number of circulating eosinophiles. Journal of Clinical and Experimental Hypnosis, 2 (2), 130-135.

NOTES

"Summary and Conclusions. Eight healthy control subjects who had no history of allergic disorders

were run through a series of experimental conditions which were interposed between eosinophile counts taken at 8:00 a.m. and noon. In three of the situations a few additional 'normal' controls were added. Six patients diagnosed as having atopic dermatitis were studied in one of the hypnotic conditions, viz., suggested 'personal stress,' and four other atopics were exposed to a simulated murder.

"An analysis of the results indicated that 'normals' had significant differences in their eosinophile counts before and after a control run and hypnosis. However, direct reference to the raw data revealed an abnormally low average count before one of the intervening stresses which then rose more than 48% on the entire group by noon. The increase, which could hardly have been due to the experimental situation, created such a difference between the means of the hypnotic conditions, that a spurious significance level of greater than .05 but less than .01 was obtained. When the effects of this rather aberrant result were cancelled, we found that hypnosis, regardless of the specific suggestions employed, had some tendency to lower the eosinophile count. The trend was not great enough to be statistically significant.

"'Normals' also displayed a significant drop in eosinophiles in the other experimental situations which was most directly a function of their reaction to simulated murder. The dermatitic patients did not show significant differences in the two psychological stresses where they were studied. There did seem to be a tendency for them to respond in the same direction as the normals, but with less magnitude. Since some atopics did show an eosinophile response to external stress in this study and in another reported previously (3), it is concluded that a defect in the hypothalamus, higher brain centers, or the adrenal medulla could not be characteristic of all dermatitic patients. The behavior of the patient and control groups in the simulated murder condition was discussed" (pp. 134-135).

1953

Conn, Jacob H. (1953). Hypnosynthesis III. Hypnotherapy of chronic war neuroses with a discussion of the value of abreaction, regression and revivication. Journal of Clinical and Experimental Hypnosis, 1, 29-43. (Abstracted in Psychological Abstracts, 53: 6687)

Author's Summary - Three examples of chronic war neuroses which were successfully treated by hypnotherapy are presented. The clinical material would seem to indicate that the patient in the trance state is greatly influenced by the attitude and goal of the therapist and tends to produce the type of material which is expected of him. The protocols reveal that the hypnotized patient responds to a permissive, calm, attitude with relatively little emotional display, and by talking about harrowing war experiences in a matter-of-fact manner.

It would appear that merely to recall the traumatic experience without a personalized, constructive, emotional relation to a supporting, understanding therapist is of little therapeutic value. The crux of the therapeutic problem in every approach, whether it be narcosynthesis, narco-analysis, hypnosynthesis, or the hypnotic intensification of an emotion is to bring about the integration of unbearable experiences which previously had been dissociated and obliterated from memory or which automatically reappear and disrupt smooth ego functioning.

It is postulated that the hypnotic trance state provides a unifying, integrating inter-personal experience which is of value in the treatment of chronic war neuroses.

1947

Kaufman, M. R.; Beaton, L. (1947). A psychiatric treatment in combat. Bulletin of the Menninger Clinic, 11, 1-14.

NOTES

Describes use of hypnosis in treating "combat fatigue" in field conditions during the Pacific campaign

of WWII. Hypnosis was utilized for sleep and rest in tent hospitals in or near combat to avoid chemical sedation as well as for reliving and mastering traumatic events. The milieu was one of expectant recovery with patients pitching tents, digging foxholes and serving as litter bearers. Psychiatric admissions were 12.8% of the total with return to duty rates varying with intensity of combat and duration of campaign with over half returned to combat duty. Four detailed cases are reported.

## **SUBJECTIVE EXPERIENCE**

**2003**

Holroyd, Jean (2003). The science of meditation and the state of hypnosis. American Journal of Clinical Hypnosis, 46 (2), 109-128.

Two aspects of Buddhist meditation -- concentration and mindfulness -- are discussed in relationship to hypnosis. Mindfulness training facilitates the investigation of subjective responses to hypnosis. Concentration practice leads to altered states similar to those in hypnosis, both phenomenologically and neurologically. The similarities and differences between hypnosis and meditation are used to shed light on perennial questions: (1) Does hypnosis involve an altered state of consciousness? (2) Does a hypnotic induction increase suggestibility? It is concluded that a model for hypnosis should include altered states as well as capacity for imaginative involvement and expectations.

**2002**

Manmiller, Jessica L.; Kumar, V. K.; Pekala, Ronald J. (2002). Hypnotizability, creative capacity, creativity styles, absorption and phenomenological experience. [Paper] Presented at the annual meeting of the American Psychological Association, Chicago.

"The study investigated relationships between creative capacity, styles of creativity, hypnotizability, and absorption. Participants were 429 students enrolled in Introduction to Psychology classes. Students first completed questionnaires pertaining to creative capacity, creativity styles, and absorption (Tellegen's Absorption Scale). They were subsequently hypnotized using the Harvard Group Scale of Hypnotic Susceptibility and completed the Phenomenology of Consciousness Inventory. The pattern of results suggests that creative capacity is more closely related to absorption than hypnotizability. The support for P. G. Bowers' assertion that effortless experiencing while engaged in creative tasks and hypnotic tasks is a process that is common to both high creative and high hypnotizable subjects was weak. Hypnotizability was more strongly and negatively correlated with volitional control for suggestions experienced during hypnosis, than both absorption and creative capacity. Creativity styles of belief in unconscious processes, use of techniques, final product orientation (intrinsic/extrinsic) motivation, environmental control and behavioral self-regulation, and supersition were negatively correlated with volitional control (feeling of effortless experiencing) during hypnosis, but the correlations were small in magnitude" (Bulletin of Division 30, Psychological Hypnosis, Fall, 2002, Vol. 11, No. 3, P. 14).

**2001**

Gibbons, Don E. (2001). Experience as an art form: Hypnosis, hyperempiria, and the Best Me technique. San Jose CA: Authors Choice Press. ([[available online:] <http://www.iuniverse.com/bookstore/marketplace>))

## **NOTES**

The Best Me Technique is a procedure for constructing suggestions which incorporates many different dimensions of experience -- beliefs, emotions, sensations, thoughts, motives, and expectations -- for

maximum involvement and effectiveness. Best Me suggestions may be used with either hyperempiria, an alert induction based on suggestions of mind expansion and increased alertness and sensitivity, or with more traditional forms of hypnotic induction.

Pekala, Ronald J.; Kumar, V. K. (2001). Operationalizing trance I: Rationale and research using a psychophenomenological approach. American Journal of Clinical Hypnosis, 43 (3-4), 330-.

Reports an error in the article by R. J. Pekala and V. K. Kumar (see record 2000-00739-001). Two references were incorrectly printed: (1) Pekala, R. J., & Kumar, V. K. (1988). Phenomenological variations in attention across low, medium, and high hypnotically susceptible individuals. *Imagination, Cognition, and Personality*, 7, 303-314; (2) Forbes, E. J., & Pekala, R. J. (1996). Types of hypnotically (un)susceptible individuals as a function of phenomenological experience: A partial replication. *Australian Journal of Clinical Hypnosis*, 24, , 92-109. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

2000

Pekala, Ronald J.; Kumar, V. K. (2000). Operationalizing trance I: Rationale and research using a psychophenomenological approach. American Journal of Clinical Hypnosis, 43 (2), 107-135.

Despite the popularity of the term "trance" among clinicians to describe the subjective effects associated with being hypnotized, heretofore there has been no means to operationalize that definition. The authors present a rationale and psychophenomenological method to operationalize the term "trance" in terms of: (a) hypnotic depth, a quantitative measure of subjective trance assessed via a predicted Harvard Group Scale score, derived from regression analysis; and (b) "trance typology profiles," a qualitative differentiation of empirically derived (via cluster and discriminant analyses) categories of subjective trance experiences. The authors then discuss theoretical and clinical implications of this psychophenomenological approach for developing an operational definition of the concept of trance. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1999

Cardena, Etzel (1999, August). The ways to study anomalous experience. [Paper] Presented at the annual meeting of the American Psychological Association, Boston, Massachusetts.

In recent years, introspective inquiry has become an essential venue to explore states of consciousness and anomalous experience. Many recent reviews have coincided that introspective techniques to examine "one's own mental happenings," rather than to determine the cause of one's behavior, can be valid and reliable. Most limitations of introspective inquiry are also applicable to other content areas in psychology and include: forgetting, reconstruction errors/confabulation, verbal description difficulties, distortion through observation, substitution of inferences for observation, censorship, lack of independent verification, dissembling and social desirability, demand characteristics, and possible inaccessibility due to "state specific" memory. Careful attention to these potential pitfalls is warranted. Various methods (from the Greek etymology methodos for "way" or road) to study the contents of consciousness have been developed, including, phenomenological approaches, concurrent methods (thinking out loud, event recording, thought sampling, and depth ratings) and retrospective methods (diaries; interviews; content analysis; psychological tests; surveys and questionnaires; and case studies and life histories). Because every method has specific areas of application and limitations, an integration of various approaches should yield the most comprehensive view of anomalous experiences.

McConkey, Kevin M.; Wende, Vanessa; Barnier, Amanda J. (1999). Measuring change in the subjective experience of hypnosis. International Journal of Clinical and Experimental Hypnosis, 47 (1), 23-39.

The authors indexed the subjective experience of hypnosis through the use of a continuous behavioral measure of the strength of the participant's experience at the time of the suggestion. Specifically, subjects turned a dial to indicate changes in their experience of the suggested effect during that experience. Thirty-three high, 47 medium, and 28 low hypnotizable subjects were asked to use the dial during the suggestion, test, and cancellation phases of three hypnotic items: arm levitation, arm rigidity, and anosmia. The pattern of ratings differed according to the nature of the suggestion. Also, across the items, subjects who passed according to behavioral criteria experienced the suggested effect to a greater degree than those who failed. Notably, whereas the ratings of highs and mediums did not differ for any item, they differed from lows on all three items. The authors discuss the implications of these findings in terms of the potential for this method to provide insight into the experience of hypnosis.

1998

Eastwood, J. D.; Gaskovski, P.; Bowers, K. S. (1998). The folly of effort: Ironic effects in the mental control of pain. International Journal of Clinical and Experimental Hypnosis, 46 (1), 77-91.

During exposure to pain, participants who were engaged in hypnotic analgesia or stress inoculation provided pain reports every 5 s and 45 s, respectively. It was found that the frequency of pain reporting had a significant effect on participants' level of experienced pain. This finding is discussed in the context of important methodological implications for laboratory investigations of analgesia. Furthermore, preliminary evidence was obtained suggesting that high hypnotizables in hypnotic analgesia remained relatively undisturbed by frequent pain reporting. Based on Wegner's (1994) ironic process theory, it is argued that this pattern of results is inconsistent with theories of hypnosis that propose that hypnotized individuals intentionally engender responses while remaining unaware of their sustained, deliberate effort. The obtained pattern of results was, however, predicted from the dissociated control model of hypnosis (Bowers, 1990, 1992).

Kirsch, Irving; Milling, Leonard S.; Burgess, Cheryl (1998). Experiential scoring for the Waterloo-Stanford Group C Scale. International Journal of Clinical and Experimental Hypnosis, 46 (3), 269-279.

A scale is presented that assesses subjective experiences associated with the test suggestions contained in the Waterloo-Stanford Group C scale (WSGC), a group adaptation of the Stanford Hypnotic Susceptibility Scale: Form [C] (SHSS:C). This scale, along with the standard behavioral scoring system of the WSGC, was given to 926 students at the University of Connecticut. Normative data from this sample indicate that the experiential scoring scale is both reliable and valid as a measure of suggestibility. It is suggested that it may be useful to supplement behavioral scoring with experiential scoring when the WSGC is used.

1997

Hillig, Justine A.; Holroyd, Jean (1997-98). Consciousness, attention, and hypnoidal effects during firewalking. Imagination, Cognition and Personality.

Subjective experiences of individuals who walked on hot coals during a firewalking ceremony were investigated. This study extended and partially

supported an investigation reported by Pekala and Ersek in this Journal [1]. Twenty-three participants completed retrospective questionnaire assessments concerning their subjective experiences while walking on hot coals. Results from twelve participants were compared with the participants' own experiences during a baseline condition. The data suggested that attention during firewalking is significantly more "one-pointed" than during a baseline condition, and that consciousness may be characterized as more "hypnoidal" than during a baseline condition. Walking on hot coals was further characterized by trends toward reporting increased altered awareness, altered experience, and absorbed attention. Participants who developed a greater degree of blistering reported significantly greater hypnoidal effects during the firewalk than those who developed a lesser degree of blistering.

Weitzenhoffer, Andre M. (1997). Hypnotic susceptibility: A personal and historical note regarding the development and naming of the Stanford Scales. International Journal of Clinical and Experimental Hypnosis, 45 (2), 126-143.

Certain misleading, if not inaccurate, allegations that have been made regarding the foundations of the Stanford scales are corrected. No special meaning was intended when the scales were designated susceptibility scales. A retrospective examination, however, indicates that grounds existed for making certain differentiations. SHSS:C and RSPS:I and RSPS:II should more appropriately have been designated as suggestibility and depth scales. On the other hand, whereas SHSS:A and SHSS:B also assess depth of hypnosis, they include a feature that permits using the obtained depth as a measure of hypnotic capacity and a predictor of future hypnotic performance. The possibility of using the same measure, suggestibility, to assess hypnotic responsiveness in dissimilar contexts may have been partially responsible for the confusing variety of labels that have been attached to what in the past has appeared to many to be one and the same thing. Further confusion more recently has been introduced by researchers and clinicians who have used the term depth, previously and conventionally attached to assessments based on observed overt responses, in reference to now certain subjectively based assessments.

1996

Cardena, Etzel (1996). "Just floating on the sky:" A comparison of hypnotic and shamanic phenomena. In Quekelberghe, R. V.; Eigner, D. (Ed.), Yearbook of cross-cultural medicine and psychotherapy 1994 (pp. 85-98).

Despite the vastly different cultural contexts of hypnosis and shamanism, a comparison of the phenomenology of the two is warranted.

The author proposes that the two types of very hypnotizable individuals, one exhibiting vivid imagery and the other showing diminished memory and control, corresponds to the classical distinction between soul journey and spirit possession . Other cognitive traits, developmental histories and alternate experiences of hypnotic virtuosos and shamans imply other similarities. The resemblance between hypnotic and shamanic phenomenology strongly suggests a universal disposition that is independent of culture. Western culture should acknowledge, respect and study the potentials and risks of this ability.

Kumar, V. K.; Pekala, Ronald J.; Cummings, James (1996). Trait factors, state effects, and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 44 (3), 232-249.

This study examined the relationship of 15 trait (e.g., absorption, ego-permissiveness) and 21 phenomenological variables (assessed by the Phenomenology of Consciousness Inventory) with performance on the Harvard Group Scale of Hypnotic Susceptibility, Form A. Factor analyses

suggested three trait factors (absorption-permissiveness, general sensation seeking, and social desirability) and five state factors (dissociated control state, positive affect, negative affect, attention to internal processes, and visual imagery). The factors correlated to hypnotizability were absorption-permissiveness, dissociated control, positive affect, and attention to internal processes. In predicting hypnotizability, the amount of variance accounted for by the trait factors was approximately 9%; an additional 22% was accounted for by state factors. The interactions did not account for any additional variance in predicting hypnotizability.

Pekala, Ronald J.; Forbes, Elizabeth J. (1996, August). Types of hypnotically (un)susceptible individuals as a function of phenomenological experience: Towards a typology of hypnotic types. [Paper] Presented at the annual meeting of the American Psychological Association, Toronto, Canada.

Nursing students (N = 194) experienced the Harvard Group Scale of Hypnotic Susceptibility, in which was embedded a 2-min sitting quietly interval subsequent to the eye catalepsy item but prior to the 'counting out' sequence. After the Harvard Scale subjects completed the Phenomenology of Consciousness Inventory (PCI) in reference to the sitting quietly interval embedded in the hypnotic induction ceremony. Participants were divided into low and high susceptible groups. K-means cluster analysis of the subjects' responses to the PCI revealed three groups of subclusters for the high susceptibles. These results partially replicated two prior studies. Cluster analyses were then completed across all subjects, resulting in nine different cluster groups. These groups had different patterns of phenomenological experiences that cut across individual subjects' actual Harvard Scale scores. Implications of the above for (a) working with clients who may not score that high on standard behavioral measures of hypnotizability (such as the Harvard), or (b) understand how hypnosis 'works,' were discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Fall, 1996, Vol. 5, No. 3.)

1995

Gearan, Paul; Schoenberger, Nancy E.; Kirsch, Irving (1995). Modifying hypnotizability: A new component analysis. International Journal of Clinical and Experimental Hypnosis, 43 (1), 70-89.

The effects of the Carleton Skills Training Program (CSTP) on hypnotizability were compared to those of a modified training program in which instructions for physical enactment of the response were omitted. After training, subjects in the original CSTP reported an increase in the extent to which they intentionally enacted suggested behaviors. In contrast, subjects in the modified training program reported increased fantasy without voluntary physical enactment. Nevertheless, both training programs increased behavioral and subjective responsiveness to suggestion, and there were no significant differences in response enhancement between the two programs. Across conditions, increases in behavioral and subjective responses to suggestion were correlated with increased use of fantasy. In contrast, increases in enactment were correlated only with compliance. The modified training program is recommended as a means of enhancing suggestibility with less likelihood than the original CSTP of engendering compliance.

Repka, Renee J.; Nash, Michael R. (1995). Hypnotic responsivity of the deaf: The development of the University of Tennessee Hypnotic Susceptibility Scale for the Deaf. International Journal of Clinical and Experimental Hypnosis, 43 (3), 316-331.

The purpose of these two studies was to develop and test a measure that assesses the hypnotic responsivity of deaf individuals. The University of Tennessee Hypnotic Susceptibility Scale for the Deaf (UTHSS:D) is a signed, videotaped version of a standard hypnotic induction with 12 standard

suggestions. Experiment 1 compared the behavioral and subjective hypnotic responsivity of deaf and hearing individuals using the UTHSS:D and the Field Depth Inventory (FDI), respectively. As compared to hearing subjects, deaf participants were found to be less responsive to hypnosis when assessed behaviorally (UTHSS:D) and equally responsive to hypnosis when assessed subjectively (FDI). Experiment 2 undertook a more comprehensive examination of the hypnotic responsivity of deaf individuals, using hearing individuals as controls. Three dimensions of hypnosis responsivity were assessed: behavioral (UTHSS:D), subjective (FDI), and interpersonal (Archaic Involvement Measure). Additionally, correlates of hypnotic responsivity (absorption, attitudes, expectations) were examined for the two groups. In Experiment 2, no significant differences were found between the deaf and hearing participant groups on any measures of hypnotic responsivity or on any measure of the correlates of hypnotic responsivity.

Woody, Erik Z. (1995, November). Trying, not trying, and trying not to try. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

In the "classic suggestion effect" the behavior of a hypnotized person following a suggestion is experienced as nonvoluntary. So alterations of experience are important to understand. We can think of it as a misattribution: which cues lead subjects to misattribute their behavior, etc.

A different view is to see it as how information is processed (neodissociation theory). There are two views of dissociation to consider: 1. Behavior is voluntary, but that voluntariness is blocked from awareness. (The S is trying but doesn't know it consciously.) This is a barrier model of dissociation. The S lacks information about self agency. Bowers calls it a theory of dissociated experience. 2. Underlying control of behavior is altered (not so governed by executive control) and the subject is correct when they say they are not trying. Bowers called this a theory of dissociated control.

A persistent problem is that these two theories of dissociation are incomplete sketches. But cognitive neuroscientists and experimental psychopathologists have recently become interested also, rapidly developing and independently developing the same two theories.

Bowers and I stated that the theory presented by Norman (Norman?) and Shallice is similar to dissociative control theory. When a response is habitual, a lower system called contention scheduling can do it; if response is more complex, a higher control supervisory system involving unique information like goals is available, modulating the lower control system. Volition and how it is experienced depends on the nature of the supervisory system. When it is not [or when it is?] modulating or monitoring the contention scheduling process, one experiences will.

Thus, hypnosis is in the grey zone where the supervisory system monitors without modulation of contention scheduling--a wide realm. Also, for high hypnotizables hypnosis may weaken the higher level control system associated with the subjective experience of will; this dissociates lower levels of control from higher levels of control. The lower levels cannot be modulated as well at will. This indicates changes of frontal functions.

In psychopathology, Chris Frit argues that schizophrenia can be thought of as disorders of volition: 1. Spontaneous self initiated willed actions are generated by a different route to action from unwilled actions. In schizophrenia there is impoverishment of self initiated action. The patient also shows perseverated action. In contrast, when directly instructed the patient can perform complex tasks. This is close to the dissociated control model of hypnosis. Laboratory procedures for studying perseverative acts in schizophrenia can be applied to hypnosis. (However the theory doesn't explain the positive symptoms of schizophrenia.) 2. There is an internal monitor that keeps track of the self initiated aspects of actions (e.g. inner speech), which schizophrenics lack. Likewise delusions of control, due to a failure to track the self initiated aspect of these actions, resemble the dissociated experience aspect of hypnosis.

The Classic Suggestion Effect is a mild delusion of control. This is very different from the social psychological view. Nisbett & Wilson say people do not introspect about the sources of their behavior. In their view, believing that alien forces are controlling you is due to failure of a mechanism. It is an interesting alternative to social psychological misattribution models to explain the nonvoluntary experience.

Functional brain imaging of normal subjects indicates that willed actions involve different areas of brain than nonvoluntary actions. Current thinking is that what differentiates schizophrenics from normals is in how their separate brain regions interact with each other. (This view is consistent with the research of Crawford and others on brain areas involved in hypnosis.) 3. There is a unifying mechanism of meta-representation or second order representations ("mentalizing") which are distinct from normal representations of reality. Consider the example of the suggestion to hallucinate a fly on the Harvard Form A Group Scale. The hypnotist wants me to believe that a fly is buzzing around me. If the second order representation is not there, only the first order representation is there: "a fly is buzzing around me." This is in Frit's theory's term a dementalized experience. The "dementalized experience" is a bit like Sarbin's believed in imagining. Low hypnotizables are plagued with meta-representation ("trying not to try").

Frit's work even suggests some parts of neodissociation theory may be a better representation of schizophrenia than of hypnosis.

Zamansky, Harold S.; Ruehle, Beth L. (1995). Making hypnosis happen: The involuntariness of the hypnotic experience. International Journal of Clinical and Experimental Hypnosis, 43 (4), 386-398.

The authors tested the hypothesis that hypnotized individuals do not truly experience their responses to suggestions as occurring involuntarily, but instead absorb themselves in imagery that is congruent with the suggestions while avoiding critical thoughts, or even simply comply with suggestions without genuinely experiencing their responses as nonvolitional. Participants were instructed to engage in thoughts and imagery that conflicted with the suggestions given, were urged to pay attention to their behavior, and were questioned regarding the perceived involuntariness of their responses. Simultaneously, electrodermal skin conductance responses provided a measure of the truthfulness of their reports. It was found that responses to all hypnotic suggestions were reported as being involuntary, in spite of the conflicting imagery and increased saliency, and that these reports were truthful. These findings provide disconfirming evidence for the sociocognitive theories of hypnosis.

1994

Varga, Katalin; Banyai, Eva; Gosi-Greguss, Anna C. (1994). Parallel application of the experiential analysis technique with subject and hypnotist: A new possibility for measuring interactional synchrony. International Journal of Clinical and Experimental Hypnosis, 42 (2), 130-139.

The Parallel Experiential Analysis Technique (PEAT), a new method for gathering data on the subjective experiences of both the hypnotist and the subject, is described. The PEAT is an interactional modification of the Experiential Analysis Technique (EAT). Procedural details and methodological observations resulting from the modification of the EAT are discussed. Suggestions on how to characterize the phenomenology of the hypnotic interaction and to determine the degree of interactional synchrony on the subjective level between the hypnotist and subject are made.

1993

Kronenberger, William G.; La Clave, Linda; Morrow, Catherine (1993, October). Assessment of the hypnotic state in the clinical setting: Development of the hypnotic state assessment questionnaire.

[Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

We do research, clinical work and teaching. In this setting students ask, how do I know when somebody is hypnotized? We wanted to give them a normative sense of what to expect. Supervisory issues arise--e.g. when student reports that a patient "looked very hypnotized." We also wanted a measure that could track changes from one hypnotherapy session to another. We wanted quantification of hypnotic response (e.g. to use in medical charts).

We looked at self report measures, reviewed by Tart (number ratings) and hypnotizability scales; we reviewed articles, looked at what we teach, etc.. Criteria for the scale we developed were: 1. brief 2. unobtrusive (not introducing something different into the hypnosis process) 3. easy to use 4. have both behavioral and subjective components 5. clinically useful 6. apply to wide age range (we have patients ages 7-60) 7. apply to many different types of inductions (though there is no clinical scale that will apply to all types of inductions). We use a more permissive, relaxation induction ourselves.

We assessed observed behavior during hypnosis as well as immediately following hypnosis, and then asked patients questions about what the experience was like for them. From their responses we developed the Hypnotic State Assessment Questionnaire. The scale has 18 items, as follows: 1.

Hypnotic State Observation (HSO) Items

Noise Factor (e.g. drumming fingers)

Noise

Spontaneous Verbalizations

Behavior Factor

Motoric behavior (spontaneous)

Focused attention (not moving eyes)

Rhythmical Breathing

Relaxed state/Lack of tension Each are coded 1-5 with behavioral anchors at 1, 3, and 5 2. Post Hypnotic Observations

Positive Experience Factor (rated Yes-No)

Smile

Spontaneously Verbalize Positive Experiences 3. Post Hypnotic Inquiry

Automaticity Factor

Thoughts/feelings happen by selves

Thoughts happen without trying to think

PHI Uniqueness/Relaxation Factor

Felt this way before (not hypnosis)

Interrater Reliabilities of Subscales are higher than .9 except for Waking (rubbing eyes and stretching). We studied the HSAQ in 50 patients with a variety of problems (anxiety, depression, eating problems, smoking, somataform problems).

Scores have a floor effect; HSAQ can't determine very high depth from moderate depth, but we don't know if that is clinically meaningful. The HSO behavior factor was significantly correlated with after-hypnosis observations and inquiry. The HSO behavior factors also significantly correlated with the patient's ability to resist unexpected distractions, to comply with therapist requests, and to respond to post-hypnotic suggestions.

Nishith, Pallavi; Barabasz, Areed F.; Barabasz, Marianne (1993, October). Effects of Alprazolam and hypnosis: EEG spectral decomposition and transient experience. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL

## NOTES

We wanted to test Hilgard's neodissociation theory and Crawford's and my ideas about theta reflecting processing dissociation where environmental stimuli are ignored.

Hypothesis: highs would show greater EEG theta in hypnosis than lows when exposed to a suggestion to recreate alprazolam (trade name Xanax) effects.

We demonstrated hypnosis to groups, discussed it, administered the Harvard, took highs and lows and then tested them with Stanford C; got 20/group, matched for age, gender, and handedness. Assigned 10/cell, in drug or placebo (double blind) conditions. Tested females to make sure they weren't pregnant. Ingested the placebo or drug, waited 1 hour; took 5' waking EEG while they were asked to focus on "feelings of relaxation brought on by the drug." Interviewed them (see our chapter in Fromm & Nash book) to determine their transient mood states during the 5' period, plus gave them POMS tension/anxiety questions.

Results of first study: analyzed for hypnotizability x placebo x drug condition. EEG Theta was reduced in hypnosis; hypnotic ability showed no effects. Highs maintained higher beta in alprazolam drug condition (vigilance).

Study 2 counterbalanced conditions: Waking Hypnosis Hypnosis with a suggestion to recreate alprazolam effects.

Used Ss who actually had taken Alprazolam participated in the experiment four days later; induction was a tape recorded version of the Stanford Clinical Scale. Suggestion: imagine taking a dose twice as high as you had before. EEG and transient experience data were collected as before. 2 x 3 Manova's were computed. 1. Theta was higher for highs than lows at  $p < .01$  for both the hypnosis and hypnosis with drug effects suggestion conditions. 2. Alpha - had the same findings as for theta. (and same results as in our Antarctica study). 3. Beta was significantly higher for both high and lows in waking vs hypnosis conditions at all but the T4 site where beta was highest in the two hypnosis conditions only for the highs. 4. POMS analysis: mean tension/anxiety scores were significantly lower for highs in both the alprazolam and hypnotic suggestion conditions.

Both highs and lows showed more theta in hypnotized than in waking conditions. Failure to find differences between groups differing in hypnotizability may be because highs were so good at creating the alprazolam effect that they may have desynchronized theta.

Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

## NOTES

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the *\_subjective sense\_ of \_altered state\_ --SSAS [30]*), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.

Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are *\_discrete states of consciousness\_* in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

Spanos, Nicholas P.; Burnley, M. C.; Cross, P. A. (1993). Response expectancies and interpretations as determinants of hypnotic responding. *Journal of Personality and Social Psychology*, 65, 1237-1242.

Subjects rated the extent to which they expected to respond to each of the suggestions on a hypnotizability scale both before and after the administration of the preliminary hypnotic-induction procedure. After the induction, subjects also rated the extent to which they planned to respond actively and passively to each suggestion. Contrary to strong versions of response-expectancy theory, the extent to which subjects planned to adopt an active interpretation predicted behavioral and subjective indexes of hypnotizability even after controlling for the effects of postinduction expectations. In addition, an active interpretation significantly predicted response to suggestion for which subjects held weak and uncertain expectations. The relationship between expectation and hypnotizability was found to be fan-shaped rather than linear. Implications are discussed.

Spinhoven, Philip; Vanderlinden, Johan; ter-Kuile, Moniek M.; Linseen, A. Corry G. (1993). Assessment of hypnotic processes and responsiveness in a clinical context. International Journal of Clinical and Experimental Hypnosis, 41 (3), 210-224.

The present study was designed to investigate in a clinical situation whether differences in measured hypnotizability validly reflect differences in hypnotic processes and to what extent factors deemed extraneous to hypnosis -- such as resistance -- influence hypnotic responding. To answer this question, Dutch versions of relevant scales had to first be developed. The factorial validity and reliability of a Dutch translation of the Resistance Toward Hypnosis Scale (DRHS) and a shortened Dutch version of the Phenomenology of Consciousness Inventory (DPCI) were investigated in a sample of 205 psychiatric patients. The DRHS proved to be factorially valid and reliable, and two subscales, Trance and Reality Orientation, derived empirically from the DPCI showed good to satisfactory reliability. In a second study with a subsample of 99 psychiatric patients, hypnotizability as measured by the Stanford Hypnotic Clinical Scale for Adults was strongly and positively related to DPCI Trance scores and moderately and negatively related to DPCI Reality Orientation and DRHS Resistance scores. It is concluded that hypnotizability as measured in a clinical context under standard conditions is strongly related to hypnotic experiences over and above the moderate effects of resistance toward hypnosis and hypnotic suggestions. Standard hypnotizability assessments appear to be similar in their meaning in an experimental and clinical context.

Szabo, Csaba (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. International Journal of Clinical and Experimental Hypnosis, 41, 225-233.

The effect of two hypnotic induction styles on subjective experience was measured in an experiment in which 44 subjects participated in both traditional direct hypnosis, induced by the Stanford Hypnotic Susceptibility Scale, Form A, and indirect hypnosis (presented in counterbalanced order), followed by 4 minutes of rest before dehypnosis. The depth of hypnosis was measured retrospectively by a subjective scale, and the structure of experiences was measured by the Phenomenology of Consciousness Inventory. Subjects were subsequently administered the Stanford Hypnotic Susceptibility Scale, Form B, so that awareness of their hypnotizability would not affect their subjective depth reports. No differences were found in a comparison of subjects' structure of experiences in direct and indirect hypnosis. In addition, low and medium hypnotizable subjects reported indirect hypnosis as deeper. This may reflect the possibility that while hypnotized different mechanisms come into play for subjects high in hypnotizability compared to those who are less hypnotizable.

Kirsch, Irving (1992). The state of the altered state debate. Contemporary Hypnosis, 9, 1-6.

The question of whether hypnosis is an altered state of consciousness remains meaningful, despite declarations that it is a dead issue. Reports of its demise were based on a redefinition of the term 'state' which rendered the state hypothesis untestable. However, most state theorists use the term in its more conventional sense. Although these state hypotheses cannot be falsified, they can potentially be confirmed. They also have important implications, which make empirical data on the altered state issue as important now as they were 20 years ago.

Kirsch, Irving; Mobayed, C. P.; Council, J. R.; Kenny, D. A. (1992). Expert judgments of hypnosis from subjective state reports. Journal of Abnormal Psychology, 101, 657-662.

Suggestibility was assessed in 60 student subjects after a traditional hypnotic induction, an alert induction, progressive relaxation training, or instruction in goal-directed imagery. Responsiveness to suggestion did not differ between groups. Subjects also generated open-ended reports of their states of awareness and of their experience of three hypnotic suggestions. A sample of these reports from 24 moderately to highly suggestible subjects was evaluated by 18 experts in the field of hypnosis. Expert ratings of subjects' open-ended reports indicated that (a) traditional hypnotic inductions produce a state of consciousness that is indistinguishable from nonhypnotic relaxation training, (b) the subjective experience of hypnotic suggestions after imagination training is indistinguishable from that after hypnotic inductions, and (c) suggestibility is unrelated to state of consciousness as assessed by experts.

Matthews, William J.; Isenberg, Gail L. (1992). Hypnotic inductions with deaf and hearing subjects - an initial comparison: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 7-11.

17 volunteer deaf Ss were compared with 18 volunteer hearing Ss on the Stanford Hypnotic Clinical Scale (SHCS) of Morgan and J. R. Hilgard (1975), and the Indirect Suggestion Scale (ISS) of Matthews and Mosher (1985) in a 2 x 2 ANOVA design. 5 dependent measures: (a) objective scale score; (b) self-report scale score; (c) S rapport with the hypnotist; (d) S resistance to the hypnotist; and (e) overall subjective rating of trance experience were employed to measure any differences between the 2 groups. For SHCS behavioral items, the two-way ANOVA failed to reveal any significant main effect or interaction differences between either group (deaf/hearing) or method of induction (direct/indirect). There was a significant main effect for deaf/hearing groups in level of resistance to the hypnotist. Deaf Ss reported feeling more resistant to the hypnotist than did hearing Ss. This may be due to the mode of communication or the fact that the hypnotist was hearing. Implications and limitations of the study are discussed.

Sheehan, Peter W. (1992). The phenomenology of hypnosis and the Experiential Analysis Technique. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 364-389). New York: Guilford Press.

## NOTES

The problem with behavioral assessment methods such as hypnotizability scales is that similar behavioral responses to hypnotic suggestions may occur for very different reasons. It is important to assess the phenomenological experience of hypnotic Ss. The Experience Analysis Technique (EAT) is a method for assessing the phenomenology of hypnosis. The EAT "consists of gathering the comments of hypnotic subjects about their hypnotic behavior and experience, as they view the video playback of their hypnotic sessions" (p. 372). The EAT draws its origins from Kagan's method of Interpersonal

Process Recall [IPR], in which "counselors in training could review and react to, their contact with clients immediately after therapy sessions. An independent person, present at the review of the session, would inquire into the interaction between the counselor and client by stopping the tape and questioning the client about his or her underlying feelings and thoughts, so facilitating and clarifying the information being recalled" (p. 371). It is important that the interviewer be a different person than the hypnotist.

Hammer, Walker & Diment (1978) applied the IPR to hypnosis, using audiotape. Using the videotape EAT with hypnosis, Sheehan & McConkey (1982; Sheehan, McConkey & Cross, 1978) noted that hypnotic Ss might exhibit any of three different response styles, sometimes related to hypnotic task complexity: 1. Concentrative/cooperative style - S focuses on hypnotist's words, imagining a literal interpretation 2. Independent style - S interprets hypnotist's words in a way that is meaningful to them 3. Constructive style - S considers the communications "from a position of preparedness to process incoming stimuli in a schematic way, so as to structure or re-organize events according to the hypnotist's suggestions"

Some Ss who are high in susceptibility show greater flexibility in the use of cognitive styles than low susceptibility Ss.

Examples of the use of the EAT to evaluate several phenomena observed in experimental and clinical settings are provided: 'duality' during age regression, trance logic, posthypnotic amnesia, pseudomemories, and rapport.

The author reviews the concept of 'countering.' "Countering occurs when a S responds in accord with the wishes of the hypnotist when social influences to respond otherwise are also present in the situation. ... Counterers display a constructive (i.e. active and idiosyncratic) style of cognizing which enables them to make personal sense of the conflicting demands by preserving the integrity of each. ... Counterers, even though they demonstrate a higher degree of involvement with the hypnotist, fail reliably to score as highly on standard tests of susceptibility (e.g. the Stanford Hypnotic Susceptibility Scale, Form C) as subjects who do not counter (Sheehan, 1980). This second finding points to differential effects of rapport on Ss which are not explicable in terms of level of hypnotic susceptibility or simple willingness to comply with anticipated, obvious suggestions. Techniques like the EAT, which are sensitively attuned to detect the personal commitment of subjects to the hypnotist, are needed to detect subtle processes of this kind" (pp. 385- 386).

The author evaluates different reporting techniques used to examine the phenomenological experience of hypnosis (the Chicago Paradigm of Fromm & Kahn, 1990; Shor's phenomenological method; the Field's Inventory Scale of Hypnotic Depth) and evaluates the effects of rapport with the E on the measurement of subjective response. He suggests various experimental controls (e.g. disguising the true aims of the experiment). A measure of rapport or psychodynamic transference to the hypnotist, the Archaic Involvement Measure (AIM) has been developed by Nash and Spinler (1989).

"Experience cannot simply be observed objectively; it may not be reported spontaneously by the experienter; and it may not even be elicited through ordinary forms of interaction" (p. 388).

"What phenomenological research has shown over the last decade is that hypnotic experience is both multifaceted and complex. It has given us a view of the hypnotic subject as a person who participates actively in the hypnotic process, who is susceptible to the influence of motivations and expectations, and who employs a variety of cognitive strategies so as to manage and respond to multiple levels of communication received in the hypnotic setting. Standard techniques of assessment, especially those emphasizing the primacy of behavioral data and those offering structured choices, are not equipped to reveal the full meaning of hypnotic responsiveness" (p. 388).

"If an instrument of assessment assumes a unidimensional underlying process when there are multiple dimensions operating, then that instrument will be deficient in measuring experience by producing equivalent ratings for very different experiences, and thus will be deficient in measuring overall

experience. Measurement of trance-depth poses just such a problem, and measurement of hypnotic experience in its full complexity even more so" (pp. 388-389).

1991

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process

and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Glicksohn, Joseph; Mourad, Boaz; Pavell, Eyal (1991-92). Imagination, absorption and subjective time estimation. Imagination, Cognition and Personality, 167-176.

We report an exploratory study that investigated the interaction of trait and task in determining duration judgment. High and low absorption subjects (determined by median split along the Absorption Scale) viewed a series of paired slides, and were required to relate to each pair in one of two tasks: A metaphor-production task, and a story-production one. These tasks were carried out for an objective interval of fifteen minutes, following which the subject was required to verbally estimate this duration, retrospectively. In addition, from the individual protocols we measured the average time till response and the average time of response. A significant interaction between absorption and task was obtained for the latter two variables. In addition, a main effect for task was found for the duration estimation. These and other results are assessed in terms of both a cognitive-timer model for time estimation and a contextualistic approach to temporal processing.

## NOTES

The authors used a model for subjective time estimation (STE) that involves a cognitive timer (or internal clock) that encodes temporal information. STE purportedly may be correlated with the amount of attention directed at the passage of time, and negatively correlated with attention paid to other kinds of tasks.

They used tasks that aroused Subjects' imagination--a series of pairs of slides. One group was to produce a metaphor relating the two slides, while the other group was to produce a short story relating the two--theoretically an easier task.

The authors hypothesized that high absorption Ss would be more engrossed in the task than low absorption Ss, and therefore would underestimate the amount of time used for the task irrespective of task difficulty. For the low absorption Ss they predicted that time estimates for the more difficult metaphor task should be longer, because the task itself demanded more attention than the other task. (High absorption Ss would not exhibit such a difference.)

As another measure, Subjects were required to produce four short time intervals (4, 8, 16, and 32 seconds) to assess whether there might be a different rate of the cognitive timer for the two types of Ss, irrespective of nontemporal task involvement.

26 Ss were randomly allocated to one of two conditions (metaphor task or story task). Since this number of Ss is too small for an adequate evaluation of the interaction effect (absorption x task) of particular interest, the authors regard the experiment as exploratory only.

The results suggest that high absorption Ss view the tasks as easy and pleasant relative to the lows, and have larger STE values. Shorter time estimates are associated with the metaphor task than the story task, for both highs and lows--an unexpected finding. While highs take the same amount of time for metaphor production as for story production, lows take longer to produce a metaphor than a story (and of course, the metaphor is shorter in length!)

The high absorption Ss provided larger estimations of time for the task in which they produced a required number of seconds (4, 8, etc.), indicating a slower baseline rate of functioning of the cognitive timer.

The authors in their discussion find the results supportive of the cognitive timer model. They cite the finding that duration estimate was predicted from STE, task, and interaction of absorption with average time to response. (1) remembered duration was positively correlated with baseline functioning of the cognitive timer (STE) (2) remembered duration was negatively correlated with task difficulty (3) remembered duration was an interactive function of absorption and average time to response.

Kinnunen, Taru; Zamansky, Harold S.; Block, Martin L. (1991, August). Is the hypnotized subject lying?. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

To determine whether or not hypnotized subjects misrepresent or lie about their hypnotic experiences, electrodermal skin conductance responses were measured while groups of deeply hypnotized subjects and simulators responded to questions about their experiences to a series of suggestion. 89% of the responses of the hypnotic subjects met the criteria for truthfulness, while 65% of the responses of the simulators indicated deception. Differences between "reals" and simulators were highly significant. The relevance of the results for the nature and theory of hypnosis is discussed. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

Pekala, Ronald J. (1991). Hypnotic types: Evidence from a cluster analysis of phenomenal experience. Contemporary Hypnosis, 8, 95-104.

The phenomenological experiences of very-low and very-high, and low, medium and high susceptible individuals were cluster analyzed, attempting to determine if individuals of differing levels of hypnotic susceptibility report experiencing different types of phenomenological experience during hypnosis. Phenomenological experience was assessed by means of a self-report questionnaire called the Phenomenology of Consciousness Inventory (PCI); it allows for quantification of 12 dimensions of phenomenological experience. K-means cluster analysis yielded two relatively distinct clusters of individuals for both low/very-low and high/very-high susceptible individuals. These results suggest at least two types of very-low/low and very-high/high susceptible individuals as determined by their reported experiences during hypnosis.

## NOTES

The author notes that Sheehan and McConkey (1982) found three types of highs: concentrative, independent, and constructive. Spanos, Lush & Gwynn, 1989, found two groups of lows--one capable of learning hypnotic skills and the other less so.

In this study the author did two cluster analyses: (1) Harvard lows (0-1) and highs (11-12), and (2) all subjects divided into lows, mediums and highs, with cluster analyses performed separately for these three groups.

In the first analysis, there were two groups of very low hypnotizable subjects distinguished on the basis of altered state of awareness and rationality; and two very high groups, distinguished on the basis of imagery and positive affect.

One group of very lows reported "little alteration in altered state and altered experience and almost complete volitional control, self-awareness, rationality and memory" (p. 98) and were called 'classic very lows' because they were like refractory subjects in their self reports. The other group of very lows reported "moderate alterations in altered state and altered experience, and major decrements in volitional control, self-awareness, rationality and memory" (p. 98) and were called 'pseudo very lows' because their reports were a little like medium or high hypnotizables.

One group of very high hypnotizables had "great alterations in state of consciousness and moderate altered experiences; a loss of control, self awareness, rationality and memory; and little vivid imagery" (p. 98) and were called 'classic very highs' because their reported experience was like that of somnambules. The other type of highs were called 'fantasy very highs' because they had "moderate

alteration in consciousness and experience, a great deal of vivid imagery, moderate positive affect, and only mild-to-moderate losses in rationality and memory" (p. 100).

When low, medium, and high susceptible subjects' PCIs had separate cluster analyses, the lows had three clusters: classic, dialoging, and pseudo lows. The dialoging group was between the other two in their experiencing yet reported a great deal of internal dialogue. Among the highs, the same two clusters appeared as for the very highs.

Among the mediums there were two groups: high mediums who reported a significant drop in volitional control, self-awareness, rationality, memory, and internal dialogue, and an alteration in state of awareness; and low mediums who had milder changes.

Comparing results to Sheehan and McConkey (1982), the classic highs may correspond to their concentrative type and the fantasy highs to their independent type, because the latter generated imagery without a request to do so.

Regarding the pseudo-lows, "it is intriguing that there appear to be some individuals who make little response on the behaviorally oriented Harvard Scale, and yet report some phenomenological alterations. Are they individuals for whom hypnosis may be somewhat more effective even though they are not that hypnotizable (as measured by the 'direct' Harvard Scale) or could they be Spanos's (Spanos et al., 1989) 'trainable' low susceptibles?" (p. 102).

Richards, D. G. (1991). A study of the correlations between subjective psychic experiences and dissociative experiences. Dissociation, 19, 83-91.

Subjective psychic experiences, such as telepathy, clairvoyance, and out-of-body experiences, are often reported in conjunction with dissociative experiences. This study examined the relationship between the Dissociative Experiences Scale and a variety of psychic experiences in a nonclinical population with a high level of psychic experiences. The DES correlated moderately (.3 to .4) with most but not all of the experiences. The mean DES score was 17.2 (SD = 12.5), substantially above adult norms. Although psychic experiences are correlated with dissociation, they are not necessarily associated with pathology.

Sheehan, Peter W. (1991). Hypnosis, context, and commitment. In Lynn, S. J.; Rhue, J. W. (Ed.), Theories of hypnosis: Current models and perspectives (pp. 520-541). New York: Guilford Press.

## NOTES

"There are several different ways to classify the model that is expounded in this chapter. One may view it ... as an individual-differences model of hypnosis, because it emphasizes the significance of intragroup differences in the pattern of hypnotic performance. Alternatively, one may view it as a phenomenologically based model.... Invariably, however, single categories fail to do justice to the nature of theories, and hence it is perhaps wisest to view this theory as a means of exploring particular hypotheses about hypnotic phenomena that focus primarily on the meaning of suggestion as perceived by susceptible subjects. This model focuses, in a way that most other theories do not, on the motivational implications of the cognitive involvement of the susceptible subject in the events of the hypnotic setting. It offers a variant of contextual theories of psychological functioning, but is experiential in its emphasis rather than simply behavioral" (p. 537).

## 1990

Kirsch, Irving; Council, James R.; Wickless, Cynthia (1990). Subjective scoring for the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 38 (2), 112-124.

A scale is presented which assesses subjective experiences associated with the test suggestions contained in the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962). This scale, along with the standard HGSHS:A self-scoring test booklet, was administered

to 479 students at the University of Connecticut and 618 students at North Dakota State University, and normative data from these samples are reported. Correlational analyses indicated that the scale was both reliable and valid as a measure of hypnotic responsiveness. It is suggested that it may be useful to supplement behavioral scoring of hypnotizability with subjective scoring.

Pekala, Ronald J.; Forbes, Elizabeth J. (1990, Spring). Subjective effects of several stress management strategies: With reference to attention. Behavioural Medicine, 39-43.

This study assessed variations in reported attentional experience associated with several stress management techniques (hypnosis, progressive relaxation, deep abdominal breathing) and baseline (eyes closed) as a function of hypnotic susceptibility. Three hundred nursing students experienced the stress management conditions and afterward completed a self-report inventory, the Dimensions of Attention Questionnaire (DAQ), in reference to each condition. The DAQ quantifies 12 aspects of attentional experience in a reliable and valid manner. The results demonstrated that progressive relaxation, hypnosis, and deep abdominal breathing are characterized by differences in reported attentional experience that are further moderated by an individual's hypnotic susceptibility. The clinical implications of these results are discussed.

#### NOTES

"Significant main effects were found for conditions for perspicacity, absorption, and control, with progressive relaxation associated with increased perspicacity and absorption, but with decreased control vis-a-vis hypnosis.

"Significant main effects for groups were found for perspicacity, locus, direction of attention, absorption, control, and vigilance. ... [Post-hoc comparisons] revealed that high susceptibles (vis-a-vis low susceptibles) reported increased perspicacity, absorption, a more inward-focused attention, more feelings of being out of their bodies, and decreased control and vigilance. High-mediums were also different from lows (in the same direction) for all of the above comparisons except for direction of attention. Low-mediums, along with lows, were different from highs for absorption and control.

"Significant interactions between conditions and groups were found for absorption, control, and vigilance. Whereas low susceptibles reported significantly increased absorption but significantly decreased control and vigilance during progressive relaxation than during hypnosis, high susceptibles reported no significant differences between relaxation and hypnosis for absorption, control, or vigilance" (p. 41).

The authors describe the differences found for deep abdominal breathing on p. 41.

"The interaction effects suggest that the experience of hypnosis and progressive relaxation are moderated by a person's hypnotic susceptibility--low susceptibles experience significantly greater absorption, but decreased control and vigilance during progressive relaxation than during hypnosis, although there are no such differences for high susceptibles. This suggests that progressive relaxation may be a 'better' procedure than hypnosis to use with low susceptibles, at least if one wants to increase absorption and decrease vigilance and control" (p. 42).

The authors also note that "deep abdominal breathing is associated with increased 'calmness of mind,' in reference to a baseline condition, as demonstrated by increased attentional detachment and equanimity, and decreased vigilance and density (the 'amount' of thoughts going through one's mind)" (p. 42).

Richards, D. G. (1990). Hypnotic susceptibility and subjective psychic experiences. Journal of Parapsychology, 54, 35-51. (Abstracted in American Journal of Clinical Hypnosis, 34, 145-146)

Some studies have shown a correlation between hypnotic susceptibility and self-reports of psychic experiences. This study used a population reporting a very high level of psychic experiences and correlated the Harvard Group Scale of Hypnotic Susceptibility with psychic experiences as measured

by two scales. The mean Harvard score (6.31) was approximately the same as published norms, suggesting that the population was not unusual in terms of hypnotic susceptibility. Studies of people with large numbers of psychic experiences who have low hypnotic susceptibility may aid in understanding other factors that are involved.

Spanos, Nicholas P.; Warnock, Sean; de Groot, Hans P. (1990). Cognitive skill training, confirming sensory stimuli, and responsiveness to suggestions in subjects unselected for hypnotizability. Journal of Research in Personality, 24, 133-144.

Subjects unselected for hypnotizability were administered cognitive skill training which taught them to actively generate hypnotic responses or expectancy enhancing procedures that provided them with sensory stimuli aimed at confirming the false belief that they had successfully experienced suggested effects. Subjects were tested for suggestibility / hypnotizability at the end of their experimental treatment session and again in two follow-up posttests. Skill trained subjects exhibited significantly higher scores than subjects in all other treatments on the behavioral and subjective dimensions of the three suggestibility / hypnotizability tests. Subjects who received confirming stimuli showed higher behavioral scores than no treatment controls only on the behavioral dimension of the first suggestibility test, and no differences from controls on the subjective dimensions of any of the theory tests. Theoretical implications are discussed.

Weekes, John R.; Lynn, Steven Jay (1990). Hypnotic suggestion type, and subjective experience - the order-effects hypothesis revisited: A brief communication. International Journal of Clinical and Experimental Hypnosis, 38, 95-100.

In a replication and extension of Field, Evans, and Orne's (1965) research, no support was found for the hypothesis that suggestion order is related to hypnotic responding. Confirming earlier findings, subjects were no more responsive to suggestions ordered from easy-to-difficult than they were to suggestions ordered from difficult-to-easy. Measures of subjective involvement in suggestions, involuntariness, and archaic involvement with the hypnotist were no more sensitive to order effects, nor were order effects more apparent with subjects who received direct versus indirect suggestions. Confirming earlier research, direct suggestions did facilitate suggestion-related involuntariness and response to the hypnotic amnesia item after cancellation, whereas indirect suggestions enhanced fears of negative appraisal by the hypnotist. Thus, authoritative suggestions enhance responding to a cognitive-delusional item relative to more permissive suggestions. Finally, female subjects were more involved in suggestions than were males, particularly in response to more difficult tests items.

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

## NOTES

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in

terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic emotions and physical sensations: A real-simulating analysis. International Journal of Clinical and Experimental Hypnosis, 37, 305-319.

Real hypnotizable Ss and simulating un hypnotizable Ss were administered a suggestion for either happiness, emotional neutrality, or sadness. The emotion was assessed through subjective and behavioral measures taken once before, twice during, and once after the emotion. Findings indicated that emotionally congruent changes occurred in both self-report and performance measures. Ss' physical sensations during the emotion were assessed on a 34-item self-report scale. It was demonstrated that Ss in the happy versus sad conditions reported different physical sensations; in particular, they reported different facial sensations. The responses of real hypnotizable subjects, however, were essentially paralleled by those of simulating un hypnotizable subjects. Therefore, the possibility exists that hypnotized subjects may have been responding on the basis of social demands. The findings are discussed in terms of the effects of the emotion suggestions, and the implications of real and simulating Ss displaying similar affective responses.

#### NOTES

Used the real-simulating model in an attempt to eliminate the possibility that hypnotized Subjects in previous studies may have been responding to the demand characteristics of the situation. Used both subjective and behavioral measures. Self-report happiness and sadness, of emotion intensity; behavioral performance measure of speech rate, indexed by counting speed (which has been shown to distinguish between happiness and sadness). Used 34-item self-report Physical Sensations Scale based on Pennebaker, J. W. The psychology of physical symptoms. New York: Springer-Verlag, 1982.

They cite Weiss, et al (1987) who focused on the onset latency, and the fluctuation of muscular contraction associated with facial expression indicated a difference between posthypnotically cued and simulated emotions of anxiety and pleasure.

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic- like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

Kumar, V. K.; Pekala, Ronald J. (1989). Variations in phenomenological experience as a function of hypnosis and hypnotic susceptibility: A replication. British Journal of Experimental and Clinical Hypnosis, 6, 17-22.

Phenomenological experiences associated with a baseline (eyes closed/open) condition and an hypnotic induction were compared across individuals of differing hypnotic susceptibility. The results indicated individuals of differing hypnotic susceptibility reported different intensities of phenomenological experience during the baseline condition. The induction further augmented intensity differences for low, medium and high susceptible subjects, but more so for high than for low subjects. These results replicate earlier research, are not inconsistent with trait and situational interpretations of hypnotic susceptibility and highlight the importance of the interaction between these factors on the resulting hypnotic experience reported by the subject.

Lynn, Steven J.; Rhue, Judith W.; Weekes, John R. (1989). Hypnosis and experienced nonvolition: A social-cognitive integrative model. In Spanos, N.P.; Chaves, J.F. (Ed.), Hypnosis: The cognitive-behavioral perspective (pp. 78-109). Buffalo, NY: Prometheus.

#### NOTES

The authors present a model to account for the subjective experience of nonvolition. The model rests on four observations: (1) nonvoluntary responses "have all of the properties of behavior that is typically defined as voluntary" (p. 108); (2) "hypnotizable subjects can resist suggestions when resistance is defined as consistent with the role of a 'good' hypnotized subject" (p. 108); (3) "Hypnotic behaviors are neither reflexive/automatic ... nor manifestations of innate stimulus-response connections" (p. 108); (4) "Hypnotic performances consume attentional resources ... in a manner comparable to nonhypnotic performances" (p. 108). They continue, "At the same time, many of the cognitive operations and affective reactions that accompany hypnotic responding are not readily accessible to consciousness" (pp. 108-109).

Matheson, George; Shu, Karen L.; Bart, Catherine (1989). A validation study of a short-form hypnotic-experience questionnaire and its relationship to hypnotizability. American Journal of Clinical Hypnosis, 32, 17-26.

#### NOTES

Investigated the validity of a 16-item scale inquiring about hypnotic experience, drawn from the Hypnotic Experience Questionnaire developed by Kelly (1985) to measure components of hypnotic experience. We administered the HEQ-S and the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A) to 198 students. Factor analysis of the scale produced three stable principal components accounting for 70% of the data variance: Dissociation/Altered State (DAS), Rapport (RAP), and Relaxation (REL). Subscales representing these three factors and a composite measure, "General Depth," were constructed. Subscale correlations with HGSHS:A scores were highest for the DAS subscale (.69) and lowest for REL (.41). Applications of the HEQ-S in clinical and research use are considered.

Using the phenomenological studies and theories of J. R. Hilgard (1979) and Shor (1962), Kelly (1985) constructed the Hypnotic Experience Questionnaire (HEQ), a 47- item scale designed to demonstrate the existence of five factors of the hypnotic experience. These factors included dissociation/altered state, relaxation, rapport, visual imagery, and a negatively correlated factor of cognitive rumination measuring the amount of anxious self-reflective, and interfering thought. A composite scale, General

Depth, was also derived to provide a summary measure of the subjective quality of the hypnotic experience. The HEQ was developed as a research instrument.

The HEQ-S was administered immediately after Ss completed the Harvard response record. Items were responded to on a 5-point Likert scale ranging from one (No, none or not at all) to 5 (Yes, a great deal, or almost completely).

Pekala, Ronald J.; Bieber, Stephen L. (1989-90). Operationalizing pattern approaches to consciousness: An analysis of phenomenological patterns of consciousness among individuals of differing susceptibility. Imagination, Cognition and Personality, 9 (4), 303-320. Keywords: arousal, attention, cognition, consciousness, emotion/mood, hypnotizability, imagery, memory, nonvolition/automatism, self, state, subjective experience

Pattern differences in subjective experience, as assessed by a self-report inventory, the Phenomenology of Consciousness Inventory (PCI), were compared across low, low-medium, high-medium, and high hypnotically susceptible individuals during hypnosis and eyes-closed. A hierarchical factor analytic approach was utilized that allowed for the determination of pattern differences among PCI dimensions as a function of hypnotic susceptibility. The factor analyses found that the four susceptibility (sic) groups were 'pattern equivalent' during eyes-closed, partially pattern dissimilar during hypnosis, and partially pattern dissimilar when comparing hypnosis against eyes-closed. The nature of these results support previous analyses (1) which compared pattern structure differences as a function of correlational matrices. The results suggest the complementarity of Bieber's (2) and Pekala's (3) approaches for assessing pattern differences in consciousness and are congruent with the theorizing of Tart (4), Izard (5), and the PDP researchers on the importance of pattern structure changes in understanding states of consciousness.

Pekala, Ronald J.; Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. Australian Journal of Clinical and Experimental Hypnosis, 17 (1), 1-20.

Relationships among phenomenological subsystems of consciousness associated with a baseline condition and an hypnotic induction condition were compared across individuals of differing hypnotic susceptibility. Phenomenological experience on 12 subsystems of consciousness was quantified by means of the Phenomenology of Consciousness Inventory (PCI) and the relationships between dimensions were statistically assessed. The results replicated previous findings and suggested that hypnosis has differential effects upon the reported organization of phenomenological structures of consciousness across subjects of differing susceptibility. The data from the previous and present studies were pooled and the combined data were reanalyzed. The results provided further support for the differential pattern structure across low and high susceptibles during hypnosis. Furthermore, differences in pattern structure were augmented when comparing very low versus very high susceptible individuals.

Van Denberg, Eric J.; Kurtz, Richard M. (1989). Changes in body attitude as a function of posthypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 37, 15-30.

Hypothesized that highly hypnotizable subjects who remained amnesic for posthypnotic suggestions to improve body attitude would show greater changes than subjects who were not amnesic. Subjects given simulating instructions were used as a comparison group to assess experimental demands. 48 females were screened with the Harvard and assigned to one of 4 conditions: (a) high hypnotizable with amnesia suggestions, (b) high hypnotizable without suggested amnesia, (c) low hypnotizable simulator with amnesia, and (d) low hypnotizable simulator without suggested amnesia. A fifth group was formed of those high hypnotizable subjects who remembered the suggestion despite instructions to

the contrary. The Body Attitude Scale (Kurtz, 1966) was administered prior to and 3 days after the experimental suggestions. Results generally demonstrated that high hypnotizable amnesic subjects manifested the greatest attitudinal and phenomenological changes as a result of the posthypnotic suggestion, although conclusions were tempered by performance of simulating subjects. The implications for hypnosis research and clinical practice are discussed.

#### NOTES

"The hypothesis that hypnotized subjects would report greater positive changes in affect, self-esteem, and social functioning than simulators was tested using a brief structured questionnaire. An analysis of Subjects responses to the questionnaire while with the 'blind' research assistant (simulators in role) revealed number significant differences between groups (N = 48) on six of the seven questions. ... An analysis of Subjects' responses to the questionnaire while being debriefed by the primary investigator (simulators out of role) revealed significant differences among groups (N = 48) on three of the seven questions. ... High hypnotizable subjects with maintained amnesia demonstrated a strong tendency to be the most responsive of all groups of subjects on the first and second assessment. In contrast, the high hypnotizable Ss for whom amnesia 'broke down' reported the fewest phenomenological changes of any of the five groups during the first assessment, and comparatively few during the second assessment. Also of note is that once out of their role, simulators in both conditions dramatically reduced their reporting of positive change" (pp. 23-24).

"Moreover, a closer examination of the data demonstrated that phenomenological and behavioral differences in the groups did appear at several points during the experiment. For example, the 10 high hypnotizable subjects told to explicitly remember the suggestion did so, while 3 of the 10 simulators in this condition claimed to have forgotten it. On debriefing, these Subjects reported they did this because they believed 'really hypnotized subjects wouldn't be able to remember anything, even if they were told they could.' Further, no simulator in the amnesia condition reported they could recall the suggestion, in contrast to the high hypnotizable subjects, 44% of whom said they did remember it. With regard to phenomenological differences, simulators stated during debriefing with the primary investigator that they intentionally faked changes on BAS, and that they experienced no true effects from the suggestion for positive body attitude change. In contrast, high hypnotizability amnesic subjects reported global, pervasive changes in their mood and self-esteem that went beyond specific alterations in attitudes toward their appearance. By comparison, high hypnotizable subjects told to remember the suggestion reported greatly increased self-absorption and acute awareness of the suggestion, 'sort of like a broken record in my head'" (pp. 25-26).

"As shown by the present study, amnesia maintenance can be quite problematic. Of 18 high hypnotizable subjects for whom amnesia was suggested, only 10 remained fully amnesic for the suggestion after 3 days. In addition, those 8 subjects for whom amnesia 'broke down' showed minimal shifts on BAS, or in reports of phenomenological changes. Such frequent amnesia failure has been reported by other researchers, although the effectiveness of the suggestion is not always so compromised" (p. 26).

1988

Cardena, Etzel (1988, November). The phenomenology of quiescent and physically active deep hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

Twelve highly susceptible undergraduate students participated in three conditions (lying down on a bed, pedaling a stationary bicycle at a comfortable rate, and having a motor do the pedaling at an approximately constant, comfortable rate) in deep hypnosis and non-hypnosis conditions. They were

asked for their expectations about deep hypnotic experience, exposed to a number of traditional hypnotic phenomena before the deep hypnosis and comparison sessions, and given the opportunity to explore their own ways of inducing and deepening their state.

Even without cues or suggestions, participants gave comparable reports of their experiences at light, medium and deep hypnosis. The first one consisted mostly of relaxation and other changes in body sensations. Medium hypnosis was characterized by having complex imaginal experiences. Very deep hypnosis involved experiences of light, emptiness, and other phenomena associated with spiritual experiences.

Council, James R.; Greyson, Bruce; Huff, Kenneth D. (1988, November). Reports of paranormal experiences as a function of imaginative and hypnotic ability. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

Wilson and Barber (1983) have suggested that some excellent hypnotic subjects ("fantasy prone" persons) may be more likely to report paranormal experiences than the rest of the population. Council and Greyson (1985), studying a sample of subjects who had reported near-death experiences (NDEs), found a significant relationship between fantasy-proneness and NDEs, and a much stronger relationship between fantasy-proneness and reports of paranormal experiences in general. This paper presents new data from the study of NDE reporters and a replication and extension of those findings with a sample not selected for NDEs. These data indicate a strong association between fantasy-proneness and reports of paranormal experiences. Hypnotic susceptibility bears a weaker relationship with such reports that appears dependent upon variance shared with measures of fantasy-proneness. Other data from these studies suggests that both imaginative ability and reports of paranormal experiences may be related to a history of stressful or traumatic childhood experiences.

Kluft, R. P. (1988). The phenomenology and treatment of extremely complex multiple personality disorder. Dissociation, 1, 47-58.

Contemporary reports indicate that the average number of personalities in recently reported patients with MPD is larger than that reported in the older literature. A minority of these recent patients demonstrate extreme complexity. A group of 26 patients with 26 or more personalities and under observation for a minimum of 3 years was studied. Their presentations, the reasons that appeared to underlie their complexity, and their courses of treatment are reviewed. Findings indicate that this group of patients is diverse, with some proving readily treatable, and others proving quite refractory. Observations that appear constructive for the treatment of such patients are offered. The concept of personality is discussed and an alternative description is explored. The usefulness of the paradigms and metaphors of splitting and division as heuristics for the understanding of MPD is challenged, and a paradigm/metaphor of redoubling and reconfiguration is offered for further study.

Kumar, V. K.; Pekala, Ronald J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. International Journal of Clinical and Experimental Hypnosis, 36, 80-88.

The phenomenological effects associated with a baseline condition of eyes-closed and a hypnotic induction condition were compared across individuals of differing absorption capacity and hypnotizability. The results indicated that individuals of differing absorption capacity and hypnotizability reported different intensities of phenomenological experience during the baseline eyes-closed condition. The induction further augmented intensity differences for low, medium, and high absorption and hypnotizable Ss, but more so for high (and medium) than low hypnotizable Ss. The results support both a trait and state interpretation of hypnotizability, and highlight the importance of the interaction between these factors on the resulting hypnotic experience of S.

**NOTES:** Based on a review of relevant literature, the authors predicted that (1) during hypnosis and a baseline condition (eyes-closed), high absorption and high hypnotizable Ss will report the phenomenological effects at greater intensity relative to low absorption and low hypnotizable Ss, respectively; (2) hypnotic induction will be associated with increased absorption; greater alterations in awareness and experience; and decreased volitional control, rationality, and memory; (3) phenomenological intensity differences (hypnosis compared to eyes-closed) will be significantly greater for high than for low hypnotizable Ss.

They used the Phenomenology of Consciousness Inventory (PCI) developed by Pekala (1982), which is a 53 item self-report instrument that is completed retrospectively in reference to a preceding stimulus condition. The PCI measures the following dimensions and subdimensions: internal dialogue; self-awareness; state of awareness; imagery (amount, vividness); positive affect (joy, sexual excitement, love); negative affect (anger, fear, sadness); altered experience (time sense, body image, perception, unusual meanings); attention (absorption, direction); memory; rationality; volitional control; and arousal.

The 217 Ss were administered the Tellegen Absorption Scale, then sat quietly with eyes closed for four minutes, then completed the PCI, Form 1, relative to that 4-minute period. They were administered a slightly shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A); before the posthypnotic suggestion and amnesia suggestion they experienced another 4-minute silent period during which they were told to 'continue to experience the state you are in right now.' After the HGSHS:A they completed PCI, Form 2, in reference to the silent period during the HGSHS:A, before they completed the 11-point questionnaire on the HGSHS:A.

Subjects who did not have reliable PCI response forms were removed from the sample, leaving 173 Ss who were divided into high, medium, and low Absorption groups, and high, medium, and low hypnotizability groups. The statistical analysis employed MANOVA on intensity scores for first the major PCI dimensions and then the 14 subdimensions using Conditions (eyes closed, hypnosis) and Groups. There were significant main and interaction effects. Subsequent ANOVAs for each (sub)dimension, Conditions by Hypnotizability Groups (2 x 3) were then performed.

Hypnosis "was associated with significantly less positive affect (joy, sexual excitement, love); negative affect (anger, sadness); visual imagery (amount, vividness); self-awareness, internal dialogue, rationality, volitional control, and memory; and significantly more altered experience (time sense, perception) and altered state of awareness.

"Significant main effects for Hypnotizability Groups were found for positive affect (joy, love); altered experience (body image, time sense, perception, meaning); attention (direction, absorption); self-awareness; altered state of awareness; rationality; volitional control; and memory.

"Post-hoc comparisons for the eyes-closed condition revealed that high relative to low, hypnotizables reported significantly greater alterations in body image, time sense, meaning, and altered state of awareness. Medium hypnotizable Ss, compared to low hypnotizables, reported significantly increased alterations in body image and state of awareness.

"Post-hoc comparisons for the hypnotic induction condition revealed that high, viz-a-viz low, hypnotizables reported significantly increased absorbed attention; greater altered experience (body image, time sense, perception, meaning); and increased alterations in state of awareness. High hypnotizables also reported significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. Medium hypnotizable Ss, vis-a-vis low hypnotizables, reported significantly more altered experience (body image, time sense, perception, meaning); absorbed attention; and altered state of awareness; and significantly less imagery vividness, self-awareness, rationality, volitional control, and memory. High hypnotizable Ss, relative to medium hypnotizables, reported significantly more altered experience (perception, meaning) and absorption, and significantly less rationality, volitional control, and memory.

"Concerning the significant interactions ( $\alpha = .01$ ), graphs of the means indicated significant ordinal interactions between Conditions and Hypnotizability Groups for altered experience (perception), imagery (vividness), self-awareness, altered state of awareness, rationality, volitional control, and memory. For all of the PCI (sub)dimensions, the hypnotic induction condition (compared to eyes-closed) was associated with a significantly greater increase in altered experience (perception), and altered state of awareness; and a significantly greater decrease in imagery (vividness), rationality, volitional control, and memory for the high (and medium) hypnotizable groups relative to the low hypnotizable group.

"Significant disordinal interactions were found for absorption and unusual meanings. Whereas high hypnotizable Ss reported a more absorbed attentional focus and more unusual meaning during hypnosis, low hypnotizable Ss reported being less absorbed (or more distracted) during the induction than eyes-closed. Low hypnotizables reported more unusual meanings in reference to eyes closed" (pp. 84-85).

Correlations among the major PCI dimensions, absorption, and hypnotizability differ between the two conditions. In hypnosis, the hypnotizability correlations that reached the .001 level were: --Self Awareness -.55 --State of Awareness .60 --Altered Experience .56 --Inward Absorbed Attention .44 --Rationality -.41 --Volitional control -.65 --Memory -.41 --Arousal -.28

In the eyes closed condition, the only PCI variables that Hypnotizability correlated with, at the .001 level, were: --Positive Affect .26 --Altered Experience .32

MANOVAs and ANOVAs were computed for Absorption groups in a similar fashion. Main effects but not interaction effects were significant. Results are not abstracted here.

In their Discussion, the authors note that "The three hypotheses were supported by the results. Several of the absorption group comparisons obtained in previous research (Pekala et al., 1985) involving alterations in subjective experience (body image, perception, meaning); state of awareness; and volitional control were replicated in the present research" (p. 85).

1987

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern- masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

## NOTES

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

**Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials**

Response Category	S Group	N	Related	Unrelated	Total
Hypnotized	9	7.22	10.78	18	
		(40.13%)	(59.88%)	(100%)	
Simulating	15	12.13	5.87	18	
		(67.43%)	(32.61%)	(100%)	
Baseline	19	8.79	9.21	18	Controls (48.82%) (51.17%) (100%)

**Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials**

Related Responses	S Group	Phonetic	Semantic
Hypnotized	1.78	5.44	
		(9.89%)	(30.24%)
Simulating	7.07	5.07	
		(39.27%)	(28.16%)
Baseline	4.21	4.58	
		(23.38%)	(25.44%)

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.)

In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T.

Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

Pekala, Ronald J.; Kumar, V. K. (1987-88). Phenomenological variations in attention across low, medium, and high susceptible subjects. Imagination, Cognition and Personality, 7 (4), 303-314.

Phenomenological aspects of attention were assessed across 434 subjects in reference to baseline conditions of eyes-open or closed sitting quietly and an hypnotic induction condition. An attention questionnaire, assessing twelve dimensions of attention, was constructed and subjects completed it retrospectively in reference to the baseline condition and hypnosis. Reliability analyses indicated acceptable reliability for most dimensions. Regression and correlational analyses suggested adequate validity. Comparisons between baseline and hypnosis indicated significant phenomenological intensity differences between stimulus conditions on many attention dimensions. Comparisons among low, medium, and high susceptibles in reference to baseline and hypnosis also yielded many significant intensity differences. In addition, significant interactions between conditions and groups for many of the attention dimensions suggest that hypnosis, in comparison to the baseline conditions, potentiated intensity differences in attention for high, vis-a-vis low (and medium), susceptible subjects.

Roth, P. A. (1987). Meaning and method in the social sciences: A case for methodological pluralism. Ithica NY: Cornell University Press.

## NOTES

Cited by Wulff, in Cardena, Lynn, & Krippner, 2002 (p. 430). Wulff states, "we may look forward to a genuinely pluralistic mode of inquiry -- what Roth (1987) called \_methodological pluralism\_ -- according to which no point of view is finally privileged over any other, but each is entertained as a potential source of insight. Rather than anchoring ourselves in a particular theory or method, then, we would take our grounding in the phenomena themselves, which are far more likely to yield their secrets to a pluralistic approach" (p. 430 in Cardena et al., 2000).

1986

Laurence, Jean-Roch; Nadon, Robert (1986). Reports of hypnotic depth: Are they more than mere words?. International Journal of Clinical and Experimental Hypnosis, 34, 215-233.

The empirical work relating hypnotizability, the hypnotic situation, and the reports of hypnotic depth is reviewed and evaluated. Asking Ss to assess their hypnotic depth is a complex task involving the interaction of experiential, cognitive, and contextual variables. Accordingly, future experimental work should take into account this multidimensionality; phenomenological, situational, cognitive, and motivational factors implicated in verbal reports should be explored in terms of their respective relationships with both hypnotizability and self-ratings of hypnotic depth. More sophistication in the experimental inquiries of hypnotic depth is required in order to further our understanding of the cognitive and affective structures underlying the hypnotic experience.

## NOTES

In past years, hypnotic susceptibility and hypnotic depth were regarded as the same thing, and depth was inferred from responses to test suggestions on hypnotizability scales (e.g. Davis & Husband, 1931; LeCron, 1953).

There has been little investigation of the relationship between Subjects' subjective experiences and reported "depth." Research suggests that "hypnotic depth reports are usually significantly higher for Ss who have undergone a hypnotic treatment than for those who have received task-motivation (Ham & Spanos, 1974; Spanos & Barber, 1968; Spanos, Stam, D'Eon, Pawlak, & Radtke-Bodorik, 1980); imagination-control; or relaxation-control instructions (Connors & Sheehan, 1978; Gilbert & Barber, 1972; Spanos & Barber, 1968; Spanos, Radtke-Bodorik, & Stam, 1980, Experiment 2)" (pp. 217-218). Others have found that changes in inward experiencing (e.g. feelings of unreality, a sense of disappearance of body parts) could not be attributed simply to sitting quietly with the eyes closed (Barber & Calverley, 1979). [A footnote on p. 218 indicates some studies didn't find this difference between a hypnosis group and a task-motivation control group.]

When Ss are asked to estimate subjective depth after having experienced hypnotizability test items, they are likely to infer depth from whether or not they passed the items (and indeed, early scales promoted that assumption). Reports of subjective depth taken before rather than after the test items still correlate with overall hypnotizability score, though not to as high a degree (E. R. Hilgard & Tart, 1966; Tart, 1970). Although usually depth estimates correlate with hypnotizability in the .50 to .75 range (Perry & Laurence, 1980), the correlations were obtained in the hypnotic context, and Ss may use their own behaviors as one determinant of their estimated depth.

From another line of study it is observed that Ss' subjective depth may be at variance with behavioral performance on hypnosis scales (Bowers, 1981). High hypnotizables judge their own depth from their performance on cognitive items (e.g. amnesia, hallucinations) while mediums and lows judge their own performance based on their responses to motor items and challenge items (Kihlstrom, 1981). In one experiment on amnesia, it appeared that Ss did not judge their own depth by how well they did on the amnesia task (Spanos, Stam, D'Eon, Pawlak, and Radtke-Bodorik, 1980). "M. T. Orne (1966, 1980) has emphasized that although it is necessary to operationalize S's responses to hypnotic suggestions, behavioral concomitants are only valid if they accurately reflect subjective alterations in an individual's experience" (p. 221).

"The social-psychological approach (see Barber, 1969; Radtke & Spanos, 1981, 1982; Spanos, 1982; Wagstaff, 1981) rejects the notion of hypnotic depth as an indicator of a unique state. These authors argue that the reports of having been hypnotized reflect attributions made by Ss when confronted with a hypnotic context. ... Bem (1972) and Kelley (1972) have emphasized the idea that the more ambiguous an experience is, the more a person is likely to base his or her judgment primarily on available external information" (p. 222). In this case, defining the situation as involving "hypnosis" is one of the most potent predictors of Ss' reports of subjective experience (Spanos, Radtke-Bodorik, and Stam, 1980). Other variables that influence subjective depth estimates are the wording of the hypnotizability scale, expectancy, and information provided directly or indirectly. On the other hand, McCord (1961) found that his patients had widely disparate expectations for how they thought they would feel when hypnotized, so expectancy as a predictor would not necessarily determine specific experience.

Direct experimental work on predicting response to hypnosis test items from expectancies (Council, Kirsch, Vickery, & Carlson, 1983; Kirsch, Council, & Vickery, 1984) suggests that expectations may predict test response when people are given a cognitive skill type of induction, but not when given a 'typical trance' type of induction. Also, another study from that laboratory (Council & Kirsch, 1983) established that only when expectancies are assessed after an induction (but before the test items) do they effectively predict hypnotic behaviors. The present authors express the view that these results are

difficult to account for on the basis of social psychology theories that weight heavily the role of expectancy in generating hypnotic response.

When Ss are permitted to use several different descriptors for their experience (being hypnotized, experiencing the effects, being absorbed, and responding to the suggestions), most Ss rated their own experiences as nonhypnotic (Radtke & Spanos, 1982). This was particularly true for medium hypnotizable Ss. Thus, unidimensional scales purporting to measure "depth" actually force Ss to interpret their multi-aspect experience in terms of the investigator's frame of reference, in this case "hypnotic depth." Nevertheless, the highly hypnotizable Ss were the least likely to be swayed from their self description of being "deep" when offered alternative ways of describing their experience. This is concordant with results reported earlier by Barber et al. (1968).

"The attribution literature may provide clues as to why most highly hypnotizability Ss retain their high ratings of experienced depth when confronted with situational manipulations. Self-perception theory strictly applies when Ss' experiences are ambiguous, forcing them to fall back on contextual factors to make self-appraisals. The relationship between expectancies, absorption, effect of scale wording, and hypnotizability scores suggest, however, that high hypnotizable Ss do not rely heavily on contextual factors when assessing their levels of hypnotic depth. Most of these Ss maintain their reports of altered experiences, even when situational determinants are changed (Harackiewicz, 1979; Kihlstrom, 1984; Lepper, Greene, & Nisbett, 1973). Thus, the hypnotizability by depth scale interaction found by Radtke and Spanos (1981) may suggest that experiences reported by high hypnotizable S are not inherently ambiguous. Accordingly, self-perception theory may not apply to them" (pp.226-227).

In their Discussion, the authors state, "Several studies have attempted to relate personal, real-life events to the experience of hypnosis. A number of studies (e.g., As, 1963; Field, 1965; Shor et al., 1962; Wilson & Barber, 1982) have shown that absorption, tolerance of unusual experiences, automaticity, compulsion, and trust are related to the capacity to be hypnotized. Other studies (Bowers & Breneman, 1981; Tellegen & Atkinson, 1974; Van Nuys, 1973) have shown that certain variants of attention are also related to hypnotizability. Extensive work by J. R. Hilgard (1970, 1979) has shown that patterns of personal development relate to hypnotizability in adult life. It appears then that hypnotizable individuals bring a host of experiences and abilities with them to the hypnotic context. It makes intuitive sense which is supported by the available empirical data, that a complex interaction among these experiences and abilities, the hypnotic context, and hypnotic responsiveness is implicated in Ss' assessments of their hypnotic depth. Studies are needed in which all of these potential determinants of hypnotic depth reports are taken into account. Only then will a clearer picture of their respective importance emerge" (p. 228).

Laurence, Jean-Roch; Nadon, Robert; Nogrady, Heather; Perry, Campbell (1986). Duality, dissociation, and memory creation in highly hypnotizability subjects. International Journal of Clinical and Experimental Hypnosis, 34, 295-310.

The present paper reports an initial attempt to create a pseudomemory in a group of highly hypnotizable individuals. It was found that for approximately 50% of Ss tested, recall of a specific event was modified when Ss integrated hypnotically suggested material which then posthypnotically was believed to be veridical. This modification in a previously reported memory was linked to a particular cognitive style found in high hypnotizable Ss, namely dual cognitive functioning. Ss reporting duality in hypnotic age regression, and, to a lesser extent, the hidden observer effect, were found to be the most prone to accept a suggested memory as real. These findings suggest the need to emphasize the importance of a cognitive-phenomenological approach to hypnosis and hypnotizability.

Mitchell, George P.; Lundy, Richard M. (1986). The effects of relaxation and imagery inductions on responses to suggestions. International Journal of Clinical and Experimental Hypnosis, 34, 98-109.

Theoretical attempts to understand the meaning and importance of induction procedures in producing hypnotic phenomena suggest that 2 critical components, relaxation and imagery, should be isolated and their relative effect on hypnotic responding studied. Objectively and subjectively scored responses to 12 hypnotic suggestions, which had followed relaxation, imaginal, or combined inductions, were obtained from 59 Ss, divided into 3 levels of hypnotizability. Regardless of hypnotizability level, the combined induction led to a greater subjective report of hypnotic response than did either the relaxation or the imagery inductions; and the relaxation led to a greater subjective report than the imagery induction. It may follow that the subjective experience of hypnosis is facilitated by inductions which include relaxation. The inductions were equally effective in producing objectively measured behavioral responses. There were no significant interactions found between induction type and hypnotizability level.

#### NOTE

(From the Discussion Section). As suggested by Sacerdote (1970), the combination procedure was the most generally effective in producing hypnotic responses. The difference between combined and imagery inductions reached statistical significance on four dependent variables, and the difference between combined and relaxation reached significance on three. It may also be of interest that Ss receiving the combined procedure scored consistently higher on all nine dependent variables.

A somewhat unexpected finding was that the relaxation induction produced scores on four of the dependent variables that were statistically higher than the imagery induction scores. Considering the difficulty of isolating relaxation and imagery components, it is quite noteworthy that these differences between inductions were found.

The four variables in which the combination and relaxation conditions produced significantly higher scores than the imagery condition were subjective reports--subjective score, degree hypnotized, response volition, and Field Inventory. In contrast to Ss in the imagery induction, Ss in the other two induction conditions believed that they were responding more, felt that their responses were more nonvolitional, and felt that they were more deeply hypnotized.

The fact that relaxation instructions were present in both conditions that were superior to the imagery condition would appear to support Edmonston's (1981) position which posits relaxation as essential for the production of the state of neutral hypnosis. For Edmonston the condition of neutral hypnosis is defined as the relaxed state and precedes other phenomena, such as dissociation and increased suggestibility, which other theoreticians may include in the definition of hypnosis.

However, the statistically significant superior effect of the combined over the relaxation induction on three measures casts doubt on Edmonston's position. The S believes that he or she is more deeply hypnotized and is responding less volitionally when an imagery component is combined with relaxation. The Ss also responded more to the Field Inventory when the combined induction was used. Another explanation for imagery's relatively poor showing may lie in Ss' differential expectations. The Ss, especially those with previous experience with a traditional hypnotic induction, as was the case in the present study, may not expect to be hypnotized when presented with an imagery alone induction. Such expectations, of course, might reduce responses. On the other hand, there is no reason to believe that the reduced expectation in the imagery condition would not affect the behavioral responses as well, and such was not the case.

Thus, we may be left with the explanation that relaxation adds to the subjective experience of hypnosis. This is in keeping with Edmonston's (1981) position as well as with previous research, such as that by Hilgard and Tart (1966), which finds traditional inductions, with their relaxation components, superior to nontraditional inductions, such as fantasy or task-motivational. If future research should

find that bodily involvements such as the physical exertion or repetitive motor behavior (Banyai and Hilgard, 1976) lead to the same level of subjective experience as relaxation did, then we may need to broaden the concept of the somatic component beyond relaxation alone.

In terms of the behavioral compliance of Ss, the results of the present study are in accord with some previous studies in finding all procedures equally effective. Neither imagery, relaxation, nor the combined procedure was superior for the behavioral measure.

Personality factors (social desirability, internality/externality, and absorption) did not affect the basic findings. To the degree that the Tellegen scales measure the ability to engage in imagery there seems to be little basis for believing that imagery ability is related to the general findings.

Sarbin (1983) would call the inductions studied here 'entrance rituals,' and he has recently asked in his review of Edmonston's book, "Which ritual is more suitable... [p. 58]' for preparing S to respond in various hypnotic ways? One answer from the present results is that an entrance ritual should include muscular relaxation if one wants a better subjective response from S. From Sarbin's point of view, the relaxation component may be more ego-involving, producing more subjective experience and meaning for S.

If one wants to produce only a behavioral response, either a relaxation or imagery ritual will serve.

**Pekala, Ronald J. (1986, August). Phenomenological variations in attention across low, medium, and high susceptibility subjects. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.**

Phenomenological aspects of attention were assessed across 434 subjects in reference to baseline conditions of eyes-open or closed sitting quietly and an hypnotic induction condition. An attention questionnaire, assessing 12 dimensions of attention, was constructed and subjects completed it retrospectively in reference to the baseline condition and hypnosis. Reliability analyses indicated acceptable reliability for most dimensions. Regression and correlational analyses suggested adequate validity. Comparisons between baseline and hypnosis indicated significant phenomenological intensity differences between stimulus conditions on many attention dimensions. Comparisons among low, medium, and high susceptibles in reference to baseline and hypnosis also yielded many significant intensity differences. In addition, significant interactions between conditions and groups for many of the attention dimensions suggest that hypnosis, in comparison to the baseline conditions, potentiated intensity differences in attention for high, vis-a-vis (and medium), susceptible subjects.

**Register, Patricia A.; Kihlstrom, John F. (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34, 84-97.**

Measures of hypnotizability based on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) correlate only moderately with those based on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Ss (N = 148) scoring in the high range (10-12) on HGSHS:A were classified according to whether they scored in the "virtuoso" range (11-12) or not on a subsequent administration of SHSS:C. Significant group differences were found on items comprising the cognitive distortion subscale of HGSHS:A, whether assessed in terms of overt behavior or subjective impressions of success. The 2 groups also differed on global self-ratings of hypnotic depth and on those subscales of Field's Inventory Scale of Hypnotic Depth concerned with subjective feelings of loss of control, automaticity, transcendence of normal functioning, and fluctuating depth. Assessments of hypnotizability are enhanced when investigators consider subjective involvement as well as behavioral measures of hypnotic response. This is particularly important when the more dissociative aspects of hypnosis are under scrutiny.

NOTES

The correlation between Harvard Group and Stanford Scale scores is usually about  $r = .60$  (Bentler & Roberts, 1963; Coe, 1964; Evans & Schmeidler, 1966). This is much lower than one would expect ( $r = .82$ ), based on the tests' individual reliabilities (Evans & Schmeidler, 1966).

The authors developed a Table to show the cross-classification of Ss in terms of Harvard and SHSS:C. Only a minority (33%) of Ss scoring in the highest range of HGSHS:A also scored in the highest range on the SHSS:C (or 50% if cutting points are different).

The Absorption scale correlated  $r = .38$  ( $p < .001$ ) with the Harvard Scale, which fell to  $r = .31$  ( $p < .01$ ) when corrected for expansion of range. The correlation between Absorption and SHSS:C was  $.35$  ( $p < .001$ ).

The issue of predicting Stanford 'virtuosos' from Harvard 'virtuosos' was addressed. HGSHS:A predictor variables were used to determine which items determined whether or not one of the HGSHS:A 'virtuosos' (the 20% who scored 11-12) would also be a SHSS:C 'virtuoso.' It was found that 70% of the SHSS:C virtuosos, but only 53% of the nonvirtuosos, had reversible posthypnotic amnesia on the HGSHS:A. None of the ideomotor or challenge subscale items demonstrated this ability to predict group association. Although the 'virtuosos' differed from the 'nonvirtuosos' in self reported depth, none of the coding categories associated with the depth variable differentiated the groups; also, judges could not predict who would be a Stanford 'virtuoso' based on subjects' descriptions of depth following the Harvard scale administration.

The Experimenters also could not predict who among the Harvard 'virtuosos' would be classified as a Stanford 'virtuoso' based on either their Absorption Scale score or previous experience with hypnosis. It was found that subjects' subjective experience of the suggestions for hallucinations, amnesia, and posthypnotic behavior (all considered to be cognitive alterations) were the most highly correlated with the subsequent total SHSS:C score. On the Field scale, which measures subjective experience, the most predictive items had to do with feelings of automaticity and loss of control (referred to as nonvoluntary behavior in other literature). Predicting SHSS:C score by 5 items (Harvard behavioral score, Harvard subjective score, Field total score, Tellegen Absorption total score, and self reported depth rating),  $r = .44$ . "The 5-element regression, employing only total scores, explained 17% ... of the variance of SHSS:C; thus, the feelings of subjective success accounted for the vast proportion (79%) of the explainable variance. For the 16 element regression, employing subscales derived from factor analysis of HGSHS:A and Inventory Scale of Hypnotic Depth, the cognitive subscale was dominant, accounting for 65.5% of explainable variance" (p. 92).

A discriminant function analysis employing the same five total score variables correctly classified 63.3% of the virtuosos.

In their Discussion, the authors suggest that investigators use subjective response as well as behavioral response when identifying hypnotic talent (virtuosos) for research. Particularly, the subjective experience of success seems to be important. Little is known, to date, about the determinants of that sense of success with hypnotic suggestions. "In part, they may relate to the 'classic suggestion effect' (K. S. Bowers, 1981; P. G. Bowers, 1982; Weitzenhoffer, 1974): the quasi-automatic, compulsory, involuntary quality which distinguishes hypnotic response from compliance with simple social requests. If so, then a direct assessment of perceived involuntariness might enhance the predictive validity of HGSHS:A even more. This is especially true for the perceptual-cognitive alterations which relate to Ss' capacity for dissociation" (p. 94).

The authors further recommend, "In those situations where HGSHS:A must stand alone for economic reasons, however, and especially where HGSHS:A is employed as a convenient preliminary screening device in the search for hypnotic virtuosos, it would seem that some assessment of the subjective experience of hypnosis would provide useful supplementary information at very little cost" (p. 94).

Stam, Henderikus J.; McGrath, Patricia A.; Brooke, Ralph I.; Cosier, Frances (1986). Hypnotizability and the treatment of chronic facial pain. International Journal of Clinical and Experimental Hypnosis, 34, 182-191.

The Carleton University Responsiveness to Suggestion Scale (CURSS) of Spanos, Radtke, Hodgins, Bertrand and Stam and Spanos, Radtke, Hodgins, Stam, and Bertrand (1983) was individually administered to a sample of 61 facial pain patients. The mean scores on the 3 CURSS suggestibility dimensions were higher than those of the college student norms. As in previous studies using the CURSS, however, objective scores were smaller when experienced involuntariness was taken into account. Observer scores of overt responses were highly related to self-scores of overt responses. The CURSS also proved a good predictor of reductions in clinical pain following a psychologically based treatment program.

NOTES: The CURSS has 7 items: 2 ideomotor (arm-levitation, arms moving apart); 2 motor-challenge (arm rigidity, arm immobility); and 3 cognitive (auditory hallucination, visual hallucination, amnesia). The CURSS yields 3 suggestibility scores: O = Objective (number of suggestions to which S made appropriate overt response; 0-7 range) S = Subjective (the degree to which S reports experiencing the subjective events called for; 0-21 range) O-I = Objective-Involuntariness (number of suggestions that were passed objectively and that were rated as involuntary to either a moderate or great degree; 0-7 range) VC = Voluntary Cooperation; items that are passed objectively and are primarily experienced as voluntary occurrences

They tested 61 patients in facial pain clinic, mean age 26 years, who were diagnosed with temporomandibular pain and dysfunction syndrome (TMPDS). This syndrome includes pain, limitations in mandibular movements, and sounds during condylar movements. 41 of the patients completed a cognitive behavioral pain treatment program (results reported elsewhere, in Stam, H. J., McGrath, P. A., & Brooke, R. I. The effects of a cognitive-behavioral treatment program on temporomandibular pain and dysfunction syndrome. Psychosom. Med., 1984, 46, 534-545).

Patients rated degree they expected to be hypnotized on a visual analog scale. Expectations for becoming hypnotized were not significantly correlated with any of the dimensions, except for the CURSS:O observer-scored dimension ( $r = .29$ ). Age was also related to the CURSS:O observer-scored dimension ( $r = -.25$ ) as well as to the CURSS:S dimension ( $r = -.28$ ).

Several measures of treatment outcome were employed--change scores of weekly self ratings, and post-treatment ratings by the dental surgeon (worse, same, improved, alleviated).

"Whereas the CURSS:V-C dimension is not at all related to any of the outcome measures, the objective, subjective, and objective-involuntariness measures are highly and significantly correlated with the reduction in patients' peak pain scores and the posttreatment pain ratings. The correlations between measures of hypnotizability and pain reductions are not significant for the control group, though these are based on small sample size. Table 3 also indicates a lack of relationship between measures of hypnotizability and the weekly pain ratings. Stam et al. (1984a) point out that it may have been due to the relative instability of the global weekly ratings of pain versus the daily ratings obtained from the home logs that were used to calculate the peak pain scores" (p. 187).

Table 3 Correlation Coefficients between Dimensions of the CURSS and Reductions in Pain Susceptibility Dimension Pain Reduction O S O-I V-C

Measures	O	S	O-I	V-C
Pre-post	.60**(.36)	.51**(.19)	.44*(-.21)	.18(.42)
Peak Pre-post	.19	-.01	.15	.07
Posttreatment	.54**(-.05)	.58**(.26)	.58**(.01)	-.02(.37)
Surgeon's rating				

Note: Correlations in parentheses are for the Waiting List Control group (N = 14; N = 10 for Peak Pain); all others are for combined treatment groups, N = 27.

\* $p < .05$  \*\* $p < .01$

In their Discussion, the authors note that this research is in accord with other studies that indicate that "objective responding and the experience of those responses involuntarily are not necessarily equivalent. ... Ss in both the laboratory and the clinic are almost twice as likely to pass suggestions when assessed overtly than by the combined objective-involuntariness criterion. ... [and] objective scores alone confound responses experienced as voluntary with those experienced as involuntary" (pp. 188-189). They report that earlier studies from their laboratory indicated that "only CURSS suggestibility dimensions, and not the VC dimension, correlated significantly with absorption and Field's (1965) Inventory Scale of Hypnotic Depth. ... [and] correlations between hypnotizability and reductions in pain were not due to compliance factors but were related to each of the other three ways of assessing hypnotizability" (p. 189).

"The objective, subjective, and objective-involuntariness dimensions were all significantly correlated with the reductions in peak pain and posttreatment ratings for the treatment groups but not for the control groups. These results replicate the laboratory demonstrations that hypnotizability is correlated with suggested analgesia regardless of the presence or absence of a hypnotic induction procedure (E. R. Hilgard & J. R. Hilgard, 1975; Spanos, Radtke-Bodorik, Ferguson, & Jones, 1979; Stam & Spanos, 1980). There is some evidence, however, that this depends on the hypnotic induction procedure being defined as a component of the analgesia testing situation (Spanos, Kennedy, & Gwynn, 1984).

"Despite the differential predictions between CURSS dimensions and pain reductions, there were no increases in the predictions of pain reductions when objective scores were corrected for involuntariness or when using subjective scores. (This was apparent for the combined treatment groups as well as for each group examined separately.) The reasons for this are not obvious and await further research" (p. 189).

The authors conclude from their research that the general practice of self-scoring hypnotizability scales that is used in laboratory research appears to be equally reliable in a clinical situation.

Wilson, L.; Kihlstrom, J. F. (1986). Subjective and categorical organization of recall during posthypnotic amnesia. Journal of Abnormal Psychology, 95 (3), 264-73.

Conducted 2 experiments to determine the fate of organization of recall during posthypnotic amnesia. In both studies, amnesia suggestions were administered to undergraduate Ss of low, medium, and high hypnotic susceptibility who had learned a word list by the method of free recall while they were hypnotized. In Exp I (n = 44), words were unrelated to each other, and subjective organization was measured by raw and adjusted pair frequency. In Exp II (n = 59), words were drawn from various taxonomic categories, and category clustering was measured by repetition ratio, modified repetition ratio, and adjusted ratio of clustering. Results indicate that, compared to baseline levels, subjective organization and category clustering did not decrease reliably during the time the amnesia suggestion was in effect. Moreover, these aspects of strategic organization were not significantly correlated with the number of items recalled during amnesia. Both findings contrast with previous results concerning temporal organization of a word list memorized by the method of serial learning. Findings suggest that the disruption of retrieval processes in posthypnotic amnesia may be limited to certain organizational schemes. (43 ref).

Woolson, Donald A. (1986). An experimental comparison of direct and Ericksonian hypnotic induction procedures and the relationship to secondary suggestibility. American Journal of Clinical Hypnosis, 29 (1), 23-28.

Recent studies reporting the disparate effects of direct and indirect suggestion upon hypnotized subjects have indicated that standardized, direct hypnotic susceptibility tests may not accurately predict the suggestibility of subjects exposed to an indirectly worded, albeit similar, test. Historically, primary suggestibility correlates highly with hypnotizability, while secondary suggestibility does not

and has been reported to be a subject's response to indirect suggestion. In this study 56 volunteers for self-hypnosis training were first tested for secondary/indirect suggestibility, then each singly received either a direct standardized [sic] induction or an Ericksonian (indirect) version. While susceptibility scores between groups were close, a greater number of the Ericksonian group subjects were rated as medium or highly susceptible. This occurred regardless of their type of suggestibility. Also, the Ericksonian group subjects appeared to be less aware of their depth of trance, as judged by a comparison of their susceptibility scores and their self-report depth scores. - Journal Abstract

1985

Jupp, James J.; Collins, John K. (1985). Hypnotic responsiveness and depth in a clinical population. Australian Journal of Clinical and Experimental Hypnosis, 13 (1), 37-47.

Two samples of clinical subjects estimated depth during procedures which allowed their estimates to be related to aspects of responsiveness. In Sample 1, subjects estimated depth after they scored their responsiveness and tested their post-hypnotic recall. In Sample 2 subjects estimated depth before they had completed these tasks. Results suggested that subjects use the range of available information in making depth estimates and that they may be more influenced by the more obvious ideomotor challenge performances than by the cognitive distortion responses, aspects of amnesia, or impressions of involuntariness.

Jupp, J. J.; Collins, J. K.; McCabe, M. P. (1985). Estimates of hypnotizability: Standard group scale versus subjective impression in clinical populations. International Journal of Clinical and Experimental Hypnosis, 33 (2), 140-149.

The relationship between hypnotic responsiveness as measured by the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) and global depth estimates derived from an 11-point scale were explored in 2 clinical samples. In one case, depth estimates were made just before, and in the other, immediately following the patients' focus on aspects of hypnotic responsiveness. The responsiveness-depth relationship was moderate and consistent across both samples, a finding which in itself is consonant with previous findings employing experimental Ss. When HGSHS:A performance and depth estimates were less proximate, the relationship between them remained significant but was substantially reduced in magnitude. Data suggest that low hypnotizable Ss increase their estimates of depth, and that higher hypnotizable Ss retain relatively stable estimates with increased exposure to hypnosis in a clinical context.

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main

relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

Kirsch, Irving (1985, November). Response expectancy as a determinant of experience and behavior. American Psychologist, 40 (11), 1189-1202.

Response expectancies, defined as expectancies of the occurrence of nonvolitional responses, have generally been ignored in theories of learning. Research on placebos, hypnosis, and fear reduction indicates that response expectancies generate corresponding subjective experiences. In many cases, the genuineness of these self-reported effects has been substantiated by corresponding changes in behavior and physiological function. The means by which response expectancies affect experience, physiology, and behavior are hypothesized to vary as a function of response mode. The generation of changes in subjective experience by corresponding response expectancies is hypothesized to be a basic psychological mechanism. Physiological effects are accounted for by the mindbody identity assumption that is common to all nondualist philosophies of psychology. The effects of response expectancies on volitional behavior are due to the reinforcing properties of many nonvolitional responses. Classical conditioning appears to be one method by which response expectancies are acquired, but response expectancy effects that are inconsistent with a conditioning hypothesis are also documented.

Tkachyk, Mary E.; Spanos, Nicholas P.; Bertrand, Lorne D. (1985). Variables affecting subjective organization during posthypnotic amnesia. Journal of Research in Personality, 19, 95-108.

Subjects learned a list of unrelated words to a criterion of either two successive correct trials (standard criterion), or two successive correct trials plus five additional recall trials (extra criterion). The extra recall trials significantly increased the subjective organization of recall. In the extra criterion group, a posthypnotic amnesia suggestion and a nonhypnotic distraction task produced equivalent decrements both in the amount recalled and in the subjective organization of recall. In the standard criterion group, suggestion and distraction reduced the amount recalled, but not the subjective organization of recall. The implications of these findings for understanding the contradictory results of earlier studies of recall organization during amnesia are discussed. Implications for theories of hypnotic amnesia are also discussed.

Vickery, Anne R.; Kirsch, Irving; Council, James R.; Sirkin, Mark I. (1985). Cognitive skill and traditional trance hypnotic inductions: A within-subjects comparison. Journal of Consulting and Clinical Psychology, 53 (1), 131-133.

Comparison of a traditional trance hypnotic induction and a cognitive skill induction in a within-Ss design with 40 undergraduates showed that the cognitive skill induction enhanced subjective responses to suggestions and produced significant increments in behavioral responses when it was preceded by

the trance induction. The trance procedure led to greater self-reported alterations in consciousness. Findings suggest that skill induction teaches cognitive strategies that enhance responsivity to suggestions in subsequent hypnotic experiences, independent of alterations in consciousness elicited by trance induction.

1984

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGS: A, a group version of the SHSS: C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post-Hypnotic Compulsions, Amnesia (HGS: A), Amnesia (SHSS: C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process

Pekala, Ronald J.; Kumar, V. K. (1984). Predicting hypnotic susceptibility by a self-report phenomenological state instrument. American Journal of Clinical Hypnosis, 114-121.

In an attempt to predict hypnotic susceptibility (as measured by the Harvard Group Scale of Hypnotic Susceptibility, HGS) the phenomenological experiences of an hypnotic induction (HI) procedure and a baseline comparison condition (eyes closed, EC, sitting quietly) were assessed. After each experience the subjects (n=217) completed the Phenomenology of Consciousness Inventory (PCI), a self-report phenomenological state instrument, dealing with that condition. Step-wise multiple regression and discriminant analyses were then performed on data using the subject's HGS score as

the dependent variable and the PCI (sub)dimensions as the independent variables. Regression analyses that held up under cross-validation during HI suggest that the PCI may be an appropriate instrument for predicting susceptibility. The possible clinical usefulness of this approach is discussed.

1983

McConkey, Kevin M. (1983). Behaviour, experience, and effort in hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 11, 73-81.

Subjects were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A, and were afterwards asked to rate the degree to which they experienced the items; subjects also scored their behavioural performance on the items. Data were analyzed to explore the relationships among behaviour, experience, and effort. Findings indicated a significant positive relationship between behaviour and experience on all of the HGS: A items, a significant negative relationship between behaviour and effort on the ideomotor items, and a significant positive relationship between behaviour and effort on the cognitive items. A similar pattern was observed between experience and effort. Also, subjects of varying HGS: A responsivity differed in terms of overall experience of the scale but not in terms of the overall amount of effort that they expended. Implications of the data are discussed in terms of the factors influencing subjects' experiential response and behavioural performance as well as the attributions that they make concerning effort during hypnosis.

Nogrady, Heather; McConkey, Kevin M.; Laurence, Jean-Roch; Perry, Campbell (1983). Dissociation, duality, and demand characteristics in hypnosis. Journal of Abnormal Psychology.

Examined hypnotic dissociation (as indexed by the "hidden-observer" method), duality in age regression, and the potential impact of situational cues on these phenomena. 12 high- and 9 low-susceptible undergraduates (as determined by the Stanford Hypnotic Susceptibility Scale) were tested in an application of the real-simulating paradigm of hypnosis; 10 high- to medium-susceptible Ss were also employed. Inquiry into Ss' experiences was conducted through the experiential analysis technique, which involves Ss viewing and commenting on a videotape playback of their hypnotic session. Results demonstrate that neither the hidden-observer effect nor duality could be explained solely in terms of the demand characteristics of the test situation. The hidden-observer effect was observed in high-susceptible Ss only; all Ss who displayed the hidden-observer effect also displayed duality in age regression. High-susceptible Ss were distinctive in their reports of multiple levels of awareness during hypnosis. Findings are discussed in terms of the cognitive skills that Ss bring to hypnosis and the degree to which the hypnotic setting encourages the use of dissociative cognitive processes. (43 ref).

Spanos, Nicholas P.; Dubreuil, Debora L., Saad, Carol L., Gorassini, Donald (1983). Hypnotic elimination of prism-induced aftereffects: Perceptual effect or responses to experimental demands?. Journal of Abnormal Psychology, 92 (2), 216-222.

Two experiments assessed adaptation to displacing prisms in hypnotically limb-anesthetized Ss. Experiment I with 18 college students disconfirmed the hypothesis that the displacement aftereffect is eliminated in limb-anesthetized hypnotic Ss who adapt to prisms in the absence of a visual target. Such Ss showed as large a displacement aftereffect as control Ss who received neither a hypnotic induction procedure nor an anesthesia suggestion. Experiment II with 30 undergraduates demonstrated that under some testing conditions hypnotic Ss complied with experimental demands and eliminated the behavioral but not the perceptual component of the aftereffect.

Wagstaff, Graham F. (1983). Comment on McConkey's "Challenging hypnotic effects: The impact of conflicting influences on response to hypnotic suggestion". [Comment/Discussion] .

## NOTES

"Probably the most consistent finding to emerge from McConkey's review is that hypnotic subjects tend to respond in accordance with what they feel the hypnotist really wants, regardless of conflicting experimental demands" (p. 13).

1982

McConkey, Kevin M.; Sheehan, Peter W. (1982). Effort and experience on the Creative Imagination Scale. International Journal of Clinical and Experimental Hypnosis, 30 (3), 280-288.

158 Ss were administered the Creative Imagination Scale (CIS) of Barber and Wilson (1977) and were asked to rate the degree of effort that they expended in attempting to experience the suggested effects; Ss also routinely rated their experiences of the test items. Results were analyzed to assess the relationship between the ratings of effort and experience on the test items. The data were further analyzed in terms of Ss' CIS total experience score and the average item-effort expended during testing. Results indicated that Ss who experienced the items reported expending more effort than those Ss who did not experience the items on some, but not all, of the items. For Ss who experienced the items, increased vividness of effect was not associated with increased effort; correlational analysis indicated no significant relationship between effort and experience. Ss of varying CIS responsivity also did not differ in the degree of average item-effort they reported expending. Implications of the data are discussed for our theoretical understanding of the imagery-related processes that underlie hypnotic performance.

St. Jean, Richard; MacLeod, Carrie; Coe, W. C.; Howard, M. L. (1982). Amnesia and hypnotic time estimation. International Journal of Clinical and Experimental Hypnosis, 30, 127-137.

Previous research has shown that hypnotic Ss tend to underestimate the duration of the hypnotic interval (Bowers, 1979; Bowers & Brennehan, 1979). Based on Ornstein's (1970) work, the present investigation tested the hypothesis that such underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session. Two separate studies, in which time estimates were collected in conjunction with administrations of the Harvard, failed to find a relationship between responses to the amnesia suggestion and time estimation. Ss in both studies substantially underestimated the duration of the hypnotic interval, but the degree of such underestimation was not related to hypnotic responsiveness. Thus, Ornstein's hypothesis that underestimation occurs to the extent that Ss are amnesic for the events of the hypnotic session was strongly disconfirmed.

1981

Dosamantes-Alperson, Erma (1981). Experiencing in movement psychotherapy. American Journal of Dance Therapy, 4, 33-44.

Experiencing is a process variable in psychotherapy which deals with the manner with which individuals use their internal, ongoing bodily-felt flow of experience to gain self-awareness and to communicate about themselves. A consistent finding across research process studies in psychotherapy is that successful clients start, continue, and end therapy at higher experiencing levels than do less successful clients. The implication of this finding for all therapists, irrespective of their theoretical framework, is that they need to help their clients process the content they raise in therapy at a high level of experiencing throughout the course of therapy. This paper discusses and demonstrates several body movement based procedures that enhance clients' experiencing level while working within the context of experiential movement psychotherapy, a form of psychotherapy which emphasizes the

acquisition of personal meanings by clients from any of the following three experiential and expressive modalities: body movement, kinetic imagery, or verbal communication.

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

Johnson, L. S. (1981). Current research in self-hypnotic phenomenology: The Chicago paradigm. International Journal of Clinical and Experimental Hypnosis, 29 (3), 247-258.

This paper discusses the research of the Chicago group program (Fromm, Brown, Hurt, Oberlander, Boxer, & Pfeifer, 1981) from several viewpoints: first, as a conceptual and methodological example of what Shor (1977) has called the "phenomenological method" of hypnosis research; second, in terms of its intent and assumptions with respect to some other current self-hypnosis research; third, as potentially plagued with certain demand characteristics which favor finding phenomena unique to self-hypnosis; and fourth, as a most creative and exhaustive effort, clarifying and expanding the field of knowledge of self-hypnosis.

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

Orne, Martin T.; McConkey, Kevin M. (1981). Toward convergent inquiry into self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 313-323.

From both theoretical and therapeutic perspectives, there is a need to expand and integrate current lines of research into the phenomenon of self-hypnosis and its clinical application. Some issues and research implications are outlined that concern the need to (a) delineate the phenomenon, (b) convergently assess it through behavioral and phenomenological techniques, and (c) investigate the consequences of its private use. Behavioral, experiential, and consequential measures of self-hypnosis are seen as methodologically distinct ways of convergently assessing the phenomenon. The adoption of multiple strategies of inquiry into the nature and function of self-hypnosis may allow a better understanding of it from the respective viewpoints of those who seek to understand, to teach, and to use the technique.

Singer, Jerome L.; Pope, Kenneth S. (1981). Daydreaming and imagery skills as predisposing capacities for self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 271-281.

A growing body of empirical literature suggests that daydreaming and related forms of waking reverie are natural-occurring, common experiences in normal individuals. Specific experiments relating daydreaming and the stream of ongoing thought as an alternative source of stimulation to external cues are described. It is proposed that everyday waking consciousness has many features of internal absorption in imagery and adaptive but non-sequential processes that resemble fantasy, hypnosis, and night dreaming. Experiments linking daydreaming, imagery vividness, and hypnosis are cited as suggesting that individuals may develop capacities for control over the stream of thought and that such capacities are closely similar to the skills needed for self-hypnosis.

1980

Ericsson, K. Anders; Simon, Herbert A. (1980). Verbal reports as data. Psychological Review, 87 (3), 215-251.

## NOTES

Proposes that verbal reports are data and that accounting for them, as well as for other kinds of data, requires explication of the mechanisms by which the reports are generated, and the ways in which they are sensitive to experimental factors (instructions, tasks, etc.). Within the theoretical framework of human information processing, different types of processes underlying verbalization are discussed, and a model is presented of how ss, in response to an instruction to think aloud, verbalize information that they are attending to in short-term memory (STM). Verbalizing information is shown to affect cognitive processes only if the instructions require verbalization of information that would not otherwise be attended to. From an analysis of what would be in STM at the time of report, the model predicts what could be reliably reported. The inaccurate reports found by other research are shown to result from requesting information that was never directly heeded, thus forcing Ss to infer rather than remember their mental processes. (112 ref)

McConkey, Kevin M.; Sheehan, Peter W. (1980). Inconsistency in hypnotic age regression and cue structure as supplied by the hypnotist. International Journal of Clinical and Experimental Hypnosis, 28 (4), 394-408.

Inconsistency in hypnotic age regression was elicited by asking Ss to write a complex sentence, in contexts that varied appreciably in the extent to which they cued Ss that illogical response was

appropriate. Hypnotically responsive and unresponsive Ss were assigned to a real or simulating group in application of the real-simulating model of hypnosis and tested in 1 of 3 distinct cue conditions. Cue conditions either followed those of previous studies and communicated that no particular response was appropriate, or communicated that an illogical response was appropriate, or inappropriate. It was hypothesized that cue structure would have a significant impact. Data indicated that cues for logical response had a greater influence on the behavior of Ss than did cues for illogical response when compared with the base response condition; at times, real Ss behaved appreciably more illogically than simulating Ss. Also, detailed analysis of the reports of both groups of Ss indicated distinctive properties of experience that point to the importance of recognizing the complexities of consciousness underlying the experiences of highly susceptible Ss.

Perry, Campbell; Laurence, Jean-Roch (1980). Hypnotic depth and hypnotic susceptibility: A replicated finding. International Journal of Clinical and Experimental Hypnosis, 28 (3), 272-280.

A sample of 398 Ss was tested in groups of from 8 to 20 people on the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962). Retrospective depth reports for each of the 12 HGSHS:A items were taken in order to extend Tart's findings (1970, 1972) on susceptibility and depth. The Ss were tested over 2 successive years in samples of N = 220 and N = 178. Since results were almost identical for each year (thus constituting a replication), the data were pooled for this report.

A remarkable consistency in patterns of subjective depth across the 12 items of HGSHS:A was found, particularly noticeable in Items 7, 8, 9, and 10 for 4 susceptibility groups (high, high-medium, low-medium and low-susceptible Ss) which appeared to reflect differential item difficulties. In addition, all correlations between reported depth and HGSHS:A total scores were high and statistically significant. While the findings are in general accord with those of Tart (1970, 1972), further research is required in order to determine the underlying basis of depth reports, and the degree to which experimental reports of susceptibility and clinical reports of depth reflect similar experiential aspects of hypnosis.

Spanos, Nicholas P.; Radtke-Bodorik, H. Lorraine; Shabinsky, Michael A. (1980). Amnesia, subjective organization, and learning of a list of unrelated words in hypnotic and task-motivated subjects. International Journal of Clinical and Experimental Hypnosis, 28 (2), 126-139.

Hypnotic and task-motivated Ss learned a list of unrelated nouns and were then administered an amnesia suggestion for the list. Hypnotic Ss showed slower learning but more amnesia than task-motivated Ss. Hypnotic and task-motivated Ss showed an equivalent degree of "breakdown" in the subjective organization of their recall following the amnesia suggestion. However, the extent of this breakdown in subjective organization, was unrelated either to Ss' degree of amnesia or to their level of hypnotic susceptibility. A substantial proportion of Ss who failed to recall any words following the suggestion (total nonrecallers) later reported that they remembered but did not say at least some of the words. The theoretical implications of these findings are discussed.

St. Jean, Richard (1980). Hypnotic time distortion and learning: Another look. Journal of Abnormal Psychology, 89 (1), 24.

Conducted 2 studies employing different methodologies with a total of 75 undergraduates to test the hypothesis that hypnotic time distortion facilitates verbal learning. All of the Ss in Exp I and most of those in Exp II were given a modified version of the Stanford Hypnotic Susceptibility Scale-Form C. All Exp II Ss were also given the Harvard Group Scale of Hypnotic Susceptibility. Analysis of previous research indicated that hypnotic susceptibility and the form of time-distortion suggestions might be

important moderator variables in the relationship. The separate and combined effects of these variables were observed in both studies. No combination of hypnotic susceptibility and time-distortion suggestions in either study raised performance level beyond that of the waking- and/or hypnotic-control conditions. Responses to a postexperimental questionnaire in Exp II indicated that high-susceptible Ss reported subjectively convincing changes in experienced time flow following time-distortion suggestions (12 ref)

1979

Dosamantes-Alperson, Erma (1979). The intrapsychic and the interpersonal in movement psychotherapy. American Journal of Dance Therapy, 3, 20-31.

The adaptive function of two states of consciousness and corollary movement experiences is described. Movement in which a relaxed state of attention is maintained on inner kinesthetic sensations and imagery is contrasted with movement which is characterized by conscious, active interacting with the external world of people and events. Clinical examples from individual and group psychotherapy sessions are cited to demonstrate how meaning and conflict resolution may be achieved by clients while moving in either mode.

Johnson, Lynn S. (1979). Self-hypnosis: Behavioral and phenomenological comparisons with heterohypnosis. International Journal of Clinical and Experimental Hypnosis, 27, 240-264.

In a study of behavioral and phenomenological differences between auto- and heterohypnosis, standard autohypnotic and hetero-hypnotic experiences were administered to 48 college students (25 males, 23 females). Total scores of behavioral and phenomenological responses were compared for each experience. The phenomenological scores were also factor analyzed for each type of hypnosis. Behavioral total scores were comparable. Inexperienced Ss were as able to hypnotize themselves as to be hypnotized by another. Scores on "challenge" items were also comparable, whereas items suggesting positive actions showed greater variability. Factor analyses showed that the subjective experiences were generally similar. Heterohypnosis evoked more feelings of unawareness, passivity, and loss of control. Self-hypnosis elicited more feelings of time distortion, disorientation, active direction, and trance variability. The relationship between hypnotic mode and order effects was discussed in terms of Ruch's (1975) facilitatory/inhibitory effects. Conclusions are drawn that self-hypnosis and heterohypnosis are sufficiently similar to be conceptualized under the same label. Data is offered on expectations of self-hypnosis and their effect on later responsiveness.

1978

Coe, William C. (1978). The credibility of posthypnotic amnesia: A contextualist's view. International Journal of Clinical and Experimental Hypnosis, 26 (4), 218-245.

This paper attempts to demonstrate how the contextual view rather than the formist-mechanistic view may be more helpful in understanding posthypnotic amnesia. As a point of departure, the criterion for credible posthypnotic amnesia is defined as Ss' phenomenal experiences which are observed indirectly through their counterfactual statements expressed with a high degree of conviction. To make sense of such self-reports, concepts flowing from contextualism, the view of man as an active person in an everchanging series of contexts, are employed. Concepts such as plots, reinforcement contingencies, trust, belief systems, involvement, ambiguousness, and self-observation may be postulated in understanding how people come to believe in their own counterfactual reports and to convince others of their credibility. Recent research on source amnesia, disrupted retrieval, and breaching

posthypnotic amnesia is also critically evaluated. The conclusion is reached that the data are not compelling and their interpretations have been overstated.

1977

Ryan, M. L.; Sheehan, Peter W. (1977). Reality testing in hypnosis - subjective versus objective effects. International Journal of Clinical and Experimental Hypnosis, 25, 27-51.

90 unselected Ss were assigned to a 2 x 3 (Request for Honesty x Suggestibility Instruction) factorial design to test the hypothesis that hypnotic Ss would show pronounced impairment of reality testing by expressing a degree of conviction substantially out of phase with their objective performance. Barber's operational model of hypnosis was adopted to test the prediction on an unusually distinctive auditory comprehension task. The 2 interdependent measures, confidence and accuracy, were highly positively related indicating that, generally speaking, hypnotic Ss performed adaptively, as did task motivated and control Ss. Results for the difficult aspects of the task were most distinctive. Here, degree of confidence about behavior as expressed by Ss who performed well on the suggestibility tests was relatively greater than the confidence expressed by those who performed poorly; further, hypnotic Ss were distinctively willing to respond on the least intelligible parts of the task. The inconsistent nature of certain features of hypnotic behavior was discussed in some detail.

1976

Miller, Lawrence J. (1976). A comparison of hypnotic susceptibility for internal and external locus of control subjects in hetero- and self-hypnotic treatments (Dissertation). Dissertation Abstracts International, 37, 978-979.

"This study investigated the use of self- and hetero-hypnosis with internal and external locus of control subjects. Fifty-eight subjects, matched on hypnotic susceptibility and internal-external locus of control, were randomly assigned to the self- or hetero-hypnotic treatments. Self reports of their hypnotic behavioral scores and hypnotic subjective responses were obtained for each subject. "The statistical analyses showed there were no significant differences between the internal and external locus of control groups or within groups in regard to self- and hetero-hypnosis total behavioral scores, "challenge" or "non-challenge" items, .... their reported subjective experiences. The results supported the similarity of hetero- and self- hypnosis. Various findings from past research in regard to I-E subjects were also challenged in terms of their generalizability to hypnotic settings" (pp. 978-979).

1975

Barber, Theodore Xenophon (1975). Responding to 'hypnotic' suggestions: An introspective report. American Journal of Clinical Hypnosis, 18 (1), 6-22.

The author first presents an introspective report which describes some of his attitudes, motivations, and expectancies and ongoing thought processes while he is responding to 'hypnotic' suggestions. The introspective report indicates that (a) suggested effects are experienced when a person thinks with and imaginatively focuses on those things that are suggested and (b) a person imaginatively focuses on the suggestions when he sees the test situation as useful and worthwhile and when he wants to and expects to experience those things that are suggested. It is then argued that the responsive subject in a hypnotic situation differs in every important respect from the sleepwalker and closely resembles the person who is involved in reading an interesting novel or in observing an interesting motion picture. Finally, the author outlines a course, now being developed, that aims to teach individuals how to respond to suggestions.

**Mather, Marcia; Degun, Gian S. (1975). A comparative study of hypnosis and relaxation. British Journal of Medical Psychology, 48, 55-63.**

**Hypothesis 2. Learning would be an important variable in the efficacy of post- hypnotic suggestions (n.s.) Hypothesis 3. Suggestions made towards the end of the experimental session would be more effective than suggestions at the beginning; the assumption being that the trance might deepen with the passage of time (n.s.) Hypothesis 4. There would be a significant difference in heart rate between the waking and hypnotic states (n.s.) Hypothesis 5. There would be a shift in attitudes of the subject in favor of hypnosis from pre- to post-experiment due to an increase in susceptibility following training. (p.<.01)**

**The study employed 3 groups, 2 subject groups; there were 1 hypnosis and 1 relaxation session per subject, in a randomized AB, BA design. The relaxation condition only asked the subject to lie on a couch and relax; no relaxation instructions were given, therefore it is not really analogous to relaxation training given in clinical settings. A posthypnotic suggestion was given - to dream on a subject related topic, then to awaken, and to carry out an action.**

**1973**

**Crystal, Thomas H.; Gish, Herbert; Bloom, Richard F. (1973, June). Psychophysiological factors affecting speaker authentication and identification. (See Notes field for additional reference information and information about ordering.)**

#### **NOTES**

**Research and Development Technical Report ECOM-0161-F; AD-913 696L; Contract DAAB07-71-C-0161 with Signatron, Inc. (Lexington, MA). Distribution limited to U.S. Government agencies only; Other requests for this document must be referred to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-PP-CM-CR4, Fort Monmouth, NJ 07703. NOTES 2: This document reports on a U.S. Army research project using hypnosis to collect high fidelity samples of the voice under "combat stress" conditions in the laboratory. Using hypnotic regression, combat veterans "re-experienced" their own, actual high stress combat situations. Besides subjective reports of stress levels by subjects, physiological stress measures were obtained from polygraph recordings of heart, respiration and GSR activity. The voice samples were later analyzed by spectrographic techniques to determine which factors remain invariant to identify and authenticate the speaker in a military communications situation. Hypnotic techniques were shown to be useful in establishing controlled emotional states for laboratory research purposes. (Richard Bloom)**

**1970**

**Evans, Michael B.; Paul, Gordon L. (1970). Effects of hypnotically suggested analgesia on physiological and subjective responses to cold stress. Journal of Consulting and Clinical Psychology, 35 (3), 362-371.**

**Relative effects of suggested analgesia and hypnotic induction were evaluated with regard to reduction of stress responses (self-report, heart rate, pulse volume) to the physical application of ice-water stress. Four groups (N = 16 each) of undergraduate female Ss, equated on hypnotic susceptibility, were run individually, receiving (a) hypnotic induction plus analgesic suggestion, (b) hypnotic induction alone, (c) waking self-relaxation plus analgesic suggestion, or (d) waking self-relaxation alone. The major findings were that suggestion, not hypnotic induction procedures, produced reductions in the self-report of distress, and that the degree of reduction was related to hypnotic susceptibility in both "hypnotic and "waking" conditions. Neither suggestion nor hypnotic induction procedures resulted in reduction of the physiological stress responses monitored in this study. Several methodological issues are discussed. Although findings add to the bulk of evidence supporting the "skeptical" view of**

hypnotic phenomena, results are related to other literature, suggesting that an adequate evaluation of hypnotic analgesia as used clinically has not yet been undertaken.

Tart, Charles T. (1970). Self-report scales of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 18, 105-235. Keywords: depth, subjective experience, test/scale

35 male undergraduates scaled their depth of hypnosis on a 10-point scale after each suggestibility test item on the Stanford Hypnotic Susceptibility Scale, Form C. These self-reports were highly correlated with measures of hypnotic behavior and experience. Instructions to report depth immediately and without thinking produced reports which correlated somewhat better with the other measures than instructions to consciously make a best estimate. This self-report scale promises to be highly useful in studies of hypnosis. (Spanish & German summaries) (22 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

Gendlin, Eugene T. (1969). Focusing. Psychotherapy, 6 (1), 4-15.

## NOTES

This paper presents a therapeutic procedure that involves experiential focusing, described as a bodily method. The paper provides a step by step procedure that has been used in research. "First of all, the method involves a sharp and complete shift in direction. One must cease talking at oneself inside; one must ask: 'What's wrong?' and then keep quiet, and refrain from answering oneself. It is understood that everyone knows a great deal about what is wrong..." (P. 4).

"Whenever the patient is unsure about what he has found (explaining or doubting) the way to deal with it is always again with a fresh start. One needn't decide the verbal issues that arise. 'Focus freshly on it instead, let it come freshly again' - this is almost always the answer to whatever the issue now seems to be" (p. 6).

"In this experiential therapy, it is important that the therapist respond to what is directly felt even while it isn't yet conceptually clear. What patients sense in focusing is often conceptually vague. The patient feels the felt meaning distinctly enough, but if he talks, he often begins by complaining that it isn't possible to think about it clearly. 'There's something funny there, about the way I pull out of relationships ... (He has talked about the problem before, but not about what is 'funny' here, he just focused and encountered that) ... but I can't describe it. It's ... ah ... funny, there.' The therapist must be able to talk to that, even without knowing what it is: 'You got something there, but you don't know what it is, yet. It's a funny something that you find, right there in how you pull out'" (pp. 6-7).

The theory postulates 'felt meaning' as a body sense of the many complexities of a problem, and experiential effect as a kind of body resolution of a problem. Focusing is viewed as "one essential of psychotherapy, desensitization, Jungian imagery, hypnotherapy, free association, and other methods" (p. 9). "Experiential focusing makes specific and synthesizes the steps of those therapeutic methods which systematically seek to engender body change process" (p. 10).

1968

Gendlin, Eugene T. (1968). The experiential response. In Hammer, E. F. (Ed.), Use of interpretation in treatment: Technique and art (pp. 208-227). New York: Grune & Stratton.

## NOTES

The author poses the question, "How can a therapist's response have a concrete experiential effect in the individual?" He notes that therapists do not deal with clear emotions but with more complex experiencing. "What we feel is not an internal object (an 'affective state' as something only inside us), but a felt sense of a whole situation - how we are in that situation, what we bring about, perceive, and

feel we are up against" (p. 209). "Therefore, such a felt sense isn't something only felt, but is also intellectual" (p. 209).

The therapist should draw the patient's attention to the complexity of experiencing. "Only as the client 'focuses' on his felt meaning, can it shift, and only from it can further facets emerge. Some individuals come into psychotherapy with a great ability to engage in this experiential 'focusing'(Gendlin, 1968), while with others the therapist must struggle to draw their attention again and again to the felt sense they concretely have. Sometimes the client acts as though he had no idea that he has access to anything but his words" (p. 211).

The therapy must remain experiential. "A therapeutic response always aims at the client's own directly-felt sense of what he is talking about" (p. 213).

1963

Tart, Charles T. (1963). Hypnotic depth and basal skin resistance. International Journal of Clinical and Experimental Hypnosis, 11, 81-92.

This investigation studied the relationship between a self-report scale for measuring the depth of the hypnotic state and basal skin resistance (BSR). The self-report scale accurately predicted the occurrence of hypnotic dreaming and amnesia, traditional criteria for medium and deep hypnotic states. BSR showed a high, positive correlation with the self-report depth scale. The data suggest that both the self-report scale and BSR may be useful measures for detecting changes in hypnotic depth. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Sutcliffe, J. P. (1961). 'Credulous' and 'Skeptical' views of hypnotic phenomena: Experiments on anesthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189-200.

The author distinguishes between 2 interpretations of hypnotic phenomena: the credulous (S does or does not experience what the hypnotist suggests) and the skeptical (S reports what is suggested regardless of the "reality" of his experience). 2 groups of Ss (distinguished with respect to the presence or not of genuine hypnotic behavior and posthypnotic amnesia) were placed in a 3 [control (not under hypnotic trance), hypnotic trance, nontrance acting (S asked to act as if conditions were as suggested)] by 2 (stimulus present or not) design involving paraesthesias, hallucinations, and delusional thinking. Evidence (such as GSR, interference in thinking due to feedback, test measures of delusion) suggests that S does not misperceive the real situation, but misreports it. From Psyc Abstracts 36:04:4II89S. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1957

Leuba, Clarence (1957). The reality of hypnotic phenomena: A critique of the role playing theory of hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (1), 32-38.

## NOTES

The author describes circumstances that produce paralyzes, hallucinations, and other hypnotic phenomena in normal everyday life, as well as occasionally in hysteria. He suggests that "the phenomena which can be learned and produced in everyday life and are genuine there, can presumably, when conditions are made appropriate under hypnosis, be equally genuine there also" (p. 36). Although the hypnotized and age regressed subject is "taking a part which is different from his ordinary distractible critical self," that is not to imply he is pretending. An hysterical symptom is not malingering. "In the hysterical patient there is a powerful drive to concentrate upon the reality of a useful disability and to exclude contradictory or distracting aspects of the environment. In inducing an

hypnotic state, conducive to the phenomena of hysteria, it is the hypnotist who has somehow to narrow and concentrate his subject's attention and diminish distractions. ... [and] there must be a set or attitude to accept the hypnotist's statements completely and uncritically" (pp. 37-38).

1953

LeCron, Leslie M. (1953). A method of measuring the depth of hypnosis. Journal of Clinical and Experimental Hypnosis, 1 (2), 4-7

Author's Summary - No satisfactory method of ascertaining quickly and accurately the depth of hypnotic trance has heretofore been available. By providing the hypnotized subject with a yardstick of measurement, a reply to the question "how deep are you?" may be obtained from the subconscious mind of the subject himself. This is expressed verbally in percentages of from 1 to 100, with percentage values arbitrarily assigned by the operator to different stages of trance. Indications from testing 30 subjects are that their replies are valid, possibly to an astounding degree of accuracy. (p. 6)

## SUBLIMINAL STIMULATION

1994

Erickson III, James C. (1994). The use of hypnosis in anesthesia: A master class commentary. [Comment/Discussion]

## NOTES

The author answers questions sent by a reader: "When and how can I use hypnosis or hypnotic principles in preparing patients for surgery and while undergoing surgery? Are there studies or experiential evidence to use as guides for the selection of appropriate cases or types of operations?" (p. 8). SUMMARY "There are unequivocal benefits derived from the use of positive suggestion and hypnotic techniques in all patients who must submit to surgical and obstetrical procedures with modern general or regional anesthesia. We must learn, and we must teach our colleagues, the advantages of consistent use of the semantics of positive suggestion. When we help patients focus on the desired comfort, safety, and satisfaction obtained with well-managed modern anesthesia and surgery, they will enjoy great benefit, especially when we use the auditory perception that often exists during general anesthesia. Rather than regarding hypnotic suggestion as a mere adjunct to anesthesia, it should be regarded as an integral part of surgical and obstetrical care" (pp. 11-12).

1992

Bruner, Jerome (1992). Another look at New Look 1. American Psychologist, 47, 780-783.

New Look 1 was not initially about the unconscious. It was the new mentalism on its way to becoming the Cognitive Revolution. Its subsequent concern with "unconscious defense mechanisms," although useful, was not its main theoretical thrust. Its principal questions have always been how and where selective processes operate in perception. Obviously, many such processes are unconscious, for consciously guided attention and search become automatized easily in use. And they are fairly flexible as well. So how smart is "the unconscious"? Not very, but a big help anyway.

Erdelyi, Matthew, Hugh (1992). Psychodynamics and the unconscious. American Psychologist, 47, 784-787.

The original New Look integrated the constructivist-psychodynamic traditions of Bartlett and Freud. The unconscious (Greenwald's "New Look 3") is a logically different idea, although in practice it is often intertwined with constructivist - psychodynamic approaches. The unconscious is a pretheoretic term with a variety of problems: It has multiple and unsettled meanings; null reports need not signify

null awareness; the conscious-unconscious dichotomy implied by the limen may not exist; even "absolute subliminality" (chance-level accessibility) is relative to the time interval of testing, as accessibility can increase to above-chance levels over time (hypermnnesia). Yet, the phenomena that the unconscious sloppily subsumes are not simple or dumb. The capacity of subliminal perception should not be confused with the capacity of subliminal (unconscious) memory and cognition.

Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809.

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude.

Merikle, Philip M. (1992). Perception without awareness: Critical issues. American Psychologist, 47, 792-795.

#### NOTES

This is the introduction to a group of articles. "To a large extent, this entire controversy over perception without awareness has centered on the issue, What constitutes an adequate behavioral measure of conscious perceptual experience? Depending upon one's answer to this question, the evidence for perception without awareness is either overwhelming or nonexistent.

The distinction is much more significant and interesting if conscious and unconscious processes lead to qualitatively different consequences than if unconscious processes are simply quantitatively weaker versions of unconscious processes. Three different qualitative differences have been established: 1. Groeger (1984, 1988) has demonstrated that words are coded differently depending on whether they are perceived with or without awareness. 2. Stroop effect research showed that prediction based on stimulus redundancy only occurs when subjects consciously perceive the predictive stimuli (Cheesman & Merikle, 1986). The fact that the color word predicted the name of the color patch on 75% of the trials was only used by the subjects to facilitate naming of the color patches when the words were clearly visible. 3. Marcel (1980) showed that conscious awareness is necessary for the selection of a context-relevant interpretation of a stimulus.

The important findings are that performance differs qualitatively across the aware and nonaware conditions.

#### 1991

Dixon, Norman F.; Henley, Susan H. (1991). Unconscious perception: Possible implications of data from academic research for clinical practice. Journal of Nervous and Mental Disease, 179 (5), 243-252.

Evidence for the reality of unconscious perception and perceptual defense suggests that the experimental paradigms used to investigate these phenomena might play a role in the understanding and treatment of mental disorders. The literature on applying subliminal stimulation to problems of diagnosis and therapy indicates that data support the view that the meaning of external stimuli of which the recipient is unaware may be responded to and determine emotional responses, lexical

decisions, overt behavior, and subjective experience. Data confirm the reality of psychopathology as a substrate of emotionally colored, stored information with a potential for producing somatic symptoms and disorders of thinking, affect, and behavior. To the extent that psychopathology is screened from conscious scrutiny and thus impervious to supraliminal information, it may be accessed and ameliorated by drive-related stimuli of which the S is not aware.

1990

Bornstein, Robert F. (1990). Critical importance of stimulus unawareness for the production of subliminal psychodynamic activation effects: A meta-analytic review. Journal of Clinical Psychology, **46**, 201-210.

Performed meta-analysis that assessed the magnitude of behavior change produced by subliminal vs supraliminal drive-related stimuli (DRS) on 11 subliminal psychodynamic activation (SPA) studies (published 1966-1989) that employed both types of stimuli. The analysis revealed that subliminal presentation of DRS produced significantly stronger effects on behavior than supraliminal presentation of the same stimuli. Stimulus content, type of outcome measure, and S characteristics influenced the magnitude of subliminal/supraliminal response differences. Results support L. H. Silverman's (1983) hypothesis that DRS must be presented subliminally to produce SPA effects.

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, **10**, 117-128.

## NOTES

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or

'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations.

McLintock, T. T.; Aitken, H.; Downie, C. F.; Kenny, G. N. (1990). Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. British Medical Journal, 301 (6755), 788-790.

Sixty-three women undergoing elective abdominal hysterectomy were randomly assigned to a tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the women. Postoperative analgesia was provided through a patient-controlled analgesia system for the first 24 hours. Pain scores were recorded every 6 hours. The outcome measures were morphine consumption in the first 24 hours and pain scores. Mean morphine requirements were 51.0 mg in women who were played positive suggestions, and 65.7 mg in those played a blank tape ( $p = 0.028$ ). Pain scores were similar in the two groups. It was concluded that intraoperative suggestions seem to have a positive effect in reducing patients' morphine requirements in the early postoperative period.

Weinberger, Joel; Hardaway, Richard (1990). Separating science from myth in subliminal psychodynamic activation. Clinical Psychology Review, 10, 727-756.

This paper reviews subliminal psychodynamic activation (SPA). Eight common criticisms are described and evaluated: (a) SPA data analysis is too liberal; (b) there are enough nonsignificant unpublished SPA studies to offset those showing effects; (c) SPA studies are difficult to replicate; (d) the claims of SPA proponents rely on unpublished studies; (e) SPA stimuli are not really subliminal; (f) experimenter expectancy effects and/or demand characteristics can account for SPA effects; (g) the mediating events said to underlay SPA effects have never been evinced; and (h) alternative explanations for SPA effects are superior to the psychoanalytic ones typically offered. Theoretical and statistical analyses revealed that only the argument concerning mediating events has serious merit. The SPA stimulus for which the most support was found was Mommy and I Are One. Oedipal sanction stimuli were also found to yield reliable effects whereas Oedipal prohibition stimuli did not. Suggestions for future research are offered. Resistance to SPA findings are considered in Kuhnian terms.

Wood, W. E.; Gibson, W.; Longo, D. (1990). Moderation of morbidity following tonsillectomy and adenoidectomy: A study of awareness under anesthesia. International Journal of Pediatric Otorhinolaryngology, 20, 93-105.

In a double-blind study, 67 children, ages 3-10, were randomly assigned to one of three groups: tape recorded therapeutic suggestions repetitively recited in English or in French, and a control of continuous white noise. The English condition was associated with more favorable outcome on all parameters, although statistical significance could not be demonstrated. Favorable outcomes appeared most significant for those patients at highest risk for poor convalescence (i.e., poor status preoperative patients).

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions

with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

1987

Nash, Michael R.; Lynn, Steven Jay; Stanley, Scott; Carlson, Victor (1987). Subjectively complete hypnotic deafness and auditory priming. International Journal of Clinical and Experimental Hypnosis, 35 (1), 32-40.

The present study examined the cognitive and attentional mechanisms by which auditory information is maintained out of awareness during complete hypnotic deafness. Adopting a methodology from recent work on subliminally presented pattern- masked words and dichotic listening, the study tested whether spoken words presented during complete hypnotic deafness affect lexical decisions concerning subsequently presented word choices. The response of 9 hypnotized and 15 simulating Ss to spoken stimulus words presented following hypnotic deafness instructions was compared to the response of 20 baseline control Ss who never were exposed to the stimulus words. While the response pattern of hypnosis Ss appeared different from that of baseline control Ss, hypnotic Ss showed no evidence of the priming effect found in subliminal perception and dichotic listening studies. Simulator response deviated significantly from hypnotized and baseline control responses.

#### NOTES

10 highs capable of hypnotic deafness, screened by Harvard Group and Stanford Profile Scales (Means 11.0 and 24.7, respectively) and 15 lows (means 1.7 and 1.7, respectively) participated in the study; the low hypnotizables being in the simulation group. For the experimental session, a different E administered a standard hypnotic induction and the deafness suggestion, testing for deafness by snapping fingers near S's ear and making loud requests for motor responses.

An experimental trial consisted of tapping an S on the hand, saying the stimulus word out loud, and visually presenting four words for the S to read out loud and circle one. "Of the 18 main experimental trials, the four-word array consisted of two words which were related to the stimulus (one word which was semantically related to the spoken stimulus word and one word which was phonetically related), and two neutral unrelated words" (p. 34). For example, if the spoken word were 'dream,' the word array might include 'cream, tennis, sell, sleep.' There also were "3 phonetically unrelated trials (whose arrays consisted of one phonetically related choice and 3 unrelated choices) and 2 stimulus word-unrelated trials (whose arrays consisted of the stimulus word and 3 unrelated choices) ... [and] 7 dummy trials with 4 unrelated choices only" (p. 34). Ss rated their degree of deafness on a 10-point scale after hypnosis was terminated.

Possible sources of bias were examined by having 20 control Ss respond to blank tachistoscopic slides with the instructions that they were participating in a study of 'subliminal perception.' Another 22 Ss were asked to identify the semantically and phonetically related words from the word array, which for the most part they did successfully.

All Ss rated themselves as '10' on the deafness scale, indicating total deafness. The principal results are seen in Tables 1 and 2.

Table 1 Mean Number of Related and Unrelated Responses (Percentage of Responses) for all S Groups on the 18 Mean Experimental Trials

Response Category	S	Group	N	Related	Unrelated	Total
Hypnotized	9	7.22	10.78	18		

(40.13%) (59.88%) (100%)

Simulating 15 12.13 5.87 18

(67.43%) (32.61%) (100%)

Baseline 19 8.79 9.21 18 Controls (48.82%) (51.17%) (100%)

**Table 2 Mean Number of Phonetic and Semantic Responses within the Related Response Category on the 18 Main Experimental Trials**

**Related Responses S Group Phonetic Semantic Hypnotized 1.78 5.44**

**(9.89%) (30.24%) Simulating 7.07 5.07**

**(39.27%) (28.16%) Baseline 4.21 4.58 Controls (23.38%) (25.44%)**

Hypnotized Ss were significantly different from simulators (Table 1) in number of related responses. Simulators gave significantly more related responses than baseline controls. Simulators also gave more phonetically related words than either the hypnotized or baseline Ss (Table 2); there was no difference between groups on semantically related words. (Authors performed other useful and detailed analyses.)

In their Discussion section, the authors note that they did not obtain the expected results of hypnotized Ss producing more related responses than baseline Ss. "In fact, internal analyses of hypnotized and baseline responses revealed that the pattern of choices for hypnotic deaf Ss was opposite to the direction predicted by subception. Hypnotic Ss appeared to avoid phonetically related word choices, even for items on which baseline control Ss scored above chance. ...

"This kind of non-baseline performance by hypnotic Ss can be accounted for by either a strategic enactment conceptualization of hypnosis (Spanos, 1982; Wagstaff, 1981) or Hilgard's (1979) neo-dissociation theory. Spanos might emphasize the hypnotic S's active strivings to meet the hypnotist's perceived expectations. ... Neo-dissociation theory might stress the mechanisms by which processing of auditory inputs are maintained outside of awareness via a dissociative barrier.

" ... Given the tendency for simulating Ss to 'overplay' hypnotic phenomena (Levitt & Chapman, 1979), one might have expected simulators to pointedly avoid related responses, thus producing a lower frequency of related words than either the hypnotic Ss or the baseline controls (in effect being more deaf than the deaf). Just the opposite occurred. One possible explanation for this behavior presents itself: In their work with posthypnotic suggestion and the 'disappearing hypnotist' ... M. T. Orne and others found that simulating Ss may be more alert and responsive to demand cues than are hypnotic Ss. In the present study, the authors' original hypothesis was that hypnotic Ss might reveal a subception effect by above-chance responding on related word choices. If we assume that this expectation was somehow communicated to Ss by some subtle aspect of the experimental procedure, then it is conceivable that simulating Ss were able to detect and act upon these cues, while hypnotized Ss remained relatively unattuned to such subtleties.

"In sum, the priming effect noted in the subliminal perception research does not appear to be a feature of complete hypnotic deafness, at least as measured in this study. The behavior of simulating Ss in the present study should be another caution to researchers that differences between hypnotized and simulating Ss may reflect simulation effects in addition to, or instead of, hypnotic effects" (pp. 37-38).

**1986**

**Kaplan, Rosalind (1985). Further data on the effects of subliminal symbiotic stimulation on schizophrenics. Journal of Nervous and Mental Disease, 173 (11), 658-666.**

Examined the effects of activating unconscious symbiotic fantasies in 128 hospitalized schizophrenic men (aged 18-65 years) who qualified as relatively differentiated on an adjective rating scale and were randomly assigned to 4 groups. Each group was assessed for pathological thinking, pathological nonverbal behavior, and self-esteem before and after the subliminal exposure of an experimental and control stimulus. The control stimulus for all groups were the messages "Mommy and I are one,"

"Mommy is always with me," "Mommy feeds me well," and "I cannot hurt Mommy""(one for each group). One-half of each group was subliminally exposed to verbal messages only and one-half to verbal messages accompanied by congruent pictures. The 1st stimulus ("Mommy and I are one") was intended to activate unconscious symbiotic fantasies that in a number of prior studies reduced pathology in groups of relatively differentiated schizophrenics. The other stimuli were intended to activate reassuring unconscious fantasies about "Mommy" that were not specifically symbiosis-related. Only the "Mommy and I are one" stimulus led to more adaptive behavior and did so on all 3 dependent variables. This supported the supposition that it is specifically symbiosis-related gratifications that are ameliorative for schizophrenics. (23 ref.)

Oliver, J. M.; Burkham, Robert (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 644.

Contends that the present authors' (see PA, vol 69:1571) failure to replicate L. H. Silverman's (1976) description of subliminal psychodynamic activation, which was disputed by Silverman (see PA, vol 73:12007), can be traced in part to Silverman's (1978) description of the "symbiotic" stimulus (MOMMY AND I ARE ONE"), 1 of the 2 experimental stimuli used, as a "ubiquitous therapeutic agent". It is suggested that, although Silverman's willingness to modify his theory in light of empirical findings is commendable, modifications that are too frequent and numerous will pose problems for both theory and research. (5 ref)

Porterfield, Albert L.; Golding, Stephen L. (1985). Failure to find an effect of subliminal psychodynamic activation upon cognitive measures of pathology in schizophrenia. Journal of Abnormal Psychology, 94 (4), 630-639.

Replicated the work of L. H. Silverman and colleagues (see PA, vols. 43:14557 and 46:1566) using 30 21-59 year old schizophrenics. Ss were exposed to an aggressive, a merging, and a meaningless lexical stimulus in a within-S design. Dependent variables were inkblot through pathology and form quality, as measured on Rorschach and Holtzman Inkblot Techniques, and performance on the interference task of the Stroop Color-Word Test. Analyses of variance conducted on simple poststimulation scores, rather than on unreliable change scores, revealed no effect of stimulus content. Predicted interactions between stimulus content, Ss self-object differentiation, and temporal position of the assessment tasks did not emerge. Findings do not support Silverman's hypothesis that subliminal tachistoscopic presentations of stimuli with aggressive content temporarily increase thinking disorder in schizophrenics. (44 ref.)

Porterfield, Albert L. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 645-646.

## NOTES

Contends that in defending his nonverbal pathology measure against the claim that it lacks demonstrated validity, L. H. Silverman (see PA, vol 73:12007) painted a misleading picture of its face validity. A correction to that picture is presented, and the impact of the present author and S. L. Golding's (see PA, vol 73:11992) findings on subliminal psychodynamic activation explanations of schizophrenic thought disorder is defended, despite the absence of a nonverbal pathology measure. (5 ref)

Silverman, Lloyd H. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Rejoinder to Oliver and Burkham and to Porterfield. Journal of Abnormal Psychology, 94 (4), 647-8.

Considers the replies of A. L. Porterfield (see PA, vol 73:11991) and J. M. Oliver and R. Burkham (see PA, vol 73:11985) to the critique of the present author (see PA, vol 73:12007). The original criticisms are seen as valid. A critical deficiency in the design of Porterfield and S. L. Golding's (see PA, vol 73:11992) study is viewed as disqualifying it as a fair attempt at replication. It is suggested that although Oliver and Burkham's (see PA, vol 69:1571) study was well-designed, statements made in their write-up are unwarranted. (12 ref)

Silverman, Lloyd H. (1985). Research on psychoanalytic psychodynamic propositions. Clinical Psychology Review, 5 (3), 247-257.

Discusses a research program in which the present author has been involved that deals with the subliminal psychodynamic activation method. In this method, verbal and/or pictorial stimuli, some of which contain content related to unconscious wishes, fears, and fantasies and other of which are (relatively) neutral, are presented to Ss at 4-msec exposures. A variety of psychoanalytically based hypotheses have been tested on various clinical and nonclinical populations. Two major findings have emerged: (a) a number of clinical groups (e.g., schizophrenics, depressives, stutterers) have shown intensifications of their symptoms after the subliminal exposure of stimuli designed to stir up particular unconscious conflicts; and (b) various clinical and nonclinical groups have manifested enhanced adaptive behavior after the subliminal exposure of the message "Mommy and I are one," conceived as activating unconscious symbiotic fantasies.

1984

Divided 64 10.8 - 19.3 yr old emotionally disturbed residents of a treatment school into an experimental and control group matched for age, IQ, and reading ability. Both groups were seen 5 times/week for 6 weeks for tachistoscopic exposures of a subliminal stimulus. The stimulus for the experimental group was the phrase, "Mommy and I are one," conceived of as activating symbiotic fantasies that in a number of previous studies with varying groups of Ss had led to greater adaptive behavior. The control group was exposed to the phrase, "People are walking." Results show that experimental Ss manifested significantly greater improvement on the California Achievement Tests--Reading than did the controls. On 5 of 6 secondary variables--arithmetic achievement, self-concept, the handing in of homework assignments, independent classroom functioning, and self-imposed limits on TV viewing--the experimental Ss showed better adaptive functioning. It is suggested that activation of unconscious symbiotic fantasies can increase the effectiveness of counseling and teaching. (42 ref)

Frauman, David C.; Lynn, Steven Jay; Hardaway, Richard; Molteni, Andrew (1984). Effect of subliminal symbiotic activation on hypnotic rapport and susceptibility. Journal of Abnormal Psychology, 93 (4), 481-483.

L. H. Silverman's subliminal symbiotic activation paradigm (Silverman, 1982) was used to manipulate unconscious affective factors in hypnosis to determine whether gratification of symbiotic fantasy would enhance hypnotic susceptibility and rapport with the hypnotist. Seventy-two male undergraduates were divided into two groups matched for susceptibility (high, medium, low). The experimental group received symbiotic, MOMMY AND I ARE ONE, subliminal stimulation via tachistoscope in a double-blind design. The comparison group received a psychodynamically neutral stimulus, PEOPLE ARE WALKING. Following subliminal stimulation, subjects were hypnotized individually. Projective tasks that indexed rapport with the hypnotist and the mother were administered during hypnosis. Rapport was also measured by rated intimacy of self-disclosure topics and by valence of topics selected to

disclose to the hypnotist. A significant multivariate group selected more positively valenced topics to disclose on. The effect for symbiotic activation on hypnotic susceptibility was not quite significant ( $p < .056$ , two-tailed).

## NOTES

2350, Frauman, Lynn, Mare, & Kvaal, 1992 NOTES: [Paper presented by Lynn.] A number of observations and conclusions are based on literature reviews done with Brentar (British Journal of Experimental and Clinical Hypnosis; Chapter in Rhue, Lynn, & Kirsch [Eds.] Handbook of Clinical Hypnosis) and 15 years of training students in hypnotherapy. Some of this may seem elementary to some of you.

For half a century there have been reports of negative effects after hypnosis: minor, serious, transient, and chronic. Clinicians need be as wary (but no more wary) of negative effects in hypnosis as in other therapies. There are more negative effects in clinical situations than non clinical situations.

Therapists must be prepared to recognize negative effects and intervene.

Too often hypnosis is seen as a technique divorced from psychotherapy. The hypnotist must be a competent psychotherapist. What makes you a good therapist will make you a good hypnotherapist.

There should be careful assessment of the client for: 1. those with history of unusual experiences following anesthesia or drugs 2. those with a history of dissociation

People may recapitulate a previous bad experience with anesthesia, based on the unusual physiological feelings. The dissociative client must be stabilized before using hypnosis. Depressed clients may also have problems, with the imagery becoming dysphoric. Those vulnerable to psychotic decompensation, with paranoid or borderline character structures, must be evaluated carefully. A lot depends on your comfort zone in therapy.

Life experiences with parents and authority figures may also play into the reaction.

Many clients, and experimental Ss, are ambivalent about hypnosis. This ambivalence must be acknowledged and one must work with the ambivalence before proceeding. One may: - explain hypnosis - reframe in terms of self hypnosis or relaxation - explain as a state of awareness with full consciousness - offer active induction which is just as effective as the passive induction - do induction with eyes open

Research clearly shows that Subjects can monitor events outside the framework of a suggestion--especially if you suggest they can do so with ease.

We do not use ideomotor suggestions because they aren't necessary. We tell them to open their eyes and communicate with us during hypnosis.

We always assess their feelings about hypnosis, have them have a fantasy about what hypnosis would be like, do an informal semantic analysis of the descriptors clients use (and then reframe them), inquire about previous experiences with counseling and psychotherapy, and do a mental status. Don't make assumptions. We want to know about early life experiences to know about transference and form an alliance.

Hypnosis procedures employed must have explicit informed consent (cf MacHovic book), which also provides opportunity to demystify the experience. Our research shows the great majority of Ss find it relaxing, invigorating. Even perceptual distortions can be created without hypnosis. Can create confidence by sharing the research information on hypnosis.

Elicit cooperation with easier suggestions, then use graded suggestions. We want to titrate the demands on clients, move at a pace that keeps anxiety low, promote self efficacy and mastery through ... [missed a few words] and graduated tasks.

Carefully monitor clients for frowns, lack of attention, etc. It is important to ask them what they are experiencing. Rarely, a client appears unable to talk, in which case the therapist can offer hypotheses to the hypnotized client.

Don't terminate hypnosis if there is a problem (Orne also says this); instead, offer reassurance to explore/release the feelings. It is beneficial to work through what is being experienced. There is a somewhat higher risk of emotional reactions with age regression or induced dreams. We simply tell people they can tell us at any time about what they are experiencing, without going through any ritual. When we give suggestions about amnesia, we ask what they would like to remember and suggest that they forget what they would like to forget. The usual permissive suggestion doesn't work; find out what it is, exactly, that they want to forget and then devise strategies for it. Follow for 2 weeks after any abreactive experience that may have occurred. Let them know they can contact you. Forceful suggestions to abandon symptoms can promote resistance and the therapist may generate negative transference. (See their chapter in book edited by Rhue, Lynn, and Kirsch, *Handbook of Clinical Hypnosis*, published by the Amer Psychological Association.)

Palumbo, Robert; Gillman, Irene (1984). Effects of subliminal activation of oedipal fantasies on competitive performance: A replication and extension. *Journal of Nervous and Mental Disease*, 172 (12), 737-741.

Conducted a subliminal psychodynamic activation experiment in which the effects of 5 subliminal stimuli were sought on the dart-throwing performance of 40 male Ss (aged 22-46 years). The stimuli consisted of the following messages, each accompanied by a congruent picture: "beating dad is ok," "beating dad is wrong," "beating him is ok," "beating him is wrong," and "people are walking." The 1st 2 stimuli were intended to activate competitive motives within the context of the Oedipus complex; the next 2, competitive motives outside that context; and the last message was intended as a control stimulus. Findings show that "beating dad is ok" led to greater dart-throwing accuracy than each of the other 4 conditions, which, in turn, did not differ from each other. This finding replicates a result reported by L. H. Silverman et al (1978) and is in keeping with the formulation that the activation of oedipal motives can affect competitive performance (7 ref)

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. *Perceptual and Motor Skills*, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho-physiological responses.

1982

Silverman, Lloyd H.; Lachmann, Frank M.; Milich, Robert H. (1982). *The search for oneness*. New York: International Universities Press.

## NOTES

This book summarizes research on preconscious activation (subliminal psychodynamic activation) of fantasies of oneness, following tachistoscopic presentation of words like, "Mommy and I are one." It represents an attempt to test and validate, through experimental investigation, psychoanalytic

concepts. The authors show how such fantasies can improve psychosocial adaptation for people with varying kinds of psychopathology.

**1980**

Shevrin, Howard; Dickman, Scott (1980). The psychological unconscious: A necessary assumption for all psychological theory?. American Psychologist, 35 (5), 421-434.

The notion of complex psychological processes operating outside of awareness has traditionally been associated with the concept of the unconscious used by psychodynamically oriented clinicians; it has never found an equivalent place in the mainstream of American experimental psychology. However, mounting evidence from several rather diverse fields of empirical research (e.g., selective attention, cortical evoked potentials, subliminal perception) provides support for such a concept, and, in fact, explanatory constructs of a similar nature have been embodied in several current models of perceptual processing. While there clearly remains an enormous gap between the clinically based conception and the experimentally based conception of the nature of these unconscious processes, they nevertheless seem to provide an interface between two seemingly disparate approaches to the understanding of personality.

**1961**

Pearson, R. E. (1961). Response to suggestion given under general anesthesia. American Journal of Clinical Hypnosis, 4, 106-114.

Employed a double-blind design with placebo control. Audio tapes containing therapeutic suggestions were played to 43 experimental patients during anesthesia. The main theme of the suggestions was that the patient would cope better and recover faster if he could become relaxed. Placebo tapes (music or blank tapes) were played to the 38 control patients. Only E, who had no contact with the patients, knew which tape was played to a given patient. Three postoperative variables were studied: (a) number of doses of narcotics in the first 5 postoperative days; (b) a numerical rating by the surgeon of the postoperative course; and (c) number of postoperative days until release. Although no significant differences were found between the suggestion group and placebo group on need for narcotics or rated course of recovery, patients receiving suggestions were discharged an average of 2.42 days sooner ( $p < .05$ ).

## **SUGGESTABILITY**

**1995**

Eisen, Mitchell L.; Goodman, Gail S.; Qin, Jianjian (1995, November). Child witnesses: Dissociation and memory and suggestibility in abused children. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## **NOTES**

Our study looked at suggestibility and resistance to suggestion. During 5-day hospitalization for investigation of child abuse. The first day patient gets physical exam; 2nd day a genital exam, heart arousal, stress arousal; a later day had mental status, emotional functioning, cognitive functioning--and gross screen of IQ for age 5 and up and the digit span for 6 and up, plus rating of global functioning and provisional diagnosis. On Day 5 each child was given structured interview that included questions about the anal- genital exam, with some misleading questions included.

35 minutes after the psychological examination they were given questions about the exam, for brief memory. Next exam was forensic examination of memory for abuse. Gave memory for sentences, perceptual alterations scale (PAS), adolescent version of Dissociative Experiences Scale (A-DES); gave questionnaire to parents.

Hypotheses: suggestibility would be negatively related to age (more errors when younger). Sexually and physically abused children would show more dissociation or psychopathology. Dissociation or psychopathology should be inversely related to memory ability. IQ should be related to memory and resistance to misinformation. Wanted to reconcile two models of post traumatic stress disorder (PTSD): one says they have poorer memory, and the other says they are hypervigilant.

Over 100 children in the 200 received the questionnaire on Day 5. 39% were 3-5 years old, 41% 6-10 years old. 76% were African American. 22% had no documented abuse or neglect; 13% had experienced physical abuse; 30% sex abuse; 12% both types of abuse; 15% neglect; 8% parental addiction.

Measuring dissociation in kids is problematic. The concept is used to describe a huge range of phenomena. Scores on the DES are more highly correlated with the F Scale on the MMPI than with any other measure (Michael Nash's research). So the DES measures psychopathology. Also, children have healthy kinds of dissociation-- daydreaming, etc. Josephine Hilgard noted that young kids are naturally involved in imagination. Early traumas may lead to this dissociative style. How do we sort out the healthy imaginal involvements of children from the psychopathology? There is not sufficient data at this time.

Available measures are not validated well. The CDC indicates behavior problems in children. The C-PAS conceptualizes dissociation as relating to eating disorders; the A-DES is a self report measure that related to psychopathology.

CDC scores increase, in 3-5 year olds, as the amount of abuse increases. This looks like general psychopathology, and it is a parental rating. The A-DES and C-PAS were not related to abuse or neglect. In the older groups the CDC related to poor performance on memory tests; but only for the 6-10 year olds. (Poorer memories in younger children could have masked the effect in them.)

The main finding for the study was clinician's estimate of Global Adaptive Functioning was significantly related to Resistance to Misleading Information. The effect did not show for the 3-5 yr old group, perhaps because their memory functioning is poor anyway. Also age was related to memory and suggestibility.

1994

Grant, Carolyn (1994). *The Computer-Assisted Hypnosis Scale: Standardization and norming of a computer-administered measure of hypnotic ability (Dissertation)*. Dissertation Abstracts International, 54 (10/B), 5387.

"In a counterbalanced, within-subjects, repeated measures design, 130 subjects were administered both the Computerized Assisted Hypnosis Scale (CAHS) and the Stanford Hypnotic Susceptibility Scale, Form C (Stanford Hypnotic Susceptibility Scale: C). For each hypnotic procedure responsiveness was assessed along three dimensions: behavioral (CAHS, Stanford Hypnotic Susceptibility Scale: C), subjective depth (Field Depth Inventory), and relational involvement (Archaic Involvement Measure). Subjects also completed a Stanford Hypnotic Susceptibility Scale: C self scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the Stanford Hypnotic Susceptibility Scale: C across the three dimensions assessed. Results are discussed in terms of the theory and practice of clinical assessment, noting directions for future research" (p. 5387).

1993

Balthazard, Claude G. (1993). The hypnosis scales at their centenary: Some fundamental issues still unresolved. International Journal of Clinical and Experimental Hypnosis, 41, 47-73.

Current approaches to the measurement of hypnotic performance can be traced back to the 19th century. In part because of these early origins and in part because of the nature of hypnotic phenomena, the hypnosis scales are unique psychometric instruments. The classic hypnosis scales are based on the notion of a "performance ladder"; items are scored on a pass/fail basis and can be arranged in increasing order of difficulty. Some of the implications on [sic]this "performance ladder" approach are reviewed. The evidence for two-mechanism models of hypnotic performance is reviewed. It is argued that this kind of formulation is at least as plausible as one that argues that the hypnosis scales measure "one thing" or "mostly one thing." If it were the case that the hypnosis scales were tapping two different and distinct processes, the label "hypnotic susceptibility" could not be unambiguously applied to scores on the hypnosis scales. The hypnosis scales would appear well-suited to the investigation of underlying mechanisms, yet no consistent picture of the mechanisms underlying hypnotic performance on the scales has emerged thus far. No resolution is presented, but some of the reasons why such a resolution is so elusive are discussed. The future of hypnosis scales is discussed with respect to multidimensional assessment and alternatives to the "work sample" approach.

#### NOTES

Author discusses the hypnotizability scales' history and psychometric properties, suggesting that they cannot have construct validity if more than one construct is involved. He states that many of the alternative formulations "posit structurally similar two- mechanisms models, where the relative contributions of one and the other mechanism changes gradually with the difficulty of the hypnotic performance--that is, one mechanism is more important for easy items and the other more important in the difficult range. This kind of formulation has been advanced by a number of authors .... Although these formulations are structurally similar, the nature of the mechanisms has been variously conceptualized: nonability and ability components (Shor, Orne & O'Connell, 1962), primary suggestibility and somnambulism (Weitzenhoffer, 1962), minor and major dissociations (Hilgard, 1977), compliance and true hypnosis (Tellegen, 1978-1979), and cooperativeness and expectation at one end and absorption at the other (Spanos, Mah, Pawlak, D'Eon, & Ritchie, 1980). ... In a formulation such as Hilgard's (1977), where both mechanisms are dissociative, it may be that it makes some sense to understand both mechanisms as aspects of the same complex construct. In other formulations... it would appear more cogent to speak of two constructs. Spanos et al. (1980) found that 'cooperativeness and expectation may be particularly important in responding to ideomotor and challenge suggestions, while the ability to convincingly treat imaginings as real (i.e., absorption) becomes increasingly important for more difficult 'cognitive' items" (p. 21). Balthazard & Woody (1992) presented evidence that the more difficult items on hypnotizability scales are related to absorption more than the easier items.

Balthazard & Woody (1989) investigated the proposition that hypnotizability scores are distributed bimodally, and concluded that statistical problems clouded the issue. Furthermore, most analyses previously have been of surface structure, which does not relate directly to the underlying mechanisms of hypnosis, and current psychometric methods cannot address the mechanisms that underlie surface relations. "There are two aspects of hypnotic processes ... that obscure underlying mechanism: synergisms and overdetermination. Synergisms occur when mechanisms potentiate each other in such a way that a combination of processes becomes more than the sum of its parts. Overdetermination occurs when co-occurring mechanisms do not potentiate each other, such that any one of the mechanisms would have been sufficient to produce the observed effect" (p. 63-64).

The author suggests there are two options at present: Corrective Scoring (like the Curss.OI, an objective-involuntary score which, although unreliable on test-retest, appears it could be more a measure of "pure" hypnotizability) and not using the typical "work sample" approach. Balthazard and Woody (1992) suggested the Absorption Scale may provide a better measure of "hypnotizability" than the standard hypnosis scales because absorption scores are more strongly related to difficult hypnotic performances.

Pekala, Ronald J.; Ersek, Barrett (1993). Firewalking versus hypnosis: A preliminary study concerning consciousness, attention, and fire immunity. Imagination, Cognition and Personality, 12, 207-229.

This study assessed the subjective effects associated with firewalking, and compared them with the subjective effects associated with hypnosis and a baseline condition (eyes closed sitting quietly). Twenty-seven subjects, who walked over hot coals during a firewalk ceremony, completed questionnaires about what they subjectively experienced during the firewalk. Their experiences were subsequently compared with those of subjects (n = 246) who experienced hypnosis and a baseline condition. The data suggested that firewalking, as assessed across all subjects, is characterized by high levels of volitional control and rationality, and a very absorbed attentional style wherein the mind is one-pointed, and consciousness is characterized by strong feelings of joy and high levels of internal dialogue. Firewalking was also found to be associated with significantly more joy, one-pointedness of thought, absorption, and internal dialogue than hypnosis or the baseline condition. In addition, a cluster analysis suggested two subgroups of firewalkers based on their subjective experiences of the firewalk. Interestingly, analyzing the attentional experiences among these firewalkers who got slightly burned, versus those who did not, revealed significant differences. A one-pointed and absorbed attentional focus may be the critical variable for the fire immunity observed in firewalking.

## NOTES

About 500 people walked across coals, in 3-4 steps. At end of weekend, 71 said they would complete a questionnaire and it was mailed to them. Of those, 27 responded (25 of 26 in an average of 23 days). Hence, 5% of the population who walked responded to the questionnaire, and it was some time later. Three of 24 reported minor blisters. Those who didn't get burned reported less detachment, less of a feeling of being out of their bodies, and more thoughts than the firewalkers who got slightly burned.

Pekala has defined an altered state of consciousness as associated with the perception of being in an altered state of awareness (the \_subjective sense\_ of \_altered state\_ --SSAS [30]), and a change in the patterning or configuration of the subsystems or dimensions of consciousness. A discrete state of consciousness, as defined by Pekala, is associated with a significant pattern change but no perceived alteration in state of consciousness (no SSAS). An identity state of consciousness, on the other hand, is defined as having neither a significantly perceived alteration in state of awareness nor a perceived pattern change among dimensions of consciousness in reference to another state of consciousness. Since the PCI can measure both intensity and pattern effects, it can be used to assess for altered, discrete, and identity states of consciousness.

Using a cluster analysis they found that one group of 16 subjects reported the firewalk experience to be characterized by a significant alteration in awareness and experience (body image, time sense, etc.), and significant intensities of internal dialogue, positive and negative affect, and arousal, while a second group of six subjects reported little alteration in consciousness or experience, little losses in rationality or control, and less internal dialogue, positive and negative affect or arousal than the larger group.

Whereas hypnosis is usually associated with a loss in control (the classic suggestion effect), firewalking was found to be associated with increased control, a more aroused state, and more fear! Firewalking appears to be a more absorbed and one-pointed state than even hypnosis.

The nature of attentional experience is similar across firewalkers (DAQ results).

Both firewalking and hypnosis meet the criteria for altered states of consciousness (different pattern and different subjective experience), but they are not altered states in reference to each other; they are discrete states of consciousness in reference to each other, because there is a significantly different patterning of PCI dimensions between the two conditions, but no significant SSAS. This suggests that the firewalk state is qualitatively different from the hypnotic state (as induced by the induction procedure to the Harvard Scale) and probably represents a different type of state of consciousness than hypnosis. Firewalkers obtained a lower mean hypnoidal state score than hypnosis subjects, so it does not appear that the fire immunity is due to being in a "hypnotized" state.

The fact that there appears to be two groups of successful firewalkers, one of which did not report much alteration in consciousness, calls into question the theorizing concerning the importance of alteration in state of consciousness as being etiologically related to successful firewalking. Since about 25 percent of the firewalkers clustered into what appears to be a nonaltered state of awareness, this suggests a sizable percentage of subjects who did not report any significant alteration in consciousness and experience.

Hence, what may be important is not an alteration in consciousness, but rather an alteration in attention. The cluster analysis revealed a relatively unitary attentional state across all subjects suggesting that attention was deployed in a rather similar manner across all subjects, that is, with very high absorption and one-pointedness. It was also the DAQ dimensions, and not the PCI dimensions, that successfully discriminated a trend between the blistered and nonblistered firewalkers. Hence, high levels of one-pointedness and absorption, that is, how attention is deployed during firewalking may be more critical (than an alteration in consciousness in general) for the fire immunity observed during firewalking.

1992

Kirsch, Irving; Mobayed, C. P.; Council, J. R.; Kenny, D. A. (1992). Expert judgments of hypnosis from subjective state reports. Journal of Abnormal Psychology, *101*, 657-662.

Suggestibility was assessed in 60 student subjects after a traditional hypnotic induction, an alert induction, progressive relaxation training, or instruction in goal-directed imagery. Responsiveness to suggestion did not differ between groups. Subjects also generated open-ended reports of their states of awareness and of their experience of three hypnotic suggestions. A sample of these reports from 24 moderately to highly suggestible subjects was evaluated by 18 experts in the field of hypnosis. Expert ratings of subjects' open-ended reports indicated that (a) traditional hypnotic inductions produce a state of consciousness that is indistinguishable from nonhypnotic relaxation training, (b) the subjective experience of hypnotic suggestions after imagination training is indistinguishable from that after hypnotic inductions, and (c) suggestibility is unrelated to state of consciousness as assessed by experts.

Spiegel, Herbert; Greenleaf, Marcia (1992). Personality style and hypnotizability: The fix-flex continuum. Psychiatric Medicine, *10*, 13-24.

Since Mesmer, there has been much confusion about the inter-relationship between an individual's degree of hypnotizability, the personality style of the individual, and the importance of the therapeutic strategy. Empirical and experimental research supports the hypotheses that there are: 1) biopsychosocial components of hypnotizability on a continuum ranging from ecologically insensitive (not modifiable by external stimuli) to ecologically sensitive (very modifiable by external stimuli); 2) biopsychosocial components that can be measured to identify an individual's degree of hypnotic capacity and responsivity; 3) distinct personality styles which correlation with low, mid-range and high hypnotizability on a fix (ecologically insensitive) - flex (ecologically sensitive) continuum; and 4) different clinical syndromes which correlation with these categorical distinctions. We propose that measuring hypnotizability and personality style is a way to clarify diagnosis and choose appropriate

treatment strategies to maximize existing biopsychosocial resources of an individual with a specific problem in a particular context.

Spiegel, David (1992, October). Dissociation during trauma. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Spiegel & Spiegel's theory of hypnosis involves: 1. absorption 2. suggestion 3. dissociation

Traumatic memories may be out of consciousness yet may influence consciousness. Thus, rape victim may not be able to continue to enjoy sex with her husband or may hyperventilate when near the place it occurs. This conceptualization is consistent with Kihlstrom's evidence using priming in verbal learning; and Ken Bowers' research on hypnosis for pain control.

Hypnotizability is higher in childhood than in adults, so if children are traumatized they may resort to dissociation more easily.

Certain dissociative disorders may be associated with high hypnotizability (forgetting the causal arrow, as association does not imply causation).

The diagnosis of post traumatic stress syndrome (PTSD) in the current diagnostic manual, DSM III-R, parallels the three characteristics of hypnosis, except that the diagnosis also includes a history of trauma. (In the upcoming revision, DSM IV will remove the language of "beyond the range of normal human experience" when characterizing the trauma in patient's history. The traumas referred to will be physical traumas.)

1990

Holroyd, Jean (1990). How hypnosis may potentiate psychotherapy. In Fass, Margot L.; Brown, Daniel (Ed.), Creative mastery in hypnosis and hypnoanalysis (pp. 125-130). Hillsdale, NJ: Lawrence Erlbaum Associates.

#### NOTES

This chapter is a reprint of an article published in the American Journal of Clinical Hypnosis in 1987. It provides a conceptual framework for understanding psychotherapy processes in the context of a hypnotic state. Based on empirical and theoretical considerations, the author identified nine changes occurring with hypnosis: changes in attention and awareness, imagery, dissociation, reality orientation, suggestibility, mind-body interactions, initiative or volition, availability of affect, and relationship. "This chapter proposes that hypnotherapy exploits hypnotic phenomena-- takes advantage of them--in the service of standard therapy endeavors" (p. 125).

Lynn, Steven Jay (1990). Is hypnotic influence coercive? Invited discussion of Levitt, Baker, and Fish: Some conditions of compliance and resistance among hypnotic subjects. American Journal of Clinical Hypnosis, 32 (4), 239-241.

#### NOTES

Unlike Levitt, Baker, & Fish (1990), Lynn, Rhue, & Weekes (Psychological Review, 1990 in press) concluded that nonvoluntary behaviors in hypnosis are similar to other spontaneous social behaviors (like conversational response to social stimuli). "Hypnotized subjects, like nonhypnotized subjects, act in terms of their aims, according to their point of view, and in relation to their interpretation of appropriate behavior and feelings" (p. 239).

"Research shows that hypnotizable subjects resist and even oppose suggestions as a function of their expectancies and perceptions about appropriate hypnotic behavior (Lynn, Nash, Rhue, Frauman, & Sweeney, 1984; Lynn, Snodgrass, Rhue, & Hardaway, 1987; Lynn, Weekes, Snodgrass, Abrams,

Weiss, & Rhue, 1986; Spanos, Cobb, & Gorassini, 1985). In one study (Spanos et al., 1985), when subjects were informed that deeply hypnotized subjects were capable of becoming involved in suggestions and simultaneously resisting them, subjects resisted 95% of the suggestions. When subjects were told that deeply hypnotized subjects were incapable of resisting suggestions, they passed the majority of suggestions. Thus, knowledge about what constitutes appropriate hypnotic role behavior is a reliable determinant of resistance, apparently more reliable than the monetary lures used by Levitt et al." (P. 240).

These studies by Levitt et al. only used behavioral measures of resistance and hypnotizability, and Ss' perceptions of the resistance instructor and hypnotist. "The ratings of global perceptions are, however, no substitute for measures of subjects' perception of the relationship. ... The failure to measure important variables relevant to the central dimensions of concern--coercion, compliance, involuntariness, and relational factors--precludes meaningful interpretation of the nonresisters' motivation and behavior" (p. 240).

As Orne (1959) has suggested, we should not attribute behavior in the hypnosis context to something unique to hypnosis (such as coercive influence), because other kinds of social context also constrain behavior, e.g. psychotherapy and psychology experiments, with coercive features. Therefore, it seems important in the future to compare the responses of hypnotized subjects with those of subjects in waking-imagination and hypnosis-simulating conditions. In addition to looking at their behavior, it is important to examine their own perceptions of their actions, given the complexity of the social situation entailed in hypnosis.

"Finally, there are statistical grounds to be wary of the authors' conclusions. They assert that 'relational factors in the hypnotic dyad influence hypnotic responsiveness,' yet in three of the studies (I, II, and IV), subjects' ratings of the hypnotist failed to discriminate whether they resisted or responded to the suggestion" (p. 241). Even where Study III was compared with Study II, the difference in the percentage of Ss who resisted failed to reach statistical significance. "In fact, across all studies, differences in overall resistance rates were not documented by statistical tests--despite procedural variations and differing monetary incentives. So contrary to authors' assertion, relational factors in the hypnotic dyad generally had little bearing on resistance behavior. If anything, ratings of the resistance instructor had greater weight" (p. 241).

Sletvold, H.; Jensen, G. M.; Gotestam, K. G. (1990). The effect of specific hypnotic suggestions on blood pressure in normotensive subjects. Pavlovian Journal of Biological Science, 26, 20-24.

Twenty normotensive subjects participated in a study of the effects of specific suggestions on blood pressure (BP). After an induction, the experimental group received suggestions presumed to be relatively nonactivating, although capable of lowering or raising BP. A control group was used to record the BP changes over time. All subjects met for one session. Eight subjects from the experimental group met for a second session. Both adaptation and induction resulted in significant BP decreases. A specific suggestion to increase BP gave a significant result when compared to the induction point. There was no significant change from induction to the BP-decrease suggestion. Both systolic and diastolic BP behaved in the same way. A second experimental session resulted in no significant change compared with the first session. Also, no significant difference was found in suggestibility scores from the first to the second session. The results are in line with previously published studies.

1988

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

Gudjonsson, Gisli (1988). Interrogative suggestibility: Its relationship with assertiveness, social-evaluative anxiety, state anxiety and method of coping. British Journal of Clinical Psychology, 27 (2), 159-166.

Investigated in 30 adults some of the theoretical components related to individual differences thought by the present author and R. Clark (1986) to mediate interrogative suggestibility as measured by a scale developed by the present author (1984). The variables studied were assertiveness, social-evaluative anxiety, state anxiety, and the coping methods generated and implemented during interrogation. Low assertiveness and high evaluative anxiety correlated moderately with suggestibility, but no significant correlations emerged for social avoidance and distress. State anxiety correlated significantly with suggestibility, particularly after negative feedback had been administered. Coping methods (active-cognitive/behavioral vs. avoidance) significantly predicted suggestibility scores. The findings give strong support to the present author's theoretical model.

Gudjonsson, Gisli H. (1988). The relationship of intelligence and memory to interrogative suggestibility: The importance of range effects. British Journal of Clinical Psychology, 27 (2), 185-187.

60 normal adults and 100 adult psychiatric patients completed a suggestibility scale and the Wechsler Adult Intelligence Scale (WAIS). Clear range effects of IQ and memory were evident in their relationship with suggestibility

Lynn, Steven Jay; Rhue, Judith W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43 (1), 35-44.

This article presents a summary of the findings of our ongoing research program on the fantasy-prone person. In seven studies, nearly 6,000 college students were screened in order to obtain five samples of 156 fantasy-prone subjects. Fantasy-prone subjects (fantasizers) were selected from the upper 2%-4% of the college population on a measure of imaginative involvement and contrasted with nonfantasizers (lower 2%-4%), and medium fantasy-prone subjects (middle range). General support was secured for Wilson and Barber's construct of fantasy proneness: Fantasizers were found to differ from nonfantasizers, and in many cases also from medium-range subjects, on measures of hypnotizability, imagination, waking suggestibility, hallucinatory ability, creativity, psychopathology, and childhood experiences. Differences in hypnotizability were most reliable when subjects participated in a multisession study and were screened not only with the screening inventory, but also with an interview that substantiated their fantasy-prone status. However, our findings indicated that less correspondence between fantasy proneness and hypnotizability exists than Wilson and Barber suggested. Hypnotic responsiveness is possible even in the absence of well-developed imaginative abilities, and not all fantasizers were highly hypnotizable. Fantasizers recollected being physically abused and punished to a greater degree than other subjects did and reported experiencing greater loneliness and isolation as children. Many fantasizers appeared to be relatively well-adjusted; however, a subset of fantasizers were clearly maladjusted based on self-report, Minnesota Multiphasic Personality Inventory (MMPI),

and Rorschach test data. Because of the diversity inherent in the fantasy-prone population, it is misleading to think of individuals at the extreme end of the fantasy-proneness continuum as conforming to a unitary personality type.

1987

De Sano, Christine F.; Persinger, M. A. (1987). Geophysical variables and behavior: XXXIX. Alterations in imaginings and suggestibility during brief magnetic field exposures. Perceptual and Motor Skills, 64, 968-970.

12 male and 12 female volunteers were evaluated for their suggestibility before and after an approximately 15-min. exposure to either sham, 1-Hz or 4-Hz magnetic fields that were applied across their mid-superior temporal lobes. During the field application subjects were instructed to view a green light that was pulsating at the same frequency as the field and to imagine countering an alien situation. Results were commensurate with the hypothesis that weak brain-frequency fields may influence certain aspects of imaginings and alter suggestibility.

#### NOTES

"Subjects who had been exposed to the 4-Hz fields showed a significant decrease ... in heart rate compared to those who had been exposed to either the 1 Hz or sham-field conditions. A significant ... interaction of sex by field ... was noted for the change in HIP [Hypnotic Induction Profile] scales. Whereas both men and women in the sham-field condition tended to show less induction (~ 1 unit) on the second occasion ... women showed much greater (8.4 + 1.1) induction (= 3 units) if they had been exposed to the 1-Hz field while men showed much greater (8.0 + 1.5) induction (= 3 units) if they had been exposed to the 4-Hz fields. On the protocols, women reported significantly more fear responses than men. In addition, subjects who were exposed during the imaginings to the 4-Hz field showed more imaginings ... and more references to vestibular experiences (e.g., self or entity rising or floating) ... than those exposed to the other conditions" (p. 969).

"Dissociation scores on the HIP were correlated significantly ... with vestibular (0.44), imagery (0.43), and fear (-0.45) scores from the transcripts. Floating responses on the HIP were correlated with the amount of imagery. (0.46). There was a significant positive Pearson correlation between the compliance measure and the amount of arm levitation during the second induction only. These results suggest that hypnotic susceptibility may be increased following magnetic-field exposure but that the effective frequency is not the same for each sex. In addition, the amount of the imagery (particular vestibular experiences) increased if the person observed a light that was flashing at the same frequency as a 4-Hz applied magnetic field" (p. 969).

Holroyd, Jean (1987). How hypnosis may potentiate psychotherapy. American Journal of Clinical Hypnosis, 29, 194-200.

Hypnotherapy is defined as doing psychotherapy in the hypnotic state. This article reviews cognitive, affective, and motivational changes associated with hypnotic trance, attempting to demonstrate how the hypnotic state might influence ordinary psychotherapy processes. Nine characteristics of trance probably potentiate psychotherapy: (1) changes in attention and awareness, (2) imagery enhancement, (3) increase in dissociation, (4) decrease of reality orientation, (5) increase in suggestibility, (6) increased accessibility of mind-body interactions, (7) diminution of initiative resulting in a sense of nonvoluntariness, (8) increased availability or manipulability of affect, and (9) development of a fusional relationship (rapport). This article touches upon the psychotherapeutic implications of these hypnosis attributes.

Makarec, K.; Persinger, M. A. (1987). Electroencephalographic correlates of temporal lobe signs and imaginings. Perceptual and Motor Skills, *64*, 1124-1126.

Significant correlations (0.50) were observed between scores for the Wilson-Barber Inventory of Childhood Memories and Imaginings and the experiences that are indicative of temporal lobe lability. In addition, positive correlations (0.42) occurred between temporal lobe EEG measures (scalp electrodes) and numbers of temporal lobe signs. The numbers of alpha seconds per minute from the occipital lobes were correlated (0.57) with the Wilson-Barber cluster that indicated interests in 'altered states'. Scores on the childhood imaginings section of the Wilson-Barber Inventory were correlated (0.44) with the numbers of spikes per minute over the temporal lobes when the eyes were closed.

"Persinger and DeSano (1986) found that people who display temporal lobe signs were also more likely to have more imaginings (as defined by Wilson and Barber's (1983) Inventory of Childhood Memories and Imaginings) and to be more suggestible as indicated by Spiegel's Hypnosis Induction Profile" (p. 1124).

Subjects in this investigation were 12 male and 18 female students, ages 18-39 (M = 25 years) Bipolar measures were taken from just above the ears (approximately T3-T4) and the occipital lobe (01-02). Number of alpha seconds per minute and number of spikes per minute from each lobe was taken for 10 minutes (5 successive pairs of 1 minute eyes- open, 1 minute eyes-closed).

"The total Wilson-Barber score was significantly ( $p < .01$ ) correlated ... with the major (0.46) and minor (0.50) temporal lobe clusters but not with two clusters of control items: normal psychological experiences (0.21) and mundane proprioceptive experiences (0.29). These correlations are similar to those in the Persinger and DeSano study (0.60, 0.50, 0.13, and 0.14, respectively). Like the first study (0.53), the items that were most associated with dissociation (depersonalization) were best correlated with the Wilson-Barber scores (0.60). The Wilson-Barber subcluster: adults' extreme experiences (Items 44 through 52, that indicate physiological changes associated with thinking) was again most strongly correlated with the major (0.55) and minor (0.65) temporal lobe clusters; these values were 0.42 and 0.52 in the first study" (p. 1125).

"The only statistically significant ( $p < .01$ ) correlations between the Wilson-Barber scales and the EEG measures were between the number of alpha seconds from the occipital lobe (with the eyes closed) and the [Wilson-Barber] 'altered state' cluster ( $r = 0.57$ ; Items 33, 41, 42, 43). A weaker correlation (0.36) occurred between the number of alpha seconds per min. (eyes closed condition) and childhood vestibular experiences (items 1, 2, 3, 10, 24)" (p. 1126).

1986

Chertok, Leon (1986). Psychotherapeutic transference, suggestibility. Psychotherapy, *23* (4), 563-569.

Discusses suggestion in psychotherapy and defines it as a body-affective process, an indissociable psychosociobiological entity that acts at an archaic unconscious level far beyond that of transference, mediates the influence of one individual on another, and is capable of producing manifest psychological and physiological changes. Present in all types of therapy, indirect (nondeliberate, nonintentional) suggestion is the element that plays an important role in change and can be observed in hypnotic experimentation. It is further argued that transference and suggestion are phenomena that do not altogether overlap. Suggestion is the condition of transference without which transference could not be established.

1985

Rickard, Henry C.; Crist, Dwayne A.; Barker, Harry (1985). The effects of suggestibility on relaxation. Journal of Clinical Psychology, *41* (4), 466-468.

Studied the influence of personality characteristics of 32 undergraduates on response to relaxation training. Ss were selected on the basis of scores on the Creative Imagination Scale. Eight of the high-suggestibility Ss were assigned randomly to each training mode, progressive relaxation (PR) and suggestions of relaxation (SR). The 16 low-suggestibility Ss were similarly assigned, which resulted in a 2 x 2 factorial design with 1 repeated measure, a pre-post relaxation scale that yields a total score and 3 subscale scores. A significant pre-post relaxation effect emerged. Main effects were found for both suggestibility and mode of training. High-suggestibility Ss performed significantly better regardless of the training mode. PR yielded significantly higher relaxation scores than did SR. An interaction between suggestibility and training mode occurred on the Cognitive Factor scale; Ss who scored low on suggestibility reported relaxing significantly better when the training mode was PR. (15 ref)

Spanos, Nicholas P.; de Groot, Hans P.; Tiller, Dale K.; Weekes, John R.; Bertrand, Lorne D. (1985). 'Trance logic,' duality, and hidden observer responding in hypnotic, imagination control, and simulating subjects: A social psychological analysis. Journal of Abnormal Psychology, 94 (4), 611-623.

Tested the hypothesis that a tolerance for logical incongruity characterizes hypnotic responding and is related to reports of duality experiences during age regression and hidden-observer responding during suggested analgesia. 30 undergraduates (the "reals") with high scores on a responsiveness-to-suggestion scale were randomly assigned to hypnotic or imagination control treatments, while 15 undergraduates with low scores were assigned to a simulation treatment in which they were instructed to fake hypnosis. Ss were assessed on 6 indicators of logical incongruity, given age-regression suggestions and perception tasks, administered a suggestion for analgesia and hidden observer instructions, and interviewed. Results do not support the hypothesis. The differences in responding that did emerge between reals and simulators were accounted for by the different task demands to which Ss were exposed. These behavioral differences, which have been previously interpreted in terms of intrinsic characteristics of hypnosis, may instead reflect a combination of between-treatments differences in demands and between- Ss differences in the interpretation of those demands and in the ability to fulfill them.

1983

Classen, Wilhelm; Feingold, Ernest; Netter, Petra (1983). Influence of sensory suggestibility on treatment outcome in headache patients. Neuropsychobiology, 10, 44-47.

In 45 headache patients the relationship between sensory suggestibility and three measures of treatment effect-ratings on (1) intensity of headaches; (2) efficacy of drugs, and (3) physician's competence - was investigated in a double-blind long-term crossover study. Subjects scoring high on sensory suggestibility clearly showed more relief of headaches upon the analgesic as well as upon the placebo. The physician's competence was rated higher by high-suggestible patients, whereas ratings on drug efficacy were low in all patients. The seemingly controversial behavior of high-suggestible patients was interpreted as a call for continuation of the physician's efforts in spite of the relief the patients already achieved.

McConkey, Kevin M. (1983). Behaviour, experience, and effort in hypnosis. Australian Journal of Clinical and Experimental Hypnosis, 11, 73-81.

Subjects were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A, and were afterwards asked to rate the degree to which they experienced the items; subjects also scored their behavioural performance on the items. Data were analyzed to explore the relationships among behaviour, experience, and effort. Findings indicated a significant positive relationship between behaviour and experience on all of the HGSHS:A items, a significant negative relationship between behaviour and effort on the ideomotor items, and a significant positive relationship between behaviour

and effort on the cognitive items. A similar pattern was observed between experience and effort. Also, subjects of varying HGSHS:A responsivity differed in terms of overall experience of the scale but not in terms of the overall amount of effort that they expended. Implications of the data are discussed in terms of the factors influencing subjects' experiential response and behavioural performance as well as the attributions that they make concerning effort during hypnosis.

1982

Sheehan, Eugene P.; Smith, Howard V.; Forrest, Derek W. (1982). A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes. International Journal of Clinical and Experimental Hypnosis, 30, 138-146.

2 groups of 8 Ss each, matched for suggestibility and degree of myopia, were assessed by a signal detection method in their ability to make a monocular spatial discrimination, both before and after 15 minutes of listening either to music or to taped suggestions that vision would improve. There was a significantly greater improvement in sensitivity on the part of the group of Ss listening to suggestions, and within this group, but not within the group of Ss listening to music, there was a significant negative correlation ( $r = -.67$ ) between S's initial sensitivity and the amount by which it increased. There was no significant difference between the amounts by which the criterion changed in the 2 groups. In contrast with the results reported by Graham and Leibowitz (1972), there was no evidence in the present study to indicate that the amount of improvement shown by Ss depended upon either their suggestibility as measured by BSS or their refractive error.

Spiegel, David; Detrick, Douglas; Frischholz, Edward (1982). Hypnotizability and psychopathology. American Journal of Psychiatry, 139, 431-437.

Compared hypnotic responsivity of 115 chronically ill psychiatric patients (mean age 44.6 years) with that of 83 nonpatient volunteers (mean age 28.5 years). The Hypnotic Induction Profile was administered, and diagnoses are established for patients according to Research Diagnostic Criteria. Results show that all of the diagnosed Ss (those with thought disorder, affective disorder, generalized anxiety, and miscellaneous disorders) were significantly less hypnotizable than the nonpatient comparison group. This effect was unrelated to age or medication differences. Implications of the findings are discussed in relation to a new model of hypnotic responsivity that takes into account the moderating effects of severe psychopathology. 55 refs.

1977

Albornoz-Ruiz, Jose M. (1977). Suggestibility as a factor in medical treatment. Maryland State Medical Journal, 26, 66-68.

## NOTES

This paper presents the view that a physician must be aware of the great influence, direct and indirect, s/he has with the patient as a result of their relationship. "Here it should be remembered that the power of a suggestion, without the benefit of formalized hypnosis, is directly related to the intensity and nature of the emotional bond between the patient and the doctor, often colored by a marked transference unconscious component, where the doctor stands 'in loco parentis' vis-a-vis the patient, regardless of the age, education or intellectual sophistication of the latter. Whatever the nature of the perception that is eventually presented by the patient as a symptom or identified by the doctor as a sign of illness, such perception will be elaborated upon by the patient's fancy, in lonely reveries where he defines for himself causes, nature and possible course of his disorder, not always in keeping with those established by the doctor as he exposes the same set of phenomena to his learned medical judgment" (p. 68).

Berk, Stephen N.; Moore, Mary E.; Resnick, Jerome H. (1977). Psychosocial factors as mediators of acupuncture therapy. Journal of Consulting and Clinical Psychology, 45 (4), 612-619.

This study investigated a number of psychosocial variables that have been suggested as possible mediating factors in acupuncture therapy. Forty-two volunteers with bursitis and/or tendonitis of the shoulder served as subjects. All were randomly assigned to one of four treatment groups: acupuncture - positive milieu, acupuncture - negative milieu, placebo acupuncture - positive milieu, and placebo acupuncture - negative milieu. Pretreatment and posttreatment subjective pain reports and shoulder motion studies, as well as pretreatment assessments of hypnotic susceptibility and suggestibility, were determined for each subject. Results indicated that (a) acupuncture and placebo acupuncture were equally effective in producing highly significant ( $p < .001$ ) reductions in subjective pain reports; (b) neither treatment effectively improved objective shoulder motion; (c) subjects treated in the positive milieu reported more improvement than those in the negative milieu ( $p < .053$ ); and (d) hypnotic susceptibility, suggestibility, belief in the treatment, and the satisfaction of expectations showed no relationship to treatment outcome. It is concluded that acupuncture therapy provides a powerful placebo. Treatment milieu variables warrant future study in the attempt to understand the acupuncture phenomena.

Connors, J.; Sheehan, P. W. (1976). Analysis of the cue characteristics of task motivational instructions. International Journal of Clinical and Experimental Hypnosis, 24, 287-299.

This study investigated the assumption of Barber's model of hypnosis that its set of task motivational instructions is thoroughly "nonhypnotic" in character. If this assumption is correct, then the cues associated naturally with task motivational instructions should be more compatible with a suggestibility test situation explicitly defined as nonhypnotic than with one defined as hypnotic, and this affinity should be reflected in both Ss' objective and subjective suggestibility test scores. Barber's (1965) Suggestibility Scale data collected from 90 Ss did not confirm the main prediction under test, but results failed to provide unequivocal support for the model; subjective evidence, in particular, supported least well the assumptions of the paradigm.

Naylor, Lynda P. (1976). The relationship of waking pain parameters and suggestibility in hypnosis (Dissertation). Dissertation Abstracts International, 36, 4209.

"Two pain sources, electric shock and ischemic muscle pain, were used with college men to explore the possibility that there is a relationship between waking pain parameters and level of suggestibility in hypnosis. Speculations about the presence of such a pain parameters - suggestibility relationship had arisen from incidental findings of two studies of hypno-algesia. In one study threshold for ischemic muscle pain was higher in highly suggestible subjects than in unsuggestible subjects. In the other study unsuggestible subjects were found to have a higher "tolerance" level for electric shock pain than highly suggestible subjects. "In the current study subjects served as their own controls; that is, each subject was subjected to pain from both sources and was later hypnotized to measure hypnotic suggestibility. Threshold and two tolerance measures were obtained for electric shock. Times to reach "mild", "moderate", "severe", and "intolerable" levels of pain were obtained for ischemic pain. Hypnotic suggestibility was measured by taped individual administration of the Harvard Group Scale and the Classical administration of the Harvard Group Scale and the Classical Suggestion Test. The findings were that there was no linear relationship between any pain measure and the Harvard Scale. There was some evidence that a curvilinear relationship may exist. Subjects who were high on the various pain measures were found to fall into the third quartile of hypnotic suggestibility; that is, they had Harvard Scale scores of 6 to 8. "The presence of a pain parameters-suggestibility relationship

would have raised questions about the suitability of experimental designs in which unsuggestible subjects are used as controls in studies of hypnoanalgesia. While the pain parameters-level of suggestibility data from this study do not raise questions about the suitability of the unsuggestible subject control group as it is now used, other data does. Extremely large variability was found in all the pain data and it is clear that with any small groups, randomly selected, one could easily choose two groups who differ widely in baseline pain parameters. This danger is present in all studies, not just hypnoanalgesia studies. Selection of groups matched on baseline pain parameters, along with the use of large groups, was recommended" (p. 4209).

Slade, P. D. (1976). An investigation of psychological factors involved in the predisposition to auditory hallucinations. Psychological Medicine, 6 (1), 123-132.

Previous research by the author (Slade, 1972, 1973) and others has suggested that psychological stress plays an important role in triggering off the experience of auditory hallucinations. Clearly, however, predispositional factors are involved as well. The present study is an attempt to investigate some of the psychological factors which may predispose the individual to such experiences. A battery of tests involving cognitive, personality and mental imagery variables and the verbal transformation effect was administered to two small groups of psychotic patients differing only in respect of a history of auditory hallucinations and a normal control group. The main conclusion was that the results lend direct support to the proposition of Mintz & Alpert (1972) that a combination of vivid mental imagery and poor reality-testing in the auditory modality provides the basic predisposition for the experience of auditory hallucinations.

1975

Berk, S. N. (1975). The mediating effects of hypnosis, suggestibility and placebo in acupuncture therapy (Dissertation). Dissertation Abstracts International, 36, 3020-3021.

"Results strongly support the contention that variables other than physiological mechanisms are involved in acupuncture therapy. It appears as if patient motivation, models, expectations of relief and the quality of the doctor-patient relationship can influence the outcomes of this ancient therapy. However, additional research is needed to confirm these findings. At present, the data seem to suggest that acupuncture therapy may be largely a placebo phenomenon" (p. 3021).

Tebecis, A. K.; Provins, K. A.; Farnbach, R. W.; Pentony, P. (1975). Hypnosis and the EEG: A quantitative investigation. Journal of Nervous and Mental Disease, 161, 1-17.

A quantitative investigation of the EEG during hypnosis was made by analyzing the analogue power frequency spectrum of one group of subjects in the awake and hypnotized conditions, and another group (random sample) in the awake condition. Individuals of the first group were thoroughly experienced in self-hypnosis and highly hypnotizable, whereas those of the second group had never been hypnotized and were low in waking suggestibility. There were no statistically significant differences in mean power of the whole EEG spectrum between the awake and hypnotized conditions of the experimental group, although a trend toward increased theta (4 to 8 Hz) density during hypnosis was apparent. This group, however, exhibited significantly more theta activity during both the hypnotized and the awake conditions than the random sample of controls in the awake condition, irrespective of whether the eyes were closed or open. We suggest that this increased theta density in the EEG is related to frequent experience of self- hypnosis, high hypnotizability, or both.

Spiegel, Herbert (1974). The grade 5 syndrome: The highly hypnotizable person. International Journal of Clinical and Experimental Hypnosis, 22 (4), 303-319.

On a 0-5 hypnotizability range, as measured by the Hypnotic Induction Profile, the grades 4-5 are identified as highly hypnotizable persons. This group tends to exhibit a clinically identifiable configuration of personality traits. Knowledge of the nature and interplay of these traits can help us to formulate appropriate treatment strategies. The features which together identify the grade 5 syndrome are: the high eye-roll sign; the high intact Hypnotic Induction Profile score; readiness to trust; a relative suspension of critical judgment; an ease of affiliation with new experiences; a telescoped time sense; and easy acceptance of logical incongruities; an excellent memory; a capacity for intense concentration; an overall tractability, and, paradoxically, a rigid core of private beliefs. Role-confusion and a subtle sense of inferiority are often evident. For these persons, treatment strategy requires clarification of central versus peripheral beliefs; increasing sensitivity to positive and negative field-forces; awareness of secondary gain-loss issues; aid in establishing guidelines to implement with action the integrity of their own beliefs, especially their perception of alternatives and their right to use them. Under duress, the grade 5 becomes the so-called hysterical patient. Differential diagnosis is critical because, during acute stress, introspective inquiring therapy can compound their confusion harmfully. "What" therapies are more effective than "why" therapies. If secondary gain is not formidable under appropriate therapy, these patients have a very good health potential.

Shor, Ronald E.; Easton, Randolph (1973). A preliminary report on research comparing self- and hetero-hypnosis. American Journal of Clinical Hypnosis, 16, 37-44.

A method is described for the study of the relationship between self- and hetero-hypnosis and initial findings are presented. A new instrument is described, the Inventory of Self-Hypnosis (ISH) which is a self-hypnosis adaptation of the hetero- hypnotic Harvard Group Scale, Form A (HGS). The new scale permits the making of precise item-by-item quantitative comparisons between the effects of these two scales. Preliminary research with 29 non-motivated college student subjects suggests that mean levels of responsiveness to the two scales are about the same, that item difficulty levels have much in common, but that whatever it is that the ISH measures is largely different from what the HGS measures. The findings help to formulate the need to study what it is that contributes to the similarities and differences. Further studies are in progress.

#### NOTES

Total Score Intercorrelations were reported as follows:

HGS ISHb ISHt

HGS 1.00 ISHb .39 1.00 ISHt .33 .67 1.00

Item Pass Percents Intercorrelations were reported as follows:

HGS ISHb ISHt

HGS 1.00 ISHb .72 1.00 ISHt .70 .82 1.00

ISHb = time calculated by breaths ISHt = time calculated by timer

The Inventory of Self Hypnosis (ISH) consists of 12 items, the same ones as in the Harvard scale with a few minor exceptions. Subjects are told that the inventory "is designed to teach self-hypnosis and that all of the information needed for a person to induce hypnosis in himself and to give himself a series of simple suggestions is contained in the inventory booklet" (p. 40). Therefore, there is more emphasis on hypnosis as an active imagination (cognitive) skill. An example, using a suggestion for Immobilization of the Right Arm, follows.

"This set of instructions is devoted to having it become very difficult for you to lift your right arm. These instructions involve a count of 33 breaths. The first 30 breaths is the \_suggestion phase\_ and the final three breaths is the \_trial phase\_.

"When ready close your eyes and pay close attention to your right arm. Notice how your arm shares in the general feeling of heaviness that you feel all over your body. Throughout the count of 30 breaths

concentrate your thoughts on the idea of how heavy it feels; think about it growing more and more heavy, heavy like lead. Although you should try not to lift it until later, notice how the arm seems to become much too heavy to lift.

"At the end of the 30 breaths take 3 extra breaths. During this new count try to lift your arm to see how heavy it is. Perhaps in spite of being so heavy you will be able to lift it a little, although by then it may be too heavy even for that. You will notice that there is some resistance because of the relaxed state you are in. After the three breaths stop trying and relax. In a few moments your arm will feel normal again, no longer heavy; you can easily lift it if you want to. At that point open your eyes and continue reading below the double lines.

"Summary of instructions:

"Initial actions: Close your eyes. Pay close attention to the feelings in your right arm.

"During count of 30 breaths -- Main Actions: Concentrate on the idea of your arm becoming so heavy that you would not be able to lift it.

"3 breaths -- Try to lift your arm.

"Post actions: Let normal feeling return to your arm. Open your eyes and continue reading" (p. 41).

1972

Sutcliffe, J. P. (1972). Afterimages of real and imaged stimuli. Australian Journal of Psychology, 24 (3), 275-289.

Tested 45 university students and 15 7-10 yr. olds for after-images of images and of real stimuli. 8 different colored stimuli were used and observations made enabled a check on reliability. Real stimuli typically produced negative afterimages in most Ss. Only half the Ss could project images of the stimuli, only 1/3 reported afterimages of those images, and of those images only 7% were negative. Afterimages of images had a longer latency and a shorter duration than afterimages of real stimuli. Thus qualitatively and quantitatively afterimages of images differ from afterimages of real stimuli. Findings are related to individual differences in general vividness of imagery. (18 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1969

Duke, J. D. (1969). Relatedness and waking suggestibility. International Journal of Clinical and Experimental Hypnosis, 17, 242-250.

Volunteering pairs of Ss took 9 waking tests (WT) of hypnotic susceptibility. Pairs included siblings, friends, and strangers. Concordance correlations from 20 sibling pairs were positive for 7 of the 9 WT, 2 significantly so. For 19 pairs of strangers, correlations were insignificant, 5 positive, 4 negative. Data reopen nature-nurture questions about the origins of individual differences in hypnotic aptitude. For 20 pairs of cross-sex friends, 7 of 9 correlations were negative, 1 significant, and 2 approaching significance. 6 of 9 concordance correlations from 16 spouse pairs were also negative, but none was significant. (Spanish & German summaries) (17 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Garmize, L. M.; Marcuse, F. L. (1969). Some parameters of body sway. International Journal of Clinical and Experimental Hypnosis, 17, 189-194.

Investigated the effects of 4 variables on body sway with 160 undergraduates. A 4-dimensional analysis of variance was performed on the body sway scores obtained. None of the main effects were significant. 1 of the interactions was significant, but might have been due to chance. Results are consistent with those of past researchers. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Barber, Theodore Xenophon; Calverley, David S. (1968). Toward a theory of 'hypnotic' behavior: Replication and extension of experiments by Barber and co-workers (1962-65) and Hilgard and Tart (1966). International Journal of Clinical and Experimental Hypnosis, 16, 179-195.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS' CAPABILITIES AND DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Tart, Charles T.; Hilgard, Ernest R. (1966). Responsiveness to suggestions under 'hypnosis' and 'waking-imagination' conditions: A methodological observation. International Journal of Clinical and Experimental Hypnosis, 14, 246-256. (Abstracted in American Journal of Clinical Hypnosis, 1966, 2, 158)

2 groups of Ss were selected, on the basis of previous experimental participation, for a study of hypnotic analgesia. 1 group was highly responsive to suggestions in a waking suggestion condition as well as following a formal hypnotic induction procedure. The other group was unresponsive to suggestions unless given a hypnotic induction, following which they became highly responsive. It was found that the former group was no longer highly suggestible under waking conditions: their self-reports as to how hypnotized they felt strongly suggested that they had been highly responsive to waking suggestion previously because the experimental conditions had allowed them to spontaneously enter hypnosis. The difference in responsiveness when this was not allowed was striking, even with only 11 Ss. Methodological implications of this finding are discussed. (Spanish & German summaries) (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Das, J. P. (1965). Relationship between body-sway, hand-levitation, and a questionnaire measure of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (1), 26-33.

67 randomly selected college students were administered the body-sway test, a questionnaire measure of tranceability, and an induction procedure utilizing hand-levitation to determine hypnotic susceptibility. The 6 Es varied in age, sex; 5 of them had little experience as hypnotists. All reference to "hypnosis" was omitted from the induction procedure. Significant phi-coefficients between body-sway and levitation (.52), levitation and tranceability frequency (.28) and intensity (.25), and body-sway and tranceability intensity (.33) were obtained. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneau, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J. (1963). The Maudsley Personality Inventory, suggestibility and hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 187-200.

An attempt to replicate the claim of Furneau and Gibson (1961) that stable extraverts and neurotic introverts were more susceptible to hypnotic suggestion than neurotic extraverts and stable introverts, using the MPI dimensions, was unsuccessful. Some "trends" are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneau, W. D. (1963). Neuroticism, Extraversion, answer suggestibility: A comment. International Journal of Clinical and Experimental Hypnosis, 11, 201-202.

#### NOTES

Author develops hypotheses about the relationships between scores on the Maudsley Personality Inventory (MPI) and suggestibility.

"(a) The effective-drive experienced by a S in a suggestibility test, or hypnosis situation, is positively correlated with both neuroticism and with extraversion, as measured by the MPI.

(b) Effective-drive is also a function of the "press" of the test situation, and of the S's previous experience.

(c) Within the range of values of effective-drive lower than the Yerkes-Dodson optimum for the test being studied, the magnitude of response to a suggestibility test (or hypnosis) is a positive function of drive.

(d) For values of effective-drive greater than the Yerkes-Dodson optimum, response is a negative function of drive" (p. 201).

Hoskovec, J.; Svorad, D.; Lanc, O (1963). The comparative effectiveness of spoken and tape-recorded suggestions of body sway. International Journal of Clinical and Experimental Hypnosis, **11**, 163-166.

The relative effectiveness of tape-recorded vs. spoken suggestions of body sway was measured. Both types of suggestion produced increased body sway. Spoken suggestions following recorded suggestions were the most effective. The expectation by Ss of a greater effectiveness of live presentation may have produced this result. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Gibson, H. B. (1962). Furneaux's discussion of extroversion and neuroticism with regard to suggestibility. International Journal of Clinical and Experimental Hypnosis, **10**, 281-287. (Abstracted in Index Medicus, 63, March, S-676)

Hypotheses suggested by Furneaux (see 36: 4II95F) are criticized on the grounds that his basic assumption that extraverts attend more closely in the interpersonal situation is unwarranted. It is maintained on the contrary that introverts are the less distractible and it is shown that the data published earlier by Furneaux and Gibson (see 36: 3II67F) accord with a theoretical model derived from Spence. The results are also discussed in terms of an alternative interpretation. It is further contended that Furneaux's treatment of the data leads to other inconsistencies. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Kuhner, Arthur (1962). Hypnosis without hypnosis. International Journal of Clinical and Experimental Hypnosis, **10** (2), 93-99.

The traditional concept of hypnosis that seeks a "sleep" state through employment of formal induction techniques seriously limits its general clinical applicability. It fails to fit the special needs of the patient. An approach designed to counteract this shortcoming manipulates the interpersonal relationship factor. Case illustrations from dental practice support the viewpoint that the proper relationship is akin to the hypnotic one and comparable results obtain without resort to ritualistic induction methods. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Das, J. P. (1961). Body-sway suggestibility and mental deficiency. International Journal of Clinical and Experimental Hypnosis, **13-15**.

50 mental defectives were subjected to the body-sway test of suggestibility. Contrary to expectations the defectives did not differ from each other when taken according to grades of deficiency, nor do they differ, as a group, from normal (college) controls. From Psyc Abstracts 36:02:2JII3D. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Furneaux, W. D. (1961). Neuroticism, extroversion, drive, and suggestibility. International Journal of Clinical and Experimental Hypnosis, **9**, 195-214. (Abstracted in Psychological Abstracts, 62: 4 II 95F)

In the group studied, the body-sway scores of stable extraverts and neurotic introverts tended to be large, whereas they were smaller for stable introverts and neurotic extraverts. This result was explained in terms of a theoretical model in which the effective drive produced in a S by a test-

situation is a function of both his neuroticism and his extraversion. The author believes that the theoretical model generates a number of predictions and suggestions which can serve to guide future experimental work in this field. From *Psyc Abstracts* 36:04:4II95F. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Klopp, Kirk K. (1961). Production of local anesthesia using waking suggestion with the child patient. International Journal of Clinical and Experimental Hypnosis, 9, 59-62.**

#### **NOTES**

Author describes the use of waking suggestion with children, as opposed to hypnosis. The technique "is simply the presentation of an idea which is sold to the child with such emphasis that when it is communicated to him, he accepts it with conviction. As children reason for the most part paralogically, the absence of logical grounds for the acceptance of the idea is arrived at easier than with the more mature mind of the adult" (p. 59).

**1959**

**Conn, Jacob H. (1959). Cultural and clinical aspects of hypnosis, placebos, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 7 (4), 175-185.**

#### **NOTES**

The author traces the history of hypnosis, suggestion, and placebo, noting that popularity of hypnosis with professionals waxes and wanes over the years. When practitioners lose faith in a drug, it becomes less effective with their patients. The same holds true for hypnosis. Frequently illness is ameliorated or cured by suggestion without hypnosis.

"Hypnosis is nothing more than the suggestive, placebo effect presented in a specific inter-personal setting. It is not just a state of mind, but the end result of various psychologic processes. (2) A patient may be more suggestible when fully awake. ... Another patient may be more suggestible when asleep. There are those who respond best to suggestions in the light stage of hypnosis, while about 10% of subjects are capable of developing the deeper, somnambulistic phase" (p. 181).

**1958**

**Dittborn, Julio M. (1958). Expectation as a factor of sleep suggestibility. Journal of Clinical and Experimental Hypnosis, 6 (4), 164-170. (Abstracted in *Psychological Abstracts* 61: 2390)**

#### **NOTES**

Authors studied expectation ("the attitude of waiting attentively for something usually to a certain extent defined, however vaguely," as defined by Drever) as a factor of sleep suggestibility. They tested young soldiers in the Chilean army using the postural sway test of suggestibility, repeated twice, to yield 12 Subjects. After a third postural sway test the Subjects were required to respond to a series of visual, then later oral, stimuli. [Experimental instruments are not clearly described in this article.]

The Subjects returned a week later and were asked to respond to the stimuli by using the word "sueno" (dream) for two Ss and "dormir" (sleep) for another two. The word "sleep" was used in the third experiment, following suggestions like "As you read more and more or as you hear yourself repeating the word 'sleep or dream' over and over again you will become more and more sleepy" (p. 166).

Apparently the outcome measure was the number of stimuli to which the Subject responded before lack of response indicated a trance. [Description is unclear.]

**1957**

Solovey, Galina; Milechnin, Anatol (1957). Concerning the induction of the hypnotic state. Journal of Clinical and Experimental Hypnosis, 5 (2), 82-98.

#### NOTES

The hypnotic state has four attributes: "an effect of emotional stabiliztion, a retrogression to an infantile psychological functioning, suggestibility, and transmissibility of the hypnotic relationship" (p. 82). "SUGGESTIBILITY is a special motivation to accept, incorporate within one's self, and execute direct or implicit propositions, which is equivalent to the motvation of a child to accept, assimilate and carry out the propositions of its parents" (p. 84). The authors propose that verbal and non-verbal suggestions are incorporated during the course of education, lasting years and thus becoming in effect post-hypnotic suggestions. "The person will have in the future a \_special responsiveness,\_ that may be more or less pronounced according to the circumstances, \_for those data\_ (coming from books, movies, conversations, etc.) \_which agree with his emotionally-incorporated post-hypnotic suggestions\_" (p. 85). If while in an auto-hypnotic condition he comes in contact with someone "who appears to be the embodiment of the convictions or prejudices that on being stimulated started the process of emotional activation that led to the development of the hypnotic state, \_there may be a transformation of the auto-hypnotic condition into an interpersonal hypnotic relationship\_" (p. 86).

According to the authors, this theory can explain post-hypnotic (negative) sequellae. It also accomodates explantions of both Natural or Direct Orientation inductions and Indirect Orientation inductons, and explains phenomena such as patients entering hypnosis rather automatically while awaiting the appearance of Mesmer in his waiting room.

"To conclude, we will stress that the psychological mechanism of hypnotic induction is exactly \_the same\_ in everyday life and in the experimental environment. The apparent differences like [sic] in the \_behavior\_ of the subject in the hypnotic state, and are due to the motivation that arises from the circumstances and to the convictions, capacities, psychological maturity, and degree of retrogression of the individual" (p. 96).

Solovey, Galina; Milechnin, Anatol (1957). Concerning the nature of hypnotic phenomena. Journal of Clinical and Experimental Hypnosis, 5 (2), 67-76.

#### NOTES

The authors write about the place of the hypnotic state in general psychology: "the study of the \_psychological mechanisms\_ that make the appearance of the phenomenon \_possible, which need not be different from the normal and current psychological mechanisms in everyday life\_" (p. 67). They classify hypnotic phenomena into three groups:

I. Phenomena \_which are a function of the state of psychological\_ retrogression (hypnotic depth), appearing in spontaneously [sic] or when proposed by the operator.

II. Phenomena which appear without any specific suggestion, as \_a side issue of other suggestions,\_ capable of originating emotional states in the subject.

III. Phenomena \_which are independent of all suggestion,\_ being a constituent part of the hypnotic state itself, in its 'positive' or 'negative' forms" (p. 68).

Using this framework, the authors describe several aspects of hypnosis: catalepsy, anesthesia, retrogression, the taking of a role, negativism and resistance, visceral changes, emotional stabilization, psychotherapeutic benefits (indirect). They observe that direct suggestions are often not necessary for therapeutic benefit, and give as an example the tendency for less bleeding when dentists suggest that patients will not feel less pain.

"For the elucidation of this point, the authors carried out an experiment in a dental clinic, taking six easily hypnotizable subjects in whom dental extractions were to be performed. They were given only the suggestions that they would feel the doctor working, but not experience pain ... that they would pay

no attention to it ... or even if they felt a little pain, this would not trouble them and they would bear it perfectly ... Nothing was said about the loss of blood. As a result, in all the cases the loss of blood was slight, practically insignificant, though technically difficult extractions of roots were included" (p. 74). "The explanation of hypnotic phenomena as natural and normal consequences of the hypnotic emotional state, and of the state of psychological retrogression, eliminates the supposed mysterious powers of suggestion. \_Suggestion is thus relegated to the modest role of a litmus paper which reveals the psychological functioning of the individual\_ in an experimental environment. On the other hand, in everyday-life hypnosis, in the principal hypnotic relationships of parents with their children, of teachers with their pupils, etc. (11), suggestibility plays an important role in education or re-education" (p. 75).

1956

Kline, Milton V. (1955). Freud and hypnosis: II. Further observations on resistance and acceptance. Journal of Clinical and Experimental Hypnosis, 3 (2), 124-129.

Freud's rejection of hypnosis in the development of psychoanalytic psychology becomes upon closer examination a two fold process. It involves on the part of Freud the conventional recognition that suggestion plays a basic role in the primitive emotional energy that binds people together and influences the acting out of primary libidinal drives. From an ontogenetic (and presumably phylogenetic) point of view, Freud viewed suggestibility as a repressive element in the organization of behavior and one which in effect had to be dealt with indirectly. To deal with it directly was to create a state within which powerful emotions of an unpredictable nature could emerge. Hypnosis to Freud was a 'condition' which led to general heightened suggestibility and was identical with it. To make use of this condition was in essence an attempt to make use of an individual's energies in a dependent and essentially uninhibited manner. It seemed to Freud that having produced the hypnotic 'condition,' one actually had achieved a state of suspension or ablation of certain critical ego functions and this could lead to an intense and perhaps unmanageable interpersonal relationship. It was almost an 'ethical' rather than a scientific view as Freud discussed it in his thinking and theorizing about a general psychology.

"To a great extent the basic concepts of psychoanalysis were developed as the result of Freud's awareness of the existence of hypnotic phenomena and his need to circumvent and indirectly deal with the ego manifestations of this 'condition.' Thus Freud never really rejected hypnosis as a mechanism of human behavior. His comment of the psychosocial development of man (from which psychoanalytic psychology is influenced) was heavily weighted by his awareness of 'suggestibility' and the 'condition' descriptively called hypnosis.

"The simple equation of hypnosis with suggestibility is now scientifically outmoded and incorrect. The role of suggestion and its psychosomatic equations has taken on a drastically changed perspective in social psychology, particularly with regard to the early concepts of Le Bon, Freud and McDougall (5). For these reasons alone, Freud's circumvention of hypnosis becomes increasingly unsound scientifically and adherence to such a perception of hypnosis serves only to obscure theoretical research in psychology and to maintain a rigidity born essentially of emotional ties and ethics alien to the nature of scientific inquiry" (pp 128-129).

## SUGGESTION

1995

Lee DY. Barak A. Uhlemann MR. Patsula P. Effects of preinterview suggestion on counselor memory, clinical impression, and confidence in judgments. *Journal of Clinical Psychology* 1995;51(5):666-75 This study examined the effects of schematic preinterview suggestion on counselors' (a) recognition

memory of the information presented by the client; (b) clinical impression rating of the client; and (c) confidence in rating clinical impression. Fifty-two Master's-level counselor-trainees were assigned randomly to two conditions of preinterview suggestion about the status of the client (i.e., depression and no depression). After subjects had received appropriate preinterview information (i.e., depression or no-depression content) and had viewed a videotaped counseling interview, information was gathered from them. The results indicated that the preinterview suggestion (a) did not affect counselor-trainees' clinical impression rating of the client; (b) did not affect confidence of rating; and (c) yielded a weak, but significant, confirmatory memory. Implications for the interview setting are discussed.

**Barnier, Amanda J.; McConkey, Kevin M. (1995, November). Posthypnotic suggestion: Knowing when to stop helps to keep it going. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.**

## **NOTES**

Posthypnotic suggestion sometimes leads to compulsive and involuntary responding, but we have little information about the parameters of such a response. In some research in our laboratory, we found that subjects who were given a posthypnotic suggestion that encouraged them to experience a desire to respond, showed a different pattern of response from those simply told to make a specific behavioral response. In another study, we gave subjects a posthypnotic suggestion to mail a postcard every day to the experimenter; some subjects were told to respond until they saw the hypnotist again (termination), others were given no specific information about how long they should respond (no termination). Those expecting a termination to the suggestion showed a different pattern of response across 16 weeks of testing. Thus, the information included in the suggestion about how or when to respond influences posthypnotic responding.

**Present Experiment:** Laboratory test of including specific information in the posthypnotic suggestion about how long to respond - cancellation cue vs. no cancellation cue. Responding indexed on four different tests: formal, embedded, informal, postexperimental. Also used real/simulating methodology. We expected that responding would decline across the four tests, but that the decline would be slowest for those expecting a cancellation cue.

**Methodology:** High hypnotizable subjects scored 8-10 on SHSS:C, lows scored 0- 3 on SHSS:C. Given real/simulating instructions (Orne, 1959). Formal test was given immediately after deinduction; embedded test was given during an inquiry question; informal test was given as the hypnotist appeared to terminate the experiment and leave the room; postexperimental test was given by another experimenter during a postexperimental inquiry. The suggestion was to cough when Ss heard a particular response cue.

**Results:** On the formal test, there was no difference between reals or simulators in either the cue or no cue condition, although simulators in the cue condition tended to overplay their response. Across the tests, responding declined. In particular, the majority of reals and simulators in the no cue condition stopped responding after the formal test. In the cue condition, reals and simulators responded similarly on the embedded test, but differently on the informal test; more reals than simulators continued to respond across the tests. Few subjects responded on the postexperimental test. Subjects' postexperimental comments indicated that reals and simulators in the no cue condition believed that one response was sufficient; simulators in the cue condition were confused about whether to keep responding, and reals in the cue condition responded compulsively across the test.

**Conclusions:** The inclusion of a cancellation cue in a posthypnotic suggestions maintains responding for a longer period. Responding posthypnotically is not explained solely by demand characteristics. Rather, individuals respond on the basis of their interpretation of the implied intent of the hypnotist's message (c.f., Sheehan, 1971). Responding changes across test types. These findings contribute to a

model of posthypnotic responding. They point to the active responding of hypnotized individuals (c.f., Kihlstrom: experimental subjects try to make sense of the message of the suggestions and instructions they receive).

**1994**

**Barber, Joseph (1994, October). How to use and abuse boundaries with hypnosis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

#### **NOTES**

**(for only part of the presentation) I would like to focus on how we can productively use boundaries. Hypnosis experience reactivates archaic experiences with parents; if therapist can evoke trust, the patient can feel increasingly that they can relax into the experience.**

**Bejenke, Christel J. (1993, October). A clinician's perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

#### **NOTES**

**Presents point of view of a private practice anesthesiologist in Santa Barbara, California. Used hypnosis for 20 years.**

**Use of hypnosis as hypnoanesthesia is rare since Esdaile, with brief resurgence in 50's, because surgery techniques advanced before anesthetics did in areas that were very risky. Now it is a matter of choice, and may be undertaken because of a patient's extreme fear of anesthesia, previous bad experience with anesthesia, fervent belief in holistic method, allergy, or previous experience with hypnosis. Still advised to use hypnosis for MRIs, radiation procedures, former drug addicts (who may have problems with drugs), burn patients, release of neck contractions, and medical procedures--especially with children--like lumbar puncture.**

**She disagrees with Kroger's estimate of only 10% of patients being able to use hypnoanesthesia; she does not believe it requires a lot of training, or profound muscle relaxation.**

**There is no indication of how many cases are actually done with hypnosis. Also, published cases are not representative of the quantity or complexity of cases; most published cases have a few extraordinary characteristics. The Irish surgeon Jack Gibson has done more than 4000 cases, some very complicated.**

**I have used it for D & Cs, and complex cases that were not published. Most of my patients elected to be alert during the hypnosis and conversed with their surgeons. The most common benefit is that recovery from anesthesia is not necessary; but these days with newer anesthetics recovery from anesthesia is rapid anyway. However, if as we suspect anesthesia affects immune function, that would be another reason to use hypnosis.**

**Preparation for surgery may be of three types: 1. formal hypnosis techniques 2. "hypnoidal" techniques that aren't formal 3. unprepared patients in whom hypnosis is used at last moment.**

**Examples. 1. Formal hypnosis: This symposium deals with this type of approach. Three groups derive particular benefit -- those requiring prolonged artificial ventilation postoperatively (because otherwise sedation must be used, which leads to complications), where prepared patients tolerate interventions calmly and comfortably -- cancer patients, for whom this can be first experience of patient to see self as active participant in care rather than a victim of the illness and of complicated technology -- pediatric patients. 2. Hypnoidal (hypnosis like) techniques: This is the most important application. Time doesn't permit much discussion here. Patients are in an altered state when they come for surgery, highly suggestible, and suggestions appear to be as effective as during formal trance state. The doctor can elicit positive responses during "casual conversation" while seemingly giving information to the**

patient. (The reverse is true also, with inadvertent negative suggestions, to the detriment of the patient.) Scrupulous adherence to medical facts is important during this type of conversation. Operating room fixtures are useful for focus of attention, and I have published this information in an article.

Recovery room also is place where case specific information and appropriate suggestions can be given. Patient can experience his ability to alter sensations, for the first time, following suggestions.

Remainder of the hospitalization offers opportunity for reinforcing case specific positive suggestions.

Bennett, Henry L. (1993, October). Hypnosis and suggestion in anesthesiology and surgery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

He began by saying that he is opposed to using hypnosis for surgery, though he favors a theory of how hypnosis effects physiological change, and cites T. X. Barber's classic "Changing Unchanging Bodily Processes."

Relaxation puts patient in a "psychological strait jacket" because surgery is so highly stressful. He gives information "about how to go through the surgery more comfortably," gets across the idea about coping style, tells them surgery is exertional and that they are tired afterward, that he can help them "using things you already know how to do," and specifies exactly what they can do--using model of himself as a trainer.

In some recent research he used pairs of pictures, some of which lead to pupillary constriction (blood pressure goes down) or dilation (blood pressure goes up). Instructing them to look, patients looked twice as long at the pictures than they did during free gaze. When not instructed to look, heart rate went down; when told to look, heart rate went up. So the researchers went back to free gaze. He uses this as a metaphor for many of the pre- surgery preparation activities that encourage relaxation "inappropriately."

He cites Cohen & Lazarus re vigilant copers, Price et al (1957), and some other studies on epinephrine effects. He uses examples of work patients may have done (e.g. planting a garden) when talking with patients prior to surgery, that gives them a sense of accomplishment later.

You have to give specific instructions or suggestion, not general relaxation suggestions.

Question from the audience: Can preoperative instructions (not hypnosis) diminish blood loss.

In Bennett's answer he seems to be reporting the earlier study: they found 150- 4000 cc blood loss, high variability. Extent of blood loss was determined by extent of surgery, by instructions to patients vs no instructions.

This study was replicated by Enqvist, Bystedt, & von Konow in the Anesthesia conference at Emory University in 1992.

May 1993 Western Journal of Medicine article, Disbrow, Bennett, & Owinos, with 40 lower abdominal surgery patients who got specific instructions or not. The SHCS was used to measure hypnotizability: highs resolved quicker than low hypnotizable patients. They also found that instructed patients did better than those who did not get specific instructions.

There are now 3 replications of McClintock's study: people use less medications after surgery, when tapes about rapid recovery are played \*during\* surgery.

Bennett is now using tapes with suggestions for recovery during surgery.

Blankfield, Robert P. (1993, October). Suggestion, hypnosis, and relaxation as adjuncts for surgery patients: Lessons from studies involving cardiac surgery patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL

## NOTES

The author stated that his research and the few other studies of cardiac surgery patients do not support idea that cardiac surgery patients benefit from hypnosis and suggestion.

Types of intervention have varied: hypnosis, suggestion, relaxation; pre-op, during, or post-op; with many different outcome variables.

Aiken & Henrichs (1971) study was nonrandomized, nonblinded, for 30 patients getting open heart surgery. Treated patients had benefits.

Surman, Hackett, Silverberg, & Behrendt (1974) had a randomized, single-blind design for 40 patients taught Self Hypnosis (S-H), for elective mitral valve surgery. No difference in benefits. But 45% of patients taught S-H reported a subjective sense of benefit (though objective indicators didn't support that). [He says the difference between subjective/objective outcome ratings is important.]

Hart (1980) used randomized, single-blind design for 40 patients who had open heart surgery. No differences found except initial 3 days post surgery.

Greenleaf et al (1992) - see her paper presentation of this date.

Blankfield et al (presented at Society of Clinical and Experimental Hypnosis meeting in 1992) used a randomized, single-blind design for 95 patients, who were randomly assigned to taped suggestions, music, or controls. No differences were found in benefits.

Our data were re-analyzed: patients who felt tape was helpful were compared to the remaining 62 patients, but there again were no differences in amount of narcotics used for pain, though there was a trend in the right direction; nursing assessments failed to identify less anxiety.

The point is, whereas the bulk of publications suggest benefits, there is little evidence with this population. Could these patients be different in personality, ability to respond to intervention, amount of external stimuli? They should be studied because there are a lot of these patients with only a few surgeons and you don't have to gain the cooperation of a lot of different surgeons to do this kind of research. Also, there is uniformity in cardiac surgery whereas standard operating surgery is in a state of flux in other areas (e.g. movement from generous incisions to micro procedures, and patients receiving this type of surgery remain in hospital for a week whereas this opportunity to study them during inpatient post-surgical period is disappearing in other areas). It is my opinion that cardiac patients may not be highly receptive to suggestion.

Curiously, according to Surman and my research, 1/2 the subjects report benefits. Either some benefits are subtle, or they are reporting a placebo effect.

Future studies need more patients, and the investigators must stratify on personality inventory variables such as Type A personality, hypnotizability, motivation, anxiety, depression, family support, social support systems. This is labor intensive, to determine which characteristics determine differing outcomes. The patients used in this type of research require more presurgery evaluation than previously has occurred.

The MMPI can be self administered and is widely acceptable, but is cumbersome, not well suited to people who are acutely ill. Assessment of Type A personality is important because Type A's might be less receptive to suggestion. Structured interview is time consuming, but a 52-item questionnaire can be self administered. Other factors listed above are important.

Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.

This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in

greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.

De Pascalis, Vilfredo (1993). EEG spectral analysis during hypnotic induction, hypnotic dream and age regression. International Journal of Psychophysiology, 15, 153-166.

EEG was recorded monopolarly at frontal (F3, F4), central (C3, C4) and posterior (in the middle of O1-P3-T5 and O2-P4-T6 triangles) derivations during the hypnotic induction of the Stanford Hypnotic Clinical Scale (SHCS) and during performance following suggestions of hypnotic dream and age-regression as expressed in the before-mentioned scale. 10 low-hypnotizable and 9 highly-hypnotizable and right-handed female students participated in one experimental session. Evaluations were Fast-Fourier spectral analyses during the following conditions: waking-rest in eyes-open and eyes-closed condition; early, middle, and late phases of hypnotic induction; rest-hypnosis in eyes closed condition; hypnotic dream and age regression. After spectral analysis of 0 to 44 Hz, the mean spectral amplitude estimates across seven Hz bands (theta 1, 4-6 Hz, theta 2, 6-8 Hz; alpha 1, 8-10 Hz; alpha 2, 10-13 Hz; beta 1, 13-16 Hz; beta 2, 16-20 Hz; beta 3, 20-36 Hz) and the 40-Hz EEG band (36-44 Hz) for each experimental condition were extracted. In eyes-open and -closed conditions in waking and hypnosis highly-hypnotizable subjects produced a greater 40-Hz EEG amplitude than did low hypnotizable subjects at all frontal, central and posterior locations. In the early and middle hypnotic induction highly-hypnotizables displayed a greater amount of beta 3 than did low hypnotizables and this difference was even more pronounced in the left hemisphere. With posterior scalp recordings, during hypnotic dream and age regression, high hypnotizables displayed, as compared with the rest-hypnosis condition, a decrease in alpha 1 and alpha 2 amplitudes. This effect was absent for low hypnotizables. Beta 1, beta 2 and beta 3 amplitudes increased in the left hemisphere during age regression for high hypnotizable; low hypnotizables, in contrast, displayed hemispheric balance across imaginative tasks. High hypnotizables during the hypnotic dream also displayed in the right hemisphere a greater 40-Hz EEG amplitude as compared with the left hemisphere. This difference was even more evident for posterior recording sites. This hemispheric trend was not evidenced for low hypnotizable subjects. Theta power was never a predictor of hypnotic susceptibility, 40-Hz EEG amplitude displayed a very high main effect ( $p < 0.004$ ) for hypnotizability in hypnotic conditions by displaying a greater 40-Hz EEG amplitude in high hypnotizables with respect to lows. NOTES 1:

#### NOTES

In the Discussion section, the authors indicate that they have no idea why they didn't replicate results of other theta studies, including their own, except maybe due to complex interaction among personality, subject selection, situation-specific factors, and hypnotizability.

They observe that the alpha results conform with previous findings (p. 163). Beta bands were sensitive. Highs showed left-hemisphere prevalence in all beta bands during age regression; they also showed hemispheric balance in the hypnotic dream condition. Beta 3 amplitude was also greater among highs than lows. "among high hypnotizables, beta 3 amplitude in the early hypnotic condition was greater in the left hemisphere as compared to the right and as the hypnotic induction proceeded hemisphere balancing, with reduced beta 3 amplitude, was displayed. This result appears in agreement with the predictions of the neurophysiological model proposed by Gruzelier et al. (1984) and Gruzelier (1988) as well as with other studies in which beta rhythm was found to discriminate performances between high and low hypnotizables (e.g., Meszaros et al., 1986, 1989; Sabourin et al., 1990)" (p. 163-164).

40 Hz amplitude was higher in highs and increased in right hemisphere during the hypnotic dream, especially in posterior areas. "This pattern of hemispheric activation may be interpreted as an expression of the greater right-hemisphere activation and of the release of posterior cortical functions during the hypnotic dream and is compatible with the predictions of the Gruzelier model of hypnosis,

however, the results obtained in this study for 40-Hz EEG amplitude failed to reveal an inhibition of the left-hemisphere activity with the progress of the hypnotic induction" (p. 164). (They note that De Pascalis & Penna, 1990, agreed with the Gruzelier 1988 model: highs in early induction had increase of 40-Hz in both hemispheres, but as induction proceeded they had inhibition of left and increase in right hemisphere activity. In this current experiment, only beta 3 showed the hemispheric trend of Gruzelier's model. They cite other details of current study, p. 164, not consonant with Gruzelier.)

"The 40-Hz EEG rhythm, which according to Sheer (1976) is the physiological representation of focused arousal, appeared to discriminate between differential patterns of high and low hypnotizables. Both during hypnotic induction and during hypnotic dream and age regression highly hypnotizables exhibit greater 40-Hz EEG amplitude with respect to the lows. These findings support the validity of the assumption that hypnosis is characterized by a state of focused attention (Hilgard, 1965) and that 40-Hz EEG activity reflects differential attentional patterns among subjects high and low in hypnotizability. On the basis of these findings it would appear that 40-Hz EEG and beta 3 spectral amplitudes may prove to be useful measures of individual hypnotizability" (p. 164).

1992

Anonymous (1992, May). Studies: Learning can occur while under anesthesia. Daily Breeze (South Bay, Los Angeles County).

## NOTES

"Surgical patients can absorb information while they're knocked out, and even learn tips that help with recovery, researchers reported Friday at a symposium on memory and anesthesia.

"Researchers at Papworth Hospital in Cambridge, England, studied 51 cardiac patients, one-third of whom heard a tape of positive 'therapeutic suggestions' during surgery. Another third heard batches of word associations; the rest heard a blank tape.

"Patients who were played the suggestion tape - which told them they were doing well, or wouldn't feel much pain - left the hospital 1 1/2 days earlier on average than other patients.

"Another study, from the University of Arizona College of Medicine, found that surgical patients who heard specific pain-relief suggestions recovered more easily than those hearing vague advice such as, 'Think of being well.'

"These are still early days to invest in every operating suite buying a tape recorder to play for the patients,' said Dr. Sunit Ghosh, a researcher with the Papworth team. 'But this definitely does hold promise.'

"Scholars at the second annual Symposium on Memory and Awareness in Anesthesia said patients rarely wake up recalling - unprompted - something that happened during anesthesia.

"But several studies showed subconscious learning while the patients were out cold.

"Not everyone accepted the findings.

"It shows an enormous sensitivity on the part of the brain, if it can be shown,' said Eugene Winograd, an Emory University psychologist and organizer of the Emory-sponsored conference. 'I'm not confident it has been shown yet.'

"Some researchers in other studies found no association between messages heard during anesthesia and learning.

"Dr. Alan Aitkenhead, professor of anesthesia at the University of Nottingham in England, found no significant difference between patients who heard recuperative suggestions and patients who were treated to a deliberately dull history of the hospital where they were.

"Aitkenhead said his study kept all patients quite deeply anesthetized, and that may be why they might not have learned as much as patients in other studies.

"By far, most likely, it's a difference in levels of anesthesia,' he said.

"The Papworth researchers, in another study, found that some patients showed strong word associations after hearing tapes of groups of words during surgery; but other patients under a different anesthesia didn't.

"'There needs to be standardization of our testing,' Ghosh said. 'I think it's partly related to the anesthesia technique and partly related to the way in which material is presented to the patient.'

"Dr. Peter Sebel, an Emory anesthesiologist and conference organizer, said that if patients can retain information about a speedy recovery, they probably retain other information, too - for example, a surgeon's discouraging operating-room assessment of their prognosis."

1991

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, 59 (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

DeKoninck, J.; Brunette, R. (1991). Presleep suggestion related to a phobic object: Successful manipulation of reported dream affect. Journal of General Psychology, 118, 185-200.

When compared with subjects who received presleep suggestions for negative affect, subjects who received positive affect suggestions had significantly higher levels of positive emotions in their dreams, rated their own dreams as more pleasant, and had significantly lower levels of anxiety, sadness, and aggression. This supports the hypothesis that presleep suggestion can be an effective technique in influencing the affective dimension of the dream.

1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

NOTES

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each \_cell\_ is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're \_both\_ going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. International Journal of Psychosomatics, 37, 82-85.

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilita musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

1989

Baker, Elgan L.; Levitt, Eugene E. (1989). The hypnotic relationship: An investigation of compliance and resistance. International Journal of Clinical and Experimental Hypnosis, 37, 145-153.

The purpose of this investigation was to assess the ability of hypnotic Ss to voluntarily resist a neutral suggestion when a monetary reward was offered for resistance. 19 of 40 Ss (47.5%) successfully resisted after money was offered by the "resistance instructor." The correlation between resistance/compliance and hypnotizability was  $-.44$  (high hypnotizables were more likely to comply). Ss' impressions of the hypnotist tended to be positive; impressions of the resistance instructor tended to be neutral. There was a tendency for nonresistors to have a more positive view of the hypnotist but it is not as marked as was found in an earlier study (Levitt & Baker, 1983).

#### NOTES

Twelve (75%) of the high hypnotizables did not resist; two (16.7%) of the low hypnotizable Ss did not resist.

In their discussion, they state that "these data support the conclusion that hypnotizability or talent accounts for a significant portion of the variance in determining compliance with suggestions during trance. ... [Further], this research may be conceptualized as examining the contributions of a trait variable (hypnotizability) as compared with a variety of situational or state variables (motivation, social perception, environmental contingencies) in determining compliance and suggestibility. Inherent in this model of research is the assumption that many observed hypnotic phenomena (such as suggestibility) are interactive in nature, representing the outcome of the interplay between trait and state variables and between historically determined and contemporary forces. Such a perspective is consistent with the emerging view of trance behavior and experience and validly parallels the phenomenology of experimental and clinical hypnosis which describe both consistency and variability in hypnotic responsiveness for a specific subject or patient across varying conditions and time" (p. 151).

"This study also serves to clarify the important role of positive social perception and a positive sense of alliance with the hypnotist as a correlate of compliance with suggestion. It is clear that Ss who complied despite inducements to resist reported a more positive perception of the hypnotist and a more gratifying sense of relatedness with him than did their counterparts who resisted in response to financial inducement. These data do not indicate whether the positive perceptions contributed to compliance, as transference theories of trance involvement would predict, or whether they were consolidated after the fact due to other variables such as management of potential cognitive dissonance. It does seem reasonable to conclude, however, that the relationship is influential in the process of suggestibility and compliance" (p. 151).

1988

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing.

Council, James R.; Loge, D. (1988). Suggestibility and confidence in false perceptions: A pilot study. British Journal of Experimental and Clinical Hypnosis, 5, 95-98.

Subjects received audiotaped instructions implying that they would perceive increases in odor or heaviness while comparing stimuli in a sensory-judgment task. Stimuli were actually indiscriminable. Subjects pretested as higher or lower in hypnotizability performed the task in either hypnotic or non-hypnotic conditions. In both treatments, greater hypnotizability was associated with more perceived changes in the stimuli and greater confidence in the reality of those perceptions. Results support a general factor underlying suggestibility in hypnotic and nonhypnotic situations. The findings are discussed in relationship to false confidence effects reported in hypermnesia research.

1986

Chertok, Leon (1986). Psychotherapeutic transference, suggestibility. Psychotherapy, 23 (4), 563-569.

Discusses suggestion in psychotherapy and defines it as a body-affective process, an indissociable psychosociobiological entity that acts at an archaic unconscious level far beyond that of transference, mediates the influence of one individual on another, and is capable of producing manifest psychological and physiological changes. Present in all types of therapy, indirect (non deliberate, nonintentional) suggestion is the element that plays an important role in change and can be observed in hypnotic experimentation. It is further argued that transference and suggestion are phenomena that do not altogether overlap. Suggestion is the condition of transference without which transference could not be established.

1985

Bennett, Henry L.; Davis, H. S.; Giannini, Jeffrey A. (1985). Non-verbal response to intraoperative conversation. British Journal of Anesthesiology, 57, 174-179.

In a double-blind study, 33 patients (herniorrhaphy, cholecystectomy and orthopedic) were randomly assigned to either suggestion or control groups. Under known clinical levels of nitrous oxide and enflurane or halothane anesthesia, suggestion patients were exposed to statements of the importance of touching their ear during a postoperative interview. Compared with controls, suggestion patients did touch their ear (tetrachoric correlation 0.61,  $P < 0.02$ ). test, U (Mann-Whitney frequently more so did they and

Bolocofsky, David N.; Spinler, Dwayne; Coulthard-Morris, Linda (1985). Effectiveness of hypnosis as an adjunct to behavioral weight management. Journal of Clinical Psychology, 41 (1), 35-41.

109 17-67 year olds completed a behavioral treatment for weight management either with or without the addition of hypnosis. Results show that, at the end of the 9-week program, both interventions resulted in significant weight reduction. However, at 8-month and 2-year follow-ups, the hypnosis Ss showed significant additional weight loss, while those in the behavioral-treatment-only group exhibited little further change. More Ss who used hypnosis also achieved and maintained their personal weight goals. It is suggested that hypnosis may have been an effective motivator for Ss to continue practicing the more adaptive eating behaviors acquired during treatment. Findings support the utility of employing hypnosis as an adjunct to a behavioral weight management program. (25 ref)

1984

Bryant-Tuckett, Rose; Silverman, Lloyd H. (1984). Effects of the subliminal stimulation of symbiotic fantasies on the academic performance of emotionally handicapped students. Journal of Counseling Psychology, 31 (3), 295-305.

Divided 64 10.8 - 19.3 yr old emotionally disturbed residents of a treatment school into an experimental and control group matched for age, IQ, and reading ability. Both groups were seen 5 times/week for 6 weeks for tachistoscopic exposures of a subliminal stimulus. The stimulus for the experimental group was the phrase, "Mommy and I are one," conceived of as activating symbiotic fantasies that in a number of previous studies with varying groups of Ss had led to greater adaptive behavior. The control group was exposed to the phrase, "People are walking." Results show that experimental Ss manifested significantly greater improvement on the California Achievement Tests--Reading than did the controls. On 5 of 6 secondary variables--arithmetic achievement, self-concept, the handing in of homework assignments, independent classroom functioning, and self-imposed limits on TV viewing--the experimental Ss showed better adaptive functioning. It is suggested that activation of unconscious symbiotic fantasies can increase the effectiveness of counseling and teaching. (42 ref)

Critelli, Joseph W.; Neumann, Karl F. (1984). The placebo: Conceptual analysis of a construct in transition. American Psychologist, 39, 32-39.

The placebo in psychotherapy has unfortunately retained the negative connotation of an inert "nuisance variable," a label that it originally incurred in the field of medicine. In addition, the transition toward more cognitive models of psychotherapy, particularly Bandura's theory of self-efficacy, has led to problems in defining the placebo within psychology. This transition has resulted in an awkward interface between certain preferred cognitive metaphors and the negative connotations of a presumably cognitive placebo construct. As a result, suggestions have recently been made to dismiss the placebo construct from psychology and to do away with the use of true placebo controls in outcome research. The present analysis maintains that (a) the placebo can be adequately defined within psychology, (b) the negative connotation of the placebo label is largely undeserved, (c) the placebo retains a continuing conceptual and empirical utility for evaluating psychotherapy, and (d) the therapeutic efficacy of current therapies is well established even though they have not generally been shown to be more effective than nonspecific treatment.

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho-physiological responses.

Classen, Wilhelm; Feingold, Ernest; Netter, Petra (1983). Influence of sensory suggestibility on treatment outcome in headache patients. Neuropsychobiology, 10, 44-47.

In 45 headache patients the relationship between sensory suggestibility and three measures of treatment effect-ratings on (1) intensity of headaches; (2) efficacy of drugs, and (3) physician's competence - was investigated in a double-blind long-term crossover study. Subjects scoring high on

sensory suggestibility clearly showed more relief of headaches upon the analgesic as well as upon the placebo. The physician's competence was rated higher by high-suggestible patients, whereas ratings on drug efficacy were low in all patients. The seemingly controversial behavior of high-suggestible patients was interpreted as a call for continuation of the physician's efforts in spite of the relief the patients already achieved.

1982

Belicki, Kathryn; Bowers, Patricia (1982, October). Dimensions of dissociative processing, absorption and dream change following a presleep instruction. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

#### NOTES

Subjects' tendency to have things pop into their mind when asked to imagine, image them, or to do a divergent thinking task is correlated with behavior change out of awareness (dissociated), change in dream content in response to indirect suggestion - the request to pay attention to a certain element in their dreams. Effortless imagining (as opposed to working at it), a particular type of dissociative phenomenon, is associated with dream change.

Bowers, Patricia G. (1982). The classic suggestion effect: Relationships with scales of hypnotizability, effortless experiencing, and imagery vividness. International Journal of Clinical and Experimental Hypnosis, 30 (3), 270-279.

How well the Stanford Hypnotic Susceptibility Scales assess what Weitzenhoffer (1978) terms the "classic suggestion effect" is addressed by developing an index of nonvolitional behavior (N-VB) for a group form of the Stanford Hypnotic Susceptibility Scale, Form C of Weitzenhoffer and Hilgard (1962) given to 43 Ss. The N- VB index, reflecting the classic suggestion effect's dual criteria of both behavioral responsiveness to suggestion and nonvolition ratings, was correlated highly with the traditional scoring of the group SHSS:C and moderately with the Harvard Group Scale of Hypnotic Susceptibility, Form A. Effortless experiencing of imagination and imagery vividness relate similarly to traditional and N-VB scores of hypnotizability. In addition, the relationship between involuntary ratings and passing and failing an item of the group SHSS:C was examined for each of the 10 items. There was a significant relationship for 7 of the items.

1980

Bauer, Herbert; Berner, Peter; Steinringer, Hermann; Stacher, Georg (1980). Effects of hypnotic suggestions of sensory change on event-related cortical slow potential shifts. Archiv fur Psychologie, 133 (3), 161-169.

"The purpose of this study was to evaluate whether cortical slow potentials related to a S1-S2 paradigm are influenced by hypnotic suggestions of sensory change. Five healthy subjects susceptible to hypnosis participated each in two identical experiments with three conditions. In condition (1) and (2) each three intensities of 800 and 4000 Hz tones were presented. Preceding condition (2) hypnosis was induced and the subjects received the suggestion to hear the 800 but not the 4000 Hz tones. In condition (3), the tones were presented as S1 and a flash as S2. The subjects received the same suggestions as in (2) and a motor response to S2 was required. EEG was recorded from Cz. In (1) 800 and 4000 Hz tones caused negativities of equal amplitude, in (2) only minute negativities developed, possibly due to hypnosis induced deactivation. In (3) the S1-S2 related negativities were significantly smaller in amplitude during 4000 Hz tones than during 800 Hz tones, while the negativities preceding

S2 differed only after the most intense S1. Hypnotic suggestions attenuate S1-S2 related negative potentials, possibly by affecting cognitive functions.

1979

Barber, Joseph; Donaldson, David; Ramras, Susan; Allen, Gerald D. (1979). The relationship between nitrous oxide conscious sedation and the hypnotic state. Journal of the American Dental Association, **99**, 624-626.

#### NOTES

Nitrous oxide-oxygen produces a state of consciousness in the patient that is reported to be similar to the hypnotic state. In this investigation, the authors test the hypothesis that nitrous oxide-oxygen heightens a patient's responsiveness.

This study apparently did not have a control group receiving nitrous oxide but no suggestions, to evaluate the amnesia and analgesic effects of the drug alone.

1978

Connors, J. R.; Sheehan, P. W. (1978). The influence of control comparison tasks and between-versus within-subjects effects in hypnotic responsivity. International Journal of Clinical and Experimental Hypnosis, **26**, 104-122.

Type of experimental design (between- versus within-subjects) and type of control task were examined for their differential effects on the magnitude of objective and state report test scores associated with response to items on the Stanford Hypnotic Scale of Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). In an integrated program of work exploring design effects in hypnotic research, Ss in each of 7 comparison conditions that involved hypnosis and 4 separate comparison conditions that did not involve hypnosis were tested twice on successive occasions. Three of the control tasks used (waking, imagination, and imagination [alert] instruction) were counterbalanced with hypnosis to analyze possible order effects associated with hypnotic test conditions. Data indexed the patterns of between-versus within-subjects effects associated with standard control tasks and also highlighted the order effects that accompanied them. Imagination instructions, in particular, pose specific difficulties that require attention when Ss are tested as their own controls.

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, **25**, 4-6.

#### NOTES

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6).

1976

Chaves, John F.; Barber, Theodore Xenophon (1976). Hypnotic procedures and surgery: A critical analysis with applications to 'acupuncture analgesia'. American Journal of Clinical Hypnosis, **18** (4), 217-236.

Although hypnotic procedures are useful for reducing the anxiety of surgery and helping patients tolerate surgery, they do not consistently eliminate pain. Six factors that are part of or associated with hypnotic procedures help patients tolerate surgery. These factors pertain to patient selection, the

patient-physician relationship, the preoperative 'education' of the patient, the adjunctive use of drugs, and the use of suggestions of analgesia and distraction. It appears that the same factors account for the apparent successes of 'acupuncture analgesia' as well. A frequently-overlooked fact, that most internal tissues and organs of the body do not hurt when they are cut by the surgeon's scalpel, is also important in understanding how surgery can be performed with either 'hypnoanesthesia' or 'acupuncture analgesia.'

**1975**

**Barber, Theodore Xenophon (1975). Responding to 'hypnotic' suggestions: An introspective report. American Journal of Clinical Hypnosis, 18 (1), 6-22.**

The author first presents an introspective report which describes some of his attitudes, motivations, and expectancies and ongoing thought processes while he is responding to 'hypnotic' suggestions. The introspective report indicates that (a) suggested effects are experienced when a person thinks with and imaginatively focuses on those things that are suggested and (b) a person imaginatively focuses on the suggestions when he sees the test situation as useful and worthwhile and when he wants to and expects to experience those things that are suggested. It is then argued that the responsive subject in a hypnotic situation differs in every important respect from the sleepwalker and closely resembles the person who is involved in reading an interesting novel or in observing an interesting motion picture. Finally, the author outlines a course, now being developed, that aims to teach individuals how to respond to suggestions.

**1974**

**Chaves, John F.; Barber, Theodore Xenophon (1974). Acupuncture analgesia: A six-factor theory. Psychoenergetic Systems, 1, 11-21.**

The dramatic successes claimed for acupuncture suggest that Western medicine has failed to identify important factors that pertain to the nature of pain and its control. This may not be the case, as there are at least six factors which are often overlooked by writers describing the absence of pain (i.e., analgesia) during acupuncture: (a) the patients accepted for surgery under acupuncture usually believe that it will work, (b) drugs are frequently used in combination with acupuncture, (c) the pain associated with surgical procedures is less than is generally assumed, (d) the patients are prepared in special ways for surgery under acupuncture, (e) the acupuncture needles distract the patient from the pain of surgery and, (f) suggestions for pain relief are present in acupuncture treatment. It is concluded that more research is needed to determine whether additional factors are needed to help explain the phenomenon of acupuncture analgesia.

**1973**

**Brown, H. Alan (1973). Role of expectancy manipulation in systematic desensitization. Journal of Consulting and Clinical Psychology, 41 (3), 405-411.**

Expectancy, relaxation, and hierarchy content were manipulated in a 2X2 factorial design with two additional control groups. It was hypothesized that a major portion of therapeutic change following desensitization could be accounted for by the subjects' responses to positive feedback inherent in the paradigm. Spider-phobic subjects saw either photographs of spiders or blank slides that they believed to be tachistoscopically presented pictures of spiders. In the factorial part of the design, half of the subjects believed their progress through the hierarchy to be contingent on autonomic responses; the others believed rate of progress to be random. Findings did not support the hypothesis that expectancy

was the only factor in desensitization, but they did serve to clarify the role of expectancy vis-a-vis the counterconditioning elements typically discussed in the literature.

1972

Barber, Theodore Xenophon; de Moor, Wilfried (1972). A theory of hypnotic induction procedures. American Journal of Clinical Hypnosis, 15 (2), 112-135.

The first part of the paper delineates nine variables in hypnotic induction procedures that give rise to heightened responsiveness to test-suggestions: (a) defining the situation as hypnosis; (b) removing fears and misconceptions; (c) securing cooperation; (d) asking the subject to keep his eyes closed; (e) suggesting relaxation, sleep, and hypnosis; (f) maximizing the phrasing and vocal characteristics of suggestions; (g) coupling suggestions with naturally-occurring events; (h) stimulating goal-directed imagining; and (i) preventing or reinterpreting the failure of suggestions. Data are presented to support the theory that the nine variables augment responsiveness to test-suggestions by giving rise to positive attitudes, motivations, and expectancies which, in turn, tend to produce a willingness to think with and vividly imagine those things that are suggested. The second part of the paper specifies situational variables and variables involved in induction procedures that produce a trance-like appearance, changes in body feelings, and reports of having been hypnotized.

Bowers, Kenneth S.; Kelly, P. (1970). Stress, disease, psychotherapy, and hypnosis. Journal of Abnormal Psychology, 490-505.

Presents evidence for the importance of suggestion and hypnotic ability in the healing or amelioration of various somatic disorders. It is argued that even in some treatment interventions that are not explicitly hypnotic, suggestion and hypnotic ability may be hidden factors that help to promote successful healing. Consequently, hypnotic ability may be an individual difference variable that influences treatment outcome in a manner not heretofore recognized by many investigators and clinicians involved in helping the psychologically and physically ill.

Bartlett, Edmund E.; Faw, Terry T.; Liebert, Robert M. (1967). The effects of suggestions of alertness in hypnosis on pupillary response: Report on a single subject. International Journal of Clinical and Experimental Hypnosis, 15 (4), 189-192.

THE PUPIL SIZE OF A SINGLE S WAS RECORDED UNDER 2 TYPES OF HYPNOTIC SUGGESTION: ALERTNESS INSTRUCTIONS AND TRADITIONAL RELAXATION INSTRUCTIONS. IT WAS FOUND THAT THE SIZE OF THE PUPIL INCREASED SIGNIFICANTLY UNDER ALERTNESS INSTRUCTIONS. THIS RESULT WAS TAKEN AS FURTHER CORROBORATION OF THE HYPOTHESIS THAT CHANGES IN VARIOUS PARAMETERS OF AROUSAL APPARENTLY ASSOCIATED WITH HYPNOSIS MAY BE ATTRIBUTED TO SPECIFIABLE CHARACTERISTICS OF THE INSTRUCTIONS USED RATHER THAN TO STABLE CHARACTERISTICS OF THE "STATE" OF HYPNOSIS. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Agosti, E.; Camerota, G. (1965). Some effects of hypnotic suggestion on respiratory function. International Journal of Clinical and Experimental Hypnosis, 13 (3), 149-157.

Several respiratory indices were measured in 10 Ss in 3 states: at rest, with hypnotic suggestion of relaxation, and with hypnotic instructions to imagine muscular work. The same suggestions were given to 10 control Ss in the waking state. The suggestion of relaxation produced a decrease in pulmonary ventilation in both groups, although it was substantial only in the hypnotic group which started from a

higher baseline level. The imagined work produced an increase in ventilation, especially in the hypnotic group. However, in both instances because of compensatory changes in respiratory efficiency the actual uptake of oxygen remained almost unaffected. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.

Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.

Das, J. P. (1965). Relationship between body-sway, hand-levitation, and a questionnaire measure of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (1), 26-33.

67 randomly selected college students were administered the body-sway test, a questionnaire measure of tranceability, and an induction procedure utilizing hand-levitation to determine hypnotic susceptibility. The 6 Es varied in age, sex; 5 of them had little experience as hypnotists. All reference to "hypnosis" was omitted from the induction procedure. Significant phi-coefficients between body-sway and levitation (.52), levitation and tranceability frequency (.28) and intensity (.25), and body-sway and tranceability intensity (.33) were obtained. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Black, Stephen (1964). Mind and body. London: Kimber.

## NOTES

Defines psychosomatic disease as one that responds to psychotherapy. Believes only 5% are highly hypnotizable, that hypnosis is learnable in 1/2 hour, that hypnosis is not a useful treatment for

psychosomatic disorders because you can't use interpretation [of unconscious]. The 'unconscious' is "... a complex of informational systems derived from such primaevial mechanisms" (p. 133). "Primaevial mind is involved in these mechanisms of genetics and immunology" (p. 133). "There is thus a 'somatic mind' which is unconscious and presumably without any means of verbalization of experience--and a 'cerebral mind' which is conscious" (p. 133). The dividing line is not clear.

Rapport is discussed on pp. 160, 169 as one of the spontaneous characteristics of hypnosis, in the absence of suggestion. The same for posthypnotic suggestion (rapport and amnesia). Spontaneous physiological changes in hypnosis relate to mind-body relationships (p. 169)

Conditioned reflex is discussed on p. 161

"...the subjective evidence indicates that a perceptual change involving any sensory modality can be produced by DSUH" [direct suggestion under hypnosis] p. 178. Suggestion can selectively affect different parts of the body p. 197.

Research: "Hypnosis is not only the most important and practical way of proving the existence of the unconscious--which is still in doubt in some circles--but is in fact the only way in which unconscious mechanisms can be manipulated under repeatable experimental conditions for purposes of investigation" (p. 152).

Mind-body is "amenability to control" Catatonia, which characterizes both animal and human hypnosis, seen in hypnosis, is induced by constriction (i.e. disorientation). The Cartesian concept of mind and body tends to confuse the issue p. 157.

Rapport is discussed (p. 157).

Suggestion (p. 159) "It was this concept of 'suggestion'--which so obviously parallels 'amenability to control' in animals--that eventually established hypnosis in the French schools of psychiatry as a state of increased suggestibility. ... still the standard definition of hypnosis in most medical psychiatric textbooks and in lay dictionaries" (p. 159).

Black (1969) did some biochemical sleuthing to learn how information transmitted by words becomes information encoded somatically, as when psychosomatic allergies flare and recede or disappear. What accounts for suggestion "curing" an allergic skin reaction in one part of the body while another part not included in the suggestion remains reactive? What accounts for the instantaneous skin allergy cure which sometimes occurs with suggestion (in 24 hours)?

Skin sensitivity tests in highly hypnotizable Ss who were also very allergic were inhibited by direct suggestion under hypnosis under highly controlled experimental conditions--and in one subject the effect (inhibition) was relatively permanent--ruling out (he suggests) a neurological mechanism. He did further experiments to examine whether the result was due to an instant neurological mechanism and a long-term endocrinal mechanism.

p. 212 He ruled out peripheral blood flow as the cause of diminished skin sensitivity (there was no change in blood flow with suggestions of heat or cold). Therefore decrease in blood flow couldn't explain in neurovascular terms the 'instant' inhibition of skin sensitivity (allergy) tests. Was it due to systemic--especially adrenal-- changes? He demonstrated increases in plasma cortisol under hypnosis with suggestions of fear. On p. 230 he summarizes the facts he established by skin sensitivity tests, plasma- cortisol studies, and histology - endocrinological.

Black, Stephen; Edholm, O. G.; Fox, R. H.; Kidd, D. J. (1963). The effect of suggestion under hypnosis on the peripheral circulation in man. Clinical Science, 26, 223-230.

Summary.

1. The effects on the circulation in the forearm and hand of both direct and indirect suggestion under hypnosis of thermal stimuli have been studied. 2. The induction of hypnosis did not significantly alter the forearm blood flow, but a small reduction in hand blood flow was usually observed. Pulse rate in general slowed slightly as did respiration rate. 3. The effect of body heating on forearm and hand

blood flow was not modified by hypnosis. 4. Direct suggestion under hypnosis of body heating or body cooling, with and without body heating, produced only small changes. 5. The changes associated with suggestion were not related to the thermal suggestion. Whatever the suggestion, the usual response was a reduction in hand blood flow and an increase in forearm blood flow. 6. The rise of body temperature with heating was not modified by direct suggestion, under hypnosis, of body cooling. 7. No change in body temperature could be elicited by suggestion. 8. In a few experiments marked changes in forearm blood flow occurred. These appeared to resemble the changes in the circulation produced by emotional stimuli. 9. The smaller changes more frequently observed were also similar to those produced by mild emotional stimuli" (p. 229). [N.B. The Subjects were normal, healthy adults, N = 9, between 21-45 years old; highly hypnotizable, amnesic for trance.]

1959

Conn, Jacob H. (1959). Cultural and clinical aspects of hypnosis, placebos, and suggestibility. International Journal of Clinical and Experimental Hypnosis, 7 (4), 175-185.

Observation that student subjects often go into a deeper level of hypnosis after suggestions have been given for ending the session has led the writer to explore the reactions of subjects to this phenomenon and to set up a simple experiment using ideomotor responses in ten gynecological patients who needed hypnosis for therapy. In each of the ten patients there was a deepening of the trance after the suggestion to awaken had been given. It was the opinion of the subjects that they deepened the trance in rebellion against the direction for terminating a pleasant experience" (p. 227).

1956

Barber, Theodore Xenophon (1956). 'Sleep' and 'hypnosis': A reappraisal. Journal of Clinical and Experimental Hypnosis, 4, 141-159.

## NOTES

"Some recent experiments and a reevaluation of the electroencephalographic findings indicate that the term 'hypnosis' has subsumed at least two more or less distinct phenomena: (a) 'hypnosis' preceded by 'trance-inducing suggestions' which is closely related to 'light sleep' and (b) 'hypnosis' without 'trance-inducing suggestions' which is often a 'waking' state.

"From this viewpoint we can begin to reevaluate the contradictory physiological experiments comparing sleep and hypnosis, the most favorable conditions for producing hypnosis, amnesia and decreased suggestibility in very deep hypnosis, and the reports of waking and sleeping hypnosis. We can also reappraise such thorny problems in hypnotic theory as the production of hypnosis by artificial means, autohypnosis, and animal hypnosis.

"The argument presented calls for further research. We should investigate (a) suggestibility during extreme relaxation; (b) response on hypnotic tests when the subject is told, "Go to sleep and I'll be back later to give you some tests"; (c) deep trance phenomena during sleep; (d) hypnotizability of good sleepers and insomniacs; (e) beneficial suggestions during sleep; (f) physiological functions during 'light sleep' and hypnosis; (g) the response of 'sleep-walkers' to standard hypnotic tests; (h) the relationship of 'light sleep' dreams to hypnotically induced dreams; and (i) the relationship of sleep amnesia to hypnotic amnesia" (pp. 153-154).

## SURGERY

1995

Lang, Elvira V.; Joyce, Janet S.; Spiegel, David; Hamilton, Donna; Lee, Kelvin K. (1995, November). Self-hypnotic relaxation: Effect on use of intravenous medication during invasive procedures. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental

#### NOTES

I'm an interventional radiologist. Interventional radiologists do things like placing needles into the body, putting guide wires through them, advancing instruments (to get into vessels, to treat blockages, make diagnoses, drain urine, drain pus, remove gall stones) while progress is imaged. Procedures are usually performed on awake patients and may take 1-5 hours. Traditionally intravenous drugs are given for these procedures, most commonly a mixture of morphine derivatives and sedatives. Annually about 10 million invasive procedures are performed in the U.S. Among those 47,000 patients per year are estimated to be at risk of serious cardiovascular complications and 2,600 patients per year are estimated to die as a direct consequence of sedation. Hospital regulations also require a dedicated observer to be with the patient throughout the entire procedure and for extended times afterwards, when any intravenous drugs are given. This becomes very expensive.

We started self-hypnotic relaxation with patients because of a nursing shortage. We used rapport techniques, relaxation training, imagery (neutralizing distressing imagery, enhancing pleasant imagery) and suggestions. Members of the procedure team apply these methods while the procedure takes place. During the time patients are prepared for the procedure, induction can be performed. Hypnosis can also be initiated in the procedure room, and a nurse or assistant reads a script. We give patients control over what happens, over the whole process, including even rejection of the self-hypnotic process.

We did a randomized study with male veterans. Sixteen were attributed to a self-hypnotic relaxation group, 14 served as a control group. All patients had access to patient control intravenous analgesia. We assessed pain and anxiety on visual analogue self rating scales giving intensities between 0 (none at all) to 10 (maximum). We also recorded increases in blood pressure and heart rate, side effects that could be attributed to drugs or overexcitation. In the self-hypnotic relaxation group 50% of the patients reported distressing imagery at the onset. We helped them transform this negative imagery into imagery with neutral content, then enhanced the pleasant imagery, (often a pleasant scene at home). Twelve of 16 patients in the self-hypnosis group did not request medication at all; and only 1 in the control group did not request medication. The maximum pain perception was significantly less (2 vs 5) and procedural interruptions were fewer (2 vs 7) for the self-hypnosis group. There was no difference in the increases in blood pressure and heart rate.

We concluded that use of self-hypnotic relaxation is a valuable adjunct for invasive procedures.

1993

Bejenke, Christel J. (1993, October). A clinician's perspective. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Presents point of view of a private practice anesthesiologist in Santa Barbara, California. Used hypnosis for 20 years.

Use of hypnosis as hypnoanesthesia is rare since Esdaile, with brief resurgence in 50's, because surgery techniques advanced before anesthetics did in areas that were very risky. Now it is a matter of choice, and may be undertaken because of a patient's extreme fear of anesthesia, previous bad experience with anesthesia, fervent belief in holistic method, allergy, or previous experience with hypnosis. Still advised to use hypnosis for MRIs, radiation procedures, former drug addicts (who may have problems with drugs), burn patients, release of neck contractions, and medical procedures--especially with children--like lumbar puncture.

She disagrees with Kroger's estimate of only 10% of patients being able to use hypnoanesthesia; she does not believe it requires a lot of training, or profound muscle relaxation.

There is no indication of how many cases are actually done with hypnosis. Also, published cases are not representative of the quantity or complexity of cases; most published cases have a few extraordinary characteristics. The Irish surgeon Jack Gibson has done more than 4000 cases, some very complicated.

I have used it for D & Cs, and complex cases that were not published. Most of my patients elected to be alert during the hypnosis and conversed with their surgeons. The most common benefit is that recovery from anesthesia is not necessary; but these days with newer anesthetics recovery from anesthesia is rapid anyway. However, if as we suspect anesthesia affects immune function, that would be another reason to use hypnosis.

Preparation for surgery may be of three types: 1. formal hypnosis techniques 2. "hypnoidal" techniques that aren't formal 3. unprepared patients in whom hypnosis is used at last moment.

Examples. 1. Formal hypnosis: This symposium deals with this type of approach. Three groups derive particular benefit -- those requiring prolonged artificial ventilation postoperatively (because otherwise sedation must be used, which leads to complications), where prepared patients tolerate interventions calmly and comfortably -- cancer patients, for whom this can be first experience of patient to see self as active participant in care rather than a victim of the illness and of complicated technology -- pediatric patients. 2. Hypnoidal (hypnosis like) techniques: This is the most important application. Time doesn't permit much discussion here. Patients are in an altered state when they come for surgery, highly suggestible, and suggestions appear to be as effective as during formal trance state. The doctor can elicit positive responses during "casual conversation" while seemingly giving information to the patient. (The reverse is true also, with inadvertent negative suggestions, to the detriment of the patient.) Scrupulous adherence to medical facts is important during this type of conversation.

Operating room fixtures are useful for focus of attention, and I have published this information in an article.

Recovery room also is place where case specific information and appropriate suggestions can be given. Patient can experience his ability to alter sensations, for the first time, following suggestions.

Remainder of the hospitalization offers opportunity for reinforcing case specific positive suggestions.

Bennett, Henry L. (1993, October). Hypnosis and suggestion in anesthesiology and surgery. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

He began by saying that he is opposed to using hypnosis for surgery, though he favors a theory of how hypnosis effects physiological change, and cites T. X. Barber's classic "Changing Unchanging Bodily Processes."

Relaxation puts patient in a "psychological strait jacket" because surgery is so highly stressful. He gives information "about how to go through the surgery more comfortably," gets across the idea about coping style, tells them surgery is exertional and that they are tired afterward, that he can help them "using things you already know how to do," and specifies exactly what they can do--using model of himself as a trainer.

In some recent research he used pairs of pictures, some of which lead to pupillary constriction (blood pressure goes down) or dilation (blood pressure goes up). Instructing them to look, patients looked twice as long at the pictures than they did during free gaze. When not instructed to look, heart rate went down; when told to look, heart rate went up. So the researchers went back to free gaze. He uses this as a metaphor for many of the pre- surgery preparation activities that encourage relaxation "inappropriately."

He cites Cohen & Lazarus re vigilant copers, Price et al (1957), and some other studies on epinephrine effects. He uses examples of work patients may have done (e.g. planting a garden) when talking with patients prior to surgery, that gives them a sense of accomplishment later.

You have to give specific instructions or suggestion, not general relaxation suggestions.

Question from the audience: Can preoperative instructions (not hypnosis) diminish blood loss.

In Bennett's answer he seems to be reporting the earlier study: they found 150- 4000 cc blood loss, high variability. Extent of blood loss was determined by extent of surgery, by instructions to patients vs no instructions.

This study was replicated by Enqvist, Bystedt, & von Konow in the Anesthesia conference at Emory University in 1992.

May 1993 Western Journal of Medicine article, Disbrow, Bennett, & Owinos, with 40 lower abdominal surgery patients who got specific instructions or not. The SHCS was used to measure hypnotizability: highs resolved quicker than low hypnotizable patients. They also found that instructed patients did better than those who did not get specific instructions.

There are now 3 replications of McClintock's study: people use less medications after surgery, when tapes about rapid recovery are played \*during\* surgery.

Bennett is now using tapes with suggestions for recovery during surgery.

Blankfield, Robert P. (1993, October). Suggestion, hypnosis, and relaxation as adjuncts for surgery patients: Lessons from studies involving cardiac surgery patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

## NOTES

The author stated that his research and the few other studies of cardiac surgery patients do not support idea that cardiac surgery patients benefit from hypnosis and suggestion.

Types of intervention have varied: hypnosis, suggestion, relaxation; pre-op, during, or post-op; with many different outcome variables.

Aiken & Henrichs (1971) study was nonrandomized, nonblinded, for 30 patients getting open heart surgery. Treated patients had benefits.

Surman, Hackett, Silverberg, & Behrendt (1974) had a randomized, single-blind design for 40 patients taught Self Hypnosis (S-H), for elective mitral valve surgery. No difference in benefits. But 45% of patients taught S-H reported a subjective sense of benefit (though objective indicators didn't support that). [He says the difference between subjective/objective outcome ratings is important.]

Hart (1980) used randomized, single-blind design for 40 patients who had open heart surgery. No differences found except initial 3 days post surgery.

Greenleaf et al (1992) - see her paper presentation of this date.

Blankfield et al (presented at Society of Clinical and Experimental Hypnosis meeting in 1992) used a randomized, single-blind design for 95 patients, who were randomly assigned to taped suggestions, music, or controls. No differences were found in benefits.

Our data were re-analyzed: patients who felt tape was helpful were compared to the remaining 62 patients, but there again were no differences in amount of narcotics used for pain, though there was a trend in the right direction; nursing assessments failed to identify less anxiety.

The point is, whereas the bulk of publications suggest benefits, there is little evidence with this population. Could these patients be different in personality, ability to respond to intervention, amount of external stimuli? They should be studied because there are a lot of these patients with only a few surgeons and you don't have to gain the cooperation of a lot of different surgeons to do this kind of research. Also, there is uniformity in cardiac surgery whereas standard operating surgery is in a state of flux in other areas (e.g. movement from generous incisions to micro procedures, and patients receiving this type of surgery remain in hospital for a week whereas this opportunity to study them

during inpatient post-surgical period is disappearing in other areas). It is my opinion that cardiac patients may not be highly receptive to suggestion.

Curiously, according to Surman and my research, 1/2 the subjects report benefits. Either some benefits are subtle, or they are reporting a placebo effect.

Future studies need more patients, and the investigators must stratify on personality inventory variables such as Type A personality, hypnotizability, motivation, anxiety, depression, family support, social support systems. This is labor intensive, to determine which characteristics determine differing outcomes. The patients used in this type of research require more presurgery evaluation than previously has occurred.

The MMPI can be self administered and is widely acceptable, but is cumbersome, not well suited to people who are acutely ill. Assessment of Type A personality is important because Type A's might be less receptive to suggestion. Structured interview is time consuming, but a 52-item questionnaire can be self administered. Other factors listed above are important.

Don, Norman S. (1993, October). Trance surgery in Brazil. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Showed a videotape of a Brazilian trance surgeon, who cuts without analgesia or asepsis. Patients later report no pain, infections, etc. The healer/surgeon is believed by everyone to be in a trance state, and the body is believed to be taken over by a spiritual doctor. The people involved deny that the patient is in trance.

Greenleaf, Marcia; Fisher, Stanley; Miaskowski, Christine; Du Hamel, Katherine (1993). Hypnotizability and recovery from cardiac surgery. American Journal of Clinical Hypnosis, 35, 119-128.

#### NOTES

Notes were taken from author's presentation of this material at the Annual Meeting of the Society of Clinical and Experimental Hypnosis, Arlington Heights, Illinois. The paper presentation was part of a Symposium: Towards a Theory of Surgery: Hypnosis, Suggestion, Anesthesiology and Surgery, Methodological and Theoretical Issues and Dilemmas.

Authors outlined the reported advantages of using hypnosis. Their review found problems in much of the research on this topic published to date: many single subject studies, subjects were often selected and trained by the investigator, hypnotizability wasn't evaluated.

Used the Hypnotic Induction Profile (HIP) before assignment of patients to groups, and also equated groups for age. Groups 1 & 2 had formal hypnosis and then either relaxation-imagery (Janck's autogenic training) or specific outcome suggestions (e.g. to have a clean dry wound, and to look forward to being able to function well); Group 3 were controls.

No differences were found in outcome measures of length of time in ICU, time on respirator, length of stay, and cumulative index of recovery. Didn't publish our data on pain medications because learned it was poorly charted.

Only difference found was: the relaxation imagery group got more wound drainage. It was degree of hypnotizability, independent of group, that made a difference in total number of hours on Nipride - highs were on it almost twice as long. On cumulative stability (having need of medications or respirator) the mid-range people did better. Not statistically significant but nevertheless clinically important, the lows were in the hospital 5 days longer.

This was counter-intuitive though it supports Herbert Spiegel's theory. We, as experimenters, were independent of the treatment team. We didn't have DRGs then and now we may have hit a ceiling

effect in the amount of time people stayed in the hospital, because they had excellent pre-surgery education.

We had difficulty continuing the study because the intervention seemed to other staff to be so useful: after 6 months the surgeons began requesting hypnosis for their anxious patients; the chief anesthesiologist had started using it routinely.

Sample size is problematic. They were patients who were actively recruited, not people who sought hypnosis.

**CONCLUSIONS.** High hypnotizables in the hospital intensive care unit (ICU) demonstrate sensitivity to external stimuli without critical ability to screen; we see this reversed in the postoperative period. Mid range hypnotizables can decide which external cues to pay attention to. Lows are less able to incorporate new suggestions. They are bound by pre-existing views and also vigilance.

Hypnosis = Dissociation + Absorption + Suggestibility (Spiegel's theory)

We must focus more on the state-trait phenomena, the context, and then select the treatment.

**Kessler, Roger S. (1993, October). Suggestion and hypnosis in anesthesiology and surgery: A simple and complicated analysis. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

## NOTES

Cites three reviews: Blankenfield; Rogers & Reich; and Mumford. These reviews leave us with several questions: - What does the addition of hypnosis add? - What is importance of hypnotic ability? - What techniques are most effective? - How useful are standardized tailored interventions? - What are psychological, physiological, and biochemical markers?

We lack a general theoretical framework (see H. Bennett), and there are a broad variety of pre-surgical interventions, which may influence different aspects of functioning.

Evans & Richardson found no differences between people with and without preparatory interventions. Bonke & colleagues found no differences in length of hospitalization for people with and without preparatory interventions (except for people 55 and over). Relaxation training for surgery finds mixed results.

Blankenfield obtained negative findings in cardiac surgery. His recent IJCEH article reports those negative results.

What does presurgical intervention influence? - Psychological dimensions - Biochemical & physiological dimensions - Time/cost dimensions

Correspondence across these dimensions has not been consistently demonstrated, e.g. there is a lack of correlation between cortisol (physiological dimension) and anxiety (psychological dimension).

Why are there conflicting findings? 1. Possibly patient's coping style is responded to inappropriately, e.g. people who deny vs those who sensitize seem to require different interventions. Must assess the patient's idiosyncratic coping style. 2. Four studies suggest hypnotic ability may be a factor in recovery.

a. Disbrow, Bennett, & Owings (1993)

b. Rondi et al. (high hypnotizables use less morphine via Patient Controlled Analgesia)

c. Greenleaf et al. (hypnotizability predicts recovery independently)

d. Rapkin, Straubing, & Holroyd (high hypnotizables had less blood loss during surgery) 3. Is hypnosis per se necessary?

Comparative evaluation of strategies has been ignored. Enquist found hypnosis had a greater effect than non-hypnotic treatment in blood loss. Another study of bone marrow transplant patients found the hypnosis treatment superior.

When it comes to clinical interventions, we need to assess the patient's historic and current beliefs, their experience with medical procedures, their coping style, and then form a brief tailored intervention.

1992

Adams, P. C.; Stenn, P. G. (1992). Liver biopsy under hypnosis. Journal of Clinical Gastroenterology, 15, 122-124.

Two patients underwent outpatient percutaneous liver biopsy under hypnosis without complications. One patient had severe anxiety about the procedure because of a previous adverse experience with liver biopsy, and the other had a history of severe allergy to local anesthesia. Both patients had undergone a session of hypnosis at least once prior to the biopsy. One received no local anesthesia, and the other received 1% lidocaine as a local anesthetic. Both patients were completely cooperative during the procedure with the required respiratory maneuvers. Both patients stated that they were aware of the procedure under hypnosis but described no pain and would be most willing to have the procedure done under hypnosis in the future.

Alden, Phyllis (1992, October). The use of hypnosis in the management of pain on a spinal injuries unit. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

[Author is at Royal National Hospital in England]

To have a spinal injury is one of the most devastating injuries that can happen, reducing you suddenly from a normal life to situation of loss of control, helplessness, etc.- -with nothing to say about what is being done in surgery or other aspects of treatment.

In UK patients come for acute care and rehabilitation all in one place. Over 2 1/2 yrs we had 46 referrals. 7 refused hypnosis ("witch doctoring"). 30 benefitted

Anonymous (1992, May). Studies: Learning can occur while under anesthesia. Daily Breeze (South Bay, Los Angeles County).

#### NOTES

Surgical patients can absorb information while they're knocked out, and even learn tips that help with recovery, researchers reported Friday at a symposium on memory and anesthesia.

"Researchers at Papworth Hospital in Cambridge, England, studied 51 cardiac patients, one-third of whom heard a tape of positive 'therapeutic suggestions' during surgery. Another third heard batches of word associations; the rest heard a blank tape.

"Patients who were played the suggestion tape - which told them they were doing well, or wouldn't feel much pain - left the hospital 1 1/2 days earlier on average than other patients.

"Another study, from the University of Arizona College of Medicine, found that surgical patients who heard specific pain-relief suggestions recovered more easily than those hearing vague advice such as, 'Think of being well.'

"These are still early days to invest in every operating suite buying a tape recorder to play for the patients,' said Dr. Sunit Ghosh, a researcher with the Papworth team. 'But this definitely does hold promise.'

"Scholars at the second annual Symposium on Memory and Awareness in Anesthesia said patients rarely wake up recalling - unprompted - something that happened during anesthesia.

"But several studies showed subconscious learning while the patients were out cold.

**"Not everyone accepted the findings.**

**"It shows an enormous sensitivity on the part of the brain, if it can be shown,' said Eugene Winograd, an Emory University psychologist and organizer of the Emory- sponsored conference. 'I'm not confident it has been shown yet.'**

**"Some researchers in other studies found no association between messages heard during anesthesia and learning.**

**"Dr. Alan Aitkenhead, professor of anesthesia at the University of Nottingham in England, found no significant difference between patients who heard recuperative suggestions and patients who were treated to a deliberately dull history of the hospital where they were.**

**"Aitkenhead said his study kept all patients quite deeply anesthetized, and that may be why they might not have learned as much as patients in other studies.**

**"By far, most likely, it's a difference in levels of anesthesia,' he said.**

**"The Papworth researchers, in another study, found that some patients showed strong word associations after hearing tapes of groups of words during surgery; but other patients under a different anesthesia didn't.**

**"There needs to be standardization of our testing,' Ghosh said. 'I think it's partly related to the anesthesia technique and partly related to the way in which material is presented to the patient.'**

**"Dr. Peter Sebel, an Emory anesthesiologist and conference organizer, said that if patients can retain information about a speedy recovery, they probably retain other information, too - for example, a surgeon's discouraging operating-room assessment of their prognosis."**

**Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.**

## **NOTES**

**18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.**

**This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.**

**We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.**

**Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.**

**3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.**

**Excluded: Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.**

**Music: Herb Ernst, Dreamflight II. Suggestions: Music background, permissive, based on Evans & Richardson's study.**

**Outcome Measures: Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.**

**Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in**

narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

Kostka, Marion (1992). Personal experience with 'Use of Hypnosis Before and During Angioplasty' [Letter]. American Journal of Clinical Hypnosis, 34, 281-282.

#### NOTES

Author read the article referred to after his/her heart attack and before angioplasty. Goal was to control preprocedure anxiety and assist by being relaxed and cooperative; also to be able to tolerate inflations of the balloon for as long as needed. Used self-hypnosis "and by the time I entered the laboratory my anxiety was under control. ... None of the physiological responses that can occur (i.e., nausea, pain, etc.) did occur and, for the most part, my postprocedure recovery was uneventful. ... Had two procedures because the artery again occluded. ... My cardiologist commented later that the time of inflation was longer than he had even attempted with any of his patients and he attributed this to my lack of symptoms. I felt this was due in part to the use of self- hypnosis. .... my subjective feeling was that both my discomfort and anxiety were minimal" (Pp. 281-82). No blood was sampled to measure catecholamine levels.

Levitan, Alexander A.; Harbaugh, Thomas E. (1992). Hypnotizability and hypnoanalgesia: Hypnotizability of patients using hypnoanalgesia during surgery. American Journal of Clinical Hypnosis, 34, 223-226.

Administered Stanford Hypnotic Suggestibility Scale (Form A) to 10 patients from a population of 20 who had undergone surgery in the previous 10 years using hypnoanalgesia as the sole or principal analgesic agent. Time since surgery ranged from 2 days to 10 years. Scores on the SHSS ranged from 5 (medium susceptibility) to 12 (high susceptibility) with a mean of 8.6, significantly higher than the SHSS:A normative group ( $p < .001$ ). The relationship between severity of surgery and the use of hypnoanalgesia as the sole or principal analgesia was significant for our patient population (N = 20) but not for our patient sample (N = 10).

#### NOTES

No referrals were rejected or dissuaded from the use of hypnoanalgesia. The medical reasons for referral included (1) the presence of anatomic abnormalities precluding use of inhalation anesthesia, (2) a history of cardiac arrest accompanying prior use of chemoanesthesia, and (3) excessive bleeding associated with previous attempted surgery. Self-referred patients had previous experience with meditation or self hypnosis and wished to avoid the potential complications associated with the use of chemoanesthesia" (pp. 223- 224).

The second author, who was unknown to the patients, administered the SHSS:A. "Those four patients using hypnoanalgesia alone achieved a mean SHSS:A score of 8.25. Those [five patients] using a combination of hypnosis and chemoanesthesia achieved a mean SHSS:A score of 8.80" (p. 224). (One did it both ways, in two surgeries, and is not included in this analysis.)

"Hypnoanalgesia alone was unlikely to be used for major surgery [as rated by independent rater, on major vs minor surgery] and, for whatever reasons, is most likely to be employed alone during minor surgery" (p. 224). 64% of the major surgical procedures (in their 10 patients) used combination of hypnoanalgesia and chemoanesthesia; 69% of procedures that used only hypnoanalgesia were minor surgeries.

This suggests that "the use of hypnoanalgesia as the sole analgesic agent during major surgical procedures is an option seldom taken in the presence of reliable chemoanesthetics. Hypnoanalgesia as the sole analgesic agent may be a practical alternative for patients of moderate to high hypnotic susceptibility during minor surgical procedures. Hypnoanalgesia used as the principal or adjunctive analgesic may be useful to patients of moderate to high hypnotic susceptibility during major surgical procedures" (pp. 225-226).

1991

Blankfield, Robert P. (1991). Suggestion, relaxation, and hypnosis as adjuncts in the care of surgery patients: A review of the literature. American Journal of Clinical Hypnosis, 33, 172-186.

#### NOTES

He notes that the authors provide little information re complications, and length of stay (LOS) is one of the most sensitive response measures used in these studies. The mean difference in LOS for 5 studies that have randomized assignment is 1.3 days. The N's are 80-100 for 3 of the studies, 39 and 60 for others. For two well controlled studies that did not achieve significance, the N's were 40 and 45. Many studies mixed the diagnosis and types of surgeries, making it difficult to interpret the results.

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

#### NOTES

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear

disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids).

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

**Discussion:** The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that

they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

## NOTES

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

**Cochrane, Gordon J. (1991). Client-therapist collaboration in the preparation of hypnosis interventions: Case illustrations. American Journal of Clinical Hypnosis, 33, 254-262.**

Therapists can use hypnosis in a variety of situations to help clients utilize their own resources effectively. In both heterohypnosis and tape-assisted self-hypnosis, the respectful collaboration of therapist and client in the development of specific intervention strategies can be effective. I have described four cases to illustrate the collaborative aspect of heterohypnosis in a surgical setting and tape-assisted self-hypnosis for anxiety, tinnitus, and situational depression. In each case the clients were willing and able participants.

#### NOTES

Hypnotic interventions as adjunctive therapeutic modalities for a variety of surgical procedures have been well documented (Frankel, 1987; Gravitz, 1988; Nathan, Morris, Goebel, & Blass, 1987). The availability, relative safety, dependability, and ease of use have made chemical agents the anesthetic of choice in the majority of surgical situations, but hypnosis, either alone or in conjunction with chemical agents, can have a number of advantages for some patients (Udolf, 1987, p. 248). Some patients who have extreme preoperative pain and anxiety can learn to use self-hypnosis (Frankel, 1987); others may use hypnosis when experiencing postoperative nausea and other uncomfortable side effects of chemical anesthetics. Some may fear death under general anesthesia or react to a previous trauma arising from general anesthesia and the operating room procedures in general (Udolf, 1987, p. 250) and therefore choose hypnotic strategies. In the following case illustration the patient feared general anesthesia because of a previous negative postoperative experience" (p. 255).

While collaboratively planned hypnosis often empowers the patient, contributing to a sense of personal control and well being, some patients are not able to participate in that manner. Cochrane cites patients who are severely depressed or "who struggle with narcissism and other severe pathologies" (p. 260). He notes that audiotapes are useful for supplementing in-session therapy, contributing to skill development, attitude change, and a sense of self-worth. He cites Eisen and Fromm (1983) as indicating that self hypnosis is also useful for clients "who struggle with issues of control and intimacy" (p. 260).

**Kleinhauz, Moris (1991). Prolonged hypnosis with individualized therapy. International Journal of Clinical and Experimental Hypnosis, 39 (2), 82-92.**

A therapeutic approach is presented which involves the use of prolonged hypnosis for the treatment of diverse medical and/or psychological conditions, including intractable pain. This approach may be indicated either as a complementary tool used in conjunction with other treatment approaches or as the only method of intervention. The technique is based on achieving a prolonged hypnotic response, during which hypno- relaxation serves as the foundation for the delivery of an individualized therapeutic plan which includes self-hypnosis, suggestive procedures, metaphors, and constructive imagery techniques. In debilitated patients, medical supervision and nursing care are essential, and hospitalization is recommended if necessary. Theoretical assumptions underlying this approach are presented, and clinical implications are discussed. The method is illustrated through case presentations.

#### NOTES

The general procedure involves: 1. A flexible plan concerning the duration of treatment: days, weeks, or longer. 2. Information is given to the patient, the family and the medical staff if in hospital. Emphasize that while the patient may be in a 'twilight-like' state, most of the time he/she is able to fulfill his or her basic physiological needs, (drinking, eating, taking care of personal cleanliness, etc.). 3. The method of hypnotic induction is individualized. 4. The patient is trained in self- hypnosis, and for using signals for induction and dehypnotization either for self hypnosis or for the hypnotist to use. Thus if there is a physiological or emotional need for self-hypnosis the patient can do it. Suggestions and training are given and reinforced concerning the patient's capability to fulfill his/her basic

physiological needs. 5. The family and/or the medical staff are instructed and trained in induction and dehypnotization, until the patient responds to them satisfactorily. 6. At this stage, therapeutic suggestions aimed at ego-boosting and a change of attitudes and meanings towards the symptom and symptom removal/amelioration/substitution are added. 7. Metaphoric constructive imagery is introduced when indicated. 8. If required, other hypnotic phenomena are elicited and used (e.g. dissociation, time distortion, age regression, rehearsal, hypno/analgesia, change of muscular tonus, displacement of emotions, abreaction, etc.). 9. An audio cassette which contains the wording of the therapeutic intervention is used with some patients. 10. The family and/or the medical staff are instructed to supervise the patient properly and to avoid potential complications. 11. Termination of prolonged hypnosis with individualized therapy is gradual to permit appropriate re-orientation towards reality. 12. Treatment is evaluated and a posttreatment plan is outlined.

They provide case reports and discuss precautions. All the cases reported were treated while the patients were hospitalized for their physical condition (although in Case 3, prolonged hypnosis with individualized therapy was also continued at home after the patient's discharge from the hospital), and the patients were monitored by the medical staff. In very debilitated patients, special care should be taken to avoid potential complications arising from their passivity, mainly the development of decubitus ulcer and of aspiration/choking while drinking or eating. Although precaution is taken routinely with these patients, these measures should be emphasized while the patient is in a state of prolonged hypno-relaxation.

Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

1990

Evans, Frederick J.; Stanley, R. O. (1990). Psychological interventions for coping with surgery: A review of hypnotic techniques. Australian Journal of Clinical and Experimental Hypnosis, 18, 97-105.

Illness, hospitalization, and surgery pose many severe stresses for many patients, to the extent that their ability to understand and cope with what is happening may be significantly reduced. Many of these stresses result from the nature and significance of patients' surgical procedures and post-operative treatment. This paper reviews the range of psychological interventions aimed at helping patients cope with pre- and post-operative treatment regimens. The range and content of hypnotic interventions are examined in detail. It is concluded that more rigorous research studies are required to determine the relative effectiveness of different types of interventions and to evaluate the effects of patients' psychological characteristics on the effectiveness of these interventions.

Gauld, Alan (1990). Mesmeric analgesia and surgery: A reply to Spanos and Chaves. British Journal of Experimental and Clinical Hypnosis, 7, 171-174.

NOTES

Spanos and Chaves' criticisms of the author's paper in this journal (vol. 5, 1988, pp 17-24) on mesmeric analgesia are considered. Spanos and Chaves are unnecessarily dismissive of nineteenth century reports of mesmeric analgesia and, in order to bring these cases within the compass of their theory, they make assumptions about them that are not supported by the facts.

Kaye, J. M.; Schindler, B. A. (1990). Hypnosis on a consultation-liaison service. General Hospital Psychiatry, 12, 379-383.

Studied the use of hypnosis on a consultation-liaison service with a broad spectrum of medically hospitalized patients. Autohypnosis tapes were used for reinforcement. Twenty-nine women and eight men from 24-75 years of age were hypnotized for relief of depression, pain, anxiety, or side effects of chemotherapy. Results were excellent (total to almost total relief of symptoms) in 68%, fair in 22%, and poor in 11%, with no differences among the results with the various conditions. This demonstrates that hypnotherapy is an extremely useful tool in medical management of patients in consultation-liaison psychiatry.

Kihlstrom, John F.; Schaecter, Daniel L.; Cork, Randall C.; Hurt, Catherine A.; Behr, Steven E. (1990). Implicit and explicit memory following surgical anesthesia. Psychological Science, 1, 303-306.

Paired associates were presented to 25 surgical patients following the induction of anesthesia by thiopental, vecuronium, and isoflurane. Postoperative testing (immediately or after two weeks) showed no free recall for the list; nor was there significant cued recall or recognition, compared to a matched control list. However, a free-association task showed a significant priming effect on both immediate and delayed trials. At least under some conditions, adequate surgical anesthesia appears to abolish explicit, but not implicit, memory for intraoperative events.

Kraft, Tom (1990). Use of hypnotherapy in anxiety management in the terminally ill: A preliminary study. British Journal of Experimental and Clinical Hypnosis, 7, 27-33.

The aim of this project was to give some preliminary information about the possible value of hypnotherapy in the management of terminally ill patients suffering from widespread cancer. The five phases of the dying process are described, and the case illustrations would suggest that, apart from severely obsessional patients, the terminally ill seem to benefit quite considerably from hypnotherapy. Matheson, G.; Drever, J. M. (1990). Psychological preparation of the patient for breast reconstruction. Annals of Plastic Surgery, 24, 238-247.

#### NOTES

Reviews over 100 women who had undergone rectus abdominis musculocutaneous flap reconstruction, the psychological issues motivating the patient for surgery, and psychological problems to be considered by the surgeon. A method of psychological preparation that was used and a report on the evaluative study of the program is included, and a protocol and verbalization for hypnotic relaxation is included.

McLintock, T. T.; Aitken, H.; Downie, C. F.; Kenny, G. N. (1990). Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. British Medical Journal, 301 (6755), 788-790.

Sixty-three women undergoing elective abdominal hysterectomy were randomly assigned to a tape of positive suggestions or a blank tape during the operation. Anesthesia was standardized for all of the

women. Postoperative analgesia was provided through a patient-controlled analgesia system for the first 24 hours. Pain scores were recorded every 6 hours. The outcome measures were morphine consumption in the first 24 hours and pain scores. Mean morphine requirements were 51.0 mg in women who were played positive suggestions, and 65.7 mg in those played a blank tape ( $p = 0.028$ ). Pain scores were similar in the two groups. It was concluded that intraoperative suggestions seem to have a positive effect in reducing patients' morphine requirements in the early postoperative period.

1989

Jirout, J. (1989). Reaction of the cerebral vertebrae in imagined changes in the shape of the cervical spine. Ceskoslovenska Neurologie a Neurochirurgie, 52, 75-77.

Postural reaction of the cervical vertebrae on imagined, but actually not performed, changes in the shape of the cervical spine in the sagittal plane are described. The percentage of reacting vertebrae is relatively high. The findings seem to indicate that, (1) the described phenomena belong to the constant features of the spinal dynamics, (2) that there probably exist residual traces of preceding activities, and (3) that these changes are due to the activation of the polymetameric system of the intrasegmental muscles. Abstracted in *American Journal of Clinical Hypnosis*, 1990, v. 32, p. 213.

Peebles, M. J. (1989). Through a glass darkly: The psychoanalytic use of hypnosis with post-traumatic stress disorder. International Journal of Clinical and Experimental Hypnosis, 37, 192-206.

A severe case of post-traumatic stress disorder stemming from consciousness (with auditory and pain perception) during surgery was treated with 8 sessions of hypnosis. Abreaction and revivification used alone initially retraumatized the patient, and her symptoms worsened. Ego-mastery techniques were then added; emphasis was placed on the role of the therapist as a new object presence to be internalized in restructuring the traumatic memory; memory consolidation and working-through techniques were instituted. The patient's symptoms abated and her condition remitted. The similarities between hypnotic and analytic work are highlighted. In addition, the case material provides a clinical example of the existence and potential traumatic effects of conscious awareness during surgery.

1988

Azuma, Nagato; Stevenson, Ian (1988). 'Psychic surgery' in the Philippines as a form of group hypnosis. American Journal of Clinical Hypnosis, 31, 61-67.

Psychic surgeons and their patients were observed in the Philippines during a variety of procedures of 'minor surgery.' In six cases, subcutaneous tissues (cysts and benign tumors) were removed. Histological examination confirmed the gross diagnoses and left no doubt that the skin had been penetrated. Although the psychic surgeons used no analgesics or anesthetics, the patients appeared to experience little or no pain and only slight bleeding. The authors believe that a supportive group 'atmosphere' enables the patients to enter a quasi-hypnotic state that reduces pain and facilitates healing.

Boeke, S.; Bonke, B.; Bouwhuis-Hoogerwerf, M. L.; Bovill, J. G.; Zwaveling, A. (1988). Effects of sounds presented during general anaesthesia on postoperative course. British Journal of Anaesthesia, 60, 697-702.

In a double-blind, randomized study, patients undergoing cholecystectomy were administered one of four different sounds during general anaesthesia: positive suggestions, nonsense suggestions, seaside sounds or sounds from the operating theatre. The effect of these sounds on the postoperative course

was examined to assess intraoperative auditory registration. No differences were found between the four groups in postoperative variables.

## NOTES

Postoperative course was evaluated by 5 variables: pain, nausea and vomiting, evaluation by nursing staff, subjective well-being, and duration of postoperative hospital stay. From the chart they used amount of postoperative analgesia, volume of nasogastric suction or drainage and fluid lost through vomiting over 6 days post-operatively; duration of postoperative hospital stay was registered after discharge. See p. 699 for details, including wording of questions. They cite their own earlier study that got positive results, and explain the difference as possibly due to use of only male voices on tapes, lack of difference in the sounds on tapes in this study, insensitivity of outcome measures (patients stayed longer in first study than in this one), and sample too small in this study (106).

Boeke et al. (1988) report that this double-blind, randomized study of positive suggestions, noise or sounds from the operating theatre presented to 3 groups of patients undergoing cholecystectomy during general anaesthesia had positive results for older patients. patients > 55 years who received positive suggestions had a significantly shorter postoperative hospital stay than the other patients in this age category.

Evans, C.; Richardson, P. H. (1988). Improved recovery and reduced postoperative stay after therapeutic suggestions during general anesthesia. Lancet, 2 (8609), 491-493.

The clinical value of suggestions during general anesthesia was assessed in a double-blind randomized placebo-controlled study. 39 unselected patients were allocated to suggestion (N = 19) or control (N = 20) groups who were played either recorded suggestions or a blank tape, respectively, during hysterectomy. The patients in the suggestion group spent significantly less time in the hospital after surgery, suffered from a significantly shorter period of pyrexia, and were generally rated by nurses as having made a better-than-expected recovery. Patients in the suggestion group, unlike the control group, guessed accurately that they had been played an instruction tape.

Goldmann, Les; Ogg, T. W.; Levey, A. B. (1988). Hypnosis and daycase anaesthesia. A study to reduce preoperative anxiety and intraoperative anesthesia requirements. Anesthesia, 43, 466-469.

52 female patients having gynecological surgery as day cases received either a short preoperative hypnotic induction or a brief discussion of equal length. Hypnotized patients who underwent vaginal termination of pregnancy required significantly less methohexitone for induction of anesthesia and were significantly more relaxed as judged by their visual analogue scores for anxiety. Less than half the patients were satisfied with their knowledge about the operative procedure even after discussions with the surgeon and anesthetist. A significant correlation was found between anxiety and perceived knowledge of procedures. Results suggest that preoperative hypnosis can provide a quick and effective way to reduce preoperative patient anxiety and anesthetic requirements for gynecological daycase surgery.

Hawkins, Russell; Le Page, Keith (1988). Hypnotic analgesia and reflex inhibition. Australian Journal of Clinical and Experimental Hypnosis, 16, 133-139.

The major change in thinking about models of analgesia over the last decade or so may be seen as a shift away from the earlier emphasis on a one-way afferent transmission sequence. Analgesia was effected, according to the older models, by a simple blocking of afferent impulses at some level (as achieved by local anaesthesia). Recent models suggest that there are at least two CNS analgesia control systems, each operating via an active mechanism for the inhibition of nociception which includes reciprocal \_efferent\_ impulses able to respond to input from lower centres by sending control signals

which modify their output. One CNS analgesia system has now been quite well described. This "opiate" analgesia system has proved to be naloxone reversible and seems to be mediated by reciprocal pathways between brain stem structures and the dorsal horn and trigeminal caudalis. This is not likely to be the system responsible for all cases of hypnotic analgesia, since the common experience of continued awareness of some elements of a normally painful stimulus, in spite of a freedom from pain, implicates a higher level involvement such as input from the prefrontal cortex.

## NOTES

The authors present a surgery case (of a cystoscopy and urethrotomy performed under hypnotic analgesia, with a highly hypnotizable patient) as an illustration of their position. The patient grimaced when the urethrotome was inserted into the urethra and dilated, but she denied discomfort and did not exhibit a reflex adduction of the thighs that is often observed even under standard general anaesthesia. She had spontaneous amnesia for the entire surgery. Later, under hypnosis, the patient could remember "discomfort and a sharp pain" which lasted for "seconds, if that" (p. 134).

The authors refer to Melzack and Wall's (1965) gate control theory as well as Hilgard's (1973) neodissociation interpretation of pain reduction in hypnosis. They review research by Hardy and Leichnetz (1981) with monkeys, in which they "traced the projections of the periaqueductal gray (PAG) to determine the extent of any possible cortical involvement in the endogenous analgesic system. Their work showed that the prefrontal cortex was the principal source of projections to the PAG" (p. 136). They quote the latter as writing that, "Patients who have had prefrontal lobotomies for relief of chronic pain report that while they still feel the pain they are no longer bothered by it ... the prefrontal cortex by virtue of its projections to the PAG may play a role in modulating nociception at the spinal level" (Hardy & Leichnetz, 1981, p. 99).

"Hardy and Leichnetz have also suggested that there may be more than one analgesic system within the CNS. The first system is a naloxone-reversible mechanism which can be activated by opiates (presumably both endogenous and exogenous) and by acupuncture. Since hypnotic analgesia has shown itself not to be naloxone-reversible (Goldstein & Hilgard, 1975) it may have little to do with the opiate reception analgesia system. Instead the mechanism of hypnotic analgesia may lie in Hardy and Leichnetz's second system which is sensitive to affective and cognitive influences" (pp. 136-137).

The authors include a review of the work by Mayer and Price (1976) which established the importance of brain stem structures in analgesia, especially for eliciting stimulation-produced analgesia. They cite Mayer and Price as drawing a distinction between "analgesia achieved by incapacitating a component in a pain transmission system or by activating a pain inhibition system" (p. 137). They also report that Mayer and Price conclude that stimulation-produced analgesia does not result from a "functional lesion" in the brain stem, but results from stimulation of a pain-inhibiting mechanism, suggesting the dorsal horn and trigeminal nucleus caudalis may be involved. This would be consistent with the inhibition of spinal reflexes (the adductor reflex) observed in their urethrotomy case, and the spinal reflex to nociception has also been reported by Finer (1974).

"The concomitant inhibition of reflexes in humans during hypnotic analgesia can be interpreted as evidence that nociception is probably not ascending to the cerebral cortex and that therefore the source of analgesia can be localized to the brain stem areas. It may be the case, however, that the locus of effect of hypnotic analgesia is not uniform across cases and may be identified by the overall pattern of subjective reports and physiological responses. Hypnotic analgesia may be experienced in more than one way subjectively and these differences may be attributable to differing underlying physiological mechanisms. On some occasions the relevant body part may be experienced as totally anaesthetised and all sensation (not only painful sensation) may be lost. This experience matches well with a brain stem involvement, which presumably inhibits any further afferent action. On other occasions, however, and more commonly, patients are still aware of a variety of sensations, which might include pressure in the case of childbirth or even cutting in the case of surgery, but these sensations are not

described as painful. This is reminiscent of the effect of frontal lobotomy and it is tempting to focus on the frontal lobe as the locus of hypnotic analgesia effects in such instances" (p. 138).

Houge, Donald R.; Hunter, Robert E. (1988). The use of hypnosis in orthopaedic surgery. Contemporary Orthopaedics, **16**, 65-68.

Some patients postpone or refuse indicated orthopaedic surgery because of fear or a medical contraindication to anesthesia. Clinical hypnosis previously has been used mainly as an adjunct to chemical anesthesia. However, hypnosis was shown to be entirely effective when used as the sole anesthesia in three of four orthopaedic cases. These four procedures included a radical head resection, the removal of a sideplate and Richard's screw from the hip, and two cases of arthroscopic knee surgery. The preparation required for the surgery and the experiences of the patients during these procedures are described, and the kinds of patients most likely to benefit from the use of hypnosis in orthopaedic surgery are reviewed.

1987

Frankel, Fred H. (1987). Significant developments in medical hypnosis during the past 25 years. International Journal of Clinical and Experimental Hypnosis, **35**, 231-247.

Selected significant investigative studies on the use of hypnosis in the medical context over the past 25 years are discussed. The topics covered include anxiety and pain, asthma, migraine, skin disease, burns, nausea and vomiting, surgery, haemorrhagic disorders, and cancer and immunity. The importance of hypnotizability ratings in the methodology is emphasized.

Goldmann, Les; Shah, M. V.; Hebden, M. W. (1987). Memory of cardiac anesthesia: Psychological sequelae in cardiac patients of intra-operative suggestion and operating room conversation. Anesthesia, **42** (6), 596-603.

Thirty elective cardiopulmonary by-pass surgery patients were interviewed pre- and postoperatively. A random selection of patients heard a prerecorded audio tape toward the end of surgery after they were rewarmed to 37 degrees C. The tape contained suggestions for patients to touch their chin during the postoperative interview, to remember three sentences, and to recover quickly. The interviewers were blind to the experimental conditions. The experimental group touched their chins significantly more often than the control group ( $p = .015$ ). Sentence recognition did not reach significance, perhaps due to the small numbers and low salience of the stimuli. Seven patients (23%) recalled intraoperative events, five with the aid of hypnosis. Three reports (10%) were corroborated. Preoperative medication ( $p < .01$ ) and postoperative anxiety ( $p < .05$ ) were significant predictors of those patients who reported recall.

Jay, Susan M.; Elliott, Charles H.; Katz, Ernest; Siegel, Stuart E. (1987). Cognitive-behavioral and pharmacologic interventions for children's' distress during painful medical procedures. Journal of Consulting and Clinical Psychology, **55**, 860-865.

This study evaluated the efficacy of a cognitive-behavioral intervention package and a low-risk pharmacologic intervention (oral Valium), as compared with a minimal treatment-attention control condition, in reducing children's distress during bone marrow aspirations. The subjects were 56 leukemia patients who ranged in age from 3 years to 13 years. The three intervention conditions were delivered in a randomized sequence within a repeated-measures counterbalanced design. Dependent outcome measures included observed behavioral distress scores, self-reported pain scores, pulse rate,

and blood pressure scores. Repeated-measures analyses of variance indicated that children in the cognitive-behavior therapy condition had significantly lower behavioral distress, lower pain ratings, and lower pulse rates than when they were in the attention- control condition. When children were in the Valium condition, they exhibited no significant differences from the attention control condition except that they had lower diastolic blood pressure scores.

#### NOTES

Lonnie Zelzer, M.D., in a UCLA Hypnosis Seminar lecture in 1992, stated that in pre-treatment with Valium the patients did worse during the procedure, vs no pretreatment with Valium, because the medicated patients didn't have clarity of attention during the cognitive behavioral learning.

Katz, Ernest R.; Kellerman, Jonathan; Ellenberg, Leah (1987). Hypnosis in the reduction of acute pain and distress in children with cancer. Journal of Pediatric Psychology, 12, 379-394.

Hypnosis has been used as a behavioral approach to help children tolerate aversive medical procedures more effectively, but empirical longitudinal research evaluating the outcome of such interventions has been limited. In the present study, 36 children with acute lymphoblastic leukemia between the ages of 6 and 12 years of age undergoing repeated bone marrow aspirations (BMAs) were randomized to hypnosis or play comparison groups. Subjects were selected on their behavioral performance on baseline procedures and received interventions prior to their next three BMA procedures. Major results indicated an improvement in self-reported distress over baseline with both interventions, with no differences between them. Girls exhibited more distress behavior than boys on three of four dependent measures used. Suggestions of an interaction effect between sex and treatment group were noted. The role of rapport between patient and therapist in therapeutic outcome was also evaluated. Results are discussed in terms of potential individual differences in responding to stress and intervention that warrant further research.

Minichiello, William E. (1987). Treatment of hyperhidrosis of amputation site with hypnosis and suggestions involving classical conditioning. International Journal of Psychosomatics, 7-8.

Hyperhidrosis of an amputation site utilizing hypnosis and/or behavioral strategies has not been reported in the literature. This case report is on the successful use of hypnosis utilizing principles of classical conditioning in the treatment of a patient with hyperhidrosis of an amputated limb with two previous unsuccessful sympathectomies. The patient possessing moderate hypnotic ability as measured by the Stanford Hypnotic Clinical Scale (SHCS), reported a pre-treatment score of 10 on a 0-10 severity and intensity of sweating scale, and a post-treatment score of 0. All gains were maintained at the two-year follow-up.

#### NOTES

The patient was hypnotized while an electric fan was blowing on his stump and prosthesis. Direct suggestions were given according to procedures of thermal biofeedback. The suggestions were: 1. You will notice in days ahead that your stump feels increasingly cooler and drier. 2. You will feel throughout the day as if a cool breeze from a fan is blowing on your stump. 3. Whenever you pay attention to your leg during the day, particularly after the first few hours of the morning, you will associate that leg with a cool dry breeze from a fan blowing on it. 4. You will increasingly develop the power to cool and dry your stump.

The results were that 2 1/2 weeks later patient reported reduced frequency and intensity of sweating and significant healing of the stump ulcers; rating = 2. One month later, patient reported continued progress with almost normal skin color and stump condition; the patient discontinued disability, and

returned to work. Patient returned one month later reporting, "It's cured and my physician can't believe it." Rating = 0.

Author concludes that hypnosis should be tried prior to more invasive traditional procedures. In this case two previous sympathectomies failed to correct the condition and a third sympathectomy was being contemplated.

1986

DeBenedittis, Giuseppe; Sironi, Vittorio A. (1986). Depth cerebral electrical activity in man during hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 34, 63-70.

To the authors' knowledge, hypnosis has never been induced in epileptic patients during a depth EEG study. This neurosurgical diagnostic procedure has been routinely used in medically resistant epileptic patients for the preoperative exact delimitation of the epileptogenic lesion. It offers a unique opportunity to obtain fundamental information on the possible neurophysiological mechanisms implicated in hypnosis. Observations were carried out on 1 patient affected by medically resistant partial seizures with complex symptomatology. A chronic deep electrode study explored rhinencephalic structures as well as specific target areas of the cerebral cortex. Background electrical activity during hypnosis showed a significant decrease of slow waves and an increase of alpha and beta rhythms, with constant increase of amplitude, when compared to activity in the pre- and posthypnosis states. Focal interictal abnormalities were dramatically reduced during hypnosis.

#### NOTES

Hypnotizability was assessed with the Barber Suggestibility Scale in order to test for suggestibility without a prior induction of hypnosis. The patient's score was 7 out of 8 possible. Patient was hypnotized with a standard induction procedure (Barber & Calverley, 1963).

Experimental Protocol: 15 minutes resting baseline; 15 minute test of mental imagery (waking suggestions with imagination instructions); hypnosis with progressive relaxation; suggestions for dissociation; suggestions for amnesia; arousal from hypnosis (the patient was successful with positive hallucinations, catalepsy, total amnesia, and spontaneous analgesia); and posthypnosis awake and alert (5 minutes eyes open, 5 minutes eyes closed, then 15-minute recording of post-treatment waking baseline).

EEG background activity was scored for the number of sec/minute of delta (0-4), theta (4-7), alpha (8-12), and beta (13-30) rhythms, for each 5-min period. Score = percent as related to the 1-minute epoch. Number, amplitude, and diffusion of interictal spikes also were measured but ictal activity was not recorded during the periods considered. Experimenters also measured heart rate, respiratory rate, and mean blood pressure.

ANOVA for 4 conditions (resting, waking suggestion, hypnosis, and posthypnosis) was computed for background and for focal interictal activities, and the t-test used to evaluate significant differences. ANOVA indicated a significant effect across the four experimental conditions for theta and alpha in the temporal anterior cortex, temporal posterior cortex, and frontal convexity cortex. The effect was attributable only to changes in theta and alpha between baseline and hypnosis (theta decreasing, alpha increasing as the patient went into hypnosis). No other significant difference was found. Following arousal from hypnosis, EEG activity was similar to the EEG activity before the induction.

Interictal focal abnormalities were reduced during hypnosis, compared with before hypnosis. The effect was due to changes in the area of Ammon's horn, the amygdala, the posterior temporal cortex, the mesial temporal cortex, and the inferior temporal cortex.

In their Discussion, the authors note that their data supports earlier work indicating that the limbic system is implicated in hypnosis. They cite the publications of Arnold (1959, *International Journal of*

Clinical and Experimental Hypnosis) and Crasilneck, McCranie, and Jenkins (1956). The latter authors observed EEG records taken during brain surgery on one patient. Hypnosis terminated every time the hippocampus was stimulated, leading them to suggest that the hippocampus is part of the neural circuit involved in hypnosis.

"If it is assumed that a convulsion can be considered a result of both pathophysiological and emotional events operating in the individual, emotions being the most common precipitating factor in epilepsy, then any amelioration of one will raise the convulsive threshold or lower the seizure level (Goldie, 1979; MacCabe & Habovick, 1963). Although 'voluntary control of the alpha rhythm' was achieved over 40 years ago (Jasper & Shagass, 1941), only since 1969 has such control been used for clinical purposes (Kamiya, 1969). One striking characteristic of the EEG pattern of many epileptics is the absence of a 12 to 14 c/s rhythm normally recorded from the anterior portions of the brain (sensorimotor rhythm) and the presence of a 4 to 7 c/s rhythm at the same location (Olton & Noonberg, 1980). Biofeedback may enable the individual to increase the amount of sensorimotor rhythm and to decrease the amount of 4 to 7 c/s activity. As a consequence, clinically significant decreases in seizure activity have been found after biofeedback training (Serman, 1973, 1977).

"The present data demonstrate that in this female patient hypnosis induced a highly significant reduction of the interictal activity, concomitant with an increase of alpha and sensorimotor rhythm and a decrease of slow activity, similar to biofeedback but without prior training.

" In conclusion, a depth EEG study in one epileptic patient comparing EEG activity during hypnosis and pre- and posthypnosis suggests the following conclusions: (a) hypnosis may be associated with significant decrease of slow activity and an increase of alpha and relatively high frequency, beta activity; (b) electrophysiological correlates of hypnotic behavior support the possible role of the limbic system in mediating the trance experience; and (c) hypnosis is effective in reducing focal interictal abnormalities in this patient and so it can be considered a promising technique to prevent and/or reduce emotional precipitating factors and the tendency to develop seizure activity" (p. 69).

The article referenced regarding biofeedback training to reduce ictal activity is: Serman, M. B. (1973). Neurophysiologic and clinical studies of sensorimotor EEG biofeedback training: some effects on epilepsy. In L. Birk (Ed.), *Biofeedback: Behavioral medicine.* New York: Grune & Stratton, Pp. 147-165.

Serman, M. B. (1977). Effects of sensorimotor EEG feedback training on sleep and clinical manifestations of epilepsy. In J. Beatty & H. Legewie (Eds.), *Biofeedback: Behavioral medicine.* New York: Plenum, 1977, Pp. 167-200.

Omer, Haim; Friedlander, Dov; Palti, Zvi (1986). Hypnotic relaxation in the treatment of premature labor. *Psychosomatic Medicine*, 48, 351-361.

Hypnotic relaxation was used as an adjunct to pharmacologic treatment with 39 women hospitalized for premature contractions in pregnancy. The control group received medication alone and consisted of 70 women. Treatment was started at the time of hospitalization and lasted for 3 hr on the average. Patients were also given cassettes with a hypnotic - relaxation exercise for daily practice. The rate of pregnancy prolongation was significantly higher for the hypnotic - relaxation than for the medication-alone group. Infant weight also showed the advantage of the hypnotic - relaxation treatment. Background variables of the two groups were compared and it was shown that they could not have explained the treatment effect obtained.

1985

Bennett, Henry L.; Davis, H. S.; Giannini, Jeffrey A. (1985). Non-verbal response to intraoperative conversation. *British Journal of Anesthesiology*, 57, 174-179.

In a double-blind study, 33 patients (herniorrhaphy, cholecystectomy and orthopedic) were randomly assigned to either suggestion or control groups. Under known clinical levels of nitrous oxide and

enflurane or halothane anesthesia, suggestion patients were exposed to statements of the importance of touching their ear during a postoperative interview. Compared with controls, suggestion patients did touch their ear (tetrachoric correlation 0.61,  $P < 0.02$ ). test, U (Mann-Whitney frequently more so did they and

LaRiccia, P. J.; Katz, R. H.; Peters, J. W.; Atkinson, G. W.; Weiss, T. (1985). Biofeedback and hypnosis in weaning from mechanical ventilators. Chest, 87, 267-269.

Weaning patients from mechanical ventilation can be hindered by both physical and psychologic factors. Biofeedback has been used successfully as an adjunct in difficult weaning problems. We have used a combination of hypnosis and biofeedback to wean a patient with neurologic disease who previously failed weaning by standard procedures. A 30-year-old woman with respiratory failure secondary to multiple sclerosis with transverse myelitis was given eight sessions of biofeedback over 12 days in which the movements of her chest wall, as monitored by magnetometers, were displayed on an oscilloscope. The patient was praised for targeted respiratory rate, amplitude, and rhythm. These sessions included hypnosis in which the patient was given suggestions of well-being and that she could breathe as she had five years earlier. In this manner the patient was successfully weaned. Respiratory biofeedback and hypnosis appear to be useful adjuncts in weaning patients from ventilators.

Morris, Don M.; Nathan, Ronald G.; Goebel, Ronald A.; Blass, Norman H. (1985). Hypnoanesthesia in the morbidly obese. Journal of the American Medical Association, 253 (22), 3292-3294.

The advent of chemical anesthesia relegated hypnosis to an adjunctive role in patients requiring major operations. Anesthesia can be utilized with acceptable risk in the great majority of patients encountered in modern practice. But an occasional patient will present--such as one with morbid obesity--who needs a surgical procedure and who cannot be safely managed by conventional anesthetic techniques. This report describes our experience with such a patient and illustrates some of the advantages and disadvantages of hypnoanesthesia. The greatest disadvantage is that it is unpredictable. Close cooperation between the patient, hypnotist, anesthesiologist, and surgeon is critical. However, the technique may be utilized to remove very large lesions in selected patients. Hypnoanesthesia is an important alternative for some patients who cannot and should not be managed with conventional anesthetic techniques.

1984

Bishay, Emil; Stevens, Grant; Lee, Chingmuh (1984). Hypnotic control of upper gastrointestinal hemorrhage: A case report. American Journal of Clinical Hypnosis, 27, 22-25.

The use of hypnosis for control of bleeding during and after surgical procedures is common practice. It has also been a useful tool for control of bleeding in hemophiliac children, especially during dental procedures, and in traffic accidents. This paper presents the successful treatment with hypnosis of a patient with upper gastrointestinal tract bleeding. After treatment, the patient was discharged from the hospital without the need for surgical intervention. NOTES 1:

NOTES

The physician explained to the patient that nothing would hurt her and that nobody would do anything against her will, that if she could "relax," then her unconscious mind would help her control her bleeding. [Gives script used in the hypnosis.] Trance terminated after 20 minutes. "One hour later, endoscopy performed under local anesthesia revealed 'non-bleeding gastritis, no ulcers seen.' She had no bleeding following the hypnotherapy" (p. 23).

Katcher, Aaron; Segal, Herman; Beck, Alan (1984). Comparison of contemplation and hypnosis for the reduction of anxiety and discomfort during dental surgery. American Journal of Clinical Hypnosis, 27, 14-21.

Complex moving visual stimuli are used to induce states of relaxation, hypnosis and revery. To test the efficacy of using aquarium contemplation to induce relaxation, 42 patients were randomly assigned to one of five treatments prior to elective oral surgery: 1) contemplation of an aquarium, 2) contemplation of a poster, 3) poster contemplation with hypnotic induction, 4) aquarium contemplation with hypnosis, and 5) a non intervention control. Blood pressure, heart rate, and subjective and objective measures of anxiety were used as dependent measures. Pretreatment with aquarium contemplation and hypnosis, either alone or in combination, produced significantly greater degrees of relaxation during surgery than poster contemplation or the control procedure. Two-way ANOVA demonstrated that a formal hypnotic induction did not augment the relaxation produced by aquarium contemplation.

#### NOTES

The consent form was designed to reduce anxiety about hypnosis by stating that if hypnosis was used, it would be used only to induce relaxation. Patients were then randomly assigned to one of the 5 pretreatment groups, with 8 in each of the four contemplation groups and 10 in the nonintervention control.

1. Aquarium contemplation. Ss contemplated it for 40 minutes; during the 1st 25 min, 5 tests of suggestibility were administered (from the Stanford) which eliminated all tests the authors considered anxiety-provoking such as suggested hallucination. Also, the terms hypnotically relaxed or hypnotic relaxation replaced the term hypnosis throughout the protocol.

2. Poster contemplation was the same, using a color photo of a mountain waterfall.

3. Poster contemplation with hypnosis used a protocol derived from Stanford, with visual fixation on poster, then the 5 tests, then Ss contemplated the poster for 10 minutes under hypnosis and were given post hypnotic suggestion that they could reenter hypnosis during the dental procedure by closing their eyes and visualizing the poster

4. Aquarium contemplation with hypnosis was like #3 except that Ss were asked to look at "either one fish or a portion of the aquarium" during induction and were told to reenter hypnosis during treatment by closing their eyes and visualizing the aquarium

5. Nonintervention control Ss were given no tests of suggestibility; they were seated in a chair and told to "relax."

During surgery, an observer recorded overt signs of anxiety or agitation on a check list, making entries at five-minute intervals.

The surgeries took variable lengths of time (5-90 minutes) and variable kinds of procedures (multiple injections, removal of bone, etc.) Surgeons varied in management-- gentleness, etc.

Blood pressure fell significantly during all 5 pretreatments without any significant differences between groups. Analysis of interaction effects, significant at the 0.1 level for all 3 dependent variables, indicated that hypnosis had a major effect on relaxation only when the S was contemplating a poster. Hypnosis had no significant influence on the levels of relaxation obtained by contemplation of the aquarium.

There were no significant differences between groups in the number of suggestions accepted.

Hilgard, Josephine R.; LeBaron, Samuel (1982). Relief of anxiety and pain in children and adolescents with cancer: Quantitative measures and clinical observations. International Journal of Clinical and Experimental Hypnosis, 30, 417-442.

Children and adolescents with cancer, chiefly forms of leukemia, aged 6 to 19 years, underwent medical treatments which required repeated bone marrow aspirations, normally a painful and anxiety-provoking experience. Data were obtained in baseline bone marrow observations on 63 patients, who were then offered the opportunity to volunteer for hypnotic help in pain control. Of the 24 patients who accepted hypnosis, 9 were highly hypnotizable. 10 of the 19 reduced self-reported pain substantially by the first hypnotic treatment (the prompt pain reducers) and 5 more reduced self-reported pain by the second treatment (the delayed pain reducers) while none of the 5 less hypnotizable patients accomplished this. The latter benefitted by reducing anxiety. Short case reports illustrate the variety of experiences.

Analysis of baseline observations before any therapeutic intervention revealed age and sex differences. The difference between self-reported and observed pain was not statistically significant for patients under age 10 but was significant for the patients age 10 and older ( $p < .001$ ). There were minor but significant sex differences both in observed pain ( $p < .01$ ) and in self-reported pain ( $p < .05$ ), with the females reporting more pain.

1980

Hart, R. (1980). The influence of a taped hypnotic induction treatment procedure on the recovery of surgery patients. International Journal of Clinical and Experimental Hypnosis, 28, 324-331.

A study of 40 open heart surgery patients assigned to 1 of 2 equal size treatment groups sought to evaluate the efficacy and utility of a tape-recorded hypnotic induction procedure that preoperatively prepared patients for surgery. The dependent variables included daily blood pressure measurements and postsurgical outcome data pertaining to postoperative units of blood required, state/trait anxiety, and locus of control dimensions. Results of the study tended to provide some support for the tape-recorded hypnotic induction procedure in lessening state anxiety and in promoting a more self-directed attitude toward surgical recovery.

1977

Chertok, Leon; Michaux, D.; Droin, M. C. (1977). Dynamics of hypnotic analgesia: Some new data. Journal of Nervous and Mental Disease, 164, 88-96.

Following two surgical operations under hypnotic anesthesia, it was possible, during subsequent recall under hypnosis, to elicit a representation of the past operative experience. It would seem that under hypnosis there is a persistence of the perception of nociceptive information and of its recognition as such by the subject. From an analysis of these two experiments in recall, it is possible to formulate several hypotheses concerning the psychological processes involved in hypnotic analgesia. In consequence of an affective relationship, in which the hypnotist's word assumes a special importance for the subject, the latter has recourse to two kinds of mechanism: a) internal (assimilation to an analogous sensation, not, however, registered as dangerous-- rationalization); and b) external (total compliance with the interpretations proposed by the hypnotist), which lead to a qualitative transformation of nociceptive information, as also the inhibition of the behavioral manifestations normally associated with a painful stimulus.

1995

Ashton RC Jr. Whitworth GC. Seldomridge JA. Shapiro PA. Michler RE. Smith CR. Rose EA. Fisher S. Oz MC. The effects of self-hypnosis on quality of life following coronary artery bypass surgery: preliminary results of a prospective, randomized trial. *Journal of Alternative & Complementary Medicine* 1995;1(3):285-90 The effects of complementary techniques and alternative medicine on allopathic therapies is generating much interest and research. To properly evaluate these techniques, well controlled studies are needed to corroborate the findings espoused by individuals practicing complementary medicine therapies. To this end, we evaluated the role of one of these therapies, self-hypnosis relaxation techniques, in a prospective, randomized trial to study its effects on quality of life after coronary artery bypass surgery. Subjects were randomized to a control group or a study group. Study group patients were taught self-hypnosis relaxation techniques the night prior to surgery. The control group received no such treatment. Patients then underwent routine cardiac management and care. The main endpoint of our study was quality of life, assessed by the Profile of Moods Scale. Results demonstrated that patients undergoing self-hypnosis the night prior to coronary artery bypass surgery were significantly more relaxed than the control group ( $p = 0.0317$ ). Trends toward improvement were also noted in depression, anger, and fatigue. This study demonstrates the beneficial effects of self-hypnosis relaxation techniques on coronary surgery. This study also identifies endpoints and a study design that can be used to assess complementary medicine therapies. Results of this preliminary investigation are encouraging and demonstrate a need for further well-controlled studies.

1997

Cruise CJ. Chung F. Yogendran S. Little D. Music increases satisfaction in elderly outpatients undergoing cataract surgery. *Canadian Journal of Anaesthesia* 1997;44(1):43-8 **PURPOSE:** Music has long been known to reduce anxiety, minimize the need for sedatives, and make patients feel more at ease. The purpose of the study was to evaluate the effect of music in elderly outpatients undergoing elective cataract surgery with retrobulbar block and monitored anaesthetic care using fentanyl or alfentanil and midazolam. **METHODS:** One hundred and twenty one patients were prospectively and randomly assigned to hear: relaxing suggestions, white noise, operating room noise or relaxing music via audio-cassette headphones. Vital signs were documented before and after retrobulbar block and every 15 min thereafter. Anxiety was assessed using the State-Trait Anxiety Inventory (STAI) before and after surgery. Visual analogue scales (VAS) were used to assess anxiety and patient satisfaction postoperatively with a standardized questionnaire. Between group comparisons were made using Chi-Square, or ANOVA, where appropriate. **RESULTS:** There were no differences between groups in STAI or anxiety VAS scores at any time. Differences were noted in systolic blood pressure, but not in other vital signs. Patients' ratings of the whole operative experience, satisfaction with the tape played, general level of relaxation and preference for the chosen tape for subsequent surgery were different (music > relaxing suggestions > white noise and OR noise,  $P < 0.05$ ). **CONCLUSIONS:** Elderly patients undergoing cataract surgery under retrobulbar block were more satisfied with their experience if they heard relaxing music, rather than relaxing suggestions or white noise or OR noise. The type of auditory stimuli to which the patients were exposed did not influence the level of anxiety.

1993

Disbrow EA. Bennett HL. Owings JT. Effect of preoperative suggestion on postoperative gastrointestinal motility *Western Journal of Medicine*. 1993;158(5):488-92 Autonomic behavior is subject to direct suggestion. We found that patients undergoing major operations benefit more from instruction than from information and reassurance. We compared the return of intestinal function after intra-abdominal operations in 2 groups of patients: the suggestion group received specific instructions for the early return of gastrointestinal motility, and the control group received an equal-length interview offering reassurance and nonspecific instructions. The suggestion group had a significantly shorter average time to the return of intestinal motility, 2.6 versus 4.1 days. Time to

discharge was 6.5 versus 8.1 days. Covariates including duration of operation, amount of intraoperative bowel manipulation, and amount of postoperative narcotics were also examined using the statistical model analysis of covariance. An average savings of \$1,200 per patient resulted from this simple 5-minute intervention. In summary, the use of specific physiologically active suggestions given preoperatively in a believable manner can reduce the morbidity associated with an intra-abdominal operation by reducing the duration of ileus.

Enqvist B, Fischer K. Preoperative hypnotic techniques reduce consumption of analgesics after surgical removal of third mandibular molars: a brief communication. *International Journal of Clinical & Experimental Hypnosis* 1997;45(2):102-8 The effects of hypnosis in connection with surgery have been described in many clinical publications, but few controlled studies have been published. The aim of the present study was to evaluate the effects of preoperative hypnotic techniques used by patients planned for surgical removal of third mandibular molars. The patients were randomly assigned to an experimental (hypnotic techniques) or a control (no hypnotic techniques) group. During the week before the surgery, the experimental group listened to an audiotope containing a hypnotic relaxation induction. Posthypnotic suggestions of healing and recovery were given on the tape together with advice regarding ways to achieve control over stress and pain. The control group received no hypnotic intervention. Only one surgeon who was not aware of patient group assignments performed all the operations. Thirty-six patients in the control group were compared to 33 patients in the experimental group. Anxiety before the operation increased significantly in the control group but remained at baseline level in the experimental group. Postoperative consumption of analgesics was significantly reduced in the experimental group compared to the control group.

Evans C, Richardson PH Therapeutic suggestions during general anesthesia *Advances* 1988;5(4):6-11 Tested the hypothesis that the quality and duration of recovery from surgery would be improved by therapeutic suggestions made while patients were under general anesthesia, in a double-blind randomized controlled study of 39 adult hospital patients who were admitted for an abdominal hysterectomy. Results support the hypothesis.

Greenleaf M, Fisher S, Miaskowski C, DuHamel K. Hypnotizability and recovery from cardiac surgery. *American Journal of Clinical Hypnosis* 1992;35(2):119-28 We studied 32 coronary bypass patients to examine the effect of hypnosis on recovery from surgery. The patients were assessed for hypnotizability with the Hypnotic Induction Profile (HIP) and assigned to experimental groups with a random stratification procedure to equate for differences in hypnotizability, age, and severity of illness. We taught patients in groups one and two formal hypnosis with different treatment strategies; patients in group three were not taught formal hypnosis or a treatment strategy. Scores on the HIP were significant predictors of recovery, independent of experimental treatment with formal hypnosis. Patients who scored "Midrange" stabilized more quickly in the intensive care unit (ICU) than those who scored "High" or "Low" ( $p < .05$ ). Patients who scored "High" had more labile blood pressure in the ICU compared to the "Midrange" and "Lows" ( $p < .05$ ). Measured hypnotizability was associated with the recovery sequence from surgery.

Johnston M, Vogele C Benefits of psychological preparation for surgery: A meta analysis *Ann Behav Med.* 1993;15(4):245-256 There is now substantial agreement that psychological preparation for surgery is beneficial to patients. It is important, however, to establish which benefits can be achieved by psychological preparation and if all forms of preparation are equally effective. The results of randomized controlled trials of psychological methods of preparing adult patients for surgery were analyzed in terms of eight outputs (negative affect, pain, pain medication, length of stay, behavioral and clinical indices of recovery, physiological indices, and satisfaction). In order to reduce publication bias, published as well as unpublished studies were included in the meta analysis. It was concluded that significant benefits can be obtained on all of the major outcome variables that have been explored. Procedural information and behavioral instructions show the most ubiquitous effects in improving

measures of post-operative recovery. The results have implications for the improvement of patient care in surgical units.

Lambert SA. The effects of hypnosis/guided imagery on the postoperative course of children. *Journal of Developmental & Behavioral Pediatrics*. 1996;17(5):307-10 Hypnosis, guided imagery, and relaxation have been shown to improve the postoperative course of adult surgical patients. Children have successfully used hypnosis/guided imagery to significantly reduce the pain associated with invasive procedures and to improve selected medical conditions. The purpose of this study was to examine the effect of hypnosis/guided imagery on the postoperative course of pediatric surgical patients. Fifty-two children (matched for sex, age, and diagnosis) were randomly assigned to an experimental or control group. The experimental group was taught guided imagery by the investigator. Practice of the imagery technique included suggestions for a favorable postoperative course. Significantly lower postoperative pain ratings and shorter hospital stays occurred for children in the experimental group. State anxiety was decreased for the guided imagery group and increased postoperatively for the control group. This study demonstrates the positive effects of hypnosis/guided imagery for the pediatric surgical patient.

McLintock TT. Aitken H. Downie CF. Kenny GN. Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *BMJ* 1990;301(6755):788-90 **OBJECTIVE--**To establish whether positive suggestions given to a patient under general anaesthesia reduce postoperative pain and analgesic requirements. **DESIGN--**Prospective double blind randomised study. **SETTING--**Operating theatre and gynaecology ward of a teaching hospital. **PATIENTS--**63 Woman undergoing elective abdominal hysterectomy were randomised to be played either a tape of positive suggestions or a blank tape during the operation through a personal stereo system. **INTERVENTIONS--**Three women were withdrawn from the study. Anaesthesia was standardised for all of the women. Postoperative analgesia was provided through a patient controlled analgesia system for the first 24 hours. Pain scores were recorded every six hours. **MAIN OUTCOME MEASURES--**Morphine consumption over the first 24 hours after the operation; pain scores. **RESULTS--**Mean morphine requirements were 51.0 mg (95% confidence interval 42.1 to 60.0 mg in the women played positive suggestions; and 65.7 mg (55.6 to 75.7 mg) in those played a blank tape. The point estimate (95% confidence interval) for the difference of means was 14.6 mg (22.4%) (1.9 (2.9%) to 27.3 mg (41.6%)] ( $p = 0.028$ ). Pain scores were similar in the two groups. **CONCLUSION--**Positive intraoperative suggestions seem to have a significant effect in reducing patients' morphine requirements in the early postoperative period.

## T RESE3ARCH

### TASK MOTIVATION.

1999

Comey, Gail; Kirsch, Irving (1999). Intentional and spontaneous imagery in hypnosis: The phenomenology of hypnotic responding. *International Journal of Clinical and Experimental Hypnosis*, 47 (1), 65-85.

Students were given 1 of 2 versions of the Carleton University Responsiveness to Suggestion Scale (CURSS): (a) the original version, which contains instructions to intentionally imagine goal-directed fantasies, and (b) a modified version, in which instructions for suggestion-related imagery were deleted. Participants were asked to report their goal-directed fantasies and to indicate whether these occurred spontaneously or were generated intentionally. They were also asked whether they had tried intentionally to generate the suggested experience and to indicate whether they had believed that the suggested states of affairs were real (e.g., whether they thought a hallucinated cat really existed). The

deletion of instructions for goal-related imagery significantly increased responsiveness to CURSS suggestions. Spontaneous goal-directed imagery was significantly correlated with behavioral response, but intentional imagery was not. Most successful responders tried to generate suggested experiences intentionally, indicated that they could have resisted challenge suggestions if they really wanted to, and reported believing in the reality of suggested ideomotor and challenge experiences but not of cognitive suggestions. Voluntary attempts to generate suggested experiences were correlated with subjective responding.

1992

Bowers, Kenneth S. (1992). Imagination and dissociation in hypnotic responding. International Journal of Clinical and Experimental Hypnosis, 40 (4), 253-275.

A neodissociative model of mind is better equipped than a social-psychological model to deal with the complexities of hypnosis, and of human behavior generally. It recognizes, as Coe's (1992) model does not, that behavior can be more automatically activated than strategically enacted. In particular, Coe's emphasis on human behavior as purposeful and goal directed does not distinguish between goal-directed behavior that serves a purpose, and goal-directed behavior that is performed on purpose. It is this distinction that permits goal-directed behavior to be dissociated from a person's conscious plans and intentions. In addition to offering a critique of Coe's "limited process" view of hypnosis, 4 main points are made in the interest of developing a slightly modified, neodissociation view of hypnosis. First, it is argued that goal-directed fantasies are more limited in their ability to mediate hypnotic responding than is commonly appreciated; as well, they do not seem to account for the nonvolitional quality of hypnotic responding. Second, it is argued that hypnotic ability is not unidimensional, with compliance and social influence more apt to account for the low than for the high hypnotizable's responsiveness to suggestion. Third, compared to low hypnotizables, the hypnotic responsiveness of high hypnotizables seems more likely to result from dissociated control. In other words, for high hypnotizables, hypnotic suggestions may often directly activate subsystems of cognitive control. Consequently, the need for executive initiative and effort to produce hypnotically suggested behavior is minimized, and such responses are therefore experienced as nonvolitional. Fourth and finally, while goal-directed fantasies typically accompany hypnotically suggested responses, they are in many cases more a marker of dissociated control than a mediator of suggested effects.

1988

Spanos, Nicholas P.; Gwynn, Maxwell I.; Della Malva, C. Lori; Bertrand Lorne D. (1988). Social psychological factors in the genesis of posthypnotic source amnesia. Journal of Abnormal Psychology, 97 (3), 322-329.

Three experiments assessed the role of social psychological variables in source amnesia. Experiment 1 found that low-hypnotizable subjects instructed to simulate partial amnesia were more likely to exhibit source amnesia than high-hypnotizable hypnotic or task-motivated subjects. Experiment 2 found equivalent rates of source amnesia in low-hypnotizable simulators and high-hypnotizable hypnotic subjects. In addition, the findings of Experiment 2 failed to support the idea that the instructions for partial amnesia given to simulators cued for the occurrence of source of amnesia as well as for the occurrence of partial amnesia. In Experiment 3, preliminary instructions that legitimated source amnesia as a role-appropriate response produced significantly more posthypnotic source amnesia than did neutral or no instructions. Together, the findings of the 3 experiments support the relation of source amnesia to experimental demands and subjects' expectations.

1986

Sweeney, Carol A.; Lynn, Steven Jay; Bellezza, Francis S. (1986). Hypnosis, hypnotizability, and imagery-mediated learning. International Journal of Clinical and Experimental Hypnosis, 34, 29-40.

The relationship between hypnotizability, imagery utilization ability, and hypnosis was examined in a study described to Ss (N = 157) as an 'imagery experiment.' In Session 1, the Tellegen Absorption Scale (Tellegen, 1976) was completed and the imagery-mediated paired-associate learning task was administered as a baseline measure. In Session 2, either hypnosis, task motivation, or no treatment instructions were administered and the learning task was repeated with a different word list (each 15 high, 15 low imagery pairs). In Session 3, the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) was administered. Overall, recall was superior for high imagery words. Hypnotizability was not associated with imagery-mediated recall. Recall performance, however, was correlated with Tellegen Absorption Scale scores. Interestingly, learning and recall performance decreased between Sessions 1 and 2 for hypnotized Ss but remained the same for task motivated and control Ss. The decrease in performance was mediated by less concern for performance and diminished anxiety. Self-reports of imagery utilization did not differ among groups of Ss.

## NOTES

The authors review literature on the relationship between hypnotizability, hypnosis, and imagery abilities, noting that results are conflicting. One reason for differing results may be that imagery scales are self-report measures, subject to reporting bias of varying types. The imagery-mediated paired-associate learning paradigm, using high and low imagery paired associates, may address that reporting bias issue.

This investigation used 157 Ss grouped into high (9-12), medium (5-8), and low (0-4) hypnotizability levels on the basis of the Harvard Scale. Given the fact that high imagery words are usually recalled more easily than low imagery words (Paivio, 1971), a relationship observed between hypnotizability and imagery-mediated recall would elucidate the role of imagery utilization for memory functions.

The experimental conditions included hypnosis, task motivation, and a no treatment control condition, in order to evaluate the possible enhancement effects of hypnosis on imagery utilization for memory functions. The task motivation group was included to control for motivational factors, and the no treatment control condition to control for the practice effects of repeated testing.

The word pair stimuli were from Paivio et al (1968): 30 pairs consisting of 15 high and 15 low imagery noun pairs. Each Subject participated in three experimental sessions.

Session 1. Ss were told that they were in an experiment on imagery to remember pairs of words. They completed the Tellegen Absorption Scale, then were given instructions for using imagery for recalling words, and for rating vividness and clarity of each image immediately after it was formed. Finally they performed the learning task.

Session 2. Ss received either hypnosis, task motivation instructions ("try to form good interacting images of the word pairs" with exhortation to score as high as possible), or control (Like Session 1). No one in hypnosis group refused the induction (despite the fact that they were not forewarned in Session 1 that the experiment might involve hypnosis). Ss completed a questionnaire on the percentage of word pairs they used images to remember, how easy it was to block out or ignore distractions, how vivid and clear were images of words during recall, how concerned they were about their performance, and how much anxiety, if any, they experienced during the experiment.

Session 3. The Harvard Scale was administered. Three Ss declined to participate in the Harvard Scale administration.

The results were analyzed with a 3 x 2 x 2 x 2 repeated-measures ANOVA: hypnotizability, instruction (hypnotic induction, task motivation, no treatment), session (1 and 2), and pair imagery (high and low). The expected enhanced memory performance of high hypnotizables with high imagery words in the hypnosis condition did not emerge in the results. However, the expected stimulus-imagery effect was

observed (a higher proportion of high imagery words than low imagery words recalled). The expected higher imagery ratings for hypnotized high hypnotizable Ss also was not found. Furthermore, there was a significant interaction effect for recall session by hypnotizability: low hypnotizable Ss rated imagery less vivid in Session 2 than in Session 1, while highs rated it more vivid in Session 2 than in Session 1. Thus, low hypnotizable Ss' imagery ratings actually decreased between Recall Session 1 and 2, while high hypnotizable Ss' imagery ratings increased between Recall Session 1 and 2.

While the Absorption Scale correlated with the Harvard (.28,  $p < .001$ ) and with various measures of recall, hypnotizability did not correlate with any of the recall measures. The questionnaires administered during Session 2 suggested that hypnotized Ss were less concerned and anxious than the no treatment control Ss, and less concerned than the Ss receiving task motivation instructions.

In their Discussion, the authors speculate that the strong stimulus-imagery effects might have made it unlikely for them to find differences between high, medium, and low hypnotizable Ss in imagery-based paired associate learning. They suggest including word pairs that range across the continuum of imagery ratings in future research. They also speculate that differences between hypnotizability levels might be found (as 'T Hoen reported in 1978 publication) if Ss were required to respond in a shorter time interval, or if hypnotizability were measured by a scale with more cognitive items than the Harvard Scale--both conditions in 'T Hoen's research protocol.

"The most striking finding of the present research is that instead of facilitating performance in an imagery-mediated recall task, hypnosis resulted in a decrement in recall relative to control conditions. In the hypnotic condition, the amount of learning actually decreased from one session to the next (waking-hypnosis) but remained equivalent in the task motivation (waking-task motivation) and no treatment groups (waking-waking)" (p. 37). The authors note that it is not possible to determine from their research design whether hypnosis interfered with the learning task, the retrieval task, or both.

"The findings suggest that hypnotizability may be related to reported vividness and clarity of imagery but unrelated to the actual ability to utilize imagery in an imagery-mediated paired-associate learning task. ... Although high hypnotizables' self-report ratings of imagery and vividness increased, their recall performance was not accordingly enhanced. The disparity between subjective and objective measures underscores the importance of including both types of measures in studies of imagery abilities" (pp. 37- 38).

To a considerable degree, this study controlled for Ss' expectancies regarding hypnosis better than some earlier studies. This study differs from earlier research in that (1) Experimenters didn't test hypnotizability prior to the imagery-mediation task; and (2) the study was defined as an experiment on imagery, and hypnosis was not mentioned until just before the induction in Session 2.

"In conclusion, the present results indicate that, under certain conditions, hypnosis may decrease Ss' motivation and performance. No support was provided for the ability of hypnosis to facilitate imagery utilization and performance on an imagery-mediated task. The results are compatible with the views proffered [sic] by theoreticians who have emphasized the importance of expectancies and the experimental context (e.g., Barber, 1979; Coe & Sarbin, 1977; M. T. Orne, 1951, 1959; Spanos, 1982)" (p. 38).

1985

Ashton, M.A.; McDonald, R.D. (1985). Effects of hypnosis on verbal and non-verbal creativity. International Journal of Clinical and Experimental Hypnosis, 33 (1), 15-26.

60 female volunteers, 30 hypnotizable and 30 un hypnotizable, screened on 2 measures of hypnotizability, were assigned to a hypnosis, simulation, or waking motivated treatment condition to assess whether hypnosis has a differentially enhancing effect upon verbal and non-verbal creativity test performance. Verbal and figural components of the Torrance Tests of Creative Thinking (Torrance, 1974) and the Sounds and Images Test (Cunnington & Torrance, 1965) were the principal

dependent variables. Postexperimental measures of absorption and effortless experiencing were also obtained. A 2 x 3 independent groups ANOVA did not sustain the prediction of an interaction effect between S hypnotizability and the presence of hypnosis on 3 composite measures of verbal and nonverbal creativity. Although there was an absence of treatment effects, hypnotizable Ss consistently achieved higher scores on the Torrance scoring categories, and their performance was statistically superior on a composite index of overall creativity. Absorption and effortless experiencing measures were also significantly higher for hypnotizable Ss than for un hypnotizable Ss.

Salzberg, H. C.; DePiano, F. A. (1980). Hypnotizability and task motivating suggestions: A further look at how they affect performance. International Journal of Clinical and Experimental Hypnosis, 28 (3), 261-271.

An attempt was made to ferret out the separate effects on cognitive performance of hypnotic susceptibility, task motivating suggestions, and the hypnotic trance state. An equal number of susceptible and unsusceptible Ss were given 3 cognitive tasks, first to ascertain their baseline performances, and then again following either a traditional hypnotic induction, an alert trance induction or a short interview. All Ss were given task motivating suggestions prior to administering the alternate form of the 3 tasks. An additional control group of Ss was used to assess practice effects. Results indicated that task motivating suggestions were effective in enhancing performance for all groups on the digit symbol and abstract reasoning tasks but not on the memory task. Waking suggestion Ss performed as well as hypnotized SWs when both groups of Ss were given task motivating suggestions. It was concluded that when the experimental design of a study incorporates necessary controls, hypnosis does not facilitate performance.

Spanos, Nicholas P.; Radtke-Bodorik, H. Lorraine; Shabinsky, Michael A. (1980). Amnesia, subjective organization, and learning of a list of unrelated words in hypnotic and task-motivated subjects. International Journal of Clinical and Experimental Hypnosis, 28 (2), 126-139.

Hypnotic and task-motivated Ss learned a list of unrelated nouns and were then administered an amnesia suggestion for the list. Hypnotic Ss showed slower learning but more amnesia than task-motivated Ss. Hypnotic and task-motivated Ss showed an equivalent degree of "breakdown" in the subjective organization of their recall following the amnesia suggestion. However, the extent of this breakdown in subjective organization, was unrelated either to Ss' degree of amnesia or to their level of hypnotic susceptibility. A substantial proportion of Ss who failed to recall any words following the suggestion (total nonrecallers) later reported that they remembered but did not say at least some of the words. The theoretical implications of these findings are discussed.

1976

Connors, J.; Sheehan, P. W. (1976). Analysis of the cue characteristics of task motivational instructions. International Journal of Clinical and Experimental Hypnosis, 24, 287-299.

This study investigated the assumption of Barber's model of hypnosis that its set of task motivational instructions is thoroughly "nonhypnotic" in character. If this assumption is correct, then the cues associated naturally with task motivational instructions should be more compatible with a suggestibility test situation explicitly defined as nonhypnotic than with one defined as hypnotic, and this affinity should be reflected in both Ss' objective and subjective suggestibility test scores. Barber's (1965) Suggestibility Scale data collected from 90 Ss did not confirm the main prediction under test, but results failed to provide unequivocal support for the model; subjective evidence, in particular, supported least well the assumptions of the paradigm.

Spanos, Nicholas P.; Spillane, Jeanne; McPeake, John (1976). Cognitive strategies and response to suggestion in hypnotic and task-motivated subjects. American Journal of Clinical Hypnosis, 18, 254-262.

Thirty-two male and 32 female subjects, exposed to an hypnotic induction or task-motivational instruction, were administered either three suggestions which provided a cognitive strategy (i.e., a goal-directed fantasy, GDF) for experiencing suggested effects, or three suggestions that did not provide such a strategy. Subjects provided with GDF strategies were more responsive overtly and subjectively to two out of the three suggestions. Subjects in the No GDF Strategy treatment who spontaneously devised their own goal-directed fantasies were more responsive to suggestions than subjects who failed to devise such a strategy. These results support the contention that goal-directed fantasy helps both hypnotic and non-hypnotic subjects experience suggested effects.

1970

Swiercinsky, Dennis; Coe, William C. (1970). Hypnosis, hypnotic responsiveness, and learning meaningful material. International Journal of Clinical and Experimental Hypnosis, 18 (3), 217-222.

RESPONSES TO TEST SUGGESTIONS (E.G., HALLUCINATION AND AMNESIA) WERE ASSESSED UNDER THE FOLLOWING TREATMENTS: MOTIVATIONAL INSTRUCTIONS ALONE, HYPNOTIC PROCEDURE WITH MOTIVATIONAL INSTRUCTIONS, AND IMAGINATION-CONTROL. COMPARISONS WERE MADE ACROSS INDEPENDENT GROUPS, EACH TESTED UNDER 1 TREATMENT, AND ALSO WITHIN THE SAME SS TESTED TWICE UNDER VARIOUS COMBINATIONS OF THE TREATMENTS. ALTHOUGH SS WERE SUGGESTIBLE UNDER THE IMAGINATION-CONTROL TREATMENT, BOTH THE MOTIVATIONAL INSTRUCTIONS ALONE AND THE HYPNOTIC PROCEDURE GIVEN TOGETHER WITH THE MOTIVATIONAL INSTRUCTIONS RAISED SUGGESTIBILITY ABOVE THE CONTROL LEVEL. THE HYPNOTIC-MOTIVATIONAL TREATMENT TENDED TO PRODUCE AN INCREMENT IN SUGGESTIBILITY WHICH WENT SLIGHTLY BEYOND THAT ATTRIBUTABLE TO THE MOTIVATIONAL INSTRUCTIONS. THE LATTER INCREMENT IS INTERPRETED AS DUE TO THE SLIGHTLY GREATER EFFECTIVENESS OF THE HYPNOTIC PROCEDURE IN DEFINING THE SITUATION AS ONE IN WHICH UNUSUAL MANIFESTATIONS, SUCH AS HALLUCINATION AND AMNESIA, ARE WITHIN SS' CAPABILITIES AND DEFINITELY EXPECTED BY E. (SPANISH + GERMAN SUMMARIES) (23 REF.) (PscINFO Database Record (c) 2002 APA, all rights reserved)

Bowers, Kenneth S. (1968). Hypnosis and creativity: A preliminary investigation. International Journal of Clinical and Experimental Hypnosis, 16, 38-52.

24 HIGHLY SELECTED, HYPNOTICALLY TRAINED COLLEGE STUDENTS WERE CAST INTO HYPNOTIC AND HYPNOSIS SIMULATING GROUPS AND GIVEN SUGGESTIONS TO BEHAVE CREATIVELY ON THE CONSEQUENCES TEST OF ORIGINALITY. NO DIFFERENCES BETWEEN THE 2 GROUPS APPEARED. THEY DID APPEAR, HOWEVER, ON A CONCEPT FORMATION TASK AS A FUNCTION OF TASK-INVOLVEMENT INSTRUCTIONS, IRRESPECTIVE OF WHETHER SS WERE HYPNOTIZED OR SIMULATING HYPNOSIS. MOREOVER, AWARENESS OF RESPONSE REINFORCEMENT CONTINGENCIES WAS STRONGLY INFLUENCED BY THE INVOLVING SUGGESTIONS. THE NEGATIVE FINDINGS ON THE CREATIVITY TEST WERE ATTRIBUTED TO THE EXCELLENT PERFORMANCE OF THE SIMULATOR SS. IT IS SUGGESTED THAT PERHAPS

SUSCEPTIBILITY PER SE INTERACTS WITH ROLE PLAYING INSTRUCTIONS IN GENERATING MORE REGRESSIVE MODES OF THINKING. (SPANISH + GERMAN ABSTRACTS) (2 P. REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Hartman, B. J. (1967). Hypnotizability as affected by attitudinal and motivational variables. International Journal of Clinical and Experimental Hypnosis, 86-90.

ATTEMPTED TO DISCOVER WHETHER TASK-MOTIVATED SS WOULD BE MORE HYPNOTIZABLE THAN THOSE NOT GIVEN TASK-MOTIVATION INSTRUCTIONS, AND WHETHER THE ATTITUDE OF THE E WOULD AFFECT SS' HYPNOTIZABILITY. THE BARBER SUGGESTIBILITY SCALE WAS EMPLOYED FOR MEASURING SUSCEPTIBILITY TO HYPNOSIS. SS WERE DIVIDED RANDOMLY INTO 6 GROUPS OF 10: TASK-MOTIVATED, E NEUTRAL; NON-TASK-MOTIVATED, E NEUTRAL; TASK-MOTIVATED, E FRIENDLY; TASK-MOTIVATED, E HARSH; NON-TASK-MOTIVATED, E FRIENDLY; AND NON-TASK-MOTIVATED, E HARSH. ANALYSES OF VARIANCE, BOTH FOR OBJECTIVE AND SUBJECTIVE SCORES, DID NOT YIELD SIGNIFICANT RESULTS FOR THE TASK-MOTIVATION VARIABLE BUT DID YIELD SIGNIFICANT RESULTS ( $P = .01$ ) FOR THE VARIABLE DEALING WITH E ATTITUDE. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Glass, Louis B.; Barber, Theodore X. (1961). A note on hypnotic behavior, the definition of the situation and the placebo effect. Journal of Nervous and Mental Disease, 132, 539-541.

Subjects were tested for responses to hypnotizability tests under three conditions: after 20 minute induction, after being told they would not be hypnotized but would take tests of imagination (with motivating instructions to do well), after taking a placebo pill that "would make them deeply hypnotized." Of 12 Ss who dropped in score between Session 1 and Session 2, 11 attained higher scores following placebo than during the control session; mean scores under placebo and control (5.8 and 3.7) differed significantly,  $p < .01$ . Scores were as high in the third as the first session (5.8 and 6.3 respectively).

## TECHNIQUE

1993

Lynn, Steven Jay; Neufeld, Victor; Mare, Cornelia (1993). Direct versus indirect suggestions: A conceptual and methodological review. International Journal of Clinical and Experimental Hypnosis, 31, 124-152.

The article reviews the literature on the effects of direct versus indirect hypnotic suggestions. A conceptual and methodological analysis of direct versus indirect suggestions is also provided. Three conclusions follow from the review: (a) Contrary to views of Ericksonian hypnotists, suggestion style has little effect on objective responding to hypnotic test items; (b) studies of clinical- and laboratory-induced pain and other measures of subjective experience have yielded contradictory results--however, the best controlled studies have not indicated that indirect suggestions are superior to direct suggestions; and (c) there is insufficient evidence to conclude that hypnotizability level and suggestion wording interact, such that low hypnotizable subjects are particularly responsive to indirect suggestions. Methodological and conceptual problems in defining and studying hypnotic

communications, the lack of rigorous experimental controls, and research issues and directions are highlighted.

#### NOTES

Although this article is primarily concerned with the nature of suggestion, the review also mentions several studies comparing hypnosis with other interventions for pain, in passing:

Crowley (1980)

Snow (1979)

Omer, Darnel, Silberman, Shuval, & Palti (1988)

Stern (1982)

Bassman (1983)

"Like the clinical studies using the RIA [Rapid Induction Analgesia], pain studies that did not use the RIA lack appropriate control groups: Neither Bassman's (1983) nor Stern's (1982) research explicitly compared direct and indirect suggestions. What our review does suggest is that studies (e.g., Crowley, 1980; Snow, 1979; Van Gorp et al., 1985) that imposed the greatest degree of methodological control yielded the outcomes least favorable to the hypothesis that indirect suggestions are effective and account for the pain relief achieved, above and beyond factors common to placebo treatments" (p. 132).

"Lynn and his colleagues' studies indicate that whereas indirect suggestions enhance archaic representations of the hypnotist, direct suggestions facilitate involvement in the events of hypnosis, as measured by subjective involvement and involuntariness" (p. 136).

Schoen, Marc (1993). Resistance to health: When the mind interferes with the desire to become well. American Journal of Clinical Hypnosis, 36, 47-54.

Secondary gain has long been viewed as a variable that can significantly affect a patient's recovery from such conditions as chronic pain disorders, factitious and somataform disorders, and other psychological disorders. Secondary gain has not been evaluated in terms of its impact on major illnesses such as cancer or autoimmune disorders. In this paper I discuss how secondary gain can be present in such illnesses and how it results in a resistance to health. This resistance to health can lead not only to medical noncompliance, but can also ultimately affect the progression and recovery from the illness. I describe how hypnosis can be used to ferret out this resistance to health and how patients in a hypnotic state will indicate or express their resistance to becoming healthy. The advantage of this approach is that it enables the clinician to deal directly with the patient's unconscious resistance to health.

Szabo, Csaba (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. International Journal of Clinical and Experimental Hypnosis, 41, 225-233.

The effect of two hypnotic induction styles on subjective experience was measured in an experiment in which 44 subjects participated in both traditional direct hypnosis, induced by the Stanford Hypnotic Susceptibility Scale, Form A, and indirect hypnosis (presented in counterbalanced order), followed by 4 minutes of rest before dehypnosis. The depth of hypnosis was measured retrospectively by a subjective scale, and the structure of experiences was measured by the Phenomenology of Consciousness Inventory. Subjects were subsequently administered the Stanford Hypnotic Susceptibility Scale, Form B, so that awareness of their hypnotizability would not affect their subjective depth reports. No differences were found in a comparison of subjects' structure of experiences in direct and indirect hypnosis. In addition, low and medium hypnotizable subjects reported indirect hypnosis as deeper. This may reflect the possibility that while hypnotized different mechanisms come into play for subjects high in hypnotizability compared to those who are less hypnotizable.

1992

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

Excluded: Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

Music: Herb Ernst, Dreamflight II. Suggestions: Music background, permissive, based on Evans & Richardson's study.

Outcome Measures: Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

Herbert, James D.; Mueser, Kim T. (1992). Eye movement desensitization: A critique of the evidence. Journal of Behavior Therapy and Experimental Psychiatry.

The scientific evidence supporting the efficacy of eye movement desensitization (EMD), a novel intervention for traumatic memories and related conditions, is reviewed. The sparse research conducted in this area has serious methodological flaws, precluding definite conclusions regarding the effectiveness of the procedure. Clinicians are cautioned against uncritically accepting the clinical efficacy of EMD.

Lohr, Jeffrey M.; Kleinknecht, Ronald A.; Conley, Althea T.; Dal Cerro, Steven; Schmidt, Joel; Sonntag, Michael E. (1992). A methodological critique of the current status of eye movement desensitization (EMD). Journal of Behavior Therapy and Experimental Psychiatry.

Eye Movement Desensitization (EMD) has been recently advocated as a rapid treatment for the elimination of traumatic memories responsible for the maintenance of a number of anxiety disorders

and their clinical correlates. Despite a limited conceptual framework, EMD has attracted considerable interest among clinicians and researchers. The popularity and interest generated by EMD will likely result in wide usage. We present a methodological critique of it with reference to assessment, treatment outcome, and treatment process. We also provide guidelines for judging the methodological adequacy of research on EMD and suggest intensive research to assess effectiveness, treatment components, and comparisons with other procedures.

Page, Roger A.; Handley, George W. (1992). Effects of 'deepening' techniques on hypnotic depth and responding. International Journal of Clinical and Experimental Hypnosis, 40, 157-168.

The present study attempted to assess the effectiveness of commonly used deepening techniques and of surreptitiously provided stimulation on hypnotizability scores, in-hypnosis depth reports, retrospective realness ratings, and the Field Inventory of Hypnotic Depth (Field, 1965). High, medium, and low hypnotizables were assigned in equal numbers to 1 of 3 groups, each containing 54 Subjects. Controls were compared to Subjects receiving 2 deepening techniques or 2 suggestions for positive and negative hallucinations that were surreptitiously enhanced. Of the 4 dependent measures employed, the only significant difference between groups related to a change in depth reports for the manipulation items themselves, leading to the conclusion that the effect of the techniques was at best minimal and transient. Some methodological and conceptual issues are also discussed.

Sheehan, Peter W. (1992). The phenomenology of hypnosis and the Experiential Analysis Technique. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 364-389). New York: Guilford Press.

## NOTES

The problem with behavioral assessment methods such as hypnotizability scales is that similar behavioral responses to hypnotic suggestions may occur for very different reasons. It is important to assess the phenomenological experience of hypnotic Ss. The Experience Analysis Technique (EAT) is a method for assessing the phenomenology of hypnosis. The EAT "consists of gathering the comments of hypnotic subjects about their hypnotic behavior and experience, as they view the video playback of their hypnotic sessions" (p. 372). The EAT draws its origins from Kagan's method of Interpersonal Process Recall [IPR], in which "counselors in training could review and react to, their contact with clients immediately after therapy sessions. An independent person, present at the review of the session, would inquire into the interaction between the counselor and client by stopping the tape and questioning the client about his or her underlying feelings and thoughts, so facilitating and clarifying the information being recalled" (p. 371). It is important that the interviewer be a different person than the hypnotist.

Hammer, Walker & Diment (1978) applied the IPR to hypnosis, using audiotape. Using the videotape EAT with hypnosis, Sheehan & McConkey (1982; Sheehan, McConkey & Cross, 1978) noted that hypnotic Ss might exhibit any of three different response styles, sometimes related to hypnotic task complexity: 1. Concentrative/cooperative style - S focuses on hypnotist's words, imagining a literal interpretation 2. Independent style - S interprets hypnotist's words in a way that is meaningful to them 3. Constructive style - S considers the communications "from a position of preparedness to process incoming stimuli in a schematic way, so as to structure or re-organize events according to the hypnotist's suggestions"

Some Ss who are high in susceptibility show greater flexibility in the use of cognitive styles than low susceptibility Ss.

Examples of the use of the EAT to evaluate several phenomena observed in experimental and clinical settings are provided: 'duality' during age regression, trance logic, posthypnotic amnesia, pseudomemories, and rapport.

The author reviews the concept of 'countering.' "Countering occurs when a S responds in accord with the wishes of the hypnotist when social influences to respond otherwise are also present in the situation. ... Counterers display a constructive (i.e. active and idiosyncratic) style of cognizing which enables them to make personal sense of the conflicting demands by preserving the integrity of each. ... Counterers, even though they demonstrate a higher degree of involvement with the hypnotist, fail reliably to score as highly on standard tests of susceptibility (e.g. the Stanford Hypnotic Susceptibility Scale, Form C) as subjects who do not counter (Sheehan, 1980). This second finding points to differential effects of rapport on Ss which are not explicable in terms of level of hypnotic susceptibility or simple willingness to comply with anticipated, obvious suggestions. Techniques like the EAT, which are sensitively attuned to detect the personal commitment of subjects to the hypnotist, are needed to detect subtle processes of this kind" (pp. 385- 386).

The author evaluates different reporting techniques used to examine the phenomenological experience of hypnosis (the Chicago Paradigm of Fromm & Kahn, 1990; Shor's phenomenological method; the Field's Inventory Scale of Hypnotic Depth) and evaluates the effects of rapport with the E on the measurement of subjective response. He suggests various experimental controls (e.g. disguising the true aims of the experiment). A measure of rapport or psychodynamic transference to the hypnotist, the Archaic Involvement Measure (AIM) has been developed by Nash and Spinler (1989).

"Experience cannot simply be observed objectively; it may not be reported spontaneously by the experienter; and it may not even be elicited through ordinary forms of interaction" (p. 388).

"What phenomenological research has shown over the last decade is that hypnotic experience is both multifaceted and complex. It has given us a view of the hypnotic subject as a person who participates actively in the hypnotic process, who is susceptible to the influence of motivations and expectations, and who employs a variety of cognitive strategies so as to manage and respond to multiple levels of communication received in the hypnotic setting. Standard techniques of assessment, especially those emphasizing the primacy of behavioral data and those offering structured choices, are not equipped to reveal the full meaning of hypnotic responsiveness" (p. 388).

"If an instrument of assessment assumes a unidimensional underlying process when there are multiple dimensions operating, then that instrument will be deficient in measuring experience by producing equivalent ratings for very different experiences, and thus will be deficient in measuring overall experience. Measurement of trance-depth poses just such a problem, and measurement of hypnotic experience in its full complexity even more so" (pp. 388-389).

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. Hospice Journal, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

1991Mauer, D. R. (1991, October). A comparison of cognitive-behavioral and hypnotic techniques in the management of electromyography pain (Dissertation, University of Iowa). Dissertation Abstracts International, 53 (4), 1070-B. (Order No. DA 9217180)

"Compared a cognitive behavioral technique that included providing specific sensory and procedural information combined with relaxation with a hypnotic technique (relaxation with guided imagery) and a control group for management of acute EMG pain and anxiety. Pain and anxiety ratings were gathered from 45 EMG patients and observers for both nerve conduction and needle electrode components of the EMG exam. It was found that only the hypnosis group significantly reduced pain and anxiety during the needle electrode portion of the procedure. Patients with unexplained or functional symptoms reported more EMG pain and anxiety than patients who had an organically based disease. Because having had a prior EMG seemed to have an effect on the efficacy of treatment, the data were reexamined. Results determined that inexperienced EMG patients who were treated had less pain and anxiety than patients who experienced EMG before, but inexperienced control patients had an increase in pain and anxiety over experienced patients" (p. 1070).

Strauss, Billie S. (1991). The use of a multimodal image, the apple technique, to facilitate clinical hypnosis: A brief communication. International Journal of Clinical and Experimental Hypnosis, 39, 1-5.

A 1- to 3-minute exercise involving imagination (of an apple) and ideomotor ideation (hand levitation) is a simple, benign technique that is useful for illustrating to patients the nature of imagery and hypnosis. It avoids power struggles and allows a reasonable approximation of the patient's capacity for imagery and hypnotic responsiveness, without emphasizing the use of a hypnotic procedure. When administered to 35 college students, the hand levitation component of this exercise correlated with the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & E. R. Hilgard, 1963) ( $r = .66$ ,  $p < .001$ ) and with the Stanford Hypnotic Clinical Scale: Adult (Morgan & J. R. Hilgard, 1975, 1978/79) ( $r = .60$ ,  $p < .001$ ).

NOTES: Hypnosis is explained as involving imagination and concentration. Then the patient is asked to participate as the clinician checks their imagination. The patient is asked to close their eyes and hold out their hand, after which the clinician says "I'm going to put an apple in your hand; describe the apple to me." The patient is prompted to report multiple sensory modalities with questions Like, "Does the apple have weight? Does it have a smell? Would you Like to take a bite out of the apple? How does it sound as you chew it?" The clinician can obtain useful information about the patient's preferred sensory modalities, the amount of structure required to engage in imaginal activities, etc.

If the patient becomes very involved with the image and would Like to continue the experience on into hypnosis, the clinician can ask them to concentrate on the apple's weight, then tell the patient that s/he will take the apple from the patient's hand and the patient will notice that the hand feels light. As this imagery progresses, the clinician can move into suggesting a sense of lightness, and ultimately an arm levitation procedure Like that of Chiasson, i.e. that "when the hand reaches the patient's face, the patient will find himself or herself in a comfortable state of hypnosis" (p. 2).

"At any point where the patient does not appear to respond to suggestions or remain involved with the imagery, techniques are shifted. For example, if the patient indicates that the apple does not appear to have weight or the hand does not feel light, I suggest simply that the patient continue to listen to my voice, to breath deeply, and to continue to enjoy this comfortable state, perhaps using imagery commensurate with the skills shown by the patient when he or she first imagined the apple. Finally, patients are roused, with posthypnotic suggestions for alertness, comfort, and control" (p. 2).

The author administered this Apple Technique to 12 patients, following the administration with an interview to learn about their subjective responses. Of the 12, 6 showed at least some hand levitation and scored 3-5 on SHCS:A; 6 had no levitation and scored 0-1 on SHCS:A. When administered to 35 college students, only 3 did not experience a sensation of weight when imagining an apple in their hand. A three-point rating (1 = no hand movement; 2 = some hand movement, but not to the face; 3 = hand movement to the face) correlated .66 with SHSS:C and .60 with SHCS:A.

The author has found that good Ss can go into hypnosis within 2-3 minutes using the Apple Technique, while poor Ss conversely may reveal limited imaginative involvement or ideomotor skill within the same amount of time.

1990Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

## NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.])

"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a

greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).

"The stress management techniques used in the current study did not differ in their appeal" (p. 20).

"Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.

"The finding that blunters experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunters are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunters experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

Evans, Frederick J.; Stanley, R. O. (1990). Psychological interventions for coping with surgery: A review of hypnotic techniques. Australian Journal of Clinical and Experimental Hypnosis, 18, 97-105. Illness, hospitalization, and surgery pose many severe stresses for many patients, to the extent that their ability to understand and cope with what is happening may be significantly reduced. Many of these stresses result from the nature and significance of patients' surgical procedures and post-operative treatment. This paper reviews the range of psychological interventions aimed at helping patients cope with pre- and post-operative treatment regimens. The range and content of hypnotic interventions are examined in detail. It is concluded that more rigorous research studies are required to determine the relative effectiveness of different types of interventions and to evaluate the effects of patients' psychological characteristics on the effectiveness of these interventions.

1989

Bryant, Richard A.; McConkey, Kevin M. (1989). Hypnotic blindness: A behavioral and experiential analysis. Journal of Abnormal Psychology, 98, 71-77.

NOTES

"This research examined the influence of visual information on a decision task that subjects were administered during hypnotically suggested blindness. Real, hypnotizable subjects and simulating, un hypnotizable subjects were tested in two experiments. Experiment 1 focused on behavioral responses, and Exper. 2 focused on experiential reactions. In both experiments, the findings indicated

that the behavioral responses of reals were influenced by visual info. despite their reported blindness. The behavioral responses of reals and simulators were essentially similar. The experiential data in Experiment 2 provided information about the phenomenal nature of subjects' reported blindness. The experiential reactions of reals and simulators were essentially different. The research is discussed in terms of the issues that need to be considered in the development of a model of hypnotic blindness" (p. 71).

Eppley, Kenneth R.; Abrams, Allan I.; Shear, Jonathan (1989). Differential effects of relaxation techniques on trait anxiety: A meta-analysis. Journal of Clinical Psychology, 45, 957-974.

Conducted a meta-analysis of studies on the effects of relaxation techniques on trait anxiety. Effect sizes for the different treatments (e.g., progressive relaxation, biofeedback, meditation) were calculated. Most treatments produced similar effect sizes, although transcendental meditation (TM) produced a significantly larger effect size than other forms of meditation and relaxation. A comparison of the content of the treatments and their differential effects suggests that this may be due to the lesser amount of effort involved in TM. Meditation that involved concentration had a significantly smaller effect than progressive relaxation.

1988

Dougherty, John E.; Payne, Paul A. (1988). The use of breathing rhythm to enhance the vividness of mental imagery. Imagination, Cognition and Personality, 8 (2), 175-179.

The study assessed Jencks' claim that responses to certain suggestions are enhanced by being paced with different phases of the breathing cycle. Following hypnotic induction, twenty-four subjects were given four treatments in counterbalanced order: 1) exhalation-enhanced suggestions paced to exhalation, 2) inhalation-enhanced suggestions paced to inhalation, 3) inhalation-enhanced suggestions counterpaced to exhalation, and 4) exhalation-enhanced suggestions counterpaced to inhalation. Subjects' reports of imagery vividness provided marginal support ( $p < .06$ ) for Jencks' hypothesis. Post-experimental inquiry indicated subjects were unaware of the breathing contingency. Results suggest that appropriate pacing may make a greater difference for the energy-confidence group of suggestions (inhalation-paced) than for the calm-relaxation group (exhalation-paced).

Kuttner, Leora (1988). Favorite stories: A hypnotic pain-reduction technique for children in acute pain. American Journal of Clinical Hypnosis, 30, 289-295.

For young children (aged 3 to 6-11) with leukemia, a hypnotic trance consisting of a child's favorite story was found to be statistically more effective than behavioral distraction and standard medical practice in alleviating distress, pain, and anxiety during painful bone marrow aspirations. Measured by a behavioral checklist and judgment ratings by physician, parent, nurse, and observers, the favorite-story hypnotic technique had immediate therapeutic impact on these young patients, and the reduction in distress, pain, and anxiety was sustained on subsequent medical procedures. Self-report measures, however, were nonsignificant.

1985

Matthews, William J.; Kirsch, Irving; Mosher, Donald (1985). Double hypnotic induction: An initial empirical test. Journal of Abnormal Psychology, 94 (1), 92-95.

## NOTES

In separate experimental sessions, 34 undergraduate students experienced audiotapes of a standard hypnotic induction and a double induction similar to that described by Bandler and Grinder (1975). In the double induction, subjects heard a hand-levitation induction through the ear that is contralateral

to the dominant cerebral hemisphere and, simultaneously, heard grammatically childlike messages through the other ear. Half of the subjects experienced the double induction first. There were no significant within-subject differences between the two inductions. However, subjects who experienced the double induction prior to the standard induction were significantly less responsive to suggestions following both inductions, which suggests that the double induction as a first experience of hypnosis may have a negative impact on subsequent experiences of hypnosis.

**1984**

Gillett, Penny L.; Coe, William C. (1984). The effects of rapid induction analgesia (RIA), hypnotic susceptibility and the severity of discomfort on reducing dental pain. American Journal of Clinical Hypnosis, 27, 81-90.

The study was designed to address three issues involved in hypnotic analgesia for dental pain: 1) The effectiveness of J. Barber's (1977) hypnotic procedure for producing analgesia in its usual form and a shortened form, 2) the relationship of hypnotic susceptibility to analgesic responsiveness, and 3) the effect of dental procedure discomfort level on hypnotic analgesia. Sixty unselected dental patients were administered either J. Barber's (1977) RIA or a shortened version of it (SI) before their dental treatment. Measures of hypnotic susceptibility were obtained as were dentists' ratings of the discomfort levels involved in the various dental procedures administered. The 52% success rate of the present study failed to replicate Barber's very high (99%) success rate, although procedural differences might explain the lower rate. RIA and SI were equally effective. Hypnotic susceptibility level did not relate significantly to success with hypnotic analgesia. The level of dental procedure discomfort was the clearest predictor of success with hypnotic analgesia. The greater the discomfort rating of a procedure the less likely that hypnotic analgesia would be successful.

**1983**

Diamond, Michael Jay (1983). Therapeutic indications in applying an innovative hypnotherapeutic technique: The client-as-hypnotist. American Journal of Clinical Hypnosis, 25 (4), 242-247.

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist willing to enter trance. Indications and contraindications in employing innovative hypnotherapeutic interventions are considered in terms of the therapeutic goals and context, patient-therapist interaction, and patient as well as therapist characteristics. Benefits provided by the technique to the client, client-therapist interaction, and therapist respectively are briefly discussed. The specific methodology of this technique is described according to seven steps: (1) permission request: (2) client observation: (3) session structure: (4) client confidence: (5) therapist trance: (6) feedback: and (7) subsequent utilization. Relevant clinical examples are provided.

**1982**

Stern, T. E. (1982). The effects of Ericksonian hypnosis and biofeedback on self-reported measures of pain (Dissertation). Dissertation Abstracts International, 43, 3744-B.

**NOTES**

Conducted a 6-subject case study comparing the effectiveness of so-called Ericksonian hypnosis and biofeedback on chronic pain. Two subjects improved more on subjective and behavioral pain measures using biofeedback, three improved more using hypnosis, and one did not improve in either condition.

**1981**

McConkey, Kevin M.; Sheehan, Peter W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90 (1), 46-54.

Examined the breakdown of amnesia by showing 48 hypnotic and nonhypnotic undergraduates (Harvard Group Scale of Hypnotic Susceptibility) a videotape of the hypnotic events they had experienced. The extent of the amnesia for these events was defined precisely, and simulating procedures were employed to analyze the cues in the overall test situation. Videotape display of the hypnotic events was presented via the Experiential Analysis Technique and served to optimize conditions for breakdown. Some hypnotic Ss' amnesia could not be broken down even though they were exposed via videotape playback to the events to be recalled and when suggestions for the period of amnesia were quite explicit. Simulators showed breaching of amnesia but attributed their recall to the videotape rather than to the hypnotic session. Hypnotic Ss were distinctive in their inability to recall experiential aspects of their performance even though they could recall behavioral aspects. The data are discussed in relation to the hypothesis that dissociative cognitive mechanisms underlie posthypnotic amnesia. (22 ref).

1980

Crowley, R. (1980). Effects of indirect hypnosis (Rapid Induction Analgesia) for relief of acute pain associated with minor podiatric surgery (Dissertation). Dissertation Abstracts International, 40, 45-49.

#### NOTES

Lynn et al. (1993) cited this dissertation. They noted that all 30 volunteer subjects responded painfully when stimulated by a needle administered by a podiatrist and that the Rapid Induction Analgesia of Joseph Barber (RIA) was not as effective as local chemical analgesia. Furthermore, according to Lynn et al., RIA patients did not report a reduction in their anxiety following podiatric surgery comparable to that reported by patients who received chemical analgesia. The author also found that hypnotizability was related to multiple chronic pain indices.

Diamond, Michael Jay (1980). The client-as-hypnotist: Furthering hypnotherapeutic change. International Journal of Clinical and Experimental Hypnosis, 28, 197-207.

A novel hypnotic induction technique is described wherein the client reverses roles and serves as hypnotist for the therapist. Relevant theoretical processes are discussed as are mutual hypnosis, modeling, and the uncommon techniques of Erickson (1964). 3 case illustrations are presented and implications discussed. It is hypothesized that the 'client-as-hypnotist' may in certain special situations further hypnotherapy by: (a) increasing client motivation; (b) enhancing therapeutic rapport; (c) increasing both client trust and skills in utilizing unconscious processes; (d) overcoming resistance and increasing hypnotizability; (e) providing a useful psychodiagnostic and behavior assessment index; (f) presenting a role 'model' for dealing with feelings, alterations in consciousness, and self-control; (g) providing a client-centered framework for subsequent therapeutic interventions; (h) increasing client self-esteem, mastery, and ego strength; and (i) increasing client self-control skills. Potential risks and contraindications for use of the technique are also discussed.

Edwards, William Henry (1980). Direct versus indirect hypnosis for the relief of chronic pain in spinal cord injured patients (Dissertation, United States International University). Dissertation Abstracts International, 40 (10-B), 4996.

#### NOTES

This study compared effectiveness of direct hypnosis and indirect hypnosis (Rapid Induction Analgesia, developed by Joseph Barber) in reducing experimental and clinical pain in spinal cord injured patients. The 30 male paraplegic patients who had chronic benign pain volunteered for the study. They were administered three tests: the Pain Estimate Scale (Sternbach, 1974), Ischemic Muscle Pain Test (IMPT), and the Stanford Profile Hypnotic Susceptibility Scale, Form II -- SPHSS -- (Weitzenhoffer and Hilgard, 1967). Each patient experienced three sessions: (1) Baseline Control, (2) Direct Hypnosis, and (3) Indirect Hypnosis. Patients were randomly assigned to Sessions (2) and (3). The results indicated no significant statistical difference in the effectiveness of direct versus indirect hypnotic analgesia in these chronic pain patients. Direct and indirect hypnosis were equally effective; hypnotizability was not associated with outcome. Furthermore, there was no interaction between treatment effects and pretreatment pain level. The results were similar for both clinical and experimental pain.

1979

Araoz, Daniel L. (1979). Hypnosis in group-therapy. International Journal of Clinical and Experimental Hypnosis, 27 (1), 1-13.

Therapeutic groups are defined to include both therapy groups and enrichment or extensional groups, either goal-specific or goal-individualized. After reviewing the literature, 3 modalities for the use of 6 hypnotherapeutic techniques are presented. These modalities are: (a) simultaneous group hypnosis, (b) working with one member and then fostering group interaction, and (c) cooperative group self-hypnosis. The 6 group hypnotherapy techniques are: (a) relaxation, (b) positive revivification, (c) dream production, (d) age regression and recovery of early recollections, (e) age progression and mental rehearsal, and (f) ego strengthening. The need for research in group hypnotherapy is stressed, especially in the areas of transference, countertransference, and 'co-transference.'

Benson, Herbert; Frankel, Fred H.; Apfel, Roberta; Daniels, Michael D.; Schniewind, Henry E.; Nemiah, John C.; Sifneos, Peter E.; Crassweller, Karen D.; Greenwood, Martha M.; Kotch, Jamie B.; Arns, Patricia A.; Rosner, Bernard (1978). Treatment of anxiety: A

We have investigated prospectively the efficacy of two nonpharmacologic relaxation techniques in the therapy of anxiety. A simple, meditational relaxation technique (MT) that elicits the changes of decreased sympathetic nervous system activity was compared to a self-hypnosis technique (HT) in which relaxation, with or without altered perceptions, was suggested. 32 patients with anxiety neurosis were divided into 2 groups on the basis of their responsivity to hypnosis: moderate-high and low responsivity. The NIT or HT was then randomly assigned separately to each member of the two responsivity groups. Thus, 4 treatment groups were studied: moderate-high responsivity MT; low responsivity MT; moderate-high responsivity HT; and low responsivity HT. The low responsivity HT group, by definition largely incapable of achieving the altered perceptions essential to hypnosis, was designed as the control group. Patients were instructed to practice the assigned technique daily for 8 weeks. Change in anxiety was determined by three types of evaluation: psychiatric assessment; physiologic testing; and self-assessment. There was essentially no difference between the two techniques in therapeutic efficacy according to these evaluations. Psychiatric assessment revealed overall improvement in 34% of the patients and the self-rating assessment indicated improvement in 63% of the population. Patients who had moderate- high hypnotic responsivity, independent of the technique used, significantly improved on psychiatric assessment ( $p = 0.05$ ) and decreased average systolic blood pressure from 126.1 to 122.5 mm Hg over the 8-week period ( $p = 0.048$ ). The responsivity scores at the higher end of the hypnotic responsivity spectrum were proportionately correlated to greater decreases in systolic blood pressure ( $p = 0.075$ ) and to improvement by psychiatric assessment ( $p = 0.003$ ). There was, however, no consistent relation between hypnotic responsivity and the other assessments made, such as diastolic blood pressure, oxygen consumption,

heart rate and the self-rating questionnaires. The meditational and self-hypnosis techniques employed in this investigation are simple to use and effective in the therapy of anxiety.

Parker, Jerry C.; Gilbert, Gary S.; Thoreson, Richard W. (1978). Reduction of autonomic arousal in alcoholics: A comparison of relaxation and meditation techniques. Journal of Consulting and Clinical Psychology, 46 (5), 879-886.

To investigate and compare the effects of progressive relaxation training and meditation training on autonomic arousal in alcoholics, 30 subjects were selected from a population of alcoholics in a Veterans Administration hospital substance-abuse program. The subjects were randomly assigned to one of the following three experimental conditions: (a) progressive relaxation training group, (b) meditation training group, or (c) quiet rest control group. All groups met for 3 weeks during which state anxiety, blood pressure, heart rate, and spontaneous galvanic skin responses were measured. The measures were designed to assess the treatment effects following the first training session and at the end of the total training period. The results indicate that both progressive relaxation training and meditation training are useful for reducing blood pressure in alcoholics. In addition, significant differences between the groups in the effectiveness of the relaxation procedures were found. Meditation training induced blood pressure decreases at an earlier point in the 3-week training period and affected decreases in systolic blood pressure that progressive relaxation training did not. These results support the idea of considerable specificity of response to relaxation techniques.

Porter, J. W. (1978). Suggestions and success imagery for study problems. International Journal of Clinical and Experimental Hypnosis, 26, 63-75.

A procedure is presented for dealing with study problems in cases where patients come with an expectancy of help through hypnosis. Specific suggestions directly related to the study difficulty are given. "Success imagery" is outlined for use under hypnosis and by the student himself in his daily life. Two self-management techniques associated with the relaxation induced by exhalation are given further strength by being made posthypnotic suggestions. A direct posthypnotic suggestion for "concentration and recall" is combined with contingency management to effect more efficient performance when the decision is made to study. Four sessions are shown by clinical experience to be generally adequate to allow a transition from therapy to self-management of the problem aided by the student's own use of self-hypnosis. A general outline of how this is achieved for the first three sessions incorporates both Wolberg's (1965) suggestions to remove barriers preventing progress and Stanton's (1977) Rational-Emotive Therapy suggestions to strengthen the person's belief in himself.

Sanders, Shirley (1978). Creative problem-solving and psychotherapy. International Journal of Clinical and Experimental Hypnosis, 26, 15-21.

The techniques described comprise a creative problem-solving approach to short-term individual psychotherapy which appears effective in conjunction with hypnosis. The techniques include describing and visualizing the client's problem, imagining alternative reactions, dreaming about new solutions, and trying the solutions in real life. The method is illustrated by 2 clinical examples. The discussion focuses on a comparison of the techniques used with individuals versus with small groups, the fostering of regression in the service of the ego, and the redirection of attention from the physically out of control to the recognition of the possibility of obtaining control. This shift of attention fosters active coping on the part of the client.

Stanton, Harry E. (1978). A one-session hypnotic approach to modifying smoking behavior. International Journal of Clinical and Experimental Hypnosis, 26, 22-29.

Recent literature reviewing attempts to modify smoking behavior through the use of hypnosis is outlined, and an approach utilizing only 1 treatment is described. This single session includes: (a) the establishment of a favorable "mental set" on the part of the patient, (b) a hypnotic induction, (c) ego-enhancing suggestions, (d) specific suggestions directed toward the cessation of smoking, (e) an adaption of the "red balloon" visualization, and (f) success visualization. Of 75 patients treated by this technique, 45 ceased smoking. 6 months after the treatment session, 34, or 45%, were still nonsmokers, attesting to the efficacy of the method.

1977

Anderson, J. W. (1977). Defensive maneuvers in two incidents involving the Chevreul pendulum: A clinical note. International Journal of Clinical and Experimental Hypnosis, 25, 4-6.

#### NOTES

"Hypnosis frequently facilitates increased access to the unconscious. In both of these cases, the hypnotized subject gained contact with a thought which otherwise would likely have remained out of awareness. Then the ego quickly resorted to defensive maneuvers in order to deny the thought" (p. 6). Ansel, Edward Leslie (1977). A simple exercise to enhance response to hypnotherapy for migraine headache. International Journal of Clinical and Experimental Hypnosis, 25 (2), 68-71.

A common method of hypnotherapy for migraine headache utilizes suggestions of warmth for the hands and coldness for the head. This procedure reverses the abnormal pattern of vasodilation and excess supply of blood in the head and decreased supply in the extremities associated with this type of headache, thereby relieving the pain. A simple exercise, utilizing centrifugal force to dramatically increase blood flow to the hands, is described. It promotes relief in itself and provides a vivid background experience to enhance productino of this effect in hypnosis. It appears to be especially useful in patients exhibiting lesser degrees of trance capacity.

Barber, Joseph (1977). Rapid induction analgesia: A clinical report. American Journal of Clinical Hypnosis, 19, 138-149.

This is a report of clinical dental experience using a newly developed, hypnotic pain control procedure. Characteristics of the procedure are outlined, an explanation for its success is suggested, and the broader implications of this success are discussed. The unusually high incidence of clinical analgesia rapidly obtained with this procedure leads the author to question the meaning and relevance of the concept of 'hypnotic susceptibility' for the practical clinical application of hypnosis.

Dillbeck, Michael C. (1977). The effect of the transcendental meditation technique on anxiety level. Journal of Clinical Psychology, 33 (4), 1076-1078.

Two weeks of twice-daily practice of the Transcendental Meditation (Transcendental meditation) technique was compared with 2 weeks of twice-daily practice of passive relaxation as a means of reduction of anxiety, as measured by the Trait scale of the State-Trait Anxiety Inventory. Thirty-three graduate and undergraduate students were assigned randomly to a relaxation group and a Transcendental meditation group. After a 2-week experimental interval, the relaxation Ss began Transcendental meditation. As hypothesized, in the comparison between the relaxation and meditation Ss, as well as between conditions of the relaxation-meditation group, Transcendental meditation was

significantly more effective in reducing anxiety level. Thus, the anxiety-reducing effect of the practice of Transcendental meditation cannot be attributed merely to sitting quietly twice daily, although additional research must determine the extent to which S expectations for change contributed to this effect.

1975

Alexander, A. Barney (1975). An experimental test of assumptions relating to the use of electromyographic biofeedback as a general relaxation technique. Psychophysiology, 656-662.

Twenty-eight normal adults participated in an experimental test of two assumptions underlying the use of electromyographic (EMG) biofeedback as a general relaxation training technique: 1) that trained EMG reduction in one muscle generalizes to untrained muscles; and 2) that subjective feelings of relaxation are related to EMG reduction. An experimental group received 5 sessions, during the middle 3 of which EMG biofeedback training was offered on the frontalis muscle. Throughout all sessions, EMG recordings were also taken from the forearm and lower leg, and rating of subjective relaxation feelings were obtained at regular intervals. A control group, matched with the experimental group on baseline frontalis EMG, received 5 similar sessions without feedback. Employing a maximum  $p$  of .05, the results revealed no evidence of generalization of EMG reduction from the frontalis to the untrained sites, nor any tendency for successful frontalis EMG reduction to result in increased feelings of relaxation beyond what was obtainable from relaxing without the benefit of training. The results were interpreted as suggesting the EMG biofeedback cannot yet be accepted as a viable general relaxation training technique.

Mullen, G.; Perry, C. (1975). The effects of hypnotic susceptibility on reducing smoking behavior treated by a hypnotic technique. Journal of Clinical Psychology, 31, 498-505.

In order to examine the relationship between hypnotizability and treatment outcome in which hypnosis is used, 54 people ages 19-47 who undertook to stop smoking were studied. Although it is logical that there should be a relationship, clinical anecdotal material published by people who used hypnosis (Freud, Weitzenhoffer, Lazarus, Sheehan, Orne) suggests that may not be the case. Hypnotic susceptibility was evaluated with a clinical procedure developed by Orne and O'Connell (the DRP). Patients were taught self hypnosis using a brief procedure developed by Herbert Spiegel. Baseline smoking rate and three-month follow-up with postcards mailed every week were employed as measures. Success in the treatment program was defined as a 50% reduction in smoking behavior. After 3 months, 7 people were abstinent, 10 had reduced smoking to criterion level (50%), 16 people had discontinued the investigation, and 21 did not change. Considering only the 15 most and 15 least hypnotizable, 12 of the 15 high susceptibles had reduced smoking by at least 50%, as compared to 5 of the 15 of the low susceptibles. ( $\chi^2 = 4.88$ ,  $df = 1$ ,  $p < .05$ ).

1971

Aiken, Linda H.; Henrichs, Theodore F. (1971). Systematic relaxation as a nursing intervention technique with open heart surgery patients. Nursing Research, 20, 212-217.

## NOTES

Psychiatric problems frequently occur after open heart surgery, usually from day 2 to day 7 postoperatively. Symptoms include impairment of consciousness, disorientation, sensory disturbances like visual and auditory hallucination, and sometimes delusions and paranoid behavior. Authors defined a postoperative adverse reaction as "when the patient experienced impairment of consciousness with motor restlessness, disordered thinking, sensory disturbances, visual and/or

auditory illusions or hallucinations, and paranoid ideation. All of these symptoms do not usually occur together and an additional definition was given for a minor reaction which occurred if only one of the above symptoms was present for 12 hours or less" (p. 214).

The population from which samples were drawn consisted of adult male patients admitted to a university medical center for open heart surgery. The experimental group (N = 15) consisted of all patients admitted from September 1969 through June 1970 (omitting two who were not willing to participate). Controls were 15 adult males admitted for open heart surgery in the prior year.

A relaxation and systematic desensitization technique was used for the experimental group, each patient being given a tape recorder with a 15-minute tape of the exercise "to use whenever he wanted to relax" (p. 214) but at the least four times a day.

On basis of previous research one would expect postoperative adverse reactions of 40% but the Relaxation group had only 8%. (The control group had 27%, but the difference between groups was not significant with Fisher's exact probability test-- $p < .10$ .) Mortality rate was same in both groups.

The results must be interpreted in the context of differences between groups during surgery, which may or may not relate to the intervention. The Relaxation Group was significantly lower than Control Group on 4 of 5 surgical risk factors: anesthesia time, cardiopulmonary bypass time, total units of blood, and degree of hypothermia. They were (nonsignificantly) better on duration of hypothermia; and there was no difference on multivalve replacement. This suggests the Relaxation Group were less exposed to these factors to a significant degree.

**Discussion:** The groups were matched on age, sex, preoperative diagnosis, type of surgical procedure, incidence of severe economic problems, family adjustment problems, and history of psychiatric problems (i.e. the groups did not differ). "The major difference between the two groups was in relation to the surgical stress factors studied: degree of hypothermia, amount of time on cardiopulmonary bypass, anesthesia time, and total units of blood received. The experimental group was significantly lower on mean values for all of these stress factors. Without further research it is impossible to conclude that these factors did or did not influence the lower incidence of postoperative reactions found in the experimental group. It should be noted, however, that the decreased surgical stress factors had no apparent effect on reducing mortality in this sample. Also as previously stated, prior research has not been able to demonstrate a direct relationship between these surgical stress factors and the incidence of postoperative reactions" (p. 215).

"The population used in this research ranged from patients with mild symptoms of heart disease to those with severe decompensation and congestive heart failure. It was anticipated prior to beginning the research that some patients would be physically incapable of cooperating due to fatigue and dyspnea; this prove not to be the case" (p. 216).

This intervention is usable by nurses, and "provides an alternative which the professional nurse may prescribe after systematically assessing a patient's needs" (p. 216). "It is a new skill to be learned that is comparable to the skill of giving an injection or learning to recognize arrhythmias. The amount of time required to teach a patient the technique of systematic relaxation is realistically within the scope of any staff nurse's role" (p. 216).

## 1970

Hall, J. A.; Crasilneck, H. B. (1970). Development of a hypnotic technique for treating chronic cigarette smoking. International Journal of Clinical and Experimental Hypnosis, 18, 283-289.

4 hypnotic sessions were found successful, in the majority of cases, in eliminating cigarette smoking without undesirable substitution symptoms. Patients were strongly motivated by the referring physicians and by various nonhypnotic techniques incorporated into the treatment program. Examples are given of the specific nature of both the hypnotic and the nonhypnotic suggestions employed. (German & Spanish summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Maher-Loughnan, G. P. (1970). Hypnosis and auto-hypnosis for the treatment of asthma. International Journal of Clinical and Experimental Hypnosis, 18 (1), 1-14.**

Conducted 2 controlled studies into the use of hypnosis in 252 asthma patients. Several different control procedures were used. Methods and results were summarized, and the same conclusion was reached: That hypnosis supplemented by autohypnosis was significantly more effective than control procedures. An outline is given of details of treatment methods. A current analysis of Ss involving up to 6 yr. of follow-up, is presented to provide a working guide to the regime in regular practice. To be fully effective hypnosis should be employed before steroids are started. Steroid-dependent asthma is rarely totally relieved by hypnotherapy. (Spanish & German summaries) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1969**

**Raginsky, Bernard B. (1969). Hypnotic recall of aircrash cause. International Journal of Clinical and Experimental Hypnosis, 17, 1-19.**

Discusses the use of hypnotic techniques to help a 33-yr-old male recall suppressed material which implicated him in an aircrash. The cause was found after 2 short hypnotic sessions, where other methods used over 2 years had failed. The method can be used in all cases of amnesia. The S was made to hallucinate a threatening situation, and his hallucination gave a clue to the basic problem. He was then made to hallucinate a pleasant scene, which gave an indication of the method he used to escape from the problem. This was repeated at the 2nd session for confirmation. If the patient did not bring up the required material by free association under hypnosis, a dissociation of the personality induced in which the observing ego watched what the experiencing ego was doing to cause the accident. The results demonstrated that hypnotic techniques were more successful than sodium amytal interviews, free association, psychiatric interviews, physical and emotional isolation, pressure by authorities, and kindness of friends. Reference was made to the problems involved when the interests of the S were in conflict with public safety. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1967**

**Evans, Frederick J. (1967). An experimental indirect technique for the induction of hypnosis without awareness. International Journal of Clinical and Experimental Hypnosis, 15, 72-85.**

A procedure is described which has been used in an experimental setting as a method of indirectly inducing hypnosis without S's awareness. Ss are not told that hypnosis is involved in the procedure, but are told they will be taught how to relax. The aim of the indirect procedure is to create different expectations and preconceptions from those normally occurring in the special hypnotic relationship. Evidence from 3 studies (samples of 63, 63, 120) indicates that the procedure successfully induces hypnosis comparable in depth to other standard hypnotic procedures. About half of the Ss tested apparently do not recognize the procedure involves hypnosis. Approximately 30% of the Ss who receive the procedure, as well as 30% of the Ss in the control group who did not receive the procedure, but were tested with the same test suggestions, recognized that an attempt had been made to induce hypnosis. The perceptions about whether hypnosis was involved were unrelated to scores on typical hypnotic phenomena. It was concluded that the indirect induction technique successfully induces hypnosis and is a useful technique for manipulating S-expectations in an experimental context.

**NOTES**

"[The Subject] is told, 'A series of experiments are being conducted investigating the effects of relaxation on behavior. Because of confusing results in the literature, this study is designed to examine the relationship between relaxation and several other psychological phenomena, some of which might remind you of a variety of other phenomena which you may have heard or read about.' The S was told that a technique had been devised that would assist him to relax completely. His main task was to relax as completely as possible. This would be facilitated by lying comfortably on a couch, and by allowing his mind to become completely blank. To prevent himself from falling asleep, he should concentrate his attention on some object or idea. To help exclude other thoughts from his mind, E would continue to talk in a monotonous voice saying little of importance, while the S stared at a spot on the wall. This shaping of the situation was continued with a considerable degree of apparent permissiveness.

"The S's attention was slowly directed to the rhythm of his own breathing as suggestions were given of eye fatigue. If S closed his eyes, he might find it convenient to concentrate on the rhythm of his own breathing. Perhaps this would be easy to think about if he visualized a pendulum swinging in time with his breathing. The E continued to talk and count in rhythm with S's breathing. Special words, such as 'breathing in and out; the pendulum swings back and forward,' were always spoken as S inhaled or exhaled. Counting was also timed to coincide with exhalation. Deeper relaxation was suggested as E counted slowly from 1 to 21, and later, from 1 to 31.

"Throughout the procedure, phrases and words (such as 'hypnosis,' 'trance,' 'drowsy') traditionally employed with hypnotic induction techniques were avoided. After approximately 30 minutes, a natural transition was made to the testing procedure. Suggestions of continued deep relaxation were intermingled between various tests administered. Termination was effected by suggesting that the relaxation would end as E counted from 'A' to 'H'" (p. 75).

1965

Halpern, Seymore (1965). Body-image symbols of repression. International Journal of Clinical and Experimental Hypnosis, 13 (2), 83-91.

Hypnointrospection, a method of hypnoanalysis which emphasizes self-perception during voluntary immobilization, is of demonstrable value in the elucidation of the problem of body-image. Hypnointrospective fragments of a case history showing the reorganization of the body-image during therapy are presented. The sequence of body-image phenomena is interpreted as an expression of attitudinal compromises among conflicting wishes implemented through neuromuscular channels. The continuous reorganization of the physical self as perceived by the patient during hypnointrospective analysis appears to be of significance for a general theory of body-image. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.

The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Ludwig, Arnold M.; Lyle, William H., Jr.; Miller, Jerome S. (1964). Group hypnotherapy techniques with drug addicts. International Journal of Clinical and Experimental Hypnosis, 12 (2), 53-66.

This study was designed to investigate the appropriateness of a number of group hypnotherapeutic techniques which might be used in the treatment of addict patients. It is the belief of the investigators that the more "magical," "authoritative," and practical-oriented techniques seem more appropriate and useful than techniques designed to elicit deep, insightful understanding of the emotional problems underlying drug addiction. Many of the specific hypnotherapeutic techniques used are described, and some of the difficulties and advantages of group hypnosis as a treatment method are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Giles, Eugene (1962). A cross-validation study of the Pascal technique of hypnotic induction. International Journal of Clinical and Experimental Hypnosis, 10 (2), 101-108.

A cross-validation of reported high successes of hypnotic induction and statements that success was independent of the operator when using Pascal's technique showed that: (a) an experienced-operator group clearly excelled a training group, and (b) the experienced group almost exactly replicated percentage-wise the successes claimed by Pascal and Salzberg. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Rose, J. T. (1962). The use of relevant life experiences as the basis for suggestive therapy. International Journal of Clinical and Experimental Hypnosis, 10, 221-229. (Abstracted in *Imagery* 63: Mar., S-543)

A brief, directive method of hypnotherapy is described which combines limited insight therapy with hypnotic suggestions based on relevant life experiences of the patient. By integrating suggestions and experiences familiar to the patient, the former are more likely to have greater meaning to the patient and are therefore more effective. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

Cheek, David B. (1961). Value of ideomotor sex-determination technique of LeCron for uncovering subconscious fear in obstetric patients. International Journal of Clinical and Experimental Hypnosis, 9, 249-259.

(Author's Summary) "Unrecognized subconscious fears can be uncovered while using ideomotor questioning with a Chevreul pendulum or with finger signals. The technique described by LeCron for evaluating knowledge regarding the sex of an unborn child is a most helpful way of approaching subconscious fears. The frightened patient refuses to indicate knowledge of the sex of her unborn child. Uncovered fears can be resolved by appealing to conscious-level understanding with adroit questioning" (p. 258).

McCartney, James L. (1961). A half century of personal experience with hypnosis. International Journal of Clinical and Experimental Hypnosis, 9, 23-33.

NOTES

(Author's Summary and Conclusions). "After fifty years of experience with hypnosis, it is evident that it is not a superficial and careless technic but should be utilized only by capable, trained physicians, as are the other complex and difficult medical technics. ... In order to induce hypnosis, the patient must be perfectly willing to be hypnotized, he must have confidence in the practitioner, and he must concentrate on doing exactly as he is told. In selected cases, drugs or electrical impulses may be used

for the initial induction of hypnotic sleep, but if hypnotherapy is to be continued, the physician must keep in contact with the patient by repeated suggestions. The technic used should fit the individual patient, but in most cases, verbal suggestions are all that is necessary to bring about dissociation. Hypnosis may be used to facilitate the beginning of mental catharsis, the establishment of transference, and may be easily instituted following narcosynthesis, electroshock therapy, minimum stimulus, or Sedac. Suggested activity under hypnosis may be carried out at a designated time, place, and manner after awakening. This is a result of autosuggestion and may be mistaken for psychopathic behavior. Such suggestions may be instituted by television, movies, radio, telephone, or recorded or written instruction. Hypnosis may be used to plant suggestions; if misused, it may create an obsessive-compulsive neurosis, while when properly used, it may overcome many functional symptoms and may be used to supplement other forms of psychotherapy" (p. 32).

Skemp, Richard R. (1961). Note on an hypnotic induction device. International Journal of Clinical and Experimental Hypnosis, 9 (4), 303-304.

## NOTES

Author describes a technique for increasing suggestibility by causing the person to experience effects that he believes are caused by the hypnotist. "If one fixates the edge of a coloured strip on a white background, a narrow line of deeper colour will be seen close to the edge. This is because small movements of the fixation point bring this strip, for part of the time, on to an area of the retina which has been fatigued by the white. (The effect is best obtained if the colour is unsaturated). At the same time a narrow strip of brighter white will appear along the other side of the edge. If fixation is continued, this band of brighter white gradually takes on the colour complementary to that of the coloured band. These effects are unexpected to a naive subject, and therefore satisfy the requirements for a feed-back process" (p. 303). Thus, if the color is red, then the hypnotist suggests that a green line will appear, that the green band will continue to become greener, the red part redder; then suggests that the eyes will blink faster and faster, eventually closing, etc. After the eyes are closed, the suggestion that one will continue to see the green line is given.

## 1960

Conn, Jacob H. (1960). The psychodynamics of recovery under hypnosis. International Journal of Clinical and Experimental Hypnosis, 8, 3-16.

Defines hypnosis as primarily a change in reality testing, and considers it as both an altered state of consciousness and a multilevel dynamic relationship in which the S is always aware of the operator. Hypnosynthesis emphasizes the patient's values and expectations and his freedom to choose what to say and how he should be treated. Preference is given to terms of "more or less" consciousness. The patient does not receive any training in hypnosis and there is no encouragement of acting out in hypnosynthesis. Attention is directed to repetitive patterns, and the hypnotic experience is utilized as a present dynamic experience. Hypnosynthesis demonstrates that symptom removal is possible without symptom substitution when there is an effective working relationship. The common factor in every psychogenic cure, including hypnotherapy, is the fostering of self-esteem and active participation, both of which are achieved by effective collaboration in the therapeutic situation. (Spanish + German abstracts) (50 ref.) (Psycinfo database record (c) 2002 APA, all rights reserved)

## 1959

Kroger, William S.; Schneider, Sidney A. (1959). An electronic aid for hypnotic induction: A preliminary report. International Journal of Clinical and Experimental Hypnosis, 7, 93-98.

## NOTES

The BWS or brain wave synchronizer is "an instrument specifically designed to induce various levels of hypnosis by subliminal and photic stimulation of the brain waves" (p. 93). It was developed after noticing that radar operators on ships sometimes fell into deep hypnotic states while watching signals on a radar screen. It has been used with 2500 subjects, 200 of whom were receiving pre-natal training for childbirth under hypnosis.

"For the first five minutes there is a gradual increase in the number of subjects who enter deep hypnosis. At this level, a figure of 50% reach the deep state" (p. 95).

The instructions given were, "Concentrate on the center of the instrument. When your eyes become tired and heavy, as they will, just let them close and feel yourself going deeper and deeper into a relaxed state." It is acknowledged that this procedure worked when Ss expected to experience hypnosis; the rate of deep hypnosis increased as the expectancy of hypnosis increased. "Deep hypnosis in individual inductions reached 80% under the following conditions:

A. Synchronizer on 5 minutes

B. Expectation Level of 50 [on a scale in which 100 represented having seen demonstrations of conventional hypnosis and an explanation of what the instrument would do]" (p. 97).

Pascal, G. R.; Salzberg, H. C. (1959). A systematic approach to inducing hypnotic behavior. International Journal of Clinical and Experimental Hypnosis, 7 (3), 161-167.

## NOTES

"Summary

The paper reports an experiment in inducing hypnotic behavior. Hypnotic behavior is considered as operant behavior subject to the principles of such behavior. Using a procedure based on this systematic position 52 per cent of 56 subjects were brought to the deep trance state in one session, a considerable gain over results reported in the literature. It is felt that the approach presented suggests that hypnosis may be brought into the realm of behavioral science" (p. 166).

A detailed description of the procedure is provided. It begins with providing information, establishing rapport, using demonstrations of hypnotic-like behavior (the Kohnstamm phenomenon and body sway suggestions), followed by relaxation in a stimulus-attenuated room with verbal suggestions and operant (verbal) reinforcement. It proceeds with a series of frankly hypnotic suggestions for arm analgesia and lightness/floating, amnesia, etc.

1957

Moss, C. Scott (1957). A forced hypnoprojective fantasy used in the resolution of pseudo-epileptic seizures. Journal of Clinical and Experimental Hypnosis, 5 (2), 59-66. (Abstracted in Psychological Abstracts, 58: 5812)

## NOTES

A dream that occurred in natural sleep was used as the starting point for exploration in hypnosis, e.g. suggesting that the patient was seated in a movie theater and would see an element that had been in the dream, projected on the movie screen; then would see substitute pictures which had for him the same meaning as that element. "... as in the dream, commitments to reality [in hypnosis] are minimized and there are evidences of the archaic drive-oriented primary process and a loss of distance from the fantasy so that it becomes a transitory hallucinatory experience. In addition, the censorship function is reduced but not eliminated so that this case study is highlighted by the defensive symbolic substitutions provoked by the persistent demands of the therapist" (pp. 64-65).

Solovey, Galina; Milechnin, Anatol (1956). Concerning some points about the nature of hypnosis. Journal of Clinical and Experimental Hypnosis, 4 (2), 83-88.

Two experiments with young children explored the similarity between mothers' sleep inducing speech and hypnotic induction. The first group were six normal children ranging in age from 25 to 37 months. Author interviewed their mothers for details on their sleep inducing behavior. Then "we followed a procedure that as a rule consisted in leaning over the little one, dedicating all our attention to him, repeating the mother's own series of soothing diminutives in a softly-modulated voice, and stroking gently the child's hair, forehead, or arm. In four to thirty-five minutes, the children relaxed, stopped moving, let their eyelids droop, and showed a particularly placid facial expression. Their appearance was completely similar to that of a hypnotized person" (p. 83). Signs of catalepsy (e.g. following suggestions of holding a teddy bear more and more tightly) and concentration of attention to the exclusion of outside stimuli were taken to indicate the hypnotic state.

The second experiment involved infants 3 to 24 months old, lulling them into a state of quiet relaxation. "The difficulty does not consist in producing this special state, but in demonstrating that it is really hypnosis. However, if we consider the identity of the means employed in bringing it about, and the similarity of the results to those occurring at a slightly later age, it would be unreasonable to think that there is a certain reaction up to a certain age and a fundamentally different one from that age on" (p. 85).

The author relates her findings to those of investigators who studied populations of infants and children who, lacking "psychological mothering" failed to thrive or even died. She concludes that the "psychological mothering" in normal families "produces hypnotic states in the infant daily, from the moment of birth" (p. 88).

1955

Ambrose, Gordon (1955). Multiple sclerosis and treatment by hypnotherapy. Follow-up and further cases. Journal of Clinical and Experimental Hypnosis, 3 (4), 203-209.

NOTES

"Summary. Present day treatment of multiple sclerosis appears inadequate from the psychological view point and patients are too often forced to show a negative response to their illness.

"Six patients have been treated by hypnotherapy with marked subjective improvement. Three of these cases are described.

"The aim in these cases is to put the patient more in control of his organism. Patients should be told that their symptoms must never control them, they must control their symptoms.

"The very nature of the illness prevents the medical attendant from feeling scientific in his approach to these cases. Long follow-up is a necessity but much subjective improvement is possible using hypnotherapy.

"In the hypnoanalytical approach the usual exaggeration of the emotions allied with the psychosomatic reaction will often be found. Hypnosis appears to produce a rapid lessening of tension and anxiety in these cases.

"A deep state of hypnosis should be aimed at and auto-hypnosis must always be taught. It is sometimes useful to place a trusted person en rapport with the patient to carry on with positive and direct suggestions.

Hart, Hornell (1955). Measuring some results of autohypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 229-242.

NOTES

The author developed self ratings for mood (euphoria-dysphoria) and alertness-fatigue, which were administered to college students in neutral conditions and after self-hypnosis conditions. The self hypnosis, or "auto-conditioning" usually involved deep relaxation self suggestions followed by other

suggestions. The suggestions involved using the word 'you' to be able to re-instate the autoconditioning more and more effectively; suggestions for attitude change (e.g. that 'No matter what comes, we will grapple with it courageously'); and euphoria auto-suggestions (e.g. that 'you will come out of this deep relaxation, feeling rested, alert, cheerful and courageous').

In both single session experiments, as with a class of nurses who experienced an 8 minute auto-conditioning procedure, and in experiments extending over time, depression decreased. He noted that "for various reasons, the students who participated in autoconditioning experiments between February and May, 1955, were in many respects less successful than some of the previous experimental groups had been" (p. 235).

Increased alertness and diminished fatigue was also observed.

Many students chose to give themselves suggestions to correct the habit of procrastination. Two-thirds of the participants reported complete success, up to the level specified, and only one of 43 experiments on correcting procrastination was a "flat failure."

Schneck, Jerome M. (1955). Hypnosis-death and hypnosis-rebirth concepts in relation to hypnosis theory. Journal of Clinical and Experimental Hypnosis, 3 (1), 40-43.

#### NOTES

The author presents a few case notes in support of his proposition that hypnosis is symbolically connected with ideas of death and rebirth in some patients. The final sentence of this article reads, "The unconscious identification of the hypnotic state with processes relating to death and rebirth may be involved far more frequently than realized with widespread belief regarding alleged remarkable beneficial effects of the hypnotic state and procedure which incorporates simple, authoritative suggestion" (pp. 42-43).

Schneck, Jerome M. (1955). Hypnotic interviews with the therapist in fantasy. Journal of Clinical and Experimental Hypnosis, 3 (2), 109-116. (Abstracted in Psychological Abstracts, 56: 1126)

" Summary. This report furnishes illustrations from two patients of the technique consisting of hypnosis interviews conducted by the patients with the therapist in fantasy. This method emerged from previous work with visual imagery in the form of scene visualization and some of its derivatives. The writer believes that further work with the technique presented now may prove to be beneficial in psychotherapy. At the same time it offers an opportunity for further study of personality functioning in general and certain aspects of psychodynamics. The patients manipulate the session in a way which furthers a duality in their functioning as a result of which they attempt to probe and contend with contradictory tensions in their unconscious. The image of the therapist undergoes certain distortions demonstrating dynamisms such as projection and identification as utilized by the patient. The therapist is in a position to view all of this and to discern elements in his relationship with the patient which may otherwise have escaped him. Countertransference issues may be clarified in this way. The technique may assist at points where the therapist seems to be functioning too blindly and where the patient may more pointedly show the way by guiding the therapist while relating to a mental image of him. There is a possibility that some aspects of this approach in treatment may prove of value in psychotherapy which does not incorporate hypnosis. This may be of assistance to workers who have not been trained in hypnotherapy" (pp. 115-116).

1954

Erickson, Milton H. (1954). Pseudo-orientation in time as an hypnotherapeutic procedure. Journal of Clinical and Experimental Hypnosis, 2 (4), 261-283. (Abstracted in Psychological Abstracts 55: 5753)

#### NOTES

The author reports employing an experimental therapy technique, projection into future time while in

hypnosis, with five patients. "This technique was formulated by a utilization of those common experiences and understandings embraced in the general appreciation that practice leads to perfection, that action once initiated tends to continue and that deeds are the offspring of hope and expectancy. These ideas are utilized to create a therapy situation in which the patient could respond effectively psychologically to desired therapeutic goals as actualities already achieved. ... 'time projection'" (p. 261).

Erickson, Milton H. (1954). Special techniques of brief hypnotherapy. Journal of Clinical and Experimental Hypnosis, 2, 109-129. (Abstracted in Psychological Abstracts 55: 2508)

#### NOTES

Author describes techniques used with patients who aren't able, for internal or environmental reasons, to undertake comprehensive therapy, "Intentionally utilizing neurotic symptomatology to meet the unique needs of the patient" (p. 109). He provides 8 case reports.

Patient 1 was reassured, in hypnosis, that his arm paralysis was due to "inertia syndrome" which he would continue to have, but it wouldn't interfere with his work.

Patient 2, also with arm paralysis had another comparable, non-incapacitating, symptom substituted.

Patients 3 and 4, for whom restrictions on therapy were the limits of time and situational realities, had their symptoms transformed (e.g. by introducing in hypnosis the obsessional thought or worry that he would NOT have the symptom for which he sought help).

Patients 5 and 6 were helped, through hypnosis, to symptom amelioration. (Patient 5 had an IQ of 65.)

Patient 7 "Therapy was achieved ... by a deliberate correction of immediate emotional responses without rejecting them and the utilization of time to palliate and to force a correction of the problem by the intensity of the emotional reaction to its definition" (p. 121)

Patient 8 "the procedure was the deliberate development, at a near conscious level, of an immediately stronger emotion in a situation compelling an emotional response corrective, in turn, upon the actual problem" (p. 121).

Erickson, Milton H. (1954). The development of an acute limited obsessional hysterical state in a normal hypnotic subject. Journal of Clinical and Experimental Hypnosis, 2, 27-41.

#### NOTES

The 25 year old female graduate student in psychology had often been used in hypnosis experiments and as a demonstration subject, and had witnessed induction of hypnotic deafness, blindness, and color-blindness though she had not been given those suggestions herself. Scientific curiosity appeared to be the motivation for volunteering to experience hypnotic blindness, but she was skeptical about her ability to experience it. The author gave a series of "exceedingly tedious" suggestions to develop somnambulism (passively responsive and receptive) followed by suggestions leading gradually to development of "blindness" with the intention of concealing it from the hypnotist, with attendant strong and mixed emotions.

The initial attempts failed because the subject ostensibly was deceiving herself into thinking she had developed hypnotic blindness, but the author also was of the opinion that she was seeking to meet unconscious personality needs. The author then covertly changed the goal of the experiment "to develop in the subject an acute hysterical obsessional compulsive mental state which would be accompanied by hypnotic blindness and which would parallel or resemble the obsessive compulsive hysterical mental disturbances encountered in psychiatric practice" (p. 32). The author developed a monologue of suggestions based in part on the utterances of hospitalized obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc.

Kline, Milton V.; Guze, Henry (1954). The alteration of oral temperature through hypnotic techniques: I. Pilot experimentation. Journal of Clinical and Experimental Hypnosis, 2 (3), 233-237.

#### NOTES

The authors used a variety of hypnotic techniques to attempt to modify the oral temperature of a normal 30 year old male who was capable of both positive and negative hypnotic hallucinations and of reaching a somnambulistic level with spontaneous, complete, post-hypnotic amnesia. Techniques included direct suggestions (general for temperature rising as when ill, and specific, i.e. his oral area was getting hot), time regression to when he had experienced a fever, age regression to age 10 when he had a high fever, direct suggestion of temperature drop, and positive hallucination of extreme elevation in a plane. A waking simulation control was run for each condition.

Although the subject appeared uncomfortable and showed behavioral changes, the mean oral temperatures did not differ from the baseline mean significantly for either hypnosis or simulation conditions, except for the hallucinated experience of flying in a plane at an altitude of 100,000 feet. That condition lowered the temperature an average of 3 degrees Fahrenheit. In that experimental condition there was no mention of temperature alteration per se, "thus indirect mechanism rather than direct mechanism appears to be more effective in the hypnotic control of temperature" (p. 237).

LeCron, Leslie M. (1954). A hypnotic technique for uncovering unconscious material. Journal of Clinical and Experimental Hypnosis, 2, 76-79. (Abstracted in Psychological Abstracts, 54: 7497)

"Summary. A technique is given whereby unconscious material and information may be learned under hypnosis through automatic movements of the fingers, or of Chevreul's pendulum. The movements are controlled by the unconscious mind of the patient. Questions are asked which can be answered either 'yes' or 'no.' With most people the movements of the pendulum can even be elicited in the waking state. Essentially, the method is a variation of automatic writing with movements substituted for writing. A brief case history is given wherein knowledge was gained in this way as to the causes for severe menstrual pains" (p. 79).

Rosen, Harold; Erickson, Milton H. (1954). The hypnotic and hypnotherapeutic investigation and determination of symptom-function. Journal of Clinical and Experimental Hypnosis, 2 (3), 201-219. (Abstracted in Psychological Abstracts, 55: 7017)

#### NOTES

"Summary.

1. Symptoms and even syndromes may subserve the repetitive enactment of traumatic events; may reproduce, instead, specific life situations; may satisfy repressed erotic and aggressive impulses; or may at one and the same time constitute defenses against, and punishment for, underlying instinctual drives. They may mask underlying schizophrenic reactions, or hold suicidal depressions in check. They may serve these and other functions concurrently, or none, or any specific one or combination of them.

2. With selected patients under hypnosis, symptom-function may be determined rapidly and in a therapeutic setting. Various techniques can be utilized. Attacks may be precipitated and then blocked, either by direct hypnotic suggestion or by regressing the patient to a period pre-dating the onset of his disease, so that substitutive motor or other activity will be precipitated in a form accessible to therapeutic investigation; attacks may be precipitated in slow motion, so that individual components can be therapeutically investigated in detail; dissociated states may be induced; dream acting-out may be suggested; or symptoms may be suggested away while emotions back of symptoms are concurrently

intensified, so that, again, underlying dynamic material will immediately become accessible for therapy. Still other techniques may be utilized.

3. If treatment, as well as evaluation, be through these techniques, and if treatment be successful, it may be that the analogy of a log jam will be of value. The jam can usually be broken by pulling out one or two key logs. The rest then start falling into place -- and the whole log jam disappears. This may be what happens, although to a limited extent, during therapy of this type.

4. Various of these techniques have been illustrated throughout this paper. Case histories however, have at times been distorted in order to maintain the anonymity of the patients involved" (pp. 218-219).

Schneck, Jerome M. (1954). A hypnoanalytic investigation of psychogenic dyspnea with the use of induced auditory hallucinations and special additional hypnotic techniques. Journal of Clinical and Experimental Hypnosis, 2, 80-90.

"Summary. This paper describes in detail and with discussion the hypnoanalytic session which was instrumental in relieving a patient of severe dyspnea and fatigue based on intense, long standing psychological conflict. The conflict entailed the intermingling of past concerns and current pressing problems. These had to do with the patient's long repressed feelings about having been told that her birth had been unplanned. They related to current indecision about becoming pregnant. Attitudes toward her parents were significant and these involved mixed feelings with the significance of her conscious and unconscious images of them. Into this picture there were projected the patient's attitudes toward herself and her methods of functioning somatically as well as psychologically. The symbolic connotation of her symptoms as deterioration and dying in relation to needs for self-destruction were clarified. The symptoms of one and a half to two years duration were dissipated within a few hours and improvement had been maintained for more than a year at the time of writing.

"The use of induced music associations in order to make inroads into the core of the conflict is described. The dynamic significance of spontaneous choice of such theme [sic] is discussed. Other hypnotic techniques involve visual imagery with dream-like qualities and in the form of scene visualizations (8, 9). Attention is centered on induced auditory hallucinations and interesting facets of such experiences are discussed in relation to subjective and objective qualities of such hallucinations and the issue of dynamic validity" (p. 90).

Schneck, Jerome M. (1954). Hypnotherapy in a case of claustrophobia and its implications for psychotherapy in general. Journal of Clinical and Experimental Hypnosis, 2 (4), 251-260. (Abstracted in Psychological Abstracts, 55: 6064)

## NOTES

"Summary. This report presents the hypnotherapy of a patient with claustrophobia. The crucial event responsible for symptom formation occurred in military service when the patient was trapped in a trench by a tank which stopped over the patient before proceeding, and at which time the sides of the trench began to cave in. Subsequent traumatic events served as reenforcement. It is likely that a low threshold for the development of anxiety predisposed this patient to the development of the claustrophobia, although the major trauma sustained was undoubtedly of tremendous impact and a distinct threat to life. Emotional experiences were sealed and free expression was permitted through hypnotic revivification. The dynamics, further elaborated in the report, suggest that similar occurrences not necessarily in military settings may be approached therapeutically in this way. Aside from the reliving technique, recall stimulation through a dream induction approach was employed. Other hypnotic methods were described and further implications for psychotherapy in general were

elaborated. Hypnotherapeutic and hypnoanalytic approaches to phobic reactions have been described at length elsewhere" (p. 260).

**1953**

**Kline, Milton V. (1953). Delimited hypnotherapy: The acceptance of resistance in the treatment of a long standing neurodermatitis with a sensory imagery technique. Journal of Clinical and Experimental Hypnosis, 1 (4), 18-22.**

**Author's Summary - A case of experimental hypnotherapy of a chronic neurodermatitis has been presented within which the resistance of the patient was accepted as reasonable. Therapy was structured by the patient's limitations and the results, at least in this one case, justified the procedure. It is suggested that a more global perception of resistance be recognized apart from its unconscious meaning and that cognitive aspects of resistance be evaluated and utilized in treatment planning. The problem of an artifact neurotic reaction in resistance oriented therapy is discussed.**

**Kline, Milton V. (1953). Hypnotic retrogression: A neuropsychological theory of age regression and progression. Journal of Clinical and Experimental Hypnosis, 1, 21-28.**

**Author's Summary - In a review of the salient aspects of research in hypnotic age regression an evaluation of the data tended to indicate that under certain conditions valid age regression is discussed in the light of a neuropsychological theory of age regression. This theory based upon a concept of hypnotic retrogression views regression and progression phenomena in hypnosis as a form of psychological activity involving disorientation for the subject and a reorganization of his perceptual equilibrium and control mechanisms with particular reference to time-space perception. The term hypnotic retrogression is used to describe the centrally induced state which alters time-space perception and renders hypnotic regression and progression possible.**

**Rosen, Harold (1953). Hypnodiagnostic and hypnotherapeutic fantasy---evocation and acting-out techniques. Journal of Clinical and Experimental Hypnosis, 1 (1), 54-66.**

## **NOTES**

**Developed techniques to reach patients who have little motivation for psychotherapy, sometimes hypnotizing them without their knowledge or conscious consent. "By still other techniques, symptom-formation was then blocked and the inevitable, resultant anxiety reaction repressed, so that underlying fantasies could erupt into conscious awareness even to the point of being acted out" (p. 65). By these means he determined the neurotic of psychotic functions being served by the patient's physical symptoms. The hypnotic interpersonal relationship is "a fantasy-evoking one in which the patient, on the basis of his own experiential background and with more ready access to his pre-conscious, thinks, feels, experiences, reacts and even acts-out exactly as he believes the hypnotist wishes him to, projecting his own impulses, desires and fantasies to the therapist" (p. 66).**

## **TEMPERATURE**

**1993**

**Hall, Howard; Minnes, Luke; Olness, Karen (1993). The psychophysiology of voluntary immunomodulation. International Journal of Neuroscience, 69, 221-234.**

**In twenty-two studies of intentional efforts of humans to change immune measures, only four monitored psychophysiologic parameters. One study reported physiologic alterations associated with**

immune changes. In this current study we examined changes in pulse rate and peripheral temperature associated with intentional changes in neutrophil adherence. Subjects had blood, pulse and temperature recordings collected before and after either a rest condition (Group A), or a self-regulation exercise (Groups B and C) for two sessions. Group C had four prior training sessions before participating in the experimental sessions. This study found no association between psychophysiological alterations and neutrophil changes. The control group (A) demonstrated no significant neutrophil changes but showed physiologic alterations, whereas, the experimental group (C) that showed increases in neutrophil adherence demonstrated no significant physiologic changes. It was speculated that intentional changes on neutrophil adherence and the pattern of the psychophysiological measures were associated with and reflective of cognitive activity.

1992

Hajek, P.; Jakoubek, B.; Kyhos, K.; Radio, T. (1992). Increase in cutaneous temperature induced by hypnotic suggestion of pain. Perceptual and Motor Skills, 74, 737-738.

Eight patients with atopic eczema and six healthy subjects were given hypnotic suggestion to feel pain in the upper part of the back and in one case on the palm. An average local increase in skin temperature of 0.6 degrees centigrade (detected by thermovision) occurred under this condition. For some patients cutaneous pain threshold was increased before the experiment by means of repetitive hypnotic suggestion of analgesia. These subjects reported feeling no pain subjectively, but the local change in skin temperature was equal in both cases. The results suggest a central mechanism induced by measuring changes in pain threshold in the skin, which changes are independent of local changes in blood flow. Local pain in the middle of the upper part of the back, and in one subject for comparative purposes in the region of the right palm, was induced during a single hypnotic session by specific suggestion which emphasized a subjective feeling of local pain lasting for 6 minutes. In four of the eczema patients long-lasting cutaneous analgesia was induced before this experiment by a different suggestion which stressed the impossibility of conducting pain from the skin to the brain and which was repeated in ten consecutive hypnotic sessions. The spatial thermal reaction of the skin surface was monitored, with consecutive recordings taken at 20-sec. intervals before and after finishing the hypnotic suggestion of pain. There was a gradual increase in temperature (1.08 degrees Fahrenheit). In the four eczema patients with long-lasting cutaneous analgesia treated equally, the thermal reaction of the skin was similar to that described above although no subjective feeling of pain was reported. These subjects reported feeling only that their skin was getting warmer at the specified place.

Miller, Scott D.; Triggiano, Patrick J. (1992). The psychophysiological investigation of multiple personality disorder: Review and update. American Journal of Clinical Hypnosis, 35, 47-61.

## NOTES

A review and methodological critique. Updates Putnam, 1984. Currently, psychophysiological differences reported in the literature include changes in cerebral electrical activity, cerebral blood flow, galvanic skin response, skin temperature, event-related potentials, neuroendocrine profiles, thyroid function, response to medication, perception, visual functioning, visual evoked potentials, and in voice, posture, and motor behavior. Reviews the new research on the psychophysiological investigation of MPD from published, unpublished, and ongoing studies, and attempts to place current findings into a conceptual framework. Authors note results from unpublished and ongoing studies and include a critical analysis of current research methodology as well as suggestions for future research.

Mittleman, K. D.; Doubt, T. J.; Gravitz, Melvin A. (1992). Influence of self-induced hypnosis on thermal responses during immersion in 25 degrees C water. Aviation, Space & Environmental Medicine, 63, 689-695.

The efficacy of self-induced posthypnotic suggestion to improve thermogenic responses to head-out immersion in 25 degrees C water was evaluated in 12 males. An online computerized system permitted the change in body heat storage to be used as the independent variable and immersion time as the dependent variable. Two one- hour hypnotic training sessions were used. There were no differences in rates of heat production, heat loss, mean skin temperature, or rectal temperature between control and hypnotic immersions. Individual hypnotic susceptibility scores did not correlation with changes in thermal status. Ratings of perceived exertion during exercise were similar for both immersions, but perceived sensation of cold was lower during the second rest period of the hypnotic immersion. Three subjects used images of warm environments during their hypnotic immersion and lost heat at a faster rate than during control immersions. These results indicate that brief hypnotic training did not enhance the thermogenic response to cool water immersion.

Wallace, Benjamin; Kokoszka, Andrzej (1992). Experience of peripheral temperature change during hypnotic analgesia. International Journal of Clinical and Experimental Hypnosis, 40, 180-193.

Many Subjects who experience hypnotic analgesia in a portion of their body often report that it is accompanied by sensations of coldness in the affected area. Experiments were conducted to determine if such reports are the result of a physical change in peripheral temperature or are due to psychological factors. When analgesia was induced in a limb or in the back of the neck, a concomitant physical change in temperature was not observed. Subjects did report experiencing coldness, however, in the affected body part. Such experiences were attributed to associations that Subjects developed between numbness or analgesia and a drop in peripheral temperature. As a result, coldness as an associate of hypnotic analgesia is suggested as a manipulation check for the presence of such sensation reduction.

## NOTES

When a limb feels numb, there also appears to be degradation of proprioceptive abilities (Wallace & Garrett, 1973, 1975; Wallace & Hoyenga, 1980). When Ss are asked to touch their nose with finger, either subjects miss the nose or they take longer to do the task. This kind of proprioceptive decrement has also been reported by Spanos, Gorassini, and Petrusic (1981) and Welch (1978, p. 27).

This study used highly hypnotizable Ss (10-12 on Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) and low hypnotizables (0-2) in Experiment 1 which established temperature variability in an arm and sites for measuring temperature during hypnotic analgesia.

In Experiment 2, 40 subjects (20 highs and 20 lows by above standards, with group assignment confirmed by Stanford Hypnotic Susceptibility Scale, Form C, on which highs  $M = 10.4$ , lows  $M = 1.2$ ) were given relaxation imagery (e.g. to imagine a white, fluffy cloud gently moving across a deep, blue sky during a count of 20, while at the same time, listening only to the voice of E describing the scene to them.

The analgesia suggestion was that "their right arm had been injected with massive doses of Novocain, that Novocain had been injected in their shoulder, in their elbow, in their forearm, in their hand, and in their fingers ... their arm would become progressively more and more numb as E counted backward from 20 to 1" (p. 185; for more details see Wallace & Hoyenga, 1981). They were asked to perform the nose touch test as confirmation of the analgesia suggestion response.

Highs and lows who served as control subjects had the same treatment except instead of analgesia instructions they were told their arm would become progressively more and more relaxed as E counted backwards from 20 to 1.

The peripheral skin temperature was monitored during the procedures, and following the experimental manipulation Ss completed a questionnaire on their experience of numbness, heaviness, changes in limb temperature (very warm to very cold), and changes in mobility.

Analyses of variance were used to analyze the results. Although there were no objective skin temperature changes, there was a significant interaction effect for pointing error. Highs who received analgesia suggestions were off 4.35 cm; the other 3 groups had mean error of .45 cm or less. There was also an interaction effect for latency of response: highs with analgesia instructions took 3.05 seconds longer than in relaxation condition, while other three groups only took .27 sec longer, on average. Additionally, there was a correlation between receiving analgesia instructions and feeling limb heaviness for the high hypnotizables ( $r = .68$ ) but not for lows or for any Ss asked to relax their arm during the procedures.

The sensation of coldness was reported by the majority of highs receiving analgesia suggestions (7 of 10), but 2 Ss scoring 12 on the SHSS:C did not report coldness. Cold sensation was not reported by any S in any of the three other groups. The correlations between cold sensation and heaviness ( $r = .65$ ,  $p < .05$ ) and cold sensation and immobility ( $r = .79$ ,  $p < .05$ ) were found only in the High hypnotizable, analgesia suggestion group.

The authors performed a third experiment to determine whether temperature change could be used to confirm analgesia. This would be useful when one cannot confirm with inability to move the body part, e.g. when the analgesia is being developed in a part of the body that usually doesn't move. The design for Experiment 3 was the same as for Experiment 2.

Analgesia rated on a 7-point scale was reported as 6.1 by high hypnotizables and 1.2 by low hypnotizables. "Reports of a temperature change during the induction were also related to hypnotic analgesia and being classified as high in hypnotizability. Such a relationship was only significant, however, for a feeling of coldness ( $r = .63$ ,  $p < .05$ ), and 7 of the 10 high hypnotizable Subjects assigned to the analgesia group reported the aforementioned sensation. A significant experiencing of a temperature change (cold or warm) was not reported by the other three groups of Subjects" (p. 189).

In their Discussion, the authors suggest that expectancy might account for the results, since during post-experiment interviews many Ss said that they expected their arm would become cold when it was numb. That was based on their previous experience, e.g. in placing ice on the skin. Notable, people did not exhibit this association if they were not able to develop the analgesia in response to suggestion.

The authors also take note of the fact that none of the Subjects reported associating cold with pain, though cold and pain often are concurrently experienced. This might be because only extreme cold is painful, and coolness might actually be perceived as pleasant.

## 1988

Wakeman, R. J. (1988). Hypnotic desensitization of job-related heat intolerance in recovered burn victims. American Journal of Clinical Hypnosis, 31, 28-32.

The thermally injured patient who suffers extensive third-degree burns usually finds the adaptation to high temperature environments quite difficult. A 7-year study of 50 thermally injured patients with greater than 45% total body surface second- and third-degree burns was conducted to assess the usefulness of hypnosis for improved heat adaptation at the work site. There were 25 subjects in the experimental group who received hypnotic training and 25 in a matched control group. The experimental group achieved a mean of 6.25 hours worked over 16 weeks and 63.5 days worked out of 80. They worked 4.5 to 6.5 hours per day for an average of 221 days per year for up to 3 years from

baseline. The control group achieved a mean of 4.5 hours worked over 16 weeks and 54.33 days worked out of 80. The efficacy of hypnosis in heat desensitization is discussed.

## NOTES

Mean age was 38 for the hypnosis group, 33 for the control group; both groups had mean educational level of 8 grades. Mean percentage of total body surface burn was 50% for hypnosis and 54% for control groups.

Each patient was seen for 16 weeks, for 2 hours/week. The hypnosis group received hypnosis, were taught self hypnosis, and were given cassette tapes for use at home. The hypnosis training included a variety of techniques (e.g. progressive deep muscle relaxation, eye-fixation, eye-roll, and visual imagery techniques). They were given suggestions for lower skin temperature, lower 'inner body' temperature, less itching, gradual improvement of time spent on the job, as well as ego strengthening suggestions. The control patients received supportive psychotherapy, family consultation, and cognitive behavior therapy for the same amount of contact time with the same therapist.

The hypnosis group was to do self hypnosis every two hours at the worksite, in addition to home practice. Visual imagery suggestions were things like imagery of a cool waterfall flowing over the skin, having a tall cold glass of beer or soft drink, etc. They also had biofeedback of skin temperature during office visits, to reinforce decreases in skin temperature near the burned sites. They had exposure to heat (in a 95 degree sauna) for in gradually increased periods of time (15 to 120 minutes) before returning to the worksite.

Three years after treatment 20 of 25 control patients had quit their jobs or transferred to a cooler worksite, and all 25 had resigned from their original jobs or applied for further disability benefits. In contrast, only 2 of 25 experimental Ss were working in controlled-temperature settings, and none had applied for permanent disability benefits.

The authors note that family support was essential for the hypnosis patients to carry out their treatment program, and family consultations were essential for every patient. They also found the 'fade-in' technique using the sauna in the hospital occupational therapy area very useful for bridging the gap between practice in the office and going back to the work setting. "This procedure enabled the subject to practice self- hypnosis under controlled physical conditions while performing a work task that was more realistic than 'imagined heat' in the office setting" (p. 31).

## 1987

Price, Donald D.; Barber, Joseph (1987). An analysis of factors that contribute to the efficacy of hypnotic analgesia. Journal of Abnormal Psychology, 96, 46-51.

An analysis was made of factors that contribute to the magnitude of hypnotic analgesia produced by indirect hypnotic suggestions. Two groups of human volunteers made sensory and  affective  visual analogue scale (VAS) responses to nociceptive temperatures (44.5-51.5C) before and after hypnotic suggestions were given for analgesia. Group 1 was given suggestions for developing a hypnotic state only once just before analgesic testing and did not have significantly reduced VAS responses to experimental pain after hypnosis. Group 2 was continuously given cues for maintaining a hypnotic state during their analgesia testing session and had large reductions in both VAS- sensory and, especially, VAS-affective responses to pain. A small but statistically reliable correlation was found between hypnotic susceptibility and overall magnitude of reduction in VAS-sensory responses ( $R = .4$ ). The correlations were much larger for intense stimuli compared to those near threshold. Reductions in VAS-affective pain responses were not correlated with hypnotic susceptibility.

## 1986

Pereira, Robert Peter (1986, July). The role of organismic involvement in hypnotic emotional behavior (Dissertation, Wayne State University). Dissertation Abstracts International, 47 (1), 385-B. (Order No. DA8605027)

"Two hundred college undergraduates were pretested via the Harvard Group Scale of Hypnotic Susceptibility: Form A. Fifty subjects scoring in the range 7-12 were designated as Reals, while 25 subjects scoring in the range 0-4 were designated as Simulators. Reals and Simulators were given differential instructions before the administration of a second hypnotic induction procedure, which was accompanied by a task in which subjects were asked to relive each of three emotional experiences, i.e., fear, anger, and happiness. Reals were given instructions encouraging cooperation, while Simulators were instructed to try to convince a group of experienced hypnotists that they were deeply hypnotized, when, in fact, they would not be. "Physiological, overt-behavioral, and cognitive measures taken either during or following the relived-emotions task served as indices of Sarbin's organismic involvement construct. A post-experimental measure of the realness of subjects' relived emotional experience was regressed on these organismic indices in order to test Sarbin's assumption of a positive linear relationship between organismic involvement and belief-in imaginings, using data from the Real group only. Results indicated that, across all three emotions, the linear composite of organismic indices shared statistically significant amounts of variance with the criterion of experiential realness. Obtained amounts of shared variance ranged from 22% (during anger) to 55% (during happiness). These findings were interpreted as offering clear and robust support for Sarbin's theory of hypnosis. Suggestions for further research were offered. "The question of Real-Simulator differences was explored through several multivariate analyses of variance and covariance, using the organismic indices as dependent variables. These analyses were performed on the original sample of Reals and Simulators, and on two subsamples of Reals/Highs and Simulators/Lows which were created through the use of pre- and/or post-experimental exclusion criteria. Reals/Highs showed statistically higher levels of effort than did Simulators/Lows during all three emotions, as well as higher levels of skin conductance and finger temperature during anger. These findings were interpreted as being of theoretical and practical significance. Multiple replications of the physiological findings were recommended in order to assess the extent to which the skin conductance and finger temperature variables might be used in practical, i.e., forensic contexts" (p. 385-B).

Sargent, Joseph; Solbach, Patricia; Coyne, Lolafaye; Spohn, Herbert; Segerson, John (1986). Results of a controlled, experimental, outcome study of nondrug treatments for the control of migraine headaches. Journal of Behavioral Medicine, 9, 291-323.

Headache variables were examined for 136 subjects who participated for 36 weeks in one of four groups: No Treatment, Autogenic Phrases, EMG Biofeedback, Thermal Biofeedback. All subjects kept daily records of headache activity and medication usage and participated in 22 laboratory sessions during which frontalis EMG and hand temperature measurements were taken; those in the 3 treatment groups practiced at home. There was a substantial reduction in headache variables in all groups. The No- Treatment Group differed significantly from the treatment groups combined, with the least reduction in headache variables. The thermal biofeedback group vs EMG biofeedback and autogenic phrases groups showed a suggestive trend toward improvement in the frequency and intensity of total headache.

Williams, David A.; Thorn, Beverly E. (1986). Can research methodology affect treatment outcome? A comparison of two cold pressor test paradigms. Cognitive Therapy and Research, 10 (5), 539-545.

Examined the effect of fixed or open latency instructions on subjective pain report for the cold pressor test using a single cognitive training strategy with 80 undergraduates. The fixed latency paradigm instructed Ss to leave their hand in the cold water for a fixed amount of time (e.g., 3 min), whereas the tolerance paradigm asked Ss to endure pain for as long as possible. Results suggest that the fixed latency paradigm is associated with lower subjective pain ratings especially when a cognitive strategy is used. The tolerance groups failed to decrease their subjective perception of pain but evidenced longer latencies when a cognitive strategy was used. It is concluded that while other research has used these paradigms interchangeably to assess efficacy, these 2 paradigms apparently pose different challenges to Ss. (15 ref).

1985

Schlesinger, Jay Lawrence (1985). Hypnotizability in relation to success in learning biofeedback training: Attentional involvement (Dissertation, Adelphi University). Dissertation Abstracts International, 45 (n8-B), 2701. (Order No. DA 8424937)

#### NOTES

"This study investigated the role of attentional focus in the relationship between hypnotizability and success in learning two types of biofeedback training. 40 female college students, aged 18-25, were measured for hypnotic responsiveness, and given one session of EMG biofeedback and one session of temperature biofeedback. For the biofeedback training, 20 Ss received written instructions designed to establish a passive, non-volitional attentional focus on the feedback signal, and 20 received written instructions intended to establish an active, volitional attentional focus on the feedback signal.

"It was hypothesized that level of hypnotizability would be positively related to success in learning EMG and temperature biofeedback training for the Ss given passive, non-volitional attentional instructions, while level of hypnotizability would be negatively related to success in learning biofeedback training for the Ss given active, volitional attentional instructions. It was also hypothesized that higher hypnotizables would perform better with temperature biofeedback than with EMG biofeedback, and that lower hypnotizables would perform better with EMG biofeedback than with temperature biofeedback.

"The hypotheses were not supported, nor was any overall relationship between level of hypnotizability and success in learning biofeedback demonstrated. There was support to suggest that an active, volitional attentional focus on the biofeedback signal was most adequately maintained by the 20 Ss given the active volitional instructions. Clinical implications of these findings and directions for future research were discussed" (p. 2701).

1984

Holmes, David S. (1984). Meditation and somatic arousal evidence. American Psychologist, 39 (1), 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the research in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly, a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and nonmeditating (no-treatment, antimeditation, or relaxation) subjects. The implications of these findings for research and practice are discussed.

Raynaud, Jeanne; Michaux, Didier; Bleirad, Guilhem; Capderou, Andre; Bordachar, Janine; Durand, Jacques (1984). Changes in rectal and mean skin temperature in response to suggested heat during hypnosis in man. Physiology and Behavior, 33, 221-226.

Rectal temperature, mean skin temperature and heart rate were recorded in 7 subjects during hypnosis, induced either alone or while sensations of heat were suggested. During hypnosis alone, a fall in the heart rate of about 10 beat-min<sup>-1</sup> was the only autonomic response observed; body temperatures were unaltered. In contrast, during hypnosis with suggestion of heat, the following changes occurred: (1) Mean rectal temperature decreased 0-.20 degrees C. (p<.05) within 50 min. Its mean time course differed significantly from that for hypnosis alone (p<0.001). (2) Comparison of individual rectal temperature time sequences showed that in fact this temperature only declined in 4 subjects out of 7, and tended to form a plateau located 0.35 degrees C below the value of the preceding waking state. Despite reinforcement of heat suggestion, the plateau continued until the end of the hypnotic trance. (3) Mean skin temperature tended to rise. (4) When hypnosis with suggestion ceased, both rectal and skin temperatures very slowly returned to their levels during the preceding waking state.

1983

Borgeat, Francois; Goulet, Jean (1983). Psychophysiological changes following auditory subliminal suggestions for activation and deactivation. Perceptual and Motor Skills, 56, 759-766.

This study was to measure eventual psychophysiological changes resulting from auditory subliminal activation or deactivation suggestions. 18 subjects were alternately exposed to a control situation and to 25-dB activating and deactivating suggestions masked by a 40-dB white noise. Physiological measures (EMG, heart rate, skin-conductance levels and responses, and skin temperature) were recorded while subjects listened passively to the suggestions, during a stressing task that followed and after that task. Multi-variate analysis of variance showed a significant effect of the activation subliminal suggestions during and following the stressing task. This result is discussed as indicating effects of consciously unrecognized perceptions on psycho- physiological responses.

1982

Barabasz, Arreed F. (1982). Restricted environmental stimulation and the enhancement of hypnotizability: Pain, EEG alpha, skin conductance and temperature responses. International Journal of Clinical and Experimental Hypnosis, 30, 147-166.

Restricted environmental stimulation procedures were used with 10 Ss. The Stanford Hypnotic Clinical Scale: Adult, modified to include a posthypnotic suggestion for an analgesic reaction, and pain threshold and tolerance tests were administered prior to restricted environmental stimulation technique (REST), immediately after REST, and 10-14 days later. Occipital EEG alpha, skin conductance, and peripheral, core, and chamber temperature data were collected prior to, during, and after REST. A control group of 10 Ss was used to assess the effects of repeated hypnosis upon susceptibility scores and demand characteristics of the experiment. Multivariate analysis of variance results showed SHCS and pain tolerance scores to be significantly enhanced for Ss exposed to REST immediately after and 10-14 days later. Orne's (1959) postexperimental inquiry technique did not reveal experimental demand characteristics which might account for the results. EEG alpha density increased significantly in REST, but the increase was not progressive during the REST period. The maintenance of hypnotizability and pain tolerance at follow-up failed to support Reyher's (1965) theory of brain function and behavioral regulation. E. R. Hilgard's (1977) neodissociation interpretation combined with J. R. Hilgard's (1974, 1979) imaginative involvement findings is viewed as a possible explanation.

**Credidio, Steven G. (1982). Comparative effectiveness of patterned biofeedback vs meditation training on EMG and skin temperature changes. Behaviour Research and Therapy, 20, 233-241.**

Examined whether a low arousal, relaxation pattern of frontalis EMG decreases and peripheral skin temperature increases could be attained more effectively through biofeedback or meditation training. 30 21-59 yr old females were randomly assigned to 1 of 3 groups: patterned biofeedback, clinically standardized meditation, or control. Prior to training, Ss were administered the Eysenck Personality Inventory. Each S was seen weekly for 7 sessions. Subjective experiences and time spent practicing at home were also recorded. Results indicate that the meditation group showed significantly lower EMG levels at the end of treatment than did the control group. The biofeedback group had difficulty in patterning the 2 feedback signals simultaneously. Extraverts in the control group had the highest EMG levels. The most positive subjective reports came from Ss in the meditation group. It is suggested that meditation offers a viable alternative as a relaxation procedure, requiring little time to learn and devoid of any performance criteria levels.

**Spanos, Nicholas P.; McNeil, Conrad; Stam, Henderikus J. (1982). Hypnotically 'reliving' a prior burn: Effects on blister formation and localized skin temperature. Journal of Abnormal Psychology, 91 (4), 303-305.**

60 Ss who had previously been burned were "hypnotically age regressed" and given both suggestions to "relive" the burn experience and suggestions that a blister was forming. Although 17 Ss reported vividly imagining the burn events, none showed localized skin-coloration changes or evidence of blister formation. Moreover, skin temperature measured before, during, and after age regression indicated no overall suggestion effects. Nevertheless, 1 S did show differential skin-temperature response to the suggestion. This S had showed only moderate hypnotic susceptibility on the Harvard Group Scale of Hypnotic Susceptibility. (10 ref)

#### NOTES

The male subject who appeared to show changes in response to the suggestion increased temperature differences between the burn site and the contralateral site from .3 degrees C before the imagining period to a maximum of 2.7 degrees C during the imagining period and decreased to 0 degrees C after the imagining period. However, temperature differences between the adjacent sites remained very small (never more than .1 degree C) throughout the session. This subject answered "no" to all seven items on the skin-sensitivity questionnaire. He testified postexperimentally to being only "slightly hypnotized" (score 1), "not at all age regressed" (score 0), and to have experienced imagery that was only 50% as vivid as the real experience. (His HGS:AS score was 8.)

1981

**Claghorn, James L.; Mathew, Roy J.; Largen, John W.; Meyer, John S. (1981). Directional effects of skin temperature self-regulation on regional cerebral blood flow in normal subjects and migraine patients. American Journal of Psychiatry, 138, 1182-1187.**

Vascular headache of the migraine type is associated with vasomotor changes in cerebral arteries. The authors studied whether skin temperature training (biofeedback) reduced the frequency, severity, and duration of these headaches by measuring the regional cerebral blood flow (CBF) in 11 female migraine patients (27-52 years) and 9 female volunteers (22-37 years), using the noninvasive <sup>133</sup>Xe inhalation technique. Half of each group was randomly assigned to a hand-warming or a hand-cooling group. CBF increased in several regions of the left hemisphere to a significant degree only for the

migraineurs who were in the hand-warming group. The pattern of vasomotor regulation apparently differed between migraine and normal Ss. The migraineurs' headache symptoms were affected by both warming and cooling, but warming produced more salutary effects.

Piedmont, Ralph L. (1981). Effects of hypnosis and biofeedback upon the regulation of peripheral skin treatment. Perceptual and Motor Skills, 53, 855-862.

The purpose of this study was to examine the influence of hypnosis on the regulation of peripheral skin temperature. The independent variables were the presence of a hypnotic trance during the session on thermal regulation and the number of trials received. A two-factor mixed-design analysis of variance with repeated measures on one factor showed a significant main effect for trials and a significant interaction between hypnosis and trials. It may be concluded that hypnosis, in conjunction with thermal regulation techniques, exerts a significant influence over performance. The cognitive characteristics influenced by hypnosis may account for this finding.

1980

Crosson, B. (1980). Control of skin temperature through biofeedback and suggestion with hypnotized college women. International Journal of Clinical and Experimental Hypnosis, 28 (1), 75-87.

4 groups of 9 college women attempted to raise finger temperature relative to forehead temperature during hypnosis. After a hypnotic induction, each group of Ss received 1 of the following treatments for temperature control: (a) biofeedback, (b) suggestion and imagery, (c) biofeedback plus suggestion and imagery, and (d) a relaxation, false-feedback control. Groups were initially balanced for hypnotic susceptibility. Between-subject differences in baseline temperatures were statistically controlled. After 4 training sessions, only Ss in the groups receiving biofeedback and biofeedback plus suggestion and imagery demonstrated evidence of learned temperature control, and only Ss in the biofeedback group demonstrated a significantly greater ability to control skin temperature than Ss in the control group. Changes in temperature during hypnotic induction did not appear to affect changes during the subsequent treatment. There was no significant correlation between hypnotic susceptibility and temperature control for Ss in any group, contrary to popular assumption. Future research should attempt to ascertain if combined use of biofeedback and hypnosis offers any advantages to the use of biofeedback alone.

1978

Parwatarikar, Sadashiv D.; Brown, Marjorie S.; Stern, John A.; Ulett, George A.; Sletten, Ivan S. (1978). Acupuncture, hypnosis and experimental pain - I. Study with volunteers. Acupuncture and Electro-Therapeutic Research: International Journal, 3, 161-190.

An experiment was designed to evaluate the protective effects of different agents - acupuncture, hypnosis, Morphine, aspirin, Diazepam and placebo - upon experimentally-induced pain in humans. Twenty normal, healthy volunteers were subjected to cold water and tourniquet-induced pain and the protective effects of 35 minutes of hypnotic suggestion, electro-stimulation of both acupuncture points and non-acupuncture points, 10 mg/kg of Morphine, 5 grains of aspirin, 10 mg of Diazepam and a mild sugar placebo were evaluated. Data was collected on subjective evaluation of pain, EKG, EEG, respiration, skin temperature, peripheral vascular activity and EMG. A special study was also done to evaluate the effects of all the above agents on the somatosensory evoked potentials and EEG. The data were further analyzed on the basis of hypnotic susceptibility of the volunteers. The results indicated: 1) Hypnosis, acupuncture at specific sites with electrical stimulation and Morphine Sulphate had about the same reduction in experimental pain. 2) Hypnosis produced different effects from those resulting

from acupuncture stimulation on EEG. 3) Acupuncture stimulation in specific loci resulted in a latency increase in the early secondary response on somatosensory evoked potential. 4) Cold water pain was remarkably reduced after true acupuncture point stimulation. 5) Tourniquet (ischemic) pain was reduced by both hypnosis and true acupuncture site stimulation. 6) Skin temperature was significantly reduced on the side of acupuncture points (true) stimulation.

**1977**

Ansel, Edward Leslie (1977). A simple exercise to enhance response to hypnotherapy for migraine headache. International Journal of Clinical and Experimental Hypnosis, 25 (2), 68-71.

A common method of hypnotherapy for migraine headache utilizes suggestions of warmth for the hands and coldness for the head. This procedure reverses the abnormal pattern of vasodilation and excess supply of blood in the head and decreased supply in the extremities associated with this type of headache, thereby relieving the pain. A simple exercise, utilizing centrifugal force to dramatically increase blood flow to the hands, is described. It promotes relief in itself and provides a vivid background experience to enhance productivity of this effect in hypnosis. It appears to be especially useful in patients exhibiting lesser degrees of trance capacity.

**1976**

Dugan, Michelle; Sheridan, Charles (1976). Effects of instructed imagery on temperature of hands. Perceptual and Motor Skills, 42, 14.

#### NOTES

Sixteen college student volunteers were involved in the research. Subjects were randomly assigned to two groups, either to warm or to cool their hands. All 10 subjects attempting to cool their hands were able to cool at least one hand, and six people cooled both hands. For those trying to warm their hands, five warmed at least one hand and one was able to warm both hands. Four people were able to cool their hands without hypnosis, conditioning, or feedback.

Jackson, T. L.; Barkley, R. A.; Pashko, S. M. (1976). The effects of hypnotic induction versus high motivation on oral temperature. International Journal of Clinical and Experimental Hypnosis, 24, 22-28.

The hypothesis that changes in oral temperature are associated with neutral hypnotic induction was investigated using neutral hypnosis and a high motivation condition as controls. 33 Ss were assigned to 3 experimental conditions: (1) neutral hypnotic induction, (2) high motivation control, and (3) no treatment control. Ss in all 3 conditions received pre- and post-treatment oral temperature measurements after a 20-minute temperature stabilization showed a significantly greater increase in oral temperature as compared to Ss in both the high motivation and no treatment control conditions. Ss in the latter 2 conditions did not differ from each other in this regard. The methodological considerations of future research in this area are also discussed.

**1973**

Roberts, Alan H.; Kewman, Donald G.; Macdonald, Hugh (1973). Voluntary control of skin temperature: Unilateral changes using hypnosis and feedback. Journal of Abnormal Psychology, 82 (1), 163-168.

To demonstrate the ability of human Ss to achieve control over specific autonomic functions, hypnosis and auditory feedback were used to train a select group of hypnotically talented subjects to produce a

difference in skin temperature in one hand relative to the other in a direction specified by the experimenter. Large and reliable effects were shown demonstrating that some individuals are capable of achieving a high degree of voluntary control over the autonomic processes involved in peripheral skin temperature regulation. Individual differences between subjects were noted, and variables that might account for these are discussed.

**1969**

Timney, Brian N.; Barber, Theodore X. (1969). Hypnotic induction and oral temperature. International Journal of Clinical and Experimental Hypnosis, 17, 121-132.

Measured oral temperature in 19 Ss under hypnotic and control conditions. Confirming a study by A. F. Reid and G. Curtsinger (see 42:10), the hypnotic induction procedure gave rise to a significant increase in oral temperature ( $p < .01$ ). This significant rise was due to the data of 10 of the 19 Ss, 6 did no change and 3 dropped in temperature. The temperature change was not related to Ss' responsiveness to suggestions or to their testimony that they were or were not hypnotized. Although good and poor hypnotic Ss manifested the same degree of temperature rise, there was a tendency for those who had the least previous hypnotic experience to show the greatest rise. Data suggest a hypothesis for further research: oral temperature rises during hypnotic induction to the extent that Ss perceive the hypnotic situation apprehensively, i.e., as mysterious or foreboding. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1968**

Reid, Allen F.; Curtsinger, George (1968). Physiological changes associated with hypnosis: The effect of hypnosis on temperature. International Journal of Clinical and Experimental Hypnosis, 16, 111-119.

STUDIED THE PHYSIOLOGICAL EFFECT ON TEMPERATURE OF HYPNOSIS. UNDER NEUTRAL HYPNOSIS, 20 SS EXPERIENCED AN INCREASE OF ORAL TEMPERATURE AVERAGING .6DEGREES F, WHICH SUBSIDED AFTER TERMINATION OF THE TRANCE. WHEN SKIN TEMPERATURE ON THE FOREHEAD, CHEST, AND HAND WERE MEASURED ON 4 SS, THERE WAS AN EVEN MORE PRONOUNCED INCREASE; MEASUREMENTS ON THE VOLAR SURFACE OF THE FOOT WERE EQUIVOCAL. CONTROL ORAL TEMPERATURE MEASUREMENTS USING RELAXATION WITHOUT HYPNOSIS SHOWED NO SIGNIFICANT INCREASE. IT IS CONCLUDED THAT NEUTRAL HYPNOSIS IS GENERALLY ACCOMPANIED BY AN INCREASE IN ORAL AND SKIN TEMPERATURE. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1954**

Kline, Milton V.; Guze, Henry (1954). The alteration of oral temperature through hypnotic techniques: I. Pilot experimentation. Journal of Clinical and Experimental Hypnosis, 2 (3), 233-237.

**NOTES**

1:  
The authors used a variety of hypnotic techniques to attempt to modify the oral temperature of a normal 30 year old male who was capable of both positive and negative hypnotic hallucinations and of reaching a somnambulistic level with spontaneous, complete, post-hypnotic amnesia. Techniques included direct suggestions (general for temperature rising as when ill, and specific, i.e. his oral area was getting hot), time regression to when he had experienced a fever, age regression to age 10 when he had a high fever, direct suggestion of temperature drop, and positive hallucination of extreme elevation in a plane. A waking simulation control was run for each condition.

Although the subject appeared uncomfortable and showed behavioral changes, the mean oral temperatures did not differ from the baseline mean significantly for either hypnosis or simulation conditions, except for the hallucinated experience of flying in a plane at an altitude of 100,000 feet. That condition lowered the temperature an average of 3 degrees Fahrenheit. In that experimental condition there was no mention of temperature alteration per se, "thus indirect mechanism rather than direct mechanism appears to be more effective in the hypnotic control of temperature" (p. 237).

## **TERMINAL ILLNESS-DEATH**

**1999**

**Harper, Gary W. (1999). A developmentally sensitive approach to clinical hypnosis for chronically and terminally ill adolescents. American Journal of Clinical Hypnosis, 42 (1), 50-60**

Adolescents who suffer from terminal and/or chronic medical illnesses must face difficult developmental issues coupled with increased burdens of physical discomfort and uncertainty about survival. Clinical hypnosis is one technique that can be used to help these individuals gain a sense of comfort and control over their lives. I describe the use of a developmentally sensitive hypnotherapeutic intervention for chronically and terminally ill adolescents. I have used the technique for the reduction of various types of physical and psychological discomfort secondary to a range of medical problems such as cancer, end-stage renal disease, organ transplant, and HIV disease. The treatment focuses on the use of personalized procedures that attempt to increase perceptions of control through interactive formats. Movement through a personally intriguing journey is used as a metaphor for controlling and moving away from discomfort. I also present three case examples as well as general treatment recommendations for clinical use.

**1994**

**Alden, P. A. (1994, October). Hypnotic approaches in pain control with terminally-ill patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.**

## **NOTES**

( These notes do not cover the entire presentation, which was based on clinical practice experience.) One conclusion reached was that J. Barber's Rapid Induction Analgesia (RIA) is more immediately effective than a direct approach to induction, but that a direct approach improves with time. RIA seems to work better for low hypnotizables. Next she plans to study whether patients would benefit from being given a tape of RIA routinely as an adjunct to pain control.

**1992**

**Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.**

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate

variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. Hospice Journal, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

Vijselaar Joost; Van der Hart, Onno (1992). The first report of hypnotic treatment of traumatic grief: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 1-6.

In 1813 the Dutch physicians Wolthers, Hendriksz, De Waal, and Bakker reported the hypnotic treatment of a woman suffering from traumatic grief, in which the therapist had to deal directly with the patient's spontaneous reenactments of the circumstances surrounding the death. This report, summarized in the present article, has historical value, as it is probably the first known precursor of the uncovering hypnotic approach. The original authors' views on the case are discussed, and a modern view for understanding the patient's traumatic grief and its treatment is presented.

1991

Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

1988

Van Der Hart, O. (1988). An imaginary leave-taking ritual in mourning therapy. International Journal of Clinical and Experimental Hypnosis, 36 (2), 63-69.

One form of mourning therapy is the therapeutic leave-taking ritual, the essence of which is that by parting with symbols connected with the deceased, patients take their leave of the deceased and can start a new life of their own. In the case described in the present paper, the patient performed such a ritual in her imagination while under hypnosis. Her extreme grief response is explained in terms of Janet's theory of emotions. It is emphasized that successfully performing the ritual necessarily

involved a change in attitude towards the deceased, and it is argued that the specific characteristics of hypnosis--involuntariness and effortlessness--add an extra dimension to guided imagery approaches to unresolved mourning.

**1985**

Levitan, Alexander A. (1985). Hypnotic death rehearsal. American Journal of Clinical Hypnosis, 27 (4), 211-215.

Death rehearsal is a technique developed to help terminally ill patients and their families deal with anxieties about death. It has proven useful in demystifying the dying process by answering the question "What is it like to die?" Patients, who are able to hypnotically experience the death process, learn to deal with both grief and anxiety with the help of the hypnotherapist. - Author's abstract

Stumpfe, Von Klaus-Dietrich (1985). Psychosomatic reactions of near-death experiences. A state of affective dissociation. Zeitschrift fur Psychosomatische Medizin, 31, 215-225.

The feelings of persons who had encountered life-threatening danger were analyzed and compared with the feelings of persons, who are in hypnosos or trained in autogenic training. The symptoms are widely alike. The result of the comparison is, that there exists a state of affective dissociation, which can be caused by conscious or unconscious actions.

**1984**

Handelman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self- hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

**1977**

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

**1976**

Gardner, G. G. (1976). Childhood, death, and human dignity: Hypnotherapy for David. International Journal of Clinical and Experimental Hypnosis, 24, 122-139.

Hypnotherapy can be a significant part of the treatment of a dying child. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to help a terminally ill child and his family cope effectively with problems and enhance their ability to use their own resources for personal growth and mastery throughout the dying process.

1962

Crasilneck, Harold B.; Hall, James A. (1962). The use of hypnosis with unconscious patients. International Journal of Clinical and Experimental Hypnosis, 10 (3), 141-144.

8 of 10 patients dying of cancer were found to continue a simple motor response to a hypnotic command, even though they revealed no other evidence of interaction with the environment and were considered unconscious by their physicians. Certain theoretical considerations are mentioned. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1956

Stokvis, B. (1956). The application of hypnosis in organic diseases. Journal of Clinical and Experimental Hypnosis, 4 (2), 79-82.

NOTES

1:  
"SUMMARY. Hypnotherapy, applied as a symptomatic treatment, is especially indicated in those cases of organic diseases in which the patient has neurotically elaborated his physical suffering. In cases presenting neither etiological nor secondary psychic factors one may try to improve the patient's condition by hypnotic treatment. Description of a case (hypnotherapy in a woman with carcinoma mammae)[sic]. The writer's lack of appreciation of hypnotherapy in organic diseases does not include the treatment of diseases which are definitely psychosomatically determined" (pp. 81-82).

1955

Schneck, Jerome M. (1955). Hypnosis-death and hypnosis-rebirth concepts in relation to hypnosis theory. Journal of Clinical and Experimental Hypnosis, 3 (1), 40-43.

The author presents a few case notes in support of his proposition that hypnosis is symbolically connected with ideas of death and rebirth in some patients. The final sentence of this article reads, "The unconscious identification of the hypnotic state with processes relating to death and rebirth may be involved far more frequently than realized with widespread belief regarding alleged remarkable beneficial effects of the hypnotic state and procedure which incorporates simple, authoritative suggestion" (pp. 42-43).

TERMINAL ILLNESS-DEATH

1999

Harper, Gary W. (1999). A developmentally sensitive approach to clinical hypnosis for chronically and terminally ill adolescents. American Journal of Clinical Hypnosis, 42 (1), 50-60

Adolescents who suffer from terminal and/or chronic medical illnesses must face difficult developmental issues coupled with increased burdens of physical discomfort and uncertainty about survival. Clinical hypnosis is one technique that can be used to help these individuals gain a sense of comfort and control over their lives. I describe the use of a developmentally sensitive hypnotherapeutic intervention for chronically and terminally ill adolescents. I have used the technique for the reduction of various types of physical and psychological discomfort secondary to a range of medical problems

such as cancer, end-stage renal disease, organ transplant, and HIV disease. The treatment focuses on the use of personalized procedures that attempt to increase perceptions of control through interactive formats. Movement through a personally intriguing journey is used as a metaphor for controlling and moving away from discomfort. I also present three case examples as well as general treatment recommendations for clinical use.

**1994**

Alden, P. A. (1994, October). Hypnotic approaches in pain control with terminally-ill patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

( These notes do not cover the entire presentation, which was based on clinical practice experience.) One conclusion reached was that J. Barber's Rapid Induction Analgesia (RIA) is more immediately effective than a direct approach to induction, but that a direct approach improves with time. RIA seems to work better for low hypnotizables. Next she plans to study whether patients would benefit from being given a tape of RIA routinely as an adjunct to pain control.

**1992**

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

Spira, James L.; Spiegel, David (1992). Hypnosis and related techniques in pain management. Hospice Journal, 8, 89-119.

Hypnosis has been used successfully in treating cancer patients at all stages of disease and for degrees of pain. The experience of pain is influenced not only by physiological factors stemming from disease progression and oncological treatment, but also from psychosocial factors including social support and mood. Each of these influences must be considered in the successful treatment of pain. The successful use of hypnosis also depends upon the hypnotizability of patients, their particular cognitive style, their specific motivation, and level of cognitive functioning. While most patients can benefit from the use of hypnosis, less hypnotizable patients or patients with low cognitive functioning need to receive special consideration. The exercises described in this chapter can be successfully used in groups, individual sessions, and for hospice patients confined to bed. Both self-hypnosis and therapist guided hypnosis exercises are offered.

Vijsselaar Joost; Van der Hart, Onno (1992). The first report of hypnotic treatment of traumatic grief: A brief communication. International Journal of Clinical and Experimental Hypnosis, 40 (1), 1-6.

In 1813 the Dutch physicians Wolthers, Hendriksz, De Waal, and Bakker reported the hypnotic treatment of a woman suffering from traumatic grief, in which the therapist had to deal directly with the patient's spontaneous reenactments of the circumstances surrounding the death. This report, summarized in the present article, has historical value, as it is probably the first known precursor of the uncovering hypnotic approach. The original authors' views on the case are discussed, and a modern view for understanding the patient's traumatic grief and its treatment is presented.

**1991**

Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

**1988**

Van Der Hart, O. (1988). An imaginary leave-taking ritual in mourning therapy. International Journal of Clinical and Experimental Hypnosis, 36 (2), 63-69.

One form of mourning therapy is the therapeutic leave-taking ritual, the essence of which is that by parting with symbols connected with the deceased, patients take their leave of the deceased and can start a new life of their own. In the case described in the present paper, the patient performed such a ritual in her imagination while under hypnosis. Her extreme grief response is explained in terms of Janet's theory of emotions. It is emphasized that successfully performing the ritual necessarily involved a change in attitude towards the deceased, and it is argued that the specific characteristics of hypnosis--involuntariness and effortlessness--add an extra dimension to guided imagery approaches to unresolved mourning.

**1985**

Levitan, Alexander A. (1985). Hypnotic death rehearsal. American Journal of Clinical Hypnosis, 27 (4), 211-215.

Death rehearsal is a technique developed to help terminally ill patients and their families deal with anxieties about death. It has proven useful in demystifying the dying process by answering the question "What is it like to die?" Patients, who are able to hypnotically experience the death process, learn to deal with both grief and anxiety with the help of the hypnotherapist. - Author's abstract

Stumpfe, Von Klaus-Dietrich (1985). Psychosomatic reactions of near-death experiences. A state of affective dissociation. Zeitschrift fur Psychosomatische Medizin, 31, 215-225.

The feelings of persons who had encountered life-threatening danger were analyzed and compared with the feelings of persons, who are in hypnoses or trained in autogenic training. The symptoms are widely alike. The result of the comparison is, that there exists a state of affective dissociation, which can be caused by conscious or unconscious actions.

1984

Handelsman, Mitchell M. (1984). Self-hypnosis as a facilitator of self-efficacy: A case example. Psychotherapy, 21 (4), 550-553.

This article presents the four-session treatment of Elaine, using self-hypnosis to facilitate the mourning process. It is argued that self-hypnosis-- rather than enhancing imagery-- increases self-efficacy, a person's feeling that he/she can perform behaviors that lead to desired outcomes. Elaine's sense of self-efficacy was increased by allowing her to choose scenes from her life to be explored in the context of the use of imagery. Elaine imagined events surrounding her father's death, and "rewrote history" in an attempt to permit herself the direct expression of emotions.

1977

Mystical states by-pass usual sensory perception and logical thinking. They often represent the ultimate goal of long apprenticeships in Eastern or Western monastic practices which stress self-discipline and meditation; or they correlate with sudden religious conversions. While interest has also been revived in mystical experiences stimulated by hallucinogens within the appropriate physical, intellectual, and emotional environment, less attention has been paid to those mystical experiences which appear spontaneously during hypnosis and Transcendental Meditation. The present author facilitates the unleashing of mystical experiences by using hypnotic approaches specifically aimed at altering space and time perceptions. Case presentations illustrate the methodologies for guiding receptive subjects to mystical states with the aim of relieving or correcting organic and functional painful syndromes unresponsive to other interventions. The probable biopsychological processes are discussed.

1976

Gardner, G. G. (1976). Childhood, death, and human dignity: Hypnotherapy for David. International Journal of Clinical and Experimental Hypnosis, 24, 122-139.

Hypnotherapy can be a significant part of the treatment of a dying child. A detailed clinical report illustrates how hypnotherapy was integrated with other treatment modalities to help a terminally ill child and his family cope effectively with problems and enhance their ability to use their own resources for personal growth and mastery throughout the dying process.

1962

Crasilneck, Harold B.; Hall, James A. (1962). The use of hypnosis with unconscious patients. International Journal of Clinical and Experimental Hypnosis, 10 (3), 141-144.

8 of 10 patients dying of cancer were found to continue a simple motor response to a hypnotic command, even though they revealed no other evidence of interaction with the environment and were considered unconscious by their physicians. Certain theoretical considerations are mentioned. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1956

Stokvis, B. (1956). The application of hypnosis in organic diseases. Journal of Clinical and Experimental Hypnosis, 4 (2), 79-82.

NOTES

"SUMMARY. Hypnotherapy, applied as a symptomatic treatment, is especially indicated in those cases

1:

of organic diseases in which the patient has neurotically elaborated his physical suffering. In cases presenting neither etiological nor secondary psychic factors one may try to improve the patient's condition by hypnotic treatment. Description of a case (hypnotherapy in a woman with carcinoma mammae)[sic]. The writer's lack of appreciation of hypnotherapy in organic diseases does not include the treatment of diseases which are definitely psychosomatically determined" (pp. 81-82).

1955

Schneck, Jerome M. (1955). Hypnosis-death and hypnosis-rebirth concepts in relation to hypnosis theory. Journal of Clinical and Experimental Hypnosis, 3 (1), 40-43.

The author presents a few case notes in support of his proposition that hypnosis is symbolically connected with ideas of death and rebirth in some patients. The final sentence of this article reads, "The unconscious identification of the hypnotic state with processes relating to death and rebirth may be involved far more frequently than realized with widespread belief regarding alleged remarkable beneficial effects of the hypnotic state and procedure which incorporates simple, authoritative suggestion" (pp. 42-43).

#### TEST- SCALE

1994

Grant, Carolyn (1994). The Computer-Assisted Hypnosis Scale: Standardization and norming of a computer-administered measure of hypnotic ability (Dissertation). Dissertation Abstracts International, 54 (10/B), 5387.

"In a counterbalanced, within-subjects, repeated measures design, 130 subjects were administered both the Computerized Assisted Hypnosis Scale (CAHS) and the Stanford Hypnotic Susceptibility Scale, Form C (Stanford Hypnotic Susceptibility Scale: C). For each hypnotic procedure responsiveness was assessed along three dimensions: behavioral (CAHS, Stanford Hypnotic Susceptibility Scale: C), subjective depth (Field Depth Inventory), and relational involvement (Archaic Involvement Measure). Subjects also completed a Stanford Hypnotic Susceptibility Scale: C self scoring measure and the Tellegen Absorption Scale. The CAHS was shown to be a psychometrically sound instrument for measuring hypnotic ability. The various dimensions of CAHS hypnotic responsiveness were highly positively related, and the CAHS compared favorably with the Stanford Hypnotic Susceptibility Scale: C across the three dimensions assessed. Results are discussed in terms of the theory and practice of clinical assessment, noting directions for future research" (p. 5387).

1993

Balthazard, Claude G. (1993). The hypnosis scales at their centenary: Some fundamental issues still unresolved. International Journal of Clinical and Experimental Hypnosis, 41, 47-73.

Current approaches to the measurement of hypnotic performance can be traced back to the 19th century. In part because of these early origins and in part because of the nature of hypnotic phenomena, the hypnosis scales are unique psychometric instruments. The classic hypnosis scales are based on the notion of a "performance ladder"; items are scored on a pass/fail basis and can be arranged in increasing order of difficulty. Some of the implications on [sic]this "performance ladder" approach are reviewed. The evidence for two-mechanism models of hypnotic performance is reviewed. It is argued that this kind of formulation is at least as plausible as one that argues that the hypnosis scales measure "one thing" or "mostly one thing." If it were the case that the hypnosis scales were tapping two different and distinct processes, the label "hypnotic susceptibility" could not be

unambiguously applied to scores on the hypnosis scales. The hypnosis scales would appear well-suited to the investigation of underlying mechanisms, yet no consistent picture of the mechanisms underlying hypnotic performance on the scales has emerged thus far. No resolution is presented, but some of the reasons why such a resolution is so elusive are discussed. The future of hypnosis scales is discussed with respect to multidimensional assessment and alternatives to the "work sample" approach.

## NOTES

Author discusses the hypnotizability scales' history and psychometric properties, suggesting that they cannot have construct validity if more than one construct is involved. He states that many of the alternative formulations "posit structurally similar two- mechanisms models, where the relative contributions of one and the other mechanism changes gradually with the difficulty of the hypnotic performance--that is, one mechanism is more important for easy items and the other more important in the difficult range. This kind of formulation has been advanced by a number of authors .... Although these formulations are structurally similar, the nature of the mechanisms has been variously conceptualized: nonability and ability components (Shor, Orne & O'Connell, 1962), primary suggestibility and somnambulism (Weitzenhoffer, 1962), minor and major dissociations (Hilgard, 1977), compliance and true hypnosis (Tellegen, 1978-1979), and cooperativeness and expectation at one end and absorption at the other (Spanos, Mah, Pawlak, D'Eon, & Ritchie, 1980). ... In a formulation such as Hilgard's (1977), where both mechanisms are dissociative, it may be that it makes some sense to understand both mechanisms as aspects of the same complex construct. In other formulations... it would appear more cogent to speak of two constructs. Spanos et al. (1980) found that 'cooperativeness and expectation may be particularly important in responding to ideomotor and challenge suggestions, while the ability to convincingly treat imaginings as real (i.e., absorption) becomes increasingly important for more difficult 'cognitive' items" (p. 21). Balthazard & Woody (1992) presented evidence that the more difficult items on hypnotizability scales are related to absorption more than the easier items.

Balthazard & Woody (1989) investigated the proposition that hypnotizability scores are distributed bimodally, and concluded that statistical problems clouded the issue. Furthermore, most analyses previously have been of surface structure, which does not relate directly to the underlying mechanisms of hypnosis, and current psychometric methods cannot address the mechanisms that underlie surface relations. "There are two aspects of hypnotic processes ... that obscure underlying mechanism: synergisms and overdetermination. Synergisms occur when mechanisms potentiate each other in such a way that a combination of processes becomes more than the sum of its parts. Overdetermination occurs when co-occurring mechanisms do not potentiate each other, such that any one of the mechanisms would have been sufficient to produce the observed effect" (p. 63-64).

The author suggests there are two options at present: Corrective Scoring (like the Curss.OI, an objective-involuntary score which, although unreliable on test-retest, appears it could be more a measure of "pure" hypnotizability) and not using the typical "work sample" approach. Balthazard and Woody (1992) suggested the Absorption Scale may provide a better measure of "hypnotizability" than the standard hypnosis scales because absorption scores are more strongly related to difficult hypnotic performances.

Bertrand, Lorne D.; Stam, Henderikus J.; Radtke, Lorraine (1993). The Carleton Skills Training Package for modifying hypnotic susceptibility--a replication and extension: A brief communication. International Journal of Clinical and Experimental Hypnosis, 41, 6-14.

This study employed the Carleton Skills Training Package (CSTP) to attempt to enhance both objective and subjective components of hypnotic susceptibility. In addition, changes in susceptibility were compared for subjects administered a standard hypnotic induction procedure and for subjects

given brief "place yourself in hypnosis" instructions. Results indicated that subjects who were administered the CSTP exhibited significant gains in both objective and subjective susceptibility scores that were maintained at two separate posttests with different scales. No differences were observed between the groups administered the standard induction and those administered the self-induction instructions.

The authors do not make much of the latter finding, but I find it to be the more interesting outcome. "Two experiments (Barber & Calverley, 1969; Stam & Fraser, 1986) found that subjects who sat quietly for 5 minutes following an instruction to "place yourself in hypnosis" attained similar scores when responding to test suggestions as did subjects who were administered a 5-minute hypnotic induction procedure. The CSTP informs subjects that hypnotic induction procedures do not achieve their effects by inducing a trance state and that such procedures function to produce relaxation rather than to enhance responsiveness to suggestion. In addition, the CSTP emphasizes to subjects that responses to suggestions do not 'just happen' but must be actively generated. To the extent that subjects attend to these aspects of the CSTP procedure, they should exhibit equivalent increments on behavioral and subjective indexes of susceptibility regardless of whether they are administered a formal hypnotic induction procedure or simply told to 'place themselves into hypnosis.'" (p. 7).

"That naive subjects can produce equivalent objective, subjective, and involuntariness scores following such instructions highlights the degree to which hypnotic responses are not dependent on formal induction procedures. The fact that so-called active-alert induction procedures are also equivalent in producing hypnotic responses supports this notion (Banyai & Hilgard, 1976)" (p. 13).

Bruehl, Stephen; Carlson, Charles R.; McCubbin, James A. (1993). Two brief interventions for acute pain. Pain, 54, 29-36.

This study evaluated two brief (3-5 min) interventions for controlling responses to acute pain. Eighty male subjects were randomly assigned to 1 of 2 intervention groups (Positive Emotion Induction (PEI) or Brief Relaxation (BR)) or to 1 of 2 control groups (No-instruction or Social Demand). The PEI focused on re-creating a pleasant memory, while the BR procedure involved decreasing respiration rate and positioning the body in a relaxed posture. All subjects underwent a 60-sec finger pressure pain trial. Analyses indicated that the PEI subjects reported lower ratings of pain, fear, and anxiety, and experienced greater finger temperature recovery than controls. The BR procedure resulted in greater blood pressure recovery, but did not alter ratings of pain or emotion relative to controls. Further research is needed to explore the clinical use of the PEI for acute pain management.

Cardena, Etzel (1993, October). Hypnotizability and mental boundaries: A correlational study. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

Author is developing Ernest Hartman's Mental Boundaries Questionnaire. Hartman does research on chronic nightmare sufferers. He says they have thin mental boundaries, defined in various ways. Art students have thin boundaries, Navy officers thick boundaries. The questionnaire has 145 items, less 7 that are scored zero.

Item Groups: Sleep/wake/dream Unusual experiences (e.g., deja vu) Thoughts, feelings, moods Child, Adolescent, Adulthood feelings Sensitivity Neat, exact, precise Edges, lines, clothing (flexible space) = Personal score

Opinions about children about organizations about people, nations, groups, about beauty, truth = World total

**Sumbound (personal + world total) Hypnotizability should relate to Personal score more than World total.**

**Also used: 2. Field's Inventory 3. Kirsch's Inner subjective experiences (of the Harvard Scale) 4. Tellegen's Absorption Scale 5. Harvard Hypnotizability Scale**

**Gave the measures in different contexts from the hypnotizability measures. The Absorption scale (different subscales) correlated best with the Hartman's scale, but subjective scales also correlated with "Personal Score."**

**The lack of significant correlation between Harvard and Thinness of Boundaries questionnaires may be due to differences in voluntariness experience on the Harvard. Or Woody and others suggest hypnotic response may be due to compliance in some samples. Barrett had found a correlation of .19 with hypnotizability; and Robert Kunzendorf found a similar correlation.**

**Council, James R.; Grant, Debora L. (1993, October). Context effects: They're not just for hypnosis anymore. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

## **NOTES**

**Context effects in Absorption research are found in correlations, not in mean differences. Original paper has been replicated and yet results are not always significant. Now we are trying to generalize the effect to other areas: an individually administered measure will influence other measures made in the same session.**

**Other tests that correlate with hypnosis are studied with 2 x 2 design, enabling order effects and same vs separate contexts to be studied. Or two tests are administered at two points in time, with "bridges" between the two sessions (e.g. same experimenter, same consent forms, etc.) As one adds more and more bridging cues, the correlation of Absorption with other Tellegen MPQ subscales increases.**

**Same context assessment increases correlation between hypnotizability and 6-8 other scales; with childhood trauma scale when trauma scale is administered first; with beliefs in paranormal phenomena when the measure is related to an adjustment scale. The same inflation of correlations was found in Beck Depression scale research.**

**These results are of concern because we may have to re-do a lot of personality research that suggested correlation between personality test variables, as the correlations may be inflated by the effects of testing in the same context.**

**Kronenberger, William G.; La Clave, Linda; Morrow, Catherine (1993, October). Assessment of the hypnotic state in the clinical setting: Development of the hypnotic state assessment questionnaire. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.**

## **NOTES**

**We do research, clinical work and teaching. In this setting students ask, how do I know when somebody is hypnotized? We wanted to give them a normative sense of what to expect. Supervisory issues arise--e.g. when student reports that a patient "looked very hypnotized." We also wanted a measure that could track changes from one hypnotherapy session to another. We wanted quantification of hypnotic response (e.g. to use in medical charts).**

**We looked at self report measures, reviewed by Tart (number ratings) and hypnotizability scales; we reviewed articles, looked at what we teach, etc.. Criteria for the scale we developed were: 1. brief 2. unobtrusive (not introducing something different into the hypnosis process) 3. easy to use 4. have both behavioral and subjective components 5. clinically useful 6. apply to wide age range (we have patients**

ages 7-60) 7. apply to many different types of inductions (though there is no clinical scale that will apply to all types of inductions). We use a more permissive, relaxation induction ourselves.

We assessed observed behavior during hypnosis as well as immediately following hypnosis, and then asked patients questions about what the experience was like for them. From their responses we developed the Hypnotic State Assessment Questionnaire. The scale has 18 items, as follows: 1.

**Hypnotic State Observation (HSO) Items**

Noise Factor (e.g. drumming fingers)

Noise

Spontaneous Verbalizations

Behavior Factor

Motoric behavior (spontaneous)

Focused attention (not moving eyes)

Rhythmical Breathing

Relaxed state/Lack of tension Each are coded 1-5 with behavioral anchors at 1, 3, and 5 2. Post Hypnotic Observations

Positive Experience Factor (rated Yes-No)

Smile

Spontaneously Verbalize Positive Experiences 3. Post Hypnotic Inquiry

Automaticity Factor

Thoughts/feelings happen by selves

Thoughts happen without trying to think

PHI Uniqueness/Relaxation Factor

Felt this way before (not hypnosis)

Interrater Reliabilities of Subscales are higher than .9 except for Waking (rubbing eyes and stretching). We studied the HSAQ in 50 patients with a variety of problems (anxiety, depression, eating problems, smoking, somataform problems).

Scores have a floor effect; HSAQ can't determine very high depth from moderate depth, but we don't know if that is clinically meaningful. The HSO behavior factor was significantly correlated with after-hypnosis observations and inquiry. The HSO behavior factors also significantly correlated with the patient's ability to resist unexpected distractions, to comply with therapist requests, and to respond to post-hypnotic suggestions

1992

**Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. International Journal of Clinical and Experimental Hypnosis, 40, 21-43.**

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum. Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the

differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

## NOTES

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum--which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5" (p. 27). "In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance. He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965); Hilgard's general factor would probably correspond better to the Tellegen genuine responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales.

Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively

easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the instructions used to introduce the particular hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

Frischholz, Edward J. (1992, October). Dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

There are two approaches for studying dissociation 1. phenomenological: describe difference types of dissociative phenomena, e.g., forgetting, multiple personality disorder or MPD 2.theoretical: explain the physiological/ psychological processes by which things become associated/disassociated, e.g., Freud (repression) vs. Janet (dissociation).

Two types of dissociation: 1. dissociation of awareness (amnesia, unconscious cognitions) 2. dissociation of volition (loss of executive control over behavior, psychological automatisms)

Normal Dissociation is characterized as: 1. content is narrow and specific 2. duration is brief 3. awareness of loss of material exists 4. control can be re-established

Abnormal Dissociation is characterized as: 1. content is broad (self-identity) 2. duration is extended 3. no awareness of loss of material exists 4. no re-establishment of control

The most widely used measure is Dissociative Experience Scale (Bernstein & Putnam) which has .84 to .96 test-retest correlation (Bernstein & Putnam, 1986; Frischholz et al.)

Mean Scores for DES MPDs 55. DD NOS 40.8 Students 23.8

He advocates a cutoff score above 40 as indicating abnormal dissociative experiences (that would yield 6% false negatives). Above 65, suspect faking or over-reporting of dissociative experiences.

Factor Analysis of the DES would associate the following items: 1. Absorption Factor: 2, 14, 15, 17, 18, 20 (normal dissociation) 2. Amnesia Factor: 3, 4, 5, 8, 25, 26 (pathological dissociation) 3. Depersonalization/Derealization Factor: 7, 12, 13, 14, 27, 28

Correlations of DES with other tests:

Tellegen Ambiguity Jenkins

Absorption Tolerance Activity DES Total .39 .24 .04 DES Amnesia .24 .22

See Table from AJCH in July 1992, which replicates a study by Nadon Table 2  $r = .12$  with hypnotizability (Nadon reported .18).

One could use both the DES and hypnotizability scores to distinguish between different clinical groups. For example, dissociative patients reverse amnesia while schizophrenics don't.

One could distinguish real MPDs vs Simulators based on Special Hypnotic Phenomena: with Real MPDs half show the hidden observer phenomenon, therefore they hide their MPD; simulators show the hidden observer phenomenon 100% of the time. Another item that discriminates is the Orne Double Person Hallucination item. MPDs 50- 62% show it, but 92-80% [incorrect percentage in these notes?] of simulators do experience the hallucination. Of these 70-75% of the MPDs are able to distinguish the hallucination; only 45-40% of simulators are able to distinguish the hallucination. Real MPDs know, can tell difference between a hallucinated person and the real person whereas simulators maintain they can't tell who is the real person.

It's not true that MPDs are extremely high in hypnotizability. They score in 8-10 range. The MPDs score 1 SD above normals but they are not off the end of the scale.

These are good ways of testing whether someone is faking MPD. We have replicated this many times, getting better replication of MPD simulators than high hypnotizable simulators.

Another method for distinguishing true MPDs from simulators involves demonstration of the Einstellung (learning set) effect.

Looking at Water Jar Problems, patients learn to solve the problems the long way. They teach personality A how to solve problem by long solution method (four trials of B - A - 2C); on the fifth trial, 95% of Ss solve the problem by the long method, the Einstellung (learning set) effect. Switch to personality B and give the same test. If there were no transfer, people immediately see A-C, which is a short method for solving the problem. It has been observed that 50-60% of MPDs do not show Einstellung effect; they immediately see the short solution.

Have done this also with retroactive interference word learning model.

Effect of context. Kohlenberg (Behavior Therapy Journal) selectively reinforced one personality of an MPD, which then 'came out' more often; during extinction the frequency of seeing that personality went back to baseline.

I used Greenspan's and Erickson's learning without awareness paradigm. When a low baseline frequency personality emerged, I'd reinforce the person; when a dominant personality came out I'd start yawning, look out the window, etc. During extinction the frequency went back toward normal baseline level, but not all the way. These indicate you can shape the appearance of one personality, but not that it's iatrogenic.

Can also do this with schizophrenics, normal highly hypnotizable subjects.

Frischholz, Edward J. (1992, October). Myths about hypnosis that never were true: And always will be. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

Hypnotizability is not normally distributed on either the Stanford Scales (Hilgard's published graphs) or the HIP. However the eye roll sign is normally distributed.

In a meta-analysis, the average correlation between the eyeroll sign and the Stanford hypnotizability score is .33 (not, as most think, a zero).

New data relate the eyeroll sign to the HIP Induction score (.25 - .52), SHSS:C (.44 - .60), and SRSC (.43 - .31) for normal and clinical populations, respectively.

Many investigators have correlated Absorption with hypnotizability, but Nadon's summary, with 5079 Ss the correlation is only .23.

Why has the eye roll been so neglected in hypnosis research, when it correlates .33 and the Absorption scale correlates .23?

Lastly, for a rapprochement, the handout provides data on a correlation between Absorption and the HIP. With 226 smokers, 95 phobics, 65 chronic pain patients treated by Spiegel, who 20 minutes later administered the Absorption scale, the HIP Induction score correlated .41 with Absorption. The Eyeroll alone correlated .43 with Absorption. The Eyeroll correlated only .24 [?] with Induction score.

This means a combination of eyeroll sign plus Absorption raises the correlation of predictors with hypnotizability up to .48 for the entire sample. Using just smokers as Sample 1 and others as a Validation Sample, for a double cross validation: Eyeroll plus Induction Score to predict Absorption, the correlation is  $r = .46$ .

I want to advocate wider use of the eyeroll test, which requires an extra 5 minutes. We can dispel the myth that the HIP is not a valid measure.

Frischholz, Edward (1992, October). The dimensionality of hypnotic performance. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

#### NOTES

A 1985 article by Balthazar & Woody in Psychological Bulletin is the best I have read on this topic, and on how factor analysis can be used fruitfully.

Many people using the same data sets have arrived at different conclusions. My results are based on two data sets: Balthazar & Woody's, in which they created a unidimensional scale. (If you factor analyze a simplex matrix you obtain a 3 factor matrix; yet you knew it was unidimensional. They pointed out the 2nd factor correlated with item difficulty, and the 3rd factor had a U-shaped correlation with item difficulty.)

Factor analysis may not be best way to demonstrate unidimensionality.

I decided to use non metric multidimensional analysis to confirm unidimension. By this, Form A appears to be multidimensional. The same holds true for Stanford Form C scale.

Interpretability of the different dimensions? I agree with Dr. Stone: unidimensions are better for interpreting tests. But you should start out by constructing one in the first place.

I argue that Form C is unidimensional, because the items were selected by using item/full score correlations, hence a first component was built into it. But what does the scale measure? The only way to know is to correlate it with external measures, like Woody does. There are no studies using factor analysis showing that different factors on hypnotizability tests have different correlations with external measures (e.g. Factor 1 doesn't correlate differently with Absorption than Factor 3).

We might better start with a theory if we are going to construct new hypnotizability scales. Don't just use item total correlations. It would be better to find items representing different dimensions, scale the items, then correlate them with different external referents.

Then when we do collect data, make sure the items are unidimensional representations.

Third, we should appropriately validate these dimensions.

Giolas, M. H.; Saners, B. (1992). Pain and suffering as a function of dissociation level and instructional set. Dissociation, 5, 205-209.

48 female student Ss who scored above 20 on the Dissociative Experiences Scale and 48 subjects scoring below 20 on the DES were compared for response to ischemic pain. Experimental conditions included (1) a group imagining their arm becoming numb and insensitive, (2) a distraction group focusing on their breathing, and (3) a control group with no instructions. Subjects rated pain at one-minute intervals for the sensory experience of pain and for suffering (the emotional experience). The procedure was ended at subject's request or after 20 minutes. Across all conditions, the high dissociative group tolerated pain significantly longer than low dissociatives. Analysis revealed lower suffering ratings for high dissociators in the condition where, like in hypnosis, they imagined their arm numb. This is consistent with beliefs that during abuse in childhood the child learns to use imagination to reduce suffering.

1991

Frischholz, Edward J.; Braun, Bennett (1991, August). Diagnosing dissociative disorders: New methods. [Paper] Presented at the annual meeting of the American Psychological Association, San Francisco.

Five new methods which have proven useful in the differential diagnosis of dissociative disorders from other psychiatric syndromes are identified. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences. The second method involves the use of various measures of hypnotizability (e.g., Hypnotic Induction Profile; Stanford Hypnotic Susceptibility Scale, Form C; self-ratings of hypnotizability) in discriminating between various psychiatric groups. The third method involves the use of qualitative responses to individual test items (e.g., instructed posthypnotic amnesia) to discriminate between different psychiatric syndromes. The fourth method involves the use of an implicit memory test to measure the amount of between-personality state amnesia in patients suffering from Multiple Personality Disorder. The fifth method involves the use of

special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology. (ABSTRACT from Bulletin of Division 30, Psychological Hypnosis, Provided by former Editor, James Council.)

#### NOTES

Five new methods have proven useful in the differential diagnosis of dissociative disorders. The first method involves the use of the Dissociative Experiences Scale, a self-report questionnaire which significantly discriminates dissociative psychopathology from normal dissociative experiences.

The second method involves the use of various measures of hypnotizability in discriminating between various psychiatric groups.

The third method involves the use of qualitative responses to individual test items (e.g., instructed posthypnotic amnesia) to discriminate between different psychiatric syndromes.

The fourth method involves the use of an implicit memory test to measure the amount of between-personality state amnesia in patients suffering from Multiple Personality Disorder.

The fifth method involves the use of special hypnotic phenomena (e.g., the Orne double person hallucination and the Hilgard hidden observer item) to discriminate between dissociative disorder patients and subjects simulating dissociative psychopathology.

#### 1990

Avants, S. Kelly; Margolin, Arthur; Salovey, Peter (1990-91). Stress management techniques: Anxiety reduction, appeal, and individual differences. Imagination, Cognition and Personality, 10, 3-23.

#### NOTES

Four stress management techniques were evaluated for their general appeal, their immediate benefits, and the subjective experiences they evoke. One hundred undergraduates were randomly assigned to one of five treatment groups: (1) progressive muscle relaxation (PMR); (2) distraction imagery; (3) focused imagery; (4) listening to music; (5) sitting quietly (control). Distraction imagery and listening to music were the only techniques found to reduce anxiety to a greater extent than simply sitting quietly. The techniques differed in the way they made subjects feel, but not in their general appeal. Individuals with a 'blunting' coping style were more likely to find all five techniques appealing.

Tests used included the Miller Behavioral Style Scale, Cognitive-Somatic Anxiety Questionnaire of Schwartz, Davidson & Golman, Life Orientation Test of Scheier & Carver, Somatic Perception Questionnaire of Landy and Stern, Body Consciousness Questionnaire of L. C. Miller, Murphy, & Buss, Betts' Questionnaire Upon Mental Imagery, Shortened Form, State-Trait Anxiety Inventory, and Technique Evaluation Questionnaire of the authors.

Progressive muscle relaxation was according to Bernstein & Borkovec. Distraction imagery involved successively imagining a walk along a beach, a stroll across a flower filled meadow, sitting by a stream, a walk into the woods, sitting in a cabin in the woods listening to the rain against the windowpane, all including images in a variety of sense modalities. Focused imagery involved creating an image of a stressor, then through symbolic imagery experiences Ss were guided through a typical day's events that might lead up to the stressor, reinterpreting cues associated with the stressor as signals that they are in control, visualizing encountering the stressor feeling strong and determined, and any physical sensations reinterpreted as 'energy' that would help them to cope, visualizing enjoying their success (from Crits-Cristoph & Singer. Music was a 20-min tape (10 min of music used in the distraction imagery tape--Natural Light by Steve Halpern & David Smith) and 10 min of music used in background of the focused imagery tape (Structures of Silence by Michael Lanz). A 5th group, Control, was instructed to sit quietly with eyes closed.

This data can be used in support of imagery-suggestion types of hypnosis (as in surgery study) reducing anxiety. It shows particularly strong effects for people high in cognitive anxiety or low in optimism, pre-treatment.

Discussion: "... we feel confident that our distraction techniques were more effective for the immediate relief of anxiety than was PMR. This conclusion is consistent with the Suls and Fletcher meta-analysis (29) that suggested that 'avoidance' is an effective short-term coping strategy. That distraction (positive) imagery may be a more useful clinical technique than focused (active involvement) imagery was concluded in a study comparing these two techniques in the treatment of phobias (24)" (p. 19. [Ref #24 is Crits-Cristoph & Singer (1983) in *Imagination, Cognition, and Personality*.]

"Pessimism and cognitive anxiety emerged as the only individual difference variables to influence anxiety reduction. Pessimism as measured by the LOT is cognitive in nature, with most of the items relating to expectations of negative outcomes; similarly, cognitive anxiety is characterized by worry and an inability to control negative thoughts and images. That individuals who perceive their world somewhat negatively should have entered the study more anxious than individuals who do not is hardly surprising. What is surprising is that despite an inverse relation between cognitive anxiety and the ability to relax, these individuals were able to benefit from whatever technique they performed to a greater extent than were individuals with a more positive outlook. In fact, after performing the technique, pessimists had reduced their anxiety to the level of optimists" (p. 19).

"The stress management techniques used in the current study did not differ in their appeal" (p. 20). "Our finding that PMR produced more somatic effects than did focused imagery and less cognitive effects than did distraction imagery, listening to music, or sitting quietly is consistent with the model of anxiety proposed by Davidson and Schwartz (17). Our findings are also generally consistent with a conclusion reached by Woolfolk and Lehrer (4): that although various techniques are generally stress reducing, they seem to have highly specific effects. However, we found no support for the hypothesis that individuals who express anxiety cognitively (or somatically) prefer and benefit most from techniques that produce cognitive (or somatic) effects. In fact, the extremely high correlation found between the cognitive and somatic anxiety subscales of the Schwartz et al. measure (5) casts some doubt on the usefulness of a cognitive-somatic distinction, as does the corr between the experience of physical symptoms under stress (the Somatic Perception Questionnaire) with the cognitive, as well as the somatic, anxiety subscale.

"The finding that blunterners experiences more 'somatic effects' regardless of the technique they were assigned may have been the result of a single response--'how much did mind-wandering interfere with performing the technique'--which was the only Factor 2 item that was highly inversely related to blunting. Since blunterners are more likely to perceive mind wandering as the essence of stress management rather than as 'interference,' we do not view this main effect as particularly illuminating" (p. 20). "However, our finding that blunterners experienced all techniques as appealing is consistent with the results of Martelli et al. (1) who found that individuals with low information-preference benefitted from what the authors labeled an 'emotion-focused' intervention, but which, in fact, included many of the quite diverse stress management techniques that we compared in the current study. That 'avoiders' failed to benefit from any intervention in the Scott and Clum study (11) may be due to the nature of the stressor [postsurgical pain]. Our undergraduates may have been more like the Martelli dental patients in terms of their level of distress than were the Scott and Clum subjects who were patients undergoing major surgery (hysterectomy or cholecystectomy). Future research needs to examine possible three-way, technique by patient by stressor-type, interactions (cf. 19)" pp 20-21.

Biasutti, M. (1990). Music ability and altered states of consciousness: An experimental study. *International Journal of Psychosomatics*, 37, 82-85.

The relationship between music and altered states of consciousness was studied with 30 subjects divided into hypnosis and control groups. The "Test di abilità musicale" was applied. The hypnosis group did the retest after posthypnotic suggestions and the second in waking conditions. The hypnosis group had better results than the control group, especially in the rhythm test ( $p < 0.0001$ ).

Briere, John; Runtz, Marsha (1990). Augmenting Hopkins SCL scales to measure dissociative symptoms: Data from two nonclinical samples. Journal of Personality Assessment, 55, 376-379.

Describes a 13-item dissociation scale (DS) that uses numerical ratings and presents preliminary data regarding its reliability. The DS was administered to 2 samples of undergraduate women ( $N=569$ ). Ss also completed the SCL-90 or the Hopkins Symptom Checklist (HSCL). The DS was found to be reliable, and there was a correlation of the DS with self-reported child abuse history. Designed to complement the SCL-90 and the HSCL, the DS may be useful in research on the effects of psychological trauma.

Fischer, Donald G.; Elnitsky, Sherry (1990). A factor analytic study of two scales measuring dissociation. American Journal of Clinical Hypnosis, 32, 201-207.

The present study was designed to investigate the construct validity of dissociation. We administered the PAS and the DES to 507 male (48%) and female (52%) undergraduate students. Factor analysis on each scale separately showed that neither the PAS nor the DES adequately measures the three dimensions hypothesized to underlie dissociative experience. For both scales, a single factor emerged as replicable and reliable. Use of the scales, in their present form, therefore, should be limited to a single dimension representing disturbances in affect-control in the case of the PAS and disturbances in cognition-control if the DES is used at least with normal populations. Analysis of the combined items showed that the scales are measuring conceptually different but statistically correlated dimensions of dissociation. Further development of both scales is desirable, and further research should investigate the effect of different response formats on the internal structure of the scales.

## NOTES

The stated purpose of this study was to investigate the internal structure of the Perceptual Alterations Scale (PAS) and the Dissociative Experiences Scale (DES) using a large sample from a normal population.

"Sanders (1986) conceived of dissociation as a personality trait that is characterized by modification of connections between affect, cognition, and perception of voluntary control over behavior, as well as modifications in the subjective experience of affect, voluntary control, and perception. She chose items from the MMPI to represent this trait. Bernstein and Putnam (1986), utilizing the DSM-III definition of dissociation, constructed items from information derived from interviews with patients and clinicians to represent a number of different types of dissociative experiences" (0. 202).

"The PAS (Sanders, 1986) is a 27-item scale; subjects respond by checking one of the following categories using a 4-point Likert format: never, sometimes, frequently, almost always. The items related to modifications of regulatory control, changes in self-monitoring, concealment from self and others, and modifications of sensory, perceptual, and affective experiences.

"The DES (Bernstein & Putnam, 1986) contains 28 items. Subjects indicate the percentage of time they experience the feelings or behavior described by the items on a 10-point scale. The items related to the experience of disturbances in identity, memory, awareness and cognition, and feelings of derealization or depersonalization" (pp. 202- 203).

Results were as follows. The one-factor solution for the PAS accounted for 18.5% of the total variance.; 11 of the 28 items did not load significantly on the factor. The one-factor solution for the

DES accounted for 26.3% of the total variance; 7 of the 28 items did not load significantly on the factor.

"The 3-factor solution obtained by Sanders (1986) for the PAS was not replicated. An obvious reason for the different is that principal factor extraction was used in the present study, whereas principal components extraction was utilized by Sanders. ... Even when principal components analysis is performed on the present data, however, there are difficulties with the 3-factor solution" (pp. 204-205). "All of the criteria suggest that a single factor best represents the latent structure of dissociative experience as measured by the PAS and DES. Although the total amount of variance accounted for is low, the one-factor solutions for both scales are interpretable, replicable, and have high internal consistency. The items for the PAS appear to represent primarily the affect and control dimensions, whereas those for the DES represent the cognitive dimension" (pp. 205-206).

"Overall, both scales contain similar items, although the DES has more items relating to disturbances in memory and altered perception of time (i.e., cognition), whereas the PAS has more items reflecting specific disturbances in identity and control. It appears, therefore, that the scales are measuring conceptually separate but statistically correlated dimensions of dissociation" (p. 206).

Frischholz, Edward J.; Braun, B. G.; Sachs, R. G.; Hopkines, L.; Schaeffer, D. M.; Lewis, J.; Leavitt, F.; Pasquotto, J. N.; Schwartz, D. R. (1990). The dissociative experiences scale: Further replication and validation. Dissociation, 3, 151-153.

Interrater reliability for the DES was .96-.99, test-retest reliability was .93-.96, and internal consistency of DES scores was very high .93-.95. Both MPD and dissociative disorder NOS (DDNOS) patients scored significantly higher than students, and MPD patients scored significantly higher than DDNOS patients. A cutoff score of 45 to 55 maximizes the probability of distinguishing students from dissociative disorders (87%) while minimizing false positives (2%-6%) and false negatives (7%-11%). Suggestions for further research are made.

Gil, Karen M.; Williams, David A.; Keefe, Francis J.; Beckham, Jean C. (1990). The relationship of negative thoughts to pain and psychological distress. Behavior Therapy, 21 (3), 349-362.

Examined the degree to which negative thoughts during flare-ups of pain are related to pain and psychological distress in 3 pain populations: sickle cell disease, rheumatoid arthritis, and chronic pain. 185 adults completed the Inventory of Negative Thoughts in Response to Pain (INTRP), a pain rating scale, the SCL-90 (revised), and a coping strategies questionnaire. Factor analysis of the INTRP revealed 3 factors: Negative Self-Statements, Negative Social Cognitions, and Self-Blame. High scorers on Negative Self-Statement and Negative Social Cognitions reported more severe pain and psychological distress. Ss with chronic daily pain had more frequent negative thoughts during flare-ups than those having intermittent pain secondary to sickle cell disease or rheumatoid arthritis. The INTRP appears to have adequate internal consistency and construct validity.

1989

Grant, Guy (1989, June). An investigation of hypnotic susceptibility in self-hypnosis and imagery (Dissertation, University of Utah). Dissertation Abstracts International, 49 (12), 5517-5518-B.

NOTES

"There were two phases in the study. In Phase One hypnotic susceptibility scores were assessed for 43 graduate student subjects by the Harvard Group Scale of Hypnotic Susceptibility: Form A (HGSHS:A). In addition, the Self-Hypnosis Research Questionnaire (an experimental scale) provided performance scores for subjects under three hypnosis conditions: heterohypnosis, self-directed self-

hypnosis, and tape-assisted self-hypnosis. The first purpose in Phase One was to calculate correlations between hypnotic susceptibility and each of the hypnosis conditions. The second purpose was to determine if there were significant differences across the three types of hypnosis. The third purpose was to discover if any existing differences were dependent on level (e.g., low, medium, or high) of hypnotic susceptibility. Analysis of the data yielded significant correlations between hypnotic susceptibility and (a) heterohypnosis, (b) self-directed self-hypnosis, and (c) tape-assisted self-hypnosis. There were significant performance differences across the three hypnosis conditions with heterohypnosis being somewhat superior to tape-assisted self-hypnosis, and tape-assisted self-hypnosis being slightly superior to self-directed self-hypnosis. This relationship held true regardless of level of hypnotic susceptibility (e.g., low, medium, and high).

"In Phase Two, 49 graduate student subjects were administered the shortened form of the Betts' Questionnaire Upon Mental Imagery (QMI) as well as the HGSHS:A, and to determine if mental imagery is an important component of hypnotic susceptibility. Analysis yielded a significant correlation between the two measures.

"Based on the current data, it was concluded that the HGSHS:A had some utility for predicting performance in hypnosis. It was noted that, as compared with self-hypnosis, heterohypnosis provided the greatest chance of eliciting a positive hypnotic response from subjects not trained or experienced in hypnosis. It was also concluded that the QMI was correlated with and had some utility for predicting performance on the HGSHS:A. It had difficulty, however, differentiating between low and medium hypnotizability" (pp. 5517- 5518).

Hoyt, Irene P.; Nadon, Robert; Register, Patricia A.; Chorny, Joseph; Fleeson, William; Grigorian, Ellen M.; Otto, Laura; Kihlstrom, John F. (1989). Daydreaming, absorption and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37, 332-342.

## NOTES

It appears that the consistent correlation between hypnotizability and positive-constructive daydreaming is carried largely by three subscales--Acceptance of Daydreaming, Positive Reactions to Daydreaming, and Problem-Solving. Number other subscales consistently correlated with hypnotizability.

When absorption was taken into account, daydreaming activity made no independent contribution to the prediction of hypnotizability. "The present results differ from Crawford's (1982) somewhat, however, in terms of the specific aspects of daydreaming activity that are associated with hypnosis. Crawford found that hypnotizability correlated consistently (i.e., in both men and women) with three subscales tapping imagery variables: the presence of visual and auditory imagery in daydreams and the hallucinatory vividness of daydream imagery. In the present study, the imagery subscale, including both visual and auditory items, did not correlate significantly with hypnotizability; unfortunately, the hallucinatory vividness subscale is not represented on the short form (SIPI) of the daydreaming questionnaire used in this study. Crawford (1982) did not find consistent correlations between hypnotizability and scales measuring acceptance, positive reactions, and problem solving--the subscales that consistently yielded significant correlations in the present study. Not too much interpretive weight should be given to any of the correlations between hypnotizability and daydreaming subscales, until a full replication with reliable subscale measurements (such as those provided by the long, original IPI) has been completed. The important point made by Crawford (1982), and confirmed in the present study, is that hypnotizability is related to positive-constructive rather than guilty-dysphoric daydreaming" (p. 338). The two studies agree that absorption and hypnosis are not correlated with daydreaming scales reflecting poor attentional control. Given the theoretical emphasis in both domains on the narrowing of attention and exclusion of potentially distracting input, negative correlations with this aspect of daydreaming might have been expected.

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic- like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

1988

Bogenberger, Robert; Allen, Steven (1988, November). Relationship between Rorschach responses and hypnotic responsiveness. [Lecture] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

#### NOTES

The Rorschach is stable in adults, in terms of introversive vs. extroversive direction. Investigated four dependent variables: (1) distortions (e.g. "I felt the walls closing in."), (2) Loss of Distance (e.g. "I thought of abortions and infanticide."), (3) abstract/conceptual, (4) irrelevant imagery (e.g. "I thought of the book Watership Down.")

Highs gave responses more often in these groups. The combination of these four and some others discriminated Highs hypnotized from Highs not hypnotized and from Lows in both hypnotized and not hypnotized conditions.

Bowers, Patricia G.; Laurence, Jean-Roch; Hart, David (1988). The experience of hypnotic suggestions. International Journal of Clinical and Experimental Hypnosis, 36, 336-349.

The experience of nonvolition in response to hypnotic suggestions was investigated for 126 Ss. 2 different scales, a new scale providing discrete options for response and a previously used volition rating scale, gave Ss an opportunity to describe some of their subjective experiences after completion of a 12-item adaptation for group administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Ratings of depth of hypnosis were also obtained. Ss had been previously administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962). Distribution of descriptions of experience for passed and failed items were obtained. Total scores on subjective indices were found to be highly correlated with the behavioral score on the Waterloo-Stanford Scale of Hypnotic Susceptibility: Group C. Items differed, however, in the degree to which responses seem to occur effortlessly. Some suggestions have a substantial number of passed responses lacking the "classic suggestion effect," but only 7% of Ss have more than 2 such responses.

## NOTES

Earlier research on the subjective perception of voluntary enactment of suggestions found from 20% (K. Bowers, 1981; P. Bowers, 1982) to 55% (Spanos, Radtke, Hodgins, Stam, & Bertrand, 1983) of hypnotic responses were described as voluntary in nature. Methodological differences could account for the range in probability levels, and rating scales used did not provide for absence of behavioral response to a particular suggestion.

This research investigated three issues: "1. Using a choice format to describe experiences during hypnosis, what is the distribution of the different descriptions used to index the construct of nonvolition? When S gives a mid-point rating on a volition rating scale, to what experiences does he/she refer? 2. How do two aspects of subjective experience: nonvolitional experience descriptions and hypnotic depth reports, covary with behavioral passing and failing of items and with levels of hypnotizability? 3. How frequently does S pass an item behaviorally but indicate either that he/she did not experience the response or that he/she purposefully enacted it? On what items is this a more or less frequent occurrence? Are there just a few people who pass items in this fashion or is it a common observation?" (p. 339).

The Ss were seen in small groups. Immediately after hypnosis they scored their own hypnotizability scales. Then they were asked to rate their subjective response to each suggestion: - how much they had experienced the suggestion (1-5) - how involuntary their response had been (1-5) (These two items comprised the Voluntary Rating Scale (VRS) used by K. Bowers, 1981, and P. Bowers, 1982.) - how deeply hypnotized they had felt (1-10, Perry & Laurence format, 1980) - Choice Scale (example from the hand magnetism item below) "Choice Scale of Nonvolitional Experience:

Listed below are various ways people experience the hands together item. Please check the description(s) that most closely describe your experiences: (1) My hands did not move together at all. (2) I purposefully directed the movement of my hands most of the time. (3) I found I directed the movement of my hands and then later they continued to move together with no effort on my part. (4) I found my hands moving together without my helping them. (5) During this experience, the feelings of purposefully moving my hands were completely mixed with feelings that they were moving on their own. None of the above" (p. 340).

Considering both the passed and failed items, and after excluding the 'None of the above' category, "37% of items [on the W-SGSHS:C] were not experienced, 12% were enacted purposefully, 14% were experienced as intertwined volition and nonvolition, 17% were experienced as beginning purposefully but becoming nonvolitional, and 20% 'happen by themselves'" (p. 341). See Table 2, taken from the article.

Table 2 Average Percent of Ss per Item Choosing Each of the Options

Begins

No Purposeful Completely Purposefully; Happened Itself

Exper. Enactment Mixed Continues On NoTryng

Own Passed 7.5 12.2 21.8 26.2 32.2 Failed 60.4 13.9 10.4 9.3 5.9

Passed Items 3.0 10.7 30.0 47.2 9.1 Rated 3 on Volition Rating Scale

Thus of those failing an item, 60% reported that they did not experience the suggestion, while almost 26% reported some level of subjectively experienced nonvolition.

This research demonstrated that the Choice Scale is an improvement over the Voluntary Rating Scale, which has an ambiguous midpoint of '3' between voluntary and nonvoluntary extremes (on a 5-point scale). Almost half of the ambiguous '3' responses on the VRS were associated with a more meaningful response on the Choice Scale, indicating that the response started off voluntarily but then continued 'on its own.' Another third of the Ss indicated that there was an intertwining of volition and nonvolition.

The Choice Scale (transformed into an ordinal scale) was correlated with the VRS and hypnotizability and depth estimate scales. The correlations were "consistently high, suggesting that typically one reports feeling more deeply hypnotized when many suggestions are performed and passed, and more deeply hypnotized Ss report feeling that suggestions occur more 'by themselves' than do less hypnotizable Ss" (p. 342).

The authors note the complex relationship between behavioral and subjective experience. High hypnotizables report experience of nonvolition even with some failed items, and rate themselves as deeply hypnotized even when failing items. This is not true for low hypnotizables, whose self-rated depth varies directly with passing or failing items.

Mismatches were defined as passing an item behaviorally but reporting either that it was not experienced (Choice 1) or purposefully enacted (Choice 2). 93% of Ss had less than 3 mismatches; of the 8 Ss exhibiting 3 or more mismatches, 3 were medium-low hypnotizables, 4 were medium-highs, and 1 was highly hypnotizable. When one corrects their total hypnotizability score for the mismatch, people remain close to their original score however.

Some items had many more mismatches than others (See Table 6). The 'classic suggestion effect' reflected in a low percentage of mismatches (3-9%) was found for five items; three items had a moderate level of mismatches (16-22%); but four suggestions had mismatches on 34-41% of the passed responses. Item difficulty could not account for whether the classic suggestion effect occurred: two very difficult items were at opposite ends of the spectrum--positive music hallucination had the fewest and negative visual hallucination the most frequent mismatches. "One might speculate that the nature of one's ordinary imaging during the day makes some hallucinations well practiced and easier to produce, while others are rarely practiced and seem to require cognitive effort to reconstruct. ... Thus, instead of a mismatch representing 'faked' responses, it may at times represent S's report of a hallucination's seeming real while simultaneously requiring effort. Ideomotor suggestions have few mismatches. If they feel 'real,' it is by virtue of their seeming to occur without effort or volition" (pp. 346-347).

Table 6 Item % Mismatch Hand Lowering 2.9 Hands Together 4.8 Arm Rigidity 5.6 Music Hallucination 7.7 Dream 8.7 Arm Immobilization 15.5 Amnesia 21.6 Age Regression 21.8 Taste Hallucination 33.8 Negative Hallucination 34.6 Mosquito 38.1 Post-hypnotic Suggestion 40.8

Since highly hypnotizable people experience nonvoluntariness even when they fail items, tested hypnotizability must reflect more than simply passing test items on suggestion. "Research focusing exclusively on the nonvolitional aspect of hypnotic experience may be somewhat 'off the mark,' at least for some types of suggestions. Reports of nonvolition may be tracking the experience of effortless responding which may be just one aspect of a complex hypnotic response to cognitive suggestions. ... It may be that studies using free reports from Ss responsive to hallucination suggestions would be necessary prior to devising an appropriate 'choice' scale for these items. The work of Sheehan and McConkey (1982) provides a solid basis for such a task. The Choice Scale in the present study was derived from an understanding of the 'classic suggestion effect,' the concept of which is closely tied to ideomotor suggestions. This concept may or may not prove to be of central relevance to hypnotic hallucinations or more generally to cognitively demanding suggestions" (p. 347).

Hines, Larry; Handler, Leonard (1988, November). Hypnotizability and ego functions. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.

## NOTES

Researchers employed Bellak's Ego Functions Test (based on the clinical interview). Ss were 47 students and 1 non-student, some of whom had previously experienced hypnosis. They were all volunteers. Studied 12 ego functions. Used plateau hypnotizability which was defined as no improvement in Stanford Hypnotic Susceptibility Scale Form C after two hypnotic inductions; if they

did not reach a plateau by Session 4, the highest score was used. Stanford Hypnotic Susceptibility Scale scores ranged 4-12. High 10-12, Medium 6-9, Low 4-5.  $\bar{x}=9.04$ ,  $SD=2.21$ .

On the Bellak Test, High 12-13, Medium 10-11 (average functioning.), Low 1-9. Range 5-13; widest range was in Adaptive Regression in Service of Ego

Highest Mean = reality testing Lowest Mean = ARISE Majority fell into the medium range on all 12 ego functions measured.

A significant difference was found between High and Low hypnotizables on the following ego functions. [N.B. There may be transcription errors in the figures that follow.] 1. ARISE  $p<.02$   $r = .31$  Highs have greater ability to experience pleasure in regression. 2. Stimulus Barrier  $p<.003$  Highs are more flexible in their ability to separate from stimuli in their environment, Lows experienced stimulus overload. 3. Autonomous Functioning  $p<.01$  Primary acct./ in attention, learning, memory, motor function. 4. Objective Relativity  $p<.07$  5. Regulating control of drive  $p<.06$

Multiple regression accounted for 33% of variance in 12 ego functions. Stimulus Barrier alone accounted for 14% ( $p<.005$ ); ARISE accounted for 5% ( $p<.01$ ).

47% of Ss were High hypnotizables, 42% were in the Medium range.

1987

Crist, Dwayne Anderson (1987). The effect of suggestibility on the efficacy of relaxation training instruction: A multisession evaluation (Dissertation, University of Alabama). Dissertation Abstracts International, 47 (n9-B), 3950.

"Progressive relaxation is a well established procedure used in the treatment of anxiety related disorders. Research has suggested that the muscle tension-release component of progressive relaxation is the critical variable in producing relaxation effects. However, other techniques which do not employ muscle-tension release have proven effective. It has been suggested that treatment type may interact with personality characteristics to produce greater effects. Suggestibility was selected as a personality characteristic that may facilitate or inhibit relaxation effects. Fifty high and 50 low suggestible individuals were selected to participate based on scores from the Creative Imagination Scale. Half of each group as randomly assigned to either a progressive relaxation or imagery relaxation treatment. Subjects received four weekly sessions of relaxation training. The Relaxation Scale was administered before and after each session to assess effects of training. The results indicated that high suggestible individuals had significantly greater increases in relaxation within session on each of the three scales of the Relaxation Scale, but this appeared to be a result of lower pre-test scores. Only the Physical Assessment scale also demonstrated higher post-test scores for the high suggestible participants. A ceiling effect appeared to be operating for both the Physiological Tension and Cognitive Tension scales. There were no significant differences between the progressive relaxation and imagery relaxation treatments. It appears that muscle tension release may not be a critical variable in relaxation effects" (p. ).

De Sano, Christine F.; Persinger, M. A. (1987). Geophysical variables and behavior: XXXIX. Alterations in imaginings and suggestibility during brief magnetic field exposures. Perceptual and Motor Skills, 64, 968-970.

12 male and 12 female volunteers were evaluated for their suggestibility before and after an approximately 15-min. exposure to either sham, 1-Hz or 4-Hz magnetic fields that were applied across their mid-superior temporal lobes. During the field application subjects were instructed to view a green light that was pulsating at the same frequency as the field and to imagine countering an alien situation. Results were commensurate with the hypothesis that weak brain-frequency fields may influence certain aspects of imaginings and alter suggestibility.

## NOTES

"Subjects who had been exposed to the 4-Hz fields showed a significant decrease ... in heart rate compared to those who had been exposed to either the 1 Hz or sham-field conditions. A significant ... interaction of sex by field ... was noted for the change in HIP [Hypnotic Induction Profile] scales. Whereas both men and women in the sham-field condition tended to show less induction (~ 1 unit) on the second occasion ... women showed much greater (8.4 + 1.1) induction (= 3 units) if they had been exposed to the 1-Hz field while men showed much greater (8.0 + 1.5) induction (= 3 units) if they had been exposed to the 4-Hz fields. On the protocols, women reported significantly more fear responses than men. In addition, subjects who were exposed during the imaginings to the 4-Hz field showed more imaginings ... and more references to vestibular experiences (e.g., self or entity rising or floating) ... than those exposed to the other conditions" (p. 969).

"Dissociation scores on the HIP were correlated significantly ... with vestibular (0.44), imagery (0.43), and fear (-0.45) scores from the transcripts. Floating responses on the HIP were correlated with the amount of imagery. (0.46). There was a significant positive Pearson correlation between the compliance measure and the amount of arm levitation during the second induction only. These results suggest that hypnotic susceptibility may be increased following magnetic-field exposure but that the effective frequency is not the same for each sex. In addition, the amount of the imagery (particular vestibular experiences) increased if the person observed a light that was flashing at the same frequency as a 4-Hz applied magnetic field" (p. 969).

Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

## NOTES

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259).

The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

1986

Bernstein, Eve; Putnam, Frank W. (1986). Development, reliability, and validity of a dissociation scale. Journal of Nervous and Mental Disease, 174, 727-734.

"Dissociation is a lack of the normal integration of thoughts, feelings, and experiences into the stream of consciousness and memory. Dissociation occurs to some degree in normal individuals and is thought to be more prevalent in persons with major mental illnesses. The Dissociative Experiences Scale (DES) has been developed to offer a means of reliably measuring dissociation in normal and clinical populations. Scale items were developed using clinical data and interviews, scales involving memory loss, and consultations with experts in dissociation. Pilot testing was performed to refine the wording and format of the scale. The scale is a 28-item self-report questionnaire. Subjects were asked to make slashes on 100-mm lines to indicate where they fall on a continuum for each question. In addition, demographic information (age, sex, occupation, and level of education) was collected so that the connection between these variables and scale scores could be examined. The mean of all item scores ranges from 0 to 100 and is called the DES score. The scale was administered to between 10 and 39 subjects in each of the following populations: normal adults, late adolescent college students, and

persons suffering from alcoholism, agoraphobia, phobic-anxious disorders, posttraumatic stress disorder, schizophrenia, and multiple personality disorder. Reliability testing of the scale showed that the scale had good test-retest and good split-half reliability. Item-scale score correlations were all significant, indicating good internal consistency and construct validity. A Kruskal-Wallis test and post hoc comparisons of the scores of the eight populations provided evidence of the scale's criterion-referenced validity. The scale was able to distinguish between subjects with a dissociative disorder (multiple personality) and all other subjects."

1985

Balthazard, Claude G.; Woody, Erik Z. (1985). The 'stuff' of hypnotic performance: A review of psychometric approaches. Psychological Bulletin, 98, 283-296.

Reviews psychometric investigations into the nature of the processes that underlie hypnotic performance and examines issues that underlie psychometric investigations of hypnosis scales, such as the Stanford Hypnotic Susceptibility Scale. The issues addressed are dimensionality and the problem of difficulty factors, the interpretation of factorial dimensions, and componential alternatives to the factor analytic approach. It is argued that hypnotic performances are most likely overdetermined in that they reflect the combined influence of a plurality of processes. The relevance of various componential models, each reflecting a different contemporary theoretical perspective toward hypnosis, and some of the implications of such models for future research are discussed. (77 ref).

Kelly, Paul James (1985, November). The relationship between hypnotic ability and hypnotic experience (Dissertation). Dissertation Abstracts International, 46 (5), 1690-B.

"This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experiences were: dissociation, the experience of involuntariness, altered state effects, such as perceptual alterations and diminished reality sense rapport, transference-like involvement with the hypnotist, and relaxation. A 47-item scale, the Hypnotic Experience Questionnaire was developed to measure types of hypnotic experience. It was given to 484 subjects and then to a subsample of 272 students. When the scale was factored, four stable factors emerged: Nonconscious/Trance, Rapport, Relaxation, and Cognitive Rumination. A Group Profile Scale was also developed to measure students and when it was factor analyzed four factors were extracted: Hallucinations and Fantasies, Amnesias and Post-Hypnotic Compulsions, Motor Inhibition, and Direct Motor Suggestion. "Two statistical approaches were used to investigate the connections between hypnotic ability and hypnotic experience . Canonical analysis was used to identify the main relationships between hypnotic ability and hypnotic experience and factor analysis was used to explore the relationship among measures of hypnotizability and hypnotic experience. Two canonical variates from the canonical analysis were significant. The first variate was characterized by a dissociative-imaginative involvement process, and the second variate tapped a rapport-social compliance process. "When 25 variables, representing components of hypnotic ability and hypnotic experience, were factored, five factors were extracted. Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. The results of the factor analysis suggested that dissociative experience and altered state experience are related to hypnotic ability but rapport and relaxation are not. "The results of study, taken as a whole, suggest that relaxation and rapport may happen in the hypnotic situation, but neither experience is related to the condition of being hypnotized in any essential way. The results suggest that the hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. From a theoretical point of view, the results strongly supported Hilgard's theory, partially supported Shor's theory, and failed to support Edmonston's theory" (p. 1690).

1984

The mainstream of neuropsychological research and practice has been devoted to the impact of the brain as an independent variable on behavior as a dependent variable. Evidence is currently available to make clear that the order of causation may be reversed: Behavioral changes can have a durable impact on the brain. The results of extensive research indicate that a large number of neuroanatomical, neurophysiological, neurochemical, and neuropsychological parameters of the animal brain can be modified through environmental manipulation, sensory experience, and systematic training. Some evidence is available to show that psychological stimulation has certain effects on the physiology of the human brain. For instance, hemisphere-specific stimulation through the presentation of words flashed in a visual hemifield appears to modify the electrophysiological activity of the contralateral hemisphere in dyslexic children and to affect their subsequent reading performance. Neuropsychology may profit from paying more attention to the ecology of the human brain.

#### NOTES

An 18th Century anatomist in Italy, Malacarne, demonstrated increased cerebellar folds in the brains of trained (vs. untrained) dogs and birds. His approach to neuroanatomy was not continued because psychology has been more concerned with innate traits of the individual, and because of philosophical rationalism (citing Walsh, 1981). Until very recently, scientists have viewed the brain as "structurally insensitive to environmental experience" (p. 3).

Now we have evidence that animal brains are modifiable by experience, in gross morphology, fine (synapse) morphology, and neurochemicals. "Rich environments [for rats] ... produce heavier and thicker cerebral cortices and callosal connections (Walsh, 1981), larger cortex/subcortex weight ratios, larger cell bodies and nuclei (Walsh, 1981), and higher metabolic activity as suggested by increased RNA/DNA ratios (Rosenzweig, Bennett, & Diamond, 1972)" (p. 4). Enrichment leads to more extensive dendritic fields (occipital and temporal cortex, some hippocampal regions); this implies that each neuron has more synapses. Researchers have found large Purkinje-cell bodies and many dendrites in richly educated monkeys.

"Some evidence is available to show that 'preventive' and 'therapeutic' environments positively affect behavioral performances of brain-lesioned animals. However, knowledge about the brain mechanisms which underly these effects is, as yet, lacking" (p. 6). Rats that were handled during the first 21 days of life exhibited different brain lateralization from rats that were not (Denenberg, cited by Marx, 1983). Those stimulated early stored memories mainly in the right hemisphere.

The author also reviews evidence that human brains are psychologically modifiable. Children with astigmatism generate weakened cortical response to visual stimulation (Freeman & Thibos, 1973), because they experience difficulty in processing some visual-spatial patterns. People who have visual-field defects due to brain damage can improve in vision when forced to make eye movements toward lighted targets flashed in the blind areas (Zihl, 1981).

Bakker theorizes that hemispheric control of reading shifts from right to left during the learning-to-read process of normal readers; at least some aspects of reading are successively mediated by the right hemisphere at age 6 and by the left hemisphere at age 8, according to electrophysiological data in a longitudinal study (Licht, Bakker, Kok, & Bouma, 1983). He thinks P-type dyslexia results from continuing to rely on right- hemispheric strategies, leading to slow reading with fragmentation errors and repetitions. L-type dyslexia results from prematurely adopting a left-hemispheric strategy, i.e. at the very beginning of the learning process, making child insensitive to the perceptual features of script with consequent substantive errors such as omissions and additions. Thus, P- type dyslexics presumably show functional overdevelopment of the right hemisphere and L-types of the left hemisphere. Treatment would involve specific stimulation of the hemisphere that they are ignoring.

He presents data suggesting that "some electrophysiological parameters of the cerebral hemispheres can be modified in dyslexic children through hemisphere-specific stimulation and loading, and that these modifications may induce better reading" (p. 12)

Kelly, Paul James (1984, December). The relationship between hypnotic ability and hypnotic experience. Newsletter of Division 30, Psychological Hypnosis, of the American Psychological Association, 5.

This study investigated the relationship between four types of hypnotic experience and hypnotic ability. The types of experience were: dissociation, the experience of involuntariness; altered state effects, such as perceptual alterations and diminished reality sense; rapport, transference-like involvement with the hypnotist; and relaxation. A sample of 230 students was given the HGSHS:A, a group version of the SHSS:C, and the Hypnotic Experience Questionnaire (Kelly, 1984), a 47-item multidimensional scale of hypnotic experience. Items were taken from these tests to form 11 hypnotic ability variables (Positive Hallucinations, Dreams and Regressions, Post-Hypnotic Compulsions, Amnesia (HGSHS:A), Amnesia (SHSS:C), Arm Rigidity, Arm Immobilization, Other Motor Inhibitions, Head Falling, Moving Hands Together, and Hand Lowering). Fourteen hypnotic experience variables were also formed (Generalized Dissociative Effects, Dissociative Inhibition, Trance, Unawareness, Transference-like Involvement, Trust, Friendliness, Physical Relaxation, Mental Relaxation, Imagery Presence, Imagery Vividness, Imagery Detail, Self Consciousness, and Analytic Thoughts). The 25 variables were intercorrelated and factored with principal axis factoring. Five factors with eigenvalues greater than 1 were extracted and rotated to varimax criteria. These factors, which accounted for 54.4 percent of the variance, were called: Imaginative Involvement, Ideomotor Response, Rapport, Cognitive Inhibition, and Relaxation. Hypnotic ability variables loaded significantly on three of the factors (Imaginative Involvement, Ideomotor Response, and Cognitive Inhibition) and these three factors also tapped some aspect of altered state experience and/or dissociative experience. It was concluded therefore that dissociative experience and altered state experience are related to hypnotic ability. The remaining two factors, Rapport and Relaxation, showed significant loadings only for rapport variables and relaxation variables, respectively. Neither of these two factors were related to any of the traditional measures of hypnotic ability or to the experience of dissociative effects or altered state effects. The results of this study suggest that rapport and relaxation may happen in the hypnotic situation but neither experience is related to the condition of being hypnotized in any essential way. The hypnotic condition is characterized by dissociative experience, altered state experience, and by successful performance on hypnotic ability tasks. The results also raise questions about Edmonston's (1981) theory that relaxation is the essence of hypnotic responsiveness. The finding that the experience of relaxation is unrelated to hypnotic ability is more congruent with Hilgard's (1977) view that relaxation is a nonhypnotic process.

1983

Farthing, G. William; Venturino, Michael; Brown, Scott W. (1983). Relationship between two different types of imagery vividness questionnaire items and three hypnotic susceptibility scale factors: A brief communication. International Journal of Clinical and Experimental Hypnosis, 31, 8-13.

122 Ss were administered the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962), the Tellegen Absorption Scale (Tellegen & Atkinson, 1974), and 2 tape-recorded questionnaires on vividness of mental imagery. On 1 imagery questionnaire the items were impersonal, objective visual scenes (MIQ:VS), whereas on the other questionnaire the items involved discrete personal actions which elicited a combination of visual and kinesthetic imagery (MIQ:PA). Imagery vividness scores from both questionnaires correlated significantly with hypnotizability scores. MIQ:VS vividness scores were better than MIQ:PA vividness scores at predicting cognitive factor item

scores of HGSHS:A, but not ideomotor or challenge factor items scores. Multiple correlations involving MIQ:VS vividness and the Tellegen predicted cognitive factor scores better than ideomotor or challenge factor scores.

Harris, Gina M.; Johnson, Suzanne Bennett (1983). Coping imagery and relaxation instructions in a covert modeling treatment for test anxiety. Behavior Therapy, 14, 144-157.

The present study compared the efficacy of instructing test anxious subjects to use personalized coping imagery based on nonacademic experiences of competence with coping imagery based on academic experiences of competence. The effect of relaxation was also examined and the relationship of imagery elaborateness and content to treatment effectiveness was assessed. Sixty-three subjects were randomly assigned to one of four treatments or a waiting list control group. Test anxiety as measured by a self-report instrument significantly decreased in all treatment groups. Improvement in grade point average occurred for all treatment groups except for academic coping imagery without relaxation which was also the least efficient treatment. The waiting list control group significantly deteriorated in academic performance. Relaxation training did not appear to enhance treatment effectiveness or influence the elaborateness or content of the imagery used. Test anxiety scenes elicited highly response-oriented images by all subjects. However, the stimulus/response content of the subjects' images was not influenced by treatment outcome. In contrast, successful treatment was primarily associated with reduction in negative coping imagery descriptions, although an increase in positive coping statements cured as well.

John, Rodney; Hollander, Barbara; Perry, Campbell (1983). Hypnotizability and phobic behavior: Further supporting data. Journal of Abnormal Psychology, 92 (3), 390-392.

Twenty women who were phobic to snakes, spiders, or rats were individually evaluated for hypnotic susceptibility using the standard audiotaped version of the Harvard Group Scale of Hypnotic Susceptibility, Form A. Consistent with the findings of three earlier studies using the Hypnotic Induction Profile (HIP), 55% of the present sample was found to be highly responsive to hypnosis. An item analysis comparing item pass percentages for the phobic subjects with item difficulties obtained from a normative sample of 357 female college students indicated that the two samples were significantly correlated. The discrepancy between the findings of studies using standard measures of hypnotizability and studies using HIP is discussed.

1982

Crawford, Helen J.; Hilgard, Josephine R.; MacDonald, Hugh (1982). Transient experiences following hypnotic testing and special termination procedures. International Journal of Clinical and Experimental Hypnosis, 30, 117-126.

For those who are responsive to hypnosis, the experiences can be unusual and involving. It is not surprising, therefore, that such experiences in response to tests of susceptibility may not be fully terminated when the hypnotic sessions end. In order to study the initial persistence of the effects, following administration of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) and the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and E. R. Hilgard (1962), 107 college Ss were interviewed about their hypnotic experiences and subsequent experiences related to hypnosis. 72% of Ss reported feelings of relaxation and being rested following SHSS:C. Only 5% reported minor transient posthypnotic experiences following HGSHS:A, while 29% of Ss reported these feelings following SHSS:C. Except in 1 case, cognitive distortions or confusion were reported only following the more cognitively oriented SHSS:C

by Ss who scored significantly higher on cognitive items than those Ss who reported feeling drowsy. A special termination procedure involving exercise and conversation had no significant effect on the number of transient experiences. Such minor transient experiences are not a risk to Ss and any slight discomfort or uneasiness they cause can easily be dealt with by a well-trained hypnotist.

Frankel, Fred H. (1982). Hypnosis and hypnotizability scales: A reply. International Journal of Clinical and Experimental Hypnosis, 30, 377-392.

The use of the hypnotizability scales in the experimental setting is briefly reviewed, as is the need to separate the effect of hypnosis from the influence of factors such as relaxation and placebo which accompany the use of hypnosis clinically. The clinical relevance of the scales, most of which were developed primarily for experimental work, is affirmed by several studies conducted in the clinical context, in which the scales were used. Levels of hypnotizability have correlated well with patterns of clinical behavior. Although the scales are useful in many instances in helping to plan treatment strategy, their value in investigative studies is emphasized. Sacerdote's (1982) criticisms of the scales are considered. While it is true that the scales are blind to some of the qualitative aspects of the hypnotic experience, the great majority of clinically hypnotizable patients are able to respond to the items on the scales. Sacerdote's reluctance to learn about the value of the scales is evident in his preference for conjecture when he could readily have gathered irrefutable data through the administration of the scales, without the least risk to the treatment of his patients, once the course of treatment was underway or complete.

1981

Howarth, Edgar; Schokman-Gates, Kar-La (1981). Self-report multiple mood instruments. British Journal of Psychology, 72, 421-441.

## NOTES

### Mood and hypnotizability

Zuckerman, Persky, & Lind (1967; *Journal of Consulting Psychology*) used the Zuckerman-Lubin MAACL to test the hypothesis that affect states just prior to hypnosis induction are related to subsequent hypnotizability, while affect traits are not so related (P. 464). The mood states of subjects in two treatment conditions (either small and highly motivated groups or large and less motivated groups) were measured just before trance induction, while the MMPI affect-trait measures were administered afterwards. The MAACL hostility scale was found to have a significant negative correlation with hypnotizability, but the affect-trait measures were unrelated.

In an attempt to determine the 'real relationships between personality traits and hypnotizability, Silver (1973) tested 40 male students on the Byrne (1964) Repression- Sensitization Scale, and in a following session the Wessman-Ricks PFS and a short form of the Nowlis MACL. Hypnotizability was also assessed using the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). While repression was not found to be related to hypnotizability, mood was, both on the PFS and the MACL, with bright affective states being positively related and dark states showing the opposite relationship. (Factor analysis revealed that the Nowlis measured emotional energy or buoyancy overall, whereas the Wessman-Ricks measured life satisfaction). Silver (1974) found that the surgency scale of the Nowlis MACL predicted hypnotizability as well or better than the MACL's overall mood index. This suggest (sic) that, although the overall mood may determine one's susceptibility to hypnotic induction, those who are in a surgent mood will be the ones most readily hypnotized.

1979

Hilgard, Ernest B.; Crawford, Helen Joan; Bowers, Patricia; Kihlstrom, John F. (1979). A tailored SHSS:C, permitting user modification for special purposes. International Journal of Clinical and Experimental Hypnosis, 27 (2), 125-133.

In the selection of Ss for the study of specific topics within hypnosis it is often desirable to include a few Ss known to have the specialized ability under investigation. To that end a modification of the SHSS:C of Weitzenhoffer and Hilgard (1962) has been tested in which one of the original items is replaced at the option of the investigator with an item selected for the purposes of any intended investigation. An empirical test of substituting 4 such items in each of 4 subgroups compared with a standard SHSS:C demonstrated that such a replacement of 1 item by another can be done without violating the usefulness of the established norms on the standardized test. The new form is described as a "tailored" SHSS:C.

1978

Counts, D. Kenneth; Hollandsworth, James G., Jr.; Alcorn, John D. (1978). Use of electromyographic biofeedback and cue-controlled relaxation in the treatment of test anxiety. Journal of Consulting and Clinical Psychology, 46 (5), 990-996.

The effect of using electromyographic (EMG) biofeedback to increase the efficacy of cue-controlled relaxation training in the treatment of test anxiety was studied. Forty college undergraduates scoring in the upper third on a self-report measure of test anxiety were randomly assigned to one of four treatment conditions - EMG-assisted cue-controlled relaxation, cue-controlled relaxation alone, attention-placebo relaxation, and no-treatment control. Pre-post self-report measures of test anxiety, state anxiety, and trait anxiety were obtained. In addition, a performance measure in the form of a mental abilities test was administered. Subjects from the three relaxation groups received six 45-minute individual sessions over a period of 2 weeks. All treatments were conducted using audiotape recordings. The results indicate that cue-controlled relaxation is effective in increasing test performance for test anxious subjects, that EMG biofeedback does not contribute to the effectiveness of this procedure, and that self-report measures of anxiety are susceptible to a placebo effect.

Hiscock, Merrill (1978). Imagery assessment through self-report: What do imagery questionnaires measure?. Journal of Consulting and Clinical Psychology, 46, 223-229.

Four studies examined imagery questionnaires and addressed issues of reliability, agreement among different questionnaires, social desirability, and construct validity. The Betts, Paivio, and Gordon scales were examined. In two studies the Betts and Paivio correlated .45-.50, but correlations involving the Gordon were inconsistent from one study to the next. Imagery measures generally were not influenced by social desirability. Factor analysis indicated that subjective and objective measures of visualization are independent. Concludes that imagery is not a unitary construct and that criteria other than visuospatial tests may be appropriate for validating imagery questionnaires.

1977

Botto, R. W.; Fisher, S.; Soucy, G. P. (1977). The effect of a good and a poor model on hypnotic susceptibility in a low demand situation. International Journal of Clinical and Experimental Hypnosis, 25, 175-183.

A review of recent studies reveals that there has yet to be a clear demonstration of a behavioral model affecting hypnotic levels. Two studies were conducted to test whether a peer model who portrayed deep or light hypnosis could affect S hypnotizability under minimal demand conditions. Using a low

demand version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. Orne, 1962), the first study showed a difference (Good Model scoring higher than Poor Model) that only approached significance. A replication on a larger sample, however, showed significantly higher scores for those Ss observing a good model rather than a poor model. Although base scores were not obtained on these Ss, norms from comparable populations suggest that the poor model seems more effective than the good model; but this difference does not appear attributable to differential attitudes created by the models.

**1976**

Coe, William C. (1976). Effects of hypnotist susceptibility and sex on the administration of standard hypnotic susceptibility scales. International Journal of Clinical and Experimental Hypnosis, 24, 281-286.

Hypnotists' susceptibility and sex were examined for their effects on the administration of the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962). Neither resulted in different hypnotic responsiveness from Ss. Comparatively inexperienced hypnotists obtained data similar to the normative sample for the Stanford scale. The results suggest that inexperienced hypnotists are capable of administering standardized scales validly, and that characteristics of the hypnotist are relatively ineffective in distorting Ss' responses to these scales.

**1970**

Bakan, Paul (1970). Handedness and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 18, 99-104.

Carried out 2 studies with 251 and 228 undergraduates to determine the relationship between self-reports of handedness and scores on a shortened version of the Harvard Group Scale of Hypnotic Susceptibility, Form A. It was found that left-handed Ss were more likely than right-handed Ss to score at the extremes of the hypnotizability scale, either low or high, and less likely to score in the middle of the scale. Results of 2 independent studies were in agreement. (Spanish & German summaries) (15 ref.) (PsycINFO Database Record (c) 2003 APA, all rights reserved)

**1969**

Field, Peter B.; Palmer, R. (1969). Factor analysis: Hypnosis inventory. International Journal of Clinical and Experimental Hypnosis, 17, 50-61.

An inventory scale of hypnotic depth and the Stanford Hypnotic Susceptibility Scale, Form A were factor analyzed, based on a sample of 223 college students. Both measures yielded a general factor of hypnotic depth. Rotation yielded inventory factors of unawareness, drowsiness, enthusiasm, subjective conviction, and Stanford factors of challenge and ideomotor-posthypnotic suggestibility. Results of an earlier study describing development of the hypnosis inventory were successfully cross-validated. (Spanish & German summaries) (19 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**1968**

Dittborn, Julio M. (1968). A brief nonthreatening procedure for the evaluation of hypnotizability. International Journal of Clinical and Experimental Hypnosis, 16, 53-60.

**DESCRIBES A TECHNIQUE FOR THE SELECTION OF SS POTENTIALLY HIGH IN HYPNOTIZABILITY WITHOUT INFORMING THEM THAT HYPNOSIS IS BEING INDUCED.**

**IT INVOLVES AN OBJECTIVE BEHAVIORAL OUTPUT (SLEEP WRITING) AS WELL AS CLINICAL SIGNS THAT CAN BE USED TO EVALUATE HYPNOTIZABILITY. IT HAS THE ADVANTAGE OF BEING ABLE TO BE ADMINISTERED BY INDIVIDUALS OTHERWISE UNTRAINED IN HYPNOTIC TECHNIQUES. (SPANISH + GERMAN ABSTRACTS) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Faw, Volney; Sellers, David J.; Wilcox, Warren W. (1968). Psychopathological effects of hypnosis. International Journal of Clinical and Experimental Hypnosis, 16, 26-37.**

The probability that hypnotic induction produces psychopathological effects has not been experimentally determined. The present study hypothesizes various negative effects following hypnosis such as increased signs of personality disturbances, increased need for medical attention, greater tendencies toward suicide, and negative effects among the more maladjusted persons of the population sample. 107 college students were assigned at random to experimental and control groups. The experimental group was hypnotized 3 times in successive weeks. A comparison between control and experimental groups in respect to pre- and post-MMPI score differences plus a follow-up with the college counseling center and infirmary for a 90-day period following induction led to the rejection of the hypotheses. A comparison of measures yielded some significant differences in favor of the experimental group. It is concluded that there are nondetrimental effects when hypnosis is used with a normal college population.

**1966**

**Cooper, Leslie M.; London, Perry (1966). Sex and hypnotic susceptibility in children. International Journal of Clinical and Experimental Hypnosis, 14, 55-60.**

Sex differences in hypnotic susceptibility were investigated in a sample of 240 children. The Children's Hypnotic Susceptibility Scale was administered to 10 boys and 10 girls at each age level for 5-16 yr. There were no differences between the means of the boys and girls at any age for the 3 scores yielded by the measure. The percentage passing each item at each age for each sex was also computed. Of the resulting 264 comparisons only 1 (Item 10, Eye Catalepsy) was found to be significantly different at 1 age level (7 yr. of age) and was attributed to chance. It was concluded that there were no sex differences for the various items at the ages tested. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Evans, Frederick J.; Schmeidler, D. (1966). Relationship between the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale: Form C. International Journal of Clinical and Experimental Hypnosis, 14, 333-343.**

**3 SUBGROUPS OF 20 SS WITH HIGH, MEDIUM, OR LOW SCORES ON A SLIGHTLY MODIFIED, TAPE-RECORDED VERSION OF THE HARVARD GROUP SCALE OF HYPNOTIC SUSCEPTIBILITY, FORM A (HGSHS:A) WERE LATER ADMINISTERED THE STANFORD HYPNOTIC SUSCEPTIBILITY SCALE, FORM C (SHSS:C). THE 2 SCALES CORRELATED .59, WHICH IS LOWER THAN WOULD BE PREDICTED BY SCALE RELIABILITIES. THIS, TOGETHER WITH OTHER DATA BASED ON ITEM CHARACTERISTICS, INDICATES THAT THE 2 SCALES ARE NOT EQUIVALENT, BUT IN PART MEASURE DIFFERENT ASPECTS OF HYPNOTIC PERFORMANCE. SCORES ON HGSHS:A FOR LOW SS ARE PREDICTIVE OF SHSS:C SCORES, BUT THE STABILITY OF PERFORMANCE BETWEEN HGSHS:A AND SHSS:C IS NOT AS MARKED FOR MEDIUM AND HIGH SS ON HGSHS:A. THIS IS PARTLY A RESULT OF THE FAILURE OF PASSIVE MOTOR (PRIMARY) SUGGESTIBILITY TO**

**DISCRIMINATE BETWEEN LEVELS OF SUSCEPTIBILITY, ALTHOUGH CHALLENGE ITEMS DO. THE 2 CLUSTERS OF ITEMS CORRELATE .23 AND .43 IN HGSHS:A AND SHSS:C, RESPECTIVELY. THE PASSIVE SUGGESTIBILITY ITEMS DETRACT FROM THE VALIDITY OF THE 2 SCALES. (SPANISH + FRENCH SUMMARIES) (20 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Cooper, Leslie M.; Pedersen, Darhl M. (1965). A note on the failure to find personality differences between volunteers and nonvolunteers for hypnotic research. International Journal of Clinical and Experimental Hypnosis, 13 (4), 274-278.**

**Personality measures were administered to 136 students in an introductory psychology class at Brigham Young University. 30 Ss subsequently volunteered to have their hypnotic susceptibility assessed. There were no significant differences found between the means of the resulting 23 variables for the 30 volunteers and 106 nonvolunteers. 2 variables (age and ego strength) showed significantly different variances for the 2 groups, but these may be attributed to chance because of the number of significance tests made. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Das, J. P. (1965). Relationship between body-sway, hand-levitation, and a questionnaire measure of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 13 (1), 26-33.**

**67 randomly selected college students were administered the body-sway test, a questionnaire measure of tranceability, and an induction procedure utilizing hand-levitation to determine hypnotic susceptibility. The 6 Es varied in age, sex; 5 of them had little experience as hypnotists. All reference to "hypnosis" was omitted from the induction procedure. Significant phi-coefficients between body-sway and levitation (.52), levitation and tranceability frequency (.28) and intensity (.25), and body-sway and tranceability intensity (.33) were obtained. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Field, Peter B. (1965). An inventory scale of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 13, 238-249. (Abstracted in American Journal of Clinical Hypnosis, 1966, 1, 86)**

**An inventory of 300 items describing subjective experiences during hypnosis was administered to 102 students after they had wakened from hypnosis. The 38 items that correlated best with a standard measure of hypnotic susceptibility are proposed as an inventory measure of hypnotic depth. Items dealing with absorption and unawareness, automaticity and compulsion, and discontinuity from normal experience correlated best with the criterion, while items dealing with conscious motivation to enter hypnosis, feelings of surface compliance with suggestions, and unusual bodily sensations showed generally weaker relationships to the hypnotizability criterion. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Field, Peter B.; Evans, Frederick J.; Orne, Martin T. (1965). Order of difficulty of suggestions during hypnosis. International Journal of Clinical and Experimental Hypnosis, 13, 183-192.**

**This study tests the hypothesis that successful response to suggestion during hypnosis predisposes to further successful response, but failure leads to subsequent failure. The Harvard Group Scale of Hypnotic Susceptibility was administered to 2 groups of 51 volunteer students. For 1 group, 8 of the 12 items were administered in the order easy-to-difficult; for the 2nd group, in the order difficult-to-easy. Total and 8-item mean scores, and frequency distributions, did not differ significantly between groups.**

Except for the item measuring posthypnotic amnesia, item difficulties for the 2 groups did not differ significantly. Although the difficult-to-easy group was more amnesic, the 2 groups recalled a similar number of additional items when amnesia was "lifted." The block of 4 easier items was relatively easier when preceded by a block of 4 harder items and, similarly, the harder items were relatively less difficult if preceded by a block of easier items. The magnitude of this effect was small, and the order effect hypothesis was basically not supported. Future research should consider the S's subjective impression of success and failure. (16 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Levitt, Eugene E.; Overley, T. M. (1965). Experience of the hypnotist as a factor in hypnotic behavior. International Journal of Clinical and Experimental Hypnosis, 12 (1), 34-38.

A group of student nurse volunteers were found to obtain scores on the Stanford Hypnotic Susceptibility Scale which did not differ when they were hypnotized by experienced or by inexperienced hypnotists. Neither did scores vary from 1st to 2nd occasion regardless of the experience of the hypnotist. The results are interpreted to mean that the factor of hypnotist experience is likely to be irrelevant to subject performance in the standardized, research situation. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Coe, William C. (1964). Further norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 12 (3), 184-190.

The Harvard Group Scale of Hypnotic Susceptibility, Form A was administered to 168 upper level college students. Findings are congruent with the original normative data reported by Shor and E. C. Orne. Differences between the 2 samples' mean scores and distributions are discussed in terms of sample composition. Further support for the group scale as an accurate predictor of hypnotic susceptibility was indicated by a significant relationship between the group scale and the individually-administered Stanford Hypnotic Susceptibility Scale, Form C. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Cooper, G. W.; Dana, R. H. (1964). Hypnotizability and the Maudsley Personality Inventory. International Journal of Clinical and Experimental Hypnosis, 12, 28-33.

The Maudsley Personality Inventory was administered to 349 male college students. 9 male Ss were chosen to represent each of the 4 possible combinations (total N = 36) of extreme high and low extraversion and introversion scores. An attempt was made to hypnotize each S by means of the Stanford Hypnotic Susceptibility Scale, Form C. Analysis of variance indicated no significant relationship between either extraversion or neuroticism and hypnotizability, although the relationship between extraversion and hypnotizability approached significance. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Evans, Frederick J.; Schmeidler, D. (1964). Reliability of two observers scoring the Stanford Hypnotic Susceptibility Scale, Form C. International Journal of Clinical and Experimental Hypnosis, 12 (4), 239-251.

2 Os scored the responses of 60 Ss on a 12-item objective test, Stanford Scale of Hypnotic Susceptibility, Form C (Weitzenhoffer & Hilgard, 1962). Mean total scores reported by the 2 Es did not differ significantly. The correlation between the total scores of the 2 Es was .947. Nevertheless, differences in total scores assigned occurred with 40% of Ss, which is a significant departure from

perfect agreement. The 2 Es disagreed about correct scoring of 54 items (7.5% of all items scored). The extent of disagreement was significantly greater than 0. Disagreement was not related to the level of susceptibility of Ss, nor to the relative experience of Es with hypnosis. More than 1/2 of the disagreements involved systematic differences in the interpretation and application of the scoring criteria for 2 items; item 6: Dream, and item 9: Anosmia to Ammonia. These systematic differences affecting scoring reliability happened to counterbalance to produce similar total scores in this study. Several sources of potential scoring unreliability of SHSS:C are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Furieux, W. D. (1964). The heat-illusion test and the structure of suggestibility. International Journal of Clinical and Experimental Hypnosis, 12 (3), 169-180.**

2 similar forms of the heat-illusion test are shown to correlate to a smaller degree than would be expected if they measure the same attribute. The 2 versions also differ in the way in which they correlate with other suggestibility tests. It is shown that linear regression techniques are not appropriate for analyzing the data concerned. The interaction of various nonlinear relationships with a difference in "difficulty," as between the 2 forms of the illusion, seems to provide an adequate explanation for the results. It is suggested that these nonlinear relationships may indicate the existence of an attribute which prevents some Ss from responding to any suggestibility test, irrespective of what the specific mechanisms of response may be. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1963

**Bentler, P. M.; Hilgard, Ernest R. (1963). A comparison of group and individual induction of hypnosis with self-scoring and observer-scoring. International Journal of Clinical and Experimental Hypnosis, 11, 49-54. (Abstracted in Index Medicus, 63, June, S-1599)**

45 volunteer Ss were hypnotized in small groups and were subsequently hypnotized in individual sessions. In both sessions observer- and self-scores were recorded for all suggestions of the Harvard Group Scale adaptation of the Stanford Hypnotic Susceptibility Scale. The correlation between observer- and self-scores indicated that hypnotic susceptibility in the 2 sessions was very similar. Group self-scores were also found to predict quite accurately objective hypnotist scores of the subsequent individual session. A 2nd sample of 34 nonvolunteer male Ss were hypnotized individually following Form A of the Stanford scale. Self-scoring was found to be remarkably similar to observer ratings, and the results of group administration very comparable to those of individual administration of hypnotic susceptibility tests. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Dittborn, Julio M.; Munoz, L.; Aristeguita, A. (1963). Facilitation of suggested sleep after repeated performances of the sleep suggestibility test. International Journal of Clinical and Experimental Hypnosis, 11, 236-240.**

The sleep suggestibility test (SST) was individually administered to a group of young volunteer soldiers. There was increased susceptibility with each successive SST administration. It was possible to transform suggested sleep into somnambulistic hypnosis in a majority of Ss. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Evans, Frederick J. (1963). The Maudsley Personality Inventory, suggestibility and hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 187-200.**

An attempt to replicate the claim of Furneaux and Gibson (1961) that stable extraverts and neurotic introverts were more susceptible to hypnotic suggestion than neurotic extraverts and stable introverts, using the MPI dimensions, was unsuccessful. Some "trends" are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

## **TEXTBOOK**

**1995**

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

## **NOTES**

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

**1986**

Zilbergeld, Bernie; Edelstien, M. Gerald; Araoz, Daniel L. (1986). Hypnosis - Questions & Answers. New York NY: Penguin Books.

## **NOTES**

The editors requested experts in hypnosis to answer common questions that resulted from questionnaires given to over 600 health professionals who had taken a course in hypnosis during the previous three years, as well as a few questions suggested by colleagues. "We do not view this book as providing right answers, but instead as something clinicians can turn to when they have questions or want to learn how a recognized authority handles a particular issue. There are, in fact, no right answers, no one-and-only best way" (p. xviii).

## **THEATA**

**2000**

Freeman, Robert; Barabasz, Arreed; Barabasz, Marianne (2000). Hypnosis and distraction differ in their effects on cold pressor pain. American Journal of Clinical Hypnosis, 43 (2), 137-148.

This study sought to determine whether highly hypnotizable Ss differ from low hypnotizables in perceived pain and neocortical electrical activity in 3 conditions. On the bases of E. R. Hilgard's neo-dissociation theory (1977) and N. P. Spano's (1982) sociocognitive theory, Ss selected for high and low hypnotizability (10 in each group) were exposed to a cold pressor pain test during counterbalanced conditions of waking relaxation, distraction, and hypnosis. To better discriminate between hypnosis and distraction conditions, a new distraction procedure was developed involving the memorization of a sequence of colored lights. High hypnotizables showed significantly greater pain relief for hypnosis vs distraction or waking relaxation conditions. They also demonstrated significantly greater pain relief than low hypnotizables in response to hypnosis. Electroencephalographic findings showed significantly greater high theta (5.5-7.5 Hz) activity for highs as compared to lows at parietal (P3) and occipital (O1)

sites during both hypnosis and waking relaxation conditions. The findings fail to support the sociocognitive conceptualization of hypnotic behavior but provide evidence supporting the neo-dissociation theory and state based theories of hypnosis. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Montgomery, Doil D.; Dwyer, Kimberly V.; Kelly, Shannon M. (2000). Relationship between QEEG relative power and hypnotic susceptibility. American Journal of Clinical Hypnosis, 43 (1), 71-75.

Investigated the relationship between quantitative electroencephalograph relative amplitude, relative power and hypnotic susceptibility. Ss were 41 adults (aged 22-40 yrs). Hypnotic susceptibility, measured by the Wickramasekera Experience Inventory, was found to be positively correlated with QEEG theta relative amplitude. In addition, hypnotic susceptibility was found to be negatively correlated with QEEG alpha relative amplitude and alpha relative power. These findings suggest that QEEG relative amplitude and QEEG relative power, as correlates of hypnotic susceptibility, may be a promising avenue for future research. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1999

Anderson, Kathryn (1999, November). A test of Barabasz' alert hypnosis on EEG Beta and Theta production for children with ADHD. [Paper] Presented at Annual Meeting of the Society for Clinical and Experimental Hypnosis, New Orleans, LA.

This study tested the effects of Barabasz's Instant Alert Hypnosis (IAH), also known as Instantaneous Neuronal Activation Procedure (INAP, Barabasz and Barabasz, 1995) used as an adjunct to neurotherapy. The sixteen children who participated in this study met DSM - IV criteria for attention deficit hyperactivity disorder (AD/HD). Trials of neurotherapy alone were compared to neurotherapy combined with alert hypnosis on beta-theta ratios at five electrode sites (Fp1, Fp2, Fz, Cz and Pz). The results showed that EEG beta-theta ratio means were significantly higher (more than twice as large) in the trials of neurotherapy combined with alert hypnosis in contrast to neurotherapy alone. Beta was significantly enhanced while theta was inhibited. The clinical implications of these findings with regard to improved treatment efficacy and reduced time in treatment are discussed. [Abstract taken from SCEH "FOCUS", Winter 2001..]`

Nishith, Pallavi; Barabasz, Arreed; Barabasz, Marianne; Warner, Dennis (1999). Brief hypnosis substitutes for alprazolam use in college students: Transient experiences and quantitative EEG responses. American Journal of Clinical Hypnosis, 41 (3), 262-268.

We sought to determine: 1) whether a simple hypnotic induction with an alprazolam experience derived suggestion could recreate the subjective effects of alprazolam (Xanax), 2) whether the effects of alprazolam are greater than the effects of hypnosis plus this suggestion, and 3) whether the effects of hypnosis plus this suggestion were greater than the relaxation effects produced by hypnosis alone. High and low hypnotizable student volunteer subjects (Ss) ingested 1 mg of alprazolam. A hypnotic suggestion was developed on the basis of their reported reactions to alprazolam. Four days later the same Ss were exposed to hypnosis only and hypnosis plus the alprazolam experience based suggestion conditions in counterbalanced order. Ss exposed to the hypnosis plus suggestion condition demonstrated greater levels of relaxation as measured by the tension-anxiety scale of the Profile of Mood States (POMS) (Eichman & Umstead, 1971) than in the alprazolam condition or the hypnosis only condition. High hypnotizables showed significantly greater levels of relaxation than the low hypnotizables in each of the three conditions (hypnosis plus suggestion, hypnosis only, alprazolam only). EEG data showed frontal and occipital sites were specifically involved in both the alprazolam

and the hypnotic suggestion conditions. The findings indicate a basis for the use of hypnosis as a substitute for sedative drug use. Limitations and implications for clinicians are discussed.

1997

Ray, William J. (1997). EEG concomitants of hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 45 (3), 301-313.

Numerous historical attempts have been directed at understanding electrocortical concomitants of hypnosis. Today, with the availability of more sophisticated multichannel recording technologies and signal-processing approaches, it is possible to reconsider and update previous attempts. The most solid relationship between electrocortical activity and hypnotizability exists in the EEG theta frequency range. Given the stable electrocortical differences found in high and low susceptible individuals, the question arises whether we can use additional EEG measures to help understand the nature of these individual differences. One possible alternative is the pointwise or fractal dimension, which we examined during baseline conditions with high and low hypnotic susceptible individuals. The dimensionality measures suggest that high susceptible individuals display underlying brain patterns associated with imagery, whereas low susceptible individuals show patterns consistent with cognitive activity (i.e., mental math). This type of speculation is similar to that of Tellegen, who makes a distinction between imaginative versus realistic responding. Future research should address the exact nature of the underlying process (imagination, effortlessness, suggestibility, etc.) seen in high and low susceptible individuals. Journal Abstract.

1995

Graffin, Nancy F.; Ray, William J.; Lundy, Richard (1995). EEG concomitants of hypnosis and hypnotic susceptibility. Journal of Abnormal Psychology, 104, 123-131.

Electroencephalograph (EEG) measures described high- and low-hypnotizable participants in terms of 3 conditions: an initial baseline period; baselines preceding and following a standard hypnotic induction; and during the induction. The following results were obtained. 1. High and low-hypnotic susceptible participants displayed a differential pattern of EEG activity during the baseline period, characterized by greater theta power in the more frontal areas of the cortex for the high-susceptible participants. 2. In the period preceding and following a standardized hypnotic induction, low-susceptible participant displayed an increase in theta activity, whereas high-susceptible participants displayed a decrease. 3. During the actual hypnotic induction itself, theta power significantly increased for both groups in the more posterior areas of the cortex, whereas alpha activity increased across all sites. Implications of these data include the possibility of psychophysiological measures offering a stable marker for hypnotizability, and anterior/posterior cortical differences being more important than hemispheric foci for understanding hypnotic processes.

#### NOTES

7970, Lynn & Nash, 1994 ABSTRACT: In this article we address a number of issues relevant to the practice of psychotherapy and hypnotherapy: How reliable is memory? How are therapists' and clients' beliefs and expectancies related to pseudomemory formation? Are certain clients particularly vulnerable to pseudomemory creation? Does hypnosis pose special hazards for pseudomemory reports? What are the variables or factors that mediate hypnotic pseudomemories? In addition to reviewing the literature on these topics, we intend to sensitize the clinician to the potential pitfalls of critical reliance on the patient's memories, as well as uncritically accepted clinical beliefs and practices.

Ray, William J. (1995, November). EEG signatures of hypnotic susceptibility and hypnosis: It's what's up front that matters. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

We have done three studies: a psychometric study, one in which we used traditional ways of looking at EEG, and more recent research.

Study I found that hypnotizability related to absorption, but not to tests of absent mindedness/cognitive failures, abuse/neglect, attachment, depression and anxiety, NEO Five Factor Test scales (Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness) or the Marlow Crown Social Desirability Scale. Also there was no relationship to Bernstein and Putnam's measure of dissociation, the DES. There is a hint of a relationship to the Openness Scale, actually.

Study II included a literature review on 3 questions: 1. Are there differential electrocortical differences between high and low susceptible individuals? 2. Are there electrocortical markers for the hypnotic state itself? 3. Are electrocortical differences found in the trance state mediated by hypnotic procedures?

Results of Study II are published in Graffin, Ray, & Lundy, 1995.

Study III investigated three questions: 1. Are there initial baseline psychophysiological differences between High and Low susceptible Ss? 2. Are there psychophysiological differences in baseline? 3. Are there behavioral differences on the challenge tasks during the Stanford-C?

The Pre-induction baseline followed by post-induction baseline are reported today. (They also administered tasks, not discussed here.)

Literature indicates that EEG theta is much higher for highs than lows, especially in frontal and temporal areas. This is a stable finding in a number of studies. There are also posterior differences, but they are not as significant. The differences in theta between highs and lows remains across different tasks (like imaging, spatial rotations, math). Whatever differences in theta exist when high and low hypnotizable subjects walk into the room, continue across tasks. The difference also is observable in alpha.

In the whole study we found no alpha differences and no hemisphere differences, but we did find theta differences.

We thought there would be less dimensionality as someone enters hypnosis. Dimensionality reflects EEG wave form (e.g. a sine wave is simple; more complex wave is multidimensional) and is analyzed with "chaos measures" [these notes may be poor regarding this issue]. But we didn't find less dimensionality as people entered hypnosis. So if dimensionality reflects brain state maybe people don't change state as they enter hypnosis.

Highs do show higher dimensionality vs lows, across all brain areas. What does this mean? It's as if Highs walk into the experiment in a more imagery mode than lows, and they continue that way throughout the whole experiment.

The differences found in baseline were all in theta. We compared the Standard Induction vs Self Induction on the EEG Theta variable: highs show more theta across the whole brain than lows, and it doesn't matter what type of induction is used.

De Pascalis gets me thinking about the role of attention in hypnosis. Following an induction, on 35-45 Hz band of EEG there is greater frontal activity for Lows whereas for Highs you see more activity posteriorly. The difference is on the rostral-caudal dimension rather than the lateral

1994

Crawford, Helen J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. International Journal of Clinical and Experimental Hypnosis, 42 (3), 204-232.

This article reviews recent research findings, expanding an evolving neuropsychophysiological model of hypnosis (Crawford, 1989; Crawford & Gruzelier, 1992), that support the view that highly hypnotizable persons (highs) possess stronger attentional filtering abilities than do low hypnotizable persons, and that these differences are reflected in underlying brain dynamics. Behavioral, cognitive, and neurophysiological evidence is reviewed that suggests that highs can both better focus and sustain their attention as well as better ignore irrelevant stimuli in the environment. It is proposed that hypnosis is a state of enhanced attention that activates an interplay between cortical and subcortical brain dynamics during hypnotic phenomena, such as hypnotic analgesia. A body of research is reviewed that suggests that both attentional and disattentional processes, among others, are important in the experiencing of hypnosis and hypnotic phenomena. Findings from studies of electrocortical activity, event-related potentials, and regional cerebral blood flow during waking and hypnosis are presented to suggest that these attentional differences are reflected in underlying neurophysiological differences in the far fronto-limbic attentional system.

Freeman, R.; Barabasz, A.; Barabasz, M. (1994, October). EEG topographic differences between dissociation and distraction during cold pressor pain in high and low hypnotizables. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

Hilgard once said we should study what is going on inside the skull when we study hypnotic behavior. Theta EEG was studied, in 3.5 and 5.5-7.5 band widths, based on Crawford's research (no differences between high and low hypnotizables in low range but significant differences in waking state, eyes closed condition).

Also employed new type of distraction procedure. Previously used as comparison conditions things like imagine a pleasant scene, do whatever you can do to reduce pain, or imagine an instructor giving a lecture. Barabasz theorized that highs, given the opportunity, may spontaneously get involved in imagery; so distraction used in some experiments may actually become hypnosis. Here, distraction involved using a storage box, with plexiglass covering front, and 3 lights--subjects were to recall sequence of light changes that occurred during 60 sec when arm was in the cold water.

Cold pressor pain. 3 immersions with simultaneous pain reporting and EEG monitoring. --Waking State --Light array distraction --Hypnotic induction and suggested analgesia (Distraction and hypnosis with analgesia were presented in a balanced design)

Pain Ratings ranged from 0 = no pain, 10 = level would very much like to remove arm from water (rating could exceed 10 however). After removing arm, subjects were to report the maximum amount of pain that they had felt. Pain Scores were obtained at 30 seconds and 60 seconds after immersion in the cold water.

Also got qualitative data. During recovery period after each arm immersion, Subjects were asked what if anything they had done to reduce the pain felt.

30 second pain scores: Waking 7.60 vs 7.50 Distraction 8.60 vs 6.80 Hypnotic analgesia 7.80 vs 4.10 (Significantly different).

60 second pain scores: Showed same trend

There was no difference whatsoever for the lows.

Results for the 2 EEG sites: P3 left hemisphere parietal in waking and hypnotic analgesia, high theta, had significantly different activity O1 left hemisphere in waking and hypnotic analgesia, was significantly different between highs and lows (same as above).

Results for two theta ranges: Low theta range, T4 temporal right hemisphere, for lows in waking and [missed words] condition--hard to interpret this finding.

**RESULTS.** Highs demonstrated pain reduction in hypnotic analgesia compared to waking and distraction conditions and compared to lows. Lows had no differences in any condition.

Enhanced EEG theta in left parietal area differentiated highs and lows. This suggests that highs generate enhanced disattention that may be controlled by these areas.

P3 area regulates the integration and association of somatic perceptions. The O1 area controls processing of visual imagery. Perhaps high hypnotizables have more ability to alter afferent sensory information through focused attentional processes. Also, the ability to alter the suffering portion of pain experience may involve visual imagery activity.

State and trait differences are apparent.

The low theta range may be more closely related to slower delta range 0-3.5 that is associated with sleep and drowsiness. High theta = low arousal and attention capacity. That's why theta seems associated with wide range of behaviors that appear contradictory

The qualitative data shows highs reported they spontaneously preferred strategies that were more than distraction (associating colors with warmth, thinking of warm water) and the most frequent responses of lows were "nothing" or "told myself it would be over soon."

Highs in analgesia condition used no specific strategy: 8/10 reported the arm simply felt more numb.

Ray, William J.; Moraga, R.; Faith, M. (1994, October). Psychometric and psychophysiological studies of hypnotizability and dissociation. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco.

## NOTES

In the last 5-6 years we see a beginning of a consistency in this type of research on EEG and hypnosis. Baseline EEG theta for high and low hypnotizable Ss was higher significantly in frontal and temporal areas; less significantly in parietal and occipital areas. It begins to look like a signature of hypnotizability. Our research will be published in the Journal of Abnormal Psychology next year.

In Japan they see theta as sustained attention; some aspects of theta relate to MAO and also to dopamine. Betsy Faith did the same research, replicating almost exactly.

There are no differences between Highs and Lows in alpha or beta; but we find differences in theta (especially frontal, and in 40 Hz more posteriorly). It may not be L-R hemisphere difference as previously thought, but more a rostral-caudal dimension.

The signature to hypnotizability is more frontal theta at baseline. This may also relate to a drop in theta after induction, but those results are not so clear. Highs have a larger drop in theta from pre to post induction than is observed in the Lows.

We did a "chaos analysis" of EEG. There are three main measures, including dimensionality. Dimensionality is a measure of complexity. People demonstrate high dimensionality when asked to do tasks, low dimensionality in anesthesia.

High hypnotizable Ss start an induction with higher dimensionality than the Low hypnotizable Ss, and as we go through the induction they remain the same. So this measure shows individual differences but does not give evidence of a state (because it doesn't change).

Chaos dimensions for 2 mental math problems show lower dimensions in frontal compared to posterior areas; but for imagery [labeled on slide as positive and negative emotional tasks] the dimension is the same across areas.

For the dimension measures, lows look like they are doing mental math and highs look like they are doing imagery, in baseline.

**SECOND PART OF RESEARCH--DISSOCIATION.** For 100 years dissociation and hypnosis have been viewed as similar. Two dissociation scales were used - Putnam's DES and Reilly's scale. A factor analysis found four factors: 1. absorption or derealization 2. depersonalization 3. segment amnesia 4. in situ amnesia

(Segment amnesia differs from in situ amnesia because you wake up to it at that moment in the in situ vs the segment case.)

We have 20-30 people who score very high on hypnotizability.

Colin Ross finds the same factors as our factors 1 and 2, but he finds only one amnesia factor where we find two.

The correlation between DES and Harvard ranges .05 to .18. Are the high hypnotizables related to high dissociatives, with others not related? A scatter plot did not reveal that.

FFT EEG bands during baseline for high and low dissociation Ss find no differences for high and low dissociative subjects. We conclude that dissociation and hypnosis are two orthogonal processes.

Now we are beginning to look at the pathways that lead one to become highly hypnotizable or dissociative.

#### COMMENTS FROM THE AUDIENCE:

**Ian Wickramasekera:** Have you introduced threat to high or low DES people? **Answer:** High and Low DES people with happy and unhappy imagery tasks do the opposite, with the dimensionality measure. With emotionality you don't see stable baseline differences, you see reactivity differences.

**A. Barabasz:** I think the DES isn't a good measure of dissociation in hypnosis which is voluntary and not pathological.

**D. Spiegel:** Sabourin's study found more theta in left frontal during hypnosis, whereas you found less. **Answer:** That's why I don't know what to do about the state effects.

**J. Crawford:** Sabourin had Ss doing tasks, so they may have been more active than yours.

#### 1992

Atkinson, Richard P.; Crawford, Helen J. (1992). Individual differences in afterimage persistence: Relationships to hypnotic susceptibility and visuospatial skills. *American Journal of Psychology*, 105 (4), 527-539.

To investigate the moderating role of individual differences in hypnotic susceptibility and visuospatial skills on afterimage persistence, we presented a codable (cross) flash of light to 40 men and 46 women who had been dark adapted for 20 minutes. In an unrelated classroom setting, subjects had previously been given two standardized scales of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Shor & Orne, 1962; Group Stanford Hypnotic Susceptibility Scale, Form C, Crawford & Allen, 1982) and the Mental Rotations Test (Vandenberg & Kuse, 1978). The first afterimage interval and the afterimage duration correlated significantly with hypnotic responsiveness, supporting Wallace (1979), but did not show the anticipated relationships with mental rotation visuospatial skills. Individuals in the high hypnotizable group had (a) significantly longer afterimage intervals between its first appearance and first disappearance than did those in low groups, but those in medium groups did not differ significantly from the other groups. Discriminant analysis using the afterimage persistence measures classified correctly 65.2% of high hypnotizables, 37.5% of medium hypnotizables, and 54.8% of low hypnotizables. Hypothesized cognitive skills that assist in the maintenance of afterimages and underlie hypnotic susceptibility include abilities to maintain focused attention and resist distractions over time and to maintain vivid visual images.

#### NOTES

**DISCUSSION** "Because there is no apparent evidence for physiological differences of the visual system between low and high hypnotizables (e.g., Wallace, 1979), cognitive factors are suggested as possible moderators of afterimage persistence.

"Hypnotic susceptibility per se is not the moderator of afterimage duration. Rather, we argue that hypnotic susceptibility represents a constellation of underlying cognitive skills (e.g., for reviews, see Crawford, 1989; Kihlstrom, 1985) that assist an individual to respond to hypnotic suggestions as well

as assist in the persistence of afterimages by interacting with more primary casual mechanisms that are physiological in origin. These cognitive skills are thought to include the abilities to focus attention selectively upon both external stimuli and internally generated images, to maintain vivid visual images, to sustain attention over time and remain absorbed in the experience at hand, and to resist distractions. The relationships between these cognitive skills and hypnotic susceptibility are reported in a large body of literature (e.g., Crawford, 1982, 1989; Crawford et al., 1991; Crawford & Grumbles, 1988; Finke & Macdonald, 1978; Grumbles & Crawford, 1981; Mitchell, 1970; Tellegen & Atkinson, 1974)....

"Sustained and selective attention without interference from extraneous stimuli plays an important role in hypnosis. Individuals who are responsive to hypnosis demonstrate greater skills in extremely focused and sustained attention (e.g., Crawford et al., 1991; Tellegen & Atkinson, 1974). Electrophysiological research had found that high hypnotizables often generate substantially more theta electroencephalogram (EEG) power than do low hypnotizables (e.g., Crawford 1990, 1991; Crawford & Gruzelier, 1992; Sabourin, Cutcomb, Crawford, & Pribam, 1990). Such a relationship may be interpreted as further evidence of greater attentional skills in highs, because certain theta waves have been correlated with enhanced problem solving and attentional task performance (e.g., Crawford & Gruzelier, 1992; Schacter, 1977)....

"Hypnosis is seen often as a condition of amplified attention, where attention can be either more focused or diffuse dependent upon set (e.g., Krippner & Binder, 1974). Increases in vigilant performance during hypnosis have been reported, albeit inconsistently (e.g., Barabasz, 1980; Fehr & Stern, 1967; Kissen, Reifler, & Thaler, 1964; Smyth & Lowy, 1983). Fehr and Stern's results suggest that hypnotized subjects devote more attention to a primary task with less available attentional resources for a secondary task. Hypnosis has been found to have an enhancing effect on the imaginal processing of information-to-be-remembered that consists of literal or untransformed representations of pictorial or nonverbal information for high but not low hypnotizables (Crawford & Allen, 1983; Crawford, Nomura, & Slater, 1983; Crawford, Wallace, Nomura, & Slater, 1986). This may possibly be the result of increased attention and/or shifts in cognitive strategies. Supportive of the hypothesis that sustained attention can be enhanced during hypnosis, Atkinson (1991) recently found that high but not low hypnotizables report significantly more persistent afterimages in hypnosis than in waking.

"Although we have argued for a cognitive explanation for individual differences in afterimage persistence and their possible relationship to hypnotic susceptibility and sustained attentional abilities, as has Wallace (1979, 1990), we must point out the possibility that high hypnotizables may be more suggestible to imagery instructions or more willing to discuss or experience imagery than low hypnotizables, particularly in the context of hypnosis and hypnotic susceptibility testing (e.g., Zamansky, Scharf, & Brightbill, 1964). A contextual account of the longstanding relationship between hypnotic susceptibility and absorption was raised by Council, Kirsch, and Hafner (1986), but was not supported by two independent, and more methodologically sound, studies reported by Nadon, Hoyt, Register, and Kihlstrom (1991). The context of hypnosis was not an issue in the present study, because none of the subjects was aware of the investigated relationship between afterimage persistence and hypnotic susceptibility at the time of recruitment or participation" (pp. 533-535).

## 1991

Graffin, N. W. (1991, October). EEG concomitants of hypnotic susceptibility and hypnosis (Dissertation, Pennsylvania State University). Dissertation Abstracts International, 52 (4), 2296.

"Many previous studies of EEG and hypnosis were completed prior to development of spectral analysis and typically included data from a limited number of electrode sites. The categorization of subjects as high and low hypnotizables was often done inappropriately, and disparate findings were obtained. In this study, subjects scoring 10 or more and 3 or less on the Stanford Hypnotic

Susceptibility Scale, Form C were defined as high and low respectively. EEG was monitored during resting baseline, mental arithmetic, and mental spatial rotation, and before, during, and after hypnotic induction. EEG was recorded monopolarly at frontal (F3,F4), parietal (P3,P4), temporal (T3,T4), and occipital (O1,O2) derivations, and data were fast Fourier analyzed. Mental arithmetic and mental spatial rotation did not produce differential hemispheric activation. High hypnotizables had greater frontal and temporal theta at baseline than lows. All subjects showed increases in parietal and occipital theta during hypnotic induction. During prehypnotic induction baseline, highs had greater parietal and occipital theta than lows, but this difference was smaller after induction. Baseline temporal alpha was greater for highs than lows, but after hypnotic induction, all subjects had less alpha at all sites than before induction. Increases in alpha at all sites for all subjects occurred during hypnotic induction. Beta activity was unrelated to susceptibility but was greater in waking than in hypnotic states for all subjects at all sites. Increases in alpha at all sites for all subjects occurred during hypnotic induction. The theta activity observed suggests that high hypnotizables have a greater capacity for selective attention and imagery and that during hypnosis all subjects experience enhancement of these abilities. The alpha results may suggest an increase in the focusing of subjects on internal processes during hypnosis and greater scanning of the environment after induction" (p. 2296).

1990

Sabourin, M. E.; Cutcomb, S. D.; Crawford, H. J.; Pribram, K. (1990). EEG correlates of hypnotic susceptibility and hypnotic trance: Spectral analysis and coherence. International Journal of Psychophysiology, 10, 125-142.

EEG was recorded during waking rest, hypnosis (rest, arm immobilization, mosquito hallucination, hypnotic dream), and waking rest. Twelve very low and 12 very highly hypnotizability subjects participated. Evaluations were fast-Fourier spectral analysis, EEG coherence between selected derivations, and maximum spectral power within EEG bands. In eyes-open and eyes-closed conditions in waking and hypnosis, highly hypnotizability subjects generated substantially more mean theta power than did low-hypnotizable subjects at all occipital, central, and frontal locations in almost all conditions of waking and hypnosis, with a larger difference in frontal locations. Both low and high hypnotizables showed increased mean theta power in hypnosis, suggesting an intensification of attentional processes and imagery enhancement. Mean alpha power was never a predictor of hypnotic susceptibility. Interactions with hypnotic susceptibility showed that highly susceptible subjects had more beta activity in the left than in the right hemisphere, whereas low-susceptible subjects showed only weak asymmetry. No main effects for or interactions between waking/hypnosis and hypnotic level were found for coherence between derivations or maximum spectral power within theta, alpha, and beta EEG bands.

1975

Tebecis, A. K.; Provins, K. A.; Farnbach, R. W.; Pentony, P. (1975). Hypnosis and the EEG: A quantitative investigation. Journal of Nervous and Mental Disease, 161, 1-17.

A quantitative investigation of the EEG during hypnosis was made by analyzing the analogue power frequency spectrum of one group of subjects in the awake and hypnotized conditions, and another group (random sample) in the awake condition. Individuals of the first group were thoroughly experienced in self-hypnosis and highly hypnotizable, whereas those of the second group had never been hypnotized and were low in waking suggestibility. There were no statistically significant differences in mean power of the whole EEG spectrum between the awake and hypnotized conditions of the experimental group, although a trend toward increased theta (4 to 8 Hz) density during hypnosis was apparent. This group, however, exhibited significantly more theta activity during both the

hypnotized and the awake conditions than the random sample of controls in the awake condition, irrespective of whether the eyes were closed or open. We suggest that this increased theta density in the EEG is related to frequent experience of self- hypnosis, high hypnotizability, or both.

## THEORY

1995

Jasiukaitis, Paul; Spiegel, David (1995, November). Relateralizing hypnosis, or have we been barking up the wrong hemisphere?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

## NOTES

The association between the right hemisphere and hypnotizability dates to the Gurs and Bakan; and to Hilgard and Morgan who developed a measure based on EEG power spectrum. Results from the body of research using alpha are conflicting. De Pascalis, 1988, also couldn't show a large alpha difference between hemispheres.

Research on hypnotic hallucination with Pribram found Highs in a visual obstruction condition reduced P200 and P300; there was a slightly greater response at O2 than O1 EEG leads, leading us to think it was maybe a Right hemisphere task. But it was a foveal stimulus.

We tested with hemifield stimuli, blocking perception of 1/2 of the visual monitor; had them do the obstruction hallucination. P200 had the greatest reduction, with stimuli presented on the left. With obstruction of left visual field, we got little response. So ERP results were greater in right visual field (left hemisphere). This suggests the earlier observation was predominantly due to left, not right, hemisphere influence.

Martha Farah's work on imagery is instructive. Also Steve Kosslyn. The Right hemisphere answers "Where" do you see something. The Left answers "What is it you see?" The left hemisphere generates image patterns that match what you see. When you ask people to generate an image, the activity is in O1 area. Also, patients with left hemisphere damage can't generate images; callosotomy patient also gave evidence. Many inductions use generation of images (left occipital and temporal regions). So when asking subjects to generate a hallucinated image blocking the screen, they are using that area.

The cortex can serve as an amplifier or a suppressor of response. In earlier study of somatosensory potential we observed bigger response when asking person to be more aware of pain. The cortex has an arousal system. There are two relevant systems in the brain (see Posner)--posterior and anterior. Hypnotizability is correlated with a metabolite of dopamine, which is associated with the anterior system which is dopaminergic.

Tucker & Williamson, in article in Psychological Review, 1984, write that activation is "the determination of information control by previous, stored internal representations" as opposed to arousal which is the "determination by novel [missed words....]"

Kinsbourne, in Consciousness and Contemporary Science, 1988. wrote that if at any time a hemisphere works like an automaton, it is the left hemisphere. With R. Davidson, he has shown the left hemisphere elevates affect, the right depresses it. Many people report that hypnosis is a pleasurable thing to do, maybe because it elevates mood.

One obstacle to this formulation is the idea that the left hemisphere governs logical thought.

We may disturb the relationship between words and images in hypnosis; you start to manipulate images and passively receive words, so that language is now a passive, receptive experience and images are active (instead of the usual pattern of actively using words and passively using images).

1994

Freyd, Jennifer J. (1994). Betrayal-trauma: Traumatic amnesia as an adaptive response to childhood abuse. Ethics and Behavior, 4.

Betrayal-trauma theory suggests that psychogenic amnesia is an adaptive response to childhood abuse. When a parent or other powerful figure violates a fundamental ethic of human relationships, victims may need to remain unaware of the trauma not to reduce suffering but rather to promote survival. Amnesia enables the child to maintain an attachment with a figure vital to survival, development, and thriving. Analysis of evolutionary pressures, mental modules, social cognitions, and developmental needs suggests that the degree to which the most fundamental human ethics are violated can influence the nature, form, processes, and responses to trauma.

#### NOTES

"A logical extension of this research direction, based on a strategy that has been very effective in cognitive neuroscience, would be to look for neuroanatomical underpinnings of the cognitive mechanisms implicated in dissociation. ... For instance, the ability to dissociate current experience may depend partly on representational structures that support spontaneous perceptual transformations of incoming events. One possible perceptual transformation that is amenable to scientific investigation, would be the creation of spatial representations in which the mental 'observer' is spatially distinct from the real body of that observer. Such a representation would fit patient descriptions of 'leaving their body' during a traumatic episode and viewing the scene as if from afar. Additionally one could investigate the role of mental recoding and restructuring during memory 'recovery' and psychotherapy" (pp. 19-20).

1993

Balthazard, Claude G. (1993). The hypnosis scales at their centenary: Some fundamental issues still unresolved. International Journal of Clinical and Experimental Hypnosis, 41, 47-73.

Current approaches to the measurement of hypnotic performance can be traced back to the 19th century. In part because of these early origins and in part because of the nature of hypnotic phenomena, the hypnosis scales are unique psychometric instruments. The classic hypnosis scales are based on the notion of a "performance ladder"; items are scored on a pass/fail basis and can be arranged in increasing order of difficulty. Some of the implications on [sic]this "performance ladder" approach are reviewed. The evidence for two-mechanism models of hypnotic performance is reviewed. It is argued that this kind of formulation is at least as plausible as one that argues that the hypnosis scales measure "one thing" or "mostly one thing." If it were the case that the hypnosis scales were tapping two different and distinct processes, the label "hypnotic susceptibility" could not be unambiguously applied to scores on the hypnosis scales. The hypnosis scales would appear well-suited to the investigation of underlying mechanisms, yet no consistent picture of the mechanisms underlying hypnotic performance on the scales has emerged thus far. No resolution is presented, but some of the reasons why such a resolution is so elusive are discussed. The future of hypnosis scales is discussed with respect to multidimensional assessment and alternatives to the "work sample" approach.

#### NOTES

Author discusses the hypnotizability scales' history and psychometric properties, suggesting that they cannot have construct validity if more than one construct is involved. He states that many of the alternative formulations "posit structurally similar two- mechanisms models, where the relative contributions of one and the other mechanism changes gradually with the difficulty of the hypnotic performance--that is, one mechanism is more important for easy items and the other more important in the difficult range. This kind of formulation has been advanced by a number of authors .....

Although these formulations are structurally similar, the nature of the mechanisms has been variously conceptualized: nonability and ability components (Shor, Orne & O'Connell, 1962), primary suggestibility and somnambulism (Weitzenhoffer, 1962), minor and major dissociations (Hilgard, 1977), compliance and true hypnosis (Tellegen, 1978-1979), and cooperativeness and expectation at one end and absorption at the other (Spanos, Mah, Pawlak, D'Eon, & Ritchie, 1980). ... In a formulation such as Hilgard's (1977), where both mechanisms are dissociative, it may be that it makes some sense to understand both mechanisms as aspects of the same complex construct. In other formulations... it would appear more cogent to speak of two constructs. Spanos et al. (1980) found that 'cooperativeness and expectation may be particularly important in responding to ideomotor and challenge suggestions, while the ability to convincingly treat imaginings as real (i.e., absorption) becomes increasingly important for more difficult 'cognitive' items" (p. 21). Balthazard & Woody (1992) presented evidence that the more difficult items on hypnotizability scales are related to absorption more than the easier items.

Balthazard & Woody (1989) investigated the proposition that hypnotizability scores are distributed bimodally, and concluded that statistical problems clouded the issue. Furthermore, most analyses previously have been of surface structure, which does not relate directly to the underlying mechanisms of hypnosis, and current psychometric methods cannot address the mechanisms that underlie surface relations. "There are two aspects of hypnotic processes ... that obscure underlying mechanism: synergisms and overdetermination. Synergisms occur when mechanisms potentiate each other in such a way that a combination of processes becomes more than the sum of its parts. Overdetermination occurs when co-occurring mechanisms do not potentiate each other, such that any one of the mechanisms would have been sufficient to produce the observed effect" (p. 63-64).

The author suggests there are two options at present: Corrective Scoring (like the Curss.OI, an objective-involuntary score which, although unreliable on test-retest, appears it could be more a measure of "pure" hypnotizability) and not using the typical "work sample" approach. Balthazard and Woody (1992) suggested the Absorption Scale may provide a better measure of "hypnotizability" than the standard hypnosis scales because absorption scores are more strongly related to difficult hypnotic performances.

1992

Balthazard, Claude G.; Woody, Erik Z. (1992). The spectral analysis of hypnotic performance with respect to 'Absorption'. International Journal of Clinical and Experimental Hypnosis, 40, 21-43.

In factor analyses of the hypnosis scales, the essential result is that the items form a continuous, 2-dimensional fan-shaped pattern. This continuum is referred to as the "spectrum of hypnotic performance." "Spectral analysis" is introduced as an exploratory procedure which makes use of this notion of continuum or spectrum. Spectral analysis consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when the latter are arranged according to their position in the spectrum. The spectral analysis of hypnotic performance with respect to absorption is illustrated using data from a sample of 160 Ss. The results indicate that absorption is more strongly related to difficult hypnotic performances than to easy ones. In particular, illustrative item characteristic curves are presented to show that although easy hypnotic performances do not require the processes tapped by individual differences in absorption, a certain level of absorption is necessary to pass difficult hypnotic items. In addition, a high level of absorption may be sufficient in and of itself for difficult hypnotic performances. These results are discussed in light of some speculations by Shor, M. T. Orne, and O'Connell (1962) and Tellegen (1978/1979) concerning the differential contribution of ability components to performance on difficult hypnotic suggestions. The results are also related to a variety of work in social psychological models of hypnotic performance.

## NOTES

Spectral analysis "consists of a graphical display of the level of latent correlation between a variable and individual hypnotic performances when these hypnotic performances are arranged according to their position in the spectrum--which is indexed by item difficulty" (p. 25). Difficulty (the proportion of Ss that pass a given item) is on the X-axis; the degree of latent correlation is on the Y-axis. "It is necessary to differentiate between the manifest and the latent relationship of a variable to a dichotomously scored hypnotic performance. The manifest relationship is given by the point biserial correlation and the latent relationship is given by the biserial correlation. ... By inspecting the overall pattern of these biserial correlations as a function of item difficulty, it is possible to overcome the difficulty-content confound, because the biserial correlations are not affected by item difficulty" (p. 25).

"Throughout the easy and middle ranges [of item difficulty], the biserial correlation of hypnotic performance with absorption remains slightly above .2, then it rises sharply in the difficult range--beginning roughly where only one in four Ss can pass the item--to a value slightly above .5 " (p. 27). "In essence, the proportion of Ss that pass a particular hypnosis suggestion given a particular score on the absorption scale is being plotted" (p. 30).

In their discussion, the authors relate their position to that of other theorists. Shor, Orne, & O'Connell (1962) proposed that both ability and nonability components contributed to hypnosis, with ability being the primary determinant of hypnotic performance at deeper levels. Shor et al. found a correlation between depth ratings and a questionnaire that tapped 'hypnotic-like experiences' to be .45; the correlation was .84 when computed for only the Ss who became deeply hypnotized, but only .17 for Ss who were only lightly or medium-level hypnotized. They concluded that their questionnaire predicted hypnotizability only for the "deeper region" of hypnosis.

Tellegen (1978/1979) proposed a two-factor model, one factor being genuine responsiveness and the other being compliance . He suggested that various hypnosis test items draw on the two factors in differing degrees. Tellegen's genuine responsiveness factor would be similar to Shor et al.'s ability components, and Tellegen's compliance factor would be similar to Shor et al.'s non-ability components. (The Shor model goes farther than Tellegen in positing a gradual shift in the relative contributions of the two components as one moves from easy to difficult items, and this gradualness is part of the authors' spectrum model.)

The two-factor model is different from the general factor (plus special factors) model suggested by E. R. Hilgard (1965)); Hilgard's general factor would probably correspond better to the Tellegen genuine responsiveness factor and the Shor et al. ability component than to the compliance factor or nonability component, which probably would correspond more to the easier items on hypnotizability scales.

Spanos et al. (1980) suggested that cooperativeness and expectation might be more important with ideomotor and challenge suggestions, and ability to treat imaginings as real (i.e. absorption) more important for more difficult cognitive items. Sarbin (1984) developed a typology with two types of individuals--those who respond to the hypnosis context by "joining the game" and knowingly create an illusion that their response is involuntary (the compliance kind of response), and those who convince themselves and others that their response is involuntary (the genuine responsiveness factor kind of response).

[Speaking of the context effects observed but not replicated 100% of the time, on the correlation between absorption and hypnotizability.] "It is possible that context effects may depend on the difficulty of the hypnotic suggestions and the latent abilities of the sample used. For relatively good hypnotic Ss performing relatively difficult suggestions, the correlation of absorption with hypnotizability may be stable across different contexts; however, for less able Ss performing relatively easy suggestions, the correlation, depending more on the 'non-ability' component, may be quite responsive to context manipulations. It might also be mentioned parenthetically that details of the

instructions used to introduce the particular hypnosis scale employed may differentially pull for one kind of component or the other" (p. 39).

Bindler, Paul R. (1992, October). Biofeedback-assisted hypnosis: Theoretical and clinical perspectives. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

Relates personality trait of absorption to biofeedback literature. Surprisingly, low absorption ability Ss do better than high absorption Ss on biofeedback (Qualls & Sheehan). All but one study that compared biofeedback and hypnosis found no difference in effectiveness. However recently Miller & Cross found high hypnotizables reduce EMG better with hypnosis and lows did better with biofeedback.

Our findings also supported notion that highs perform better with sensory imagery instructions and lows do better with biofeedback.

Critical in determining the outcome is the way Ss deploy attention. Qualls & Sheehan, and we, find highs don't like attention drawn away from internal cognitive strategies by the biofeedback signal. However lows find the signal to keep their attention focused.

Author developed model combining biofeedback and hypnosis to capitalize on the attentional characteristics of patients, the specific cognitive and affective characteristics of the pt.

Highs start with using altered state of consciousness to help them to alter their cognition patterns. Some do not relax during hypnosis and biofeedback can be used.

Hypnotic suggestions can be added to biofeedback to emphasize attention to internal discrimination. Attention to stimuli is poor when arousal is too low or too high. Both biofeedback and hypnosis can be used to create a moderate level of attention.

With low hypnotizables, they need to increase awareness of contingencies between cognitions and physiological states; to verbalize and express their feelings. Initially they learn to recognize, label, and express their feelings through biofeedback, which amplifies the physiol. state/body sensations. It provides a means of relaxation. Begin with brief trials of biofeedback to train low arousal states. Duration of training is gradually lengthened to 15 minutes. Patient should be continually questioned about feelings etc. (physical) during exercise, and their response correlated with the feedback signal.

Many lows have difficulty expressing feelings in words. Biofeedback allows the correlation to emerge initially by the instruments. Crystal's "preparatory" treatment: helping patient with affect tolerance prepares them for next stage of verbalizing emotions. Biofeedback facilitates this by deintensifying the effect of discharged affect.

Bruner, Jerome (1992). Another look at New Look 1. American Psychologist, 47, 780-783.

New Look 1 was not initially about the unconscious. It was the new mentalism on its way to becoming the Cognitive Revolution. Its subsequent concern with "unconscious defense mechanisms," although useful, was not its main theoretical thrust. Its principal questions have always been how and where selective processes operate in perception. Obviously, many such processes are unconscious, for consciously guided attention and search become automatized easily in use. And they are fairly flexible as well. So how smart is "the unconscious"? Not very, but a big help anyway.

Dixon, Michael; Laurence, Jean-Roch (1992). Two hundred years of hypnosis research: Questions resolved? Questions unanswered!. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 34-66). New York: Guilford Press.

## NOTES

These notes summarize only that part of the chapter concerning nonvoluntary behavior (pp 38-39; 58-61).

The concept of 'nonvolition' has been and continues to be an important issue in hypnosis research. The concept pertains to the "subjective report that the hypnotic suggestion is enacted without the subject's conscious and willful participation" (p. 38). When hypnosis was attributed to a magnetic fluid, in the days of Mesmer, the issue did not arise (because of course a person would not have control over something that happened to them physically). However, when hypnosis came to be considered a psychological phenomenon, the issue of how a behavior could be the result of motivated action and yet not perceived as being under conscious influence became important. In 1819 Faria wrote that the nonvolition paradox is due to the hypnotized subject's tendency to misattribute the source or reason for one's behaviors; he noted that successful suggestions depended upon the subject falsely attributing to the hypnotist the power to influence them. From that point forward, circular reasoning was used to state that one is hypnotized if one experiences their behavior as nonvolitional, and nonvolitional behavior signifies that a person is hypnotized.

"The observation of the seemingly complete automaticity of response in the highly hypnotizable subject led Liebeault in his 1866 book (followed later on by Bernheim and Liegeois) to describe these subjects as 'puppets' in the hands of the hypnotist. This was a quite unfortunate statement, since it would lead to one of the fiercest legal debates surrounding the use of hypnosis in the last 20 years of the 19th century (Laurence & Perry, 1988). ...

"The most prominent author (if not the only one) who attempted to tackle this difficult question was Pierre Janet, who would make the investigation of automatism the basis of his theory of hypnosis, rather than suggestion or suggestibility. This theoretical orientation is best exemplified by his concept of desagregation psychologique seen in some psychopathologies, or the carrying out of a posthypnotic suggestion in the normal individual (Janet, 1889; see also Ellenberger, 1970; Perry & Laurence, 1984; Prevost, 1973). Nonetheless, until the end of the 19th century, and for a good part of the 20th century, these reports of nonvolition were thought to be the end result of some neurological changes happening during hypnosis--an idea that has not been substantiated by contemporary research." (pp 38-39)

Reports of nonvolition are explained as due to dissociation by Hilgard, or as the results of misattributing the origins of behaviors and experiences by Spanos and by Lynn. Neodissociationists like Hilgard regard misattribution to be a cognitive alteration, mainly an internal triggering mechanism, while social psychologists like Spanos and Lynn regard the misattribution to be the results of situational demands and therefore an external triggering mechanism.

"Regardless of one's preferred metaphor, the issue of nonvolitional reports remains at the core of an integrated view of hypnosis and hypnotizability. The question remains as follows: By which mechanisms does this occur, and how can we predict a priori who will report involuntariness and under what circumstances? Whereas dissociationists have emphasized general cognitive mechanisms and de-emphasized situational factors, social-psychological theorists have emphasized situational variables and de-emphasized individual differences. Given the limitations of both approaches, emphasis will have to be placed not on their continued separation but on their integration, as more and more investigations demonstrate that they clearly interact with each other (see, e.g., Nadon, Laurence, & Perry, 1991)." (p. 60)

"At the height of the confrontation between the two French schools, hypnosis found its way into the legal arena. Following a series of criminal cases in which hypnosis had been allegedly involved, the two schools once again found themselves on opposite sides of the fence. For La Salpetriere, only those who had a propensity toward criminality (and hystericals were prime candidates) could be the victims of hypnosis. For the Nancy school, in highly responsive individuals suggestions could lead to criminal behavior. Unfortunately for the Nancy school, it soon became evident that the concept of suggestion was not sufficient in explaining the questions raised by the courts, and Bernheim was forced to recognize that in cases where suggestions had played a role, other dispositional and situational factors

were probably more important in the genesis of the reprehensible behaviors. His espousing a too extreme position meant that the baby was thrown out with the bathwater. History may indicate that the same fate is now awaiting contemporary theoretical positions that adopt an extreme stance vis-a-vis the phenomenon of hypnosis" (p. 61).

Greenwald, Anthony G. (1992). New Look 3: Unconscious cognition reclaimed. American Psychologist, 47, 766-779.

Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long-term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

Hilgard, Ernest R. (1992). Dissociation and theories of hypnosis. In Fromm, Erika; Nash, Michael R. (Ed.), Contemporary hypnosis research (pp. 69-101). New York: Guilford Press.

## NOTES

[These Notes were made from a prepublication copy and the pagination for quotes added later.] The author reviews the history of dissociation theory, the hidden observer, and the credible-skeptical arguments regarding hypnosis. He briefly summarizes alternative theories about hypnosis, and asserts that we can turn aside from debate by examining the common topic studied, the "domain of hypnosis" or what happens when hypnotist, with consent of subject, attempts to induce hypnosis through conventional procedures: production of hallucinations, contractions, paralyzes, age regression, analgesia, posthypnotic amnesia, etc. Even if one disagrees about the nature of these phenomena or the appropriate explanatory concepts, one can agree on the area to be investigated.

The author notes that one never sees these behaviors in the same situation, in any other context. They are distinguishable from other phenomena like meditation, highway hypnosis, responses to a persuasive leader, and even some waking suggestions by several delimiting factors:

1. Hypnosis is not simply a response to suggestion, because that kind of response occurs in other situations. Suggestions can be divided into personal and impersonal (Hull, 1933); and suggestibility can be divided into primary and secondary (Eysenck & Furneaux, 1945). Primary suggestibility includes responses to waking suggestion (e.g. postural sway) that correlate with hypnotizability; secondary suggestibility involves responses to waking suggestion that do not correlate with primary suggestibility. Hypnotizability does not correlate with social suggestibility (i.e. gullibility or conformity) (Burns & Hammer, 1970; Moore, 1964); nor does it correlate with placebo response (McGlashan, Evans, & Orne, 1979).

2. Test-retest correlations are approximately +.70 between scores on hypnotizability scales with and without formal inductions. Thus, responses to the type of suggestion on hypnotizability scales--even when in the waking context--belong within the domain of hypnosis. The individual differences in responsivity to items on hypnotizability scales persist over time (Piccione, Hilgard, & Zimbardo, 1989:  $r = .64$  for 10 years test-retest,  $.82$  for 15 years, and  $.71$  for 25 years, on Stanford Form A); and this persistence is observed in twin studies as well (Morgan, 1973; Morgan, Hilgard, & Davert, 1970).

3. Additional evidence of coherence of the domain comes from reports of hypnotized Subjects about their phenomenological experience.

Hilgard's discussion of the executive and monitoring functions within hypnosis place his theory within the area of cognitive psychology. He presents a theory of a central regulating mechanism, with a hierarchy of subsystems that may be activated (and once activated may continue with some autonomy). When autonomous action occurs, the conscious representation of the control system may recede. Furthermore, the hypnotist's suggestions may alter the relationships within the hierarchy of subsystems and may also influence the executive functions. He gives as a common example, when a bilingual person talks in one language, the other language is temporarily inhibited.

There are a number of concepts or positions in the history of psychology that relate to Hilgard's theory of hierarchical control with executive and subsystems:

1. 'Cognitive structure' (Edward Tolman, 1932; 1938; Kurt Lewin, 1935). There may be communication problems between cognitive structures.
2. 'Habit family hierarchy' (Clark Hull, 1934). Habits are organized in a preferential system, so that if one is blocked the next is activated.
3. 'Cell assemblies' (Hebb, 1949; 1975), which are a physiological counterpart of the 'hidden observer' phenomenon.
4. 'Roles' (Sarbin & Coe, 1972) may be considered cognitive substructures.
5. 'Cognitive networks' (Blum, Geiwitz, & Stewart, 1967) serve similar functions.
6. 'Images' and 'plans' (Miller, Galanter, & Pribram, 1960) provide for control of thought and action and have some kind of hierarchy.
7. 'Subordinate ego-structures' (Gill & Brenman, 1959) with a dominant ego; or the ego-apparatuses in a 'conflict-free ego sphere' (Hartmann, 1958).

In hypnosis, central executive functions may be shared between hypnotist and Subject. Hilgard gives extensive examples of varying degrees of split in the executive control system.

"It can be argued that, except for relinquishing control over the subsystems that are specifically dissociated from control by suggestion, and the readiness for relinquishing control, the central executive functions have not been much modified in hypnosis. In superficial hypnosis, these mild dissociations can occur through waking suggestions, with little alteration of the general state of consciousness. When varied suggestions to a talented hypnotic subject have cumulative effects, as in suggestions of relaxation and detachment from the environment, the more general features of the hypnotic state begin to appear. A more massive dissociation, so far as the executive is concerned, may be the consequence of the summing up of many specific subsystems for which control has been relinquished. Such an interpretation permits hypnosis as a state to be a relative matter, the specific dissociations being identifiable, but the general state being a matter of how many specific dissociations are operative and how pervasive they are. Only when they are sufficiently pervasive is it appropriate to speak of a change of state" (p. 96).

Hilgard also discusses the monitoring function extensively, relating it to trance logic and contrasting it with the waking state. Less of the usual monitor is retained when the hypnotic involvement is greater, as in deep hypnosis, or when the subject becomes more deeply engrossed in an activated system that has been aroused. He also relates the monitoring function to the Hidden Observer phenomenon.

Isenberg, S. A.; Lehrer, P. M.; Hochran, S. (1992). The effects of suggestions and emotional arousal on pulmonary functions in asthma: A review and a hypothesis regarding verbal mediation. Psychosomatic Medicine, 54, 192-216.

This paper reviews the empirical literature on the relation between asthma, suggestion, and emotion, and proposes the hypothesis that these effects are mediated parasympathetically. The literature indicates that, among asthmatics, suggestion can produce both bronchoconstriction and bronchodilation, and that stress can produce bronchoconstriction. The proportion of asthmatic subjects showing bronchoconstriction to both suggestion and stress averages 35%-40% across studies, but, because of methodological considerations, might be conservatively estimated as closer to 20%. The effect is smaller for suggestion of bronchodilation, and is very short-lived among nonasthmatics. No

clear connection has been found between these responses and such subject variables as age, gender, asthma severity, atopy, or method of pulmonary assessment, although some nonsignificant tendencies appear. Most studies in this literature used small n's and did not systematically examine various somatic, environmental, and demographic factors that could influence results. A hypothesis is presented regarding vagal mediation of psychological effects on the airways, as well as possible alternative mechanisms, and recommendations for future research to evaluate these hypotheses.

## 1991

The first part of this paper examines the concept of dissociation in the context of hypnosis. In particular, the neodissociative and social psychological models of hypnosis are compared. It is argued that the social psychological model, in describing hypnotic enactments as purposeful, does not adequately distinguish between behavior that is enacted "on purpose" and behavior that serves or achieves a purpose. 2 recent dissertations (Hughes, 1988; Miller, 1986) from the University of Waterloo are summarized, each of which supports the neodissociative view that hypnotic behavior can be purposeful (in the sense that the suggested state of affairs is achieved) and nonvolitional (in the sense that the suggested state of affairs is not achieved by high level executive initiative and ongoing effort). The second part of the paper employs a neodissociative view of hypnosis to help understand the current epidemic of multiple personality disorder (MPD). In particular, it is argued that many symptoms of MPD are implicitly suggested effects--particularly prone to occur in persons who have a lifelong tendency to use dissociative type defenses. The present author believes that this account is easier to sustain conceptually and empirically than the current view, which states that a secondary (tertiary, etc.) personality accounts for the striking phenomenological discontinuities experienced by MPD patients.

## NOTES

As an example of the fact that behavior that serves a purpose is not always performed on purpose, the author cites not falling out of bed while sleeping, and waking up in response to signals from the bladder to go to the bathroom. Lower levels of control can be dissociated from executive initiative and/or monitoring. "Since the experience of volition is closely tied to executive initiative and effort, suggested behaviors that bypass such initiative and effort are typically experienced as nonvolitional" (p. 157). Dissociated control occurs under waking conditions also, as when one dials a very familiar phone number rather than the one that they intended to dial. In this case, the behavior that is enacted is not what one consciously intended.

Miller's dissertation, also published as Miller & Bowers, 1986, is described on p. 158 ff. Without hypnosis, cold pressor pain (cold water immersion) reduced accuracy of performance on a multiple choice vocabulary test 35%. Both hypnotic analgesia and cognitive pain management strategies were equally effective in reducing pain of cold pressor test (and both interventions were more effective for high than for low hypnotizable Ss). However, the cognitive strategy group showed an additional drop of 30% in vocabulary performance from pre- to posttreatment cold water immersion (despite successfully reducing their pain). In the hypnosis condition, lows showed only a slight additional decrease (8%) while highs showed a slight (10%) \_increase\_ in their vocabulary performance from pre- to posttreatment immersion.

Thus, the effect of hypnosis in pain control "does not depend on S's utilization of high-level cognitive strategies. Rather, hypnotic analgesia seems to involve the dissociated control of pain--that is, control which is relatively free of the need for high- level, executive initiative and effort. ... Because hypnotic analgesia minimizes the degree of executive initiative and ongoing effort required to reduce pain, however, it seems inappropriate to view such reductions as something achieved on purpose" (p. 161).

Hughes' dissertation is described on p. 162 and ff. Instead of performance decrement on a cognitive task like vocabulary testing, she used increased heart rate as an index of cognitive effort. If heart rate

increases when Ss successfully use hypnotic imagery, that would confirm the social psychological view that "suggested effects are achieved by this kind of ongoing allocation of high-level cognitive force or work" (p. 162).

Highs and lows were hypnotized and administered three trials of neutral and three trials of fearful imagery in counterbalanced order. Each imagery trial lasted 1 minute, after which Ss rated vividness of imagery, effort required, and amount of fear experienced.

Average imagery vividness was higher in highs than lows, for both neutral and fear imagery. For lows the correlation between heart rate increases and ratings of cognitive effort were .54 (neutral imagery) and .49 (fear imagery). For highs, the correlations were -.05 (neutral) and -.52 (fear). Thus, "for low but not high hypnotizable Ss, we find the predicted positive relationship between a cardiac indicator of cognitive effort and the ratings of cognitive effort involved in producing neutral imagery" (p. 163).

"First, for low hypnotizables engaged in fear imagery, ratings of effort are correlated .66 with ratings of fear. In other words, the more low hypnotizable Ss work to produce a fearful image, the more frightening the image is. Second, for high hypnotizables engaged in fear imagery, the correlation between ratings of fear and effort is minus .68-- indicating that the less effort highs report in producing fear imagery, the more frightened they become. Finally, for high hypnotizables, the correlation between ratings of fear and heart rate increase is .59, indicating that the more fear high hypnotizable Ss experience when engaged in fear imagery, the more their heart rate increases (the comparable figure for low hypnotizables is .16)" (p. 164).

The authors discuss why the pattern of correlations is different for people high and low in measured hypnotizability, and summarize the implications of both Miller's and Hughes' research. Both investigations indicate that, at least for high hypnotizable people, less initiative and effort are required to effect a response to hypnotic suggestion than one would expect. They show how behavior can be both purposeful and nonvolitional (in the sense of not exhibiting conscious intention and strategic efforts). By noting that the sense of nonvolition that accompanies a response to suggestion is an actual alteration in executive control, they provide a model for dissociative psychopathology such as MPD. For although executive control is dissociated, these experiments do not suggest that there is a second executive system or 'personality' that is responsible for the behavior.

Patients diagnosed with MPD have very high measured hypnotizability (Bliss, 1984). In fact, they seem to engage in self hypnosis, withdrawing into a trance or a dissociated state (Bliss, 1984). The authors quote Wilson & Barber (1983) as indicating that highly hypnotized, fantasy-prone normal individuals may become so absorbed in a character being imagined that they lose awareness of their own identity.

The authors offer a neodissociative account of MPD: "People prone to MPD are very high in hypnotic ability and are, therefore, vulnerable to the suggestive impact of ideas, imaginings, and fantasies; what is more, they are high in hypnotic ability because they have learned to use dissociative defenses as a way of dealing with inescapable threat-- such as physical and sexual abuse (Kluft, 1987). ... Fantasied alternatives to reality (including a fantasied alter ego ... ) can become increasingly complex and differentiated. Gradually, these fantasied alternatives begin to activate subsystems of control more or less directly--that is, with minimal involvement of executive level initiative and control. Such 'dissociated control' of behavior does not necessarily eliminate consciousness of it, though one's actions are apt to be experienced as increasingly ego-alien. If and when the activating fantasies and resulting behaviors become sufficiently threatening, however, they can also be repressed into an unconscious (i.e., amnesic) status, thus further separating high-level executive and monitoring functions from the dissociated, ego-alien aspects of oneself. The fully realized result of this process is an individual who is subject to profound discontinuities in his or her sense of self. ... The experience of behaving in an outwardly uncharacteristic manner requires only that subsystems of control are more or less directly activated by ideas and fantasies in a manner that effectively bypasses executive initiative and control" (pp. 168-169).

923, Bowers, 1992 NOTES: Tart allegedly taught ESP skills based on reinforcement, using a machine that projected display and gave feedback immediately, so the subjects could learn to anticipate the picture better. But the picture presented next was time-linked to the S's response (so S could learn it). 1987 Behavioral and Brain Sciences review, with 2 target articles, makes one doubt strength of findings. ESP research doesn't distinguish between description of an observation and it's proposed cause.

MPD shares with ESP a tendency to predispose toward a certain explanation. Feeling like one has a separate personality leads to finding evidence for one. But an MPD account is wrong-headed because the diagnosis misconstrues a notion of personality, which is a developmental concept (a pattern of thought, feeling, and behavior). Mischel's (1968) account of human functioning competed with trait theory, so "personality" concept became extraneous.

Defining personality in terms of one's experiences or beliefs about oneself has led to further problems, encouraged by the descriptive approach of DSM III (which depends on patient reports). Drew Weston distinguished between the self and self representation. One can't argue that a computer programmed to describe itself is the same as it's descriptions.

Personality can't be reduced to person's beliefs about themselves. A secondary personality cannot be reduced to bizarre experiences a person believes are due to a second personality. Clinicians do not accept as valid the beliefs of a paranoid schizophrenic; or of an anxious neurotic. With multiple personality disorder (MPD) the patient becomes the expert and the clinician the student.

William Smith's 1986 SCEH paper: case study of patient who was convinced her problems were due to unresolved problems from a previous life. He didn't challenge her system but still worked with her successfully, communicating respect without validating her belief.

Advocates of MPDs think the observation that it is associated with high hypnotizability indicates great dissociation; critics think the association indicates great suggestibility. There is a historical parallel: Mesmer probably didn't suggest seizure-like episodes, but implicit suggestions for seizures were probably partially responsible. Mistaken attribution permitted Mesmer to see this as validation of his theory of animal magnetism.

Clinicians are not the only ones to "suggest" MPD syndrome. High profile cases are in the media. We should also remember Orne's 1959 research showing that students who received false information a week earlier in lecture on hypnosis showed the behavior when they were hypnotized.

Janet's disaggregation (dissociation) theory said hysterics and hypnotized people responded to ideas dissociated from the main stream of consciousness. So his contemporaries thought that spontaneous amnesia was a defining feature of hypnosis; yet it is not thought to be so in our era. The idea may have circulated in Janet's time, by popular culture.

MPDs are always highly suggestible so can respond to circulating accounts in the media, and every account that reaches the media can influence these people.

We could abandon the diagnosis of MPD in favor of Spiegel's "disorder of self integration." It is less provocative, does not imply any clinical benefit in the benefits of seeking out more personalities. This might reduce the incidence of this disorder, or likelihood that a suggestible person would develop the disorder iatrogenically.

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

## NOTES

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data

and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

**Brown, Peter (1991). The hypnotic brain: Hypnotherapy and social communication. New Haven, CT: Yale University Press.**

## NOTES

Notes are taken from a review of this book: Diamond, Michael (1993). Book review. *Bulletin of the Menninger Clinic*, 57 (Winter), 120-121.

Brown "posits that because the fundamental matrix of the human brain is metaphoric, hypnosis results from skillful matching of metaphorical communication with the brain's biological, rhythmic alterations. The most significant feature of trance experience is thereby located in the hypnotist-subject interaction" (p. 120).

"The middle section [of the book is comprised largely of] literature reviews in support of Rossi's (1986) ultradian rhythm theory of hypnosis and Lakoff and Johnson's (Johnson, 1987; Lakoff & Johnson, 1980) experientialist theory of conceptual thought" (p. 120). The final section includes "research evidence on medical uses of hypnosis, a theory of dissociation and multiple personality disorders, and an uncritical discussion of Milton Erickson's naturalistic hypnotherapeutic approach ... [and also] a brief discussion of the social-cultural functions of possession states among the Mayotte culture" (p. 120).

Erxleben, Jan; Cates, Jim A. (1991). Systemic treatment of multiple personality: Response to a chronic disorder. American Journal of Psychotherapy, 45 (2), 269-278.

Proposes a treatment approach for multiple personality disorder (MPD) in which the personality fragments are viewed from a systemic perspective. MPD is considered the result of a dissociative defense in response to severe trauma during the formative period of personality. As the child dissociates to defend against the trauma, the fragments of personality develop as separate entities. The traditional focus of therapy is integration, or fusion of the various fragments of the personality. The alternative treatment process attempts to maintain balance within the system as a short-term goal, and strives for integration as a long-term goal.

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1990

Barber, Theodore Xenophon (1990, August). Some things I've learned about hypnosis after 37 years. [Audiotape] Presented at the annual meeting of the American Psychological Association, Boston.

## NOTES

"We are a unity of cells. Every cell is a citizen with it's own jobs, communicating all the time; cells send messages; the way we communicate with them is by suggestions. Each cell is a mind-body.... When I do it now [hypnotic inductions], I say, 'We're going to go into hypnosis, we're both going to go into hypnosis. I'm going to close my eyes (etc.)' - modeling hypnosis for them."

Counts, R. M. (1990). The concepts of dissociation. Journal of American Academy of Psychoanalysis, 18, 460-479.

Reviews conceptualizations of dissociation. Dissociation is the underlying mechanism in a number of defensive mechanisms. Repression, intellectualization, splitting, and other defense mechanisms rely upon dissociation to accomplish their specific tasks. Dissociation is thus believed to be the underlying and basic mechanism of many aspects of mental functioning.

Fellows, Brian J. (1990). Current theories of hypnosis: A critical overview. British Journal of Experimental and Clinical Hypnosis, 7, 81-92.

The present state of theory in hypnosis is reviewed and observations are made concerning future prospects. The state- non-state issue continues to dominate theoretical debate, although no satisfactory reply has yet been made to T. X. Barber's criticisms of the 'hypnotic trance' concept. The impact of social-psychological theory has been considerable and the results of Spanos's hypnotic training

programme could have significant implications for our understanding of hypnosis. Future theorizing should see a move towards a more integrated sociocognitive approach. Neodissociation theory has generally not fulfilled its early promise and is encumbered with the 'hidden observer' concept. The role of imaginative processes continues to be a dominant theme in hypnosis theory, although the relatively small correlation between imaginative and hypnotic abilities remains a problem. The links between hypnosis, sleep and relaxation deserve further research, although, as theories of hypnosis, their scope seems limited. Suggestibility and role enactment theories have shown few signs of development in recent years. Theoretical problems over the interpretation of hypnosis need to be more widely recognized and the use of question-begging terminology curtailed. One advantage of the imagination hypothesis is that it provides a bridge, or a point of convergence, between state and non-state approaches (Spanos & Barber, 1974). It also handles certain hypnotic phenomena very well. For example, the known facts of age regression can be readily interpreted, together with the oddities of age progression and past life regression, as imaginative reconstructions (Barber, 1979). However, other phenomena, such as amnesia and analgesia, are less easily explained.

Gauld, Alan (1990). Mesmeric analgesia and surgery: A reply to Spanos and Chaves. British Journal of Experimental and Clinical Hypnosis, 7, 171-174.

#### NOTES

Spanos and Chaves' criticisms of the author's paper in this journal (vol. 5, 1988, pp 17-24) on mesmeric analgesia are considered. Spanos and Chaves are unnecessarily dismissive of nineteenth century reports of mesmeric analgesia and, in order to bring these cases within the compass of their theory, they make assumptions about them that are not supported by the facts.

Heyneman, Nicholas E. (1990). The role of imagery in hypnosis: An information processing approach. International Journal of Clinical and Experimental Hypnosis, 38 (1), 39-59.

Imagery is widely agreed to be an important component of hypnosis. The theoretical framework from which to conceptualize the role of imagery in hypnosis, however, has remained controversial. A model is presented which attempts to reconceptualize hypnotic imaginal processing in terms of current theory and research in cognitive psychology and psychophysiology. This model draws from a propositional approach to imagery (e.g. Pylyshyn, 1973), particularly as adapted by Lang's (1979) bioinformational theory. It is argued that the hypnotic image is fundamentally more complex than simple iconic mental representation, containing instead both stimulus and response components. It is proposed that the critical properties of the hypnotic image are not the stimulus components or propositions which give rise to the experience of the image but instead are response propositions which are associated with overt behavior. Processing of these response propositions is conceptualized as a negative feedback system between the brain and effector site. Some preliminary sources of support as well as implications and research suggested by this model are discussed.

#### NOTES

The author notes that the brain does not store a kind of "photograph," but rather stores "meanings" (Anderson, 1978); and that images actually represent response processes, as observable in physiological concomitants (Lang, 1977).

The hypnotic suggestion that a Subject's arm is being pulled up into the air by a large helium balloon is represented by two separate propositions: "There is a helium balloon tied to your arm" (a stimulus proposition) and "Your arm is moving up into the air" (a response proposition). According to Peter Lang (1979), an image is not a mental stimulus to which a response is made, but is in itself an active response process, accompanied by physiological activity. Verbal instructions to a Subject determine whether they will access stimulus propositions or response propositions. "Lang et al. (1980) found that only those Ss given response training coupled with response proposition scripts showed significant

physiological arousal. These Ss were presumably better able to access and process that portion of the propositional network which controls visceral and motoric responding" (p. 46).

This author proposes that cognitive processing of a hypnotic image involves (internal) responding, and that 'responsive propositions' provide the basis for understanding the function of imagery in hypnosis, and are more important to hypnotic imagery than stimulus propositions. "In other words, the experience of a visual image and thus the vividness or controllability of that image is not critical for hypnosis. What is important to note is that the hypnotic behavior is not a response to a visual image but is instead a function of the processing of the image itself (cf. Lang, 1979)" (pp. 47-48).

In explaining how an image might facilitate amplification of a subtle response (such as in arm levitation), the author suggests that physiological and external feedback systems are involved--principally a neural feedback loop between brain and target organ (in this case, arm muscles). "Efferent signals, which are activated by processing response propositions, initiate the overt behavior while afferent signals feed back to the brain and modulate further input to the effector system. The process progressively reduces the mismatch between the image instructions and behavior until the hypnotic task is completed" (p. 48). The feedback loop "provides information on the discrepancy between desired behavior and actual behavior:  $e = B_d - B_a$ , where  $e$  = error,  $B_d$  = desired behavior, and  $B_a$  = actual behavior (Arbib, 1972). The error signal generated by this discrepancy modifies the efferent output so as to eventually approximate  $e = 0$ " (p. 49). The author notes that this complex process of physiological feedback may be "augmented by external feedback such as modified verbal instructions or vocal intonations of the hypnotist and self-observation by S" (p. 49).

The author's model is summarized as: "1. The context, setting, and expectations implied by being hypnotized as well as the wording of the hypnotic suggestions provides S with: (a) explicit or implicit instructions to use imagery, (b) repetitious wording which may increase the probability of fully accessing the relevant propositions, and (c) instructions that task completion is expected. This may function to increase the probability that the deep structure of the response propositions will be processed. 2. The hypnotic suggestion proper is composed of stimulus and response propositions embedded within a propositional network. 3. Stimulus propositions give rise to the phenomenological characteristics or the percept- like experience of the image but may be unimportant in determining hypnotic behavior. 4. Processing of the response propositions includes an active response. This response process is facilitated by S's expectation to become actively involved in the imagined scene. Response propositions are the critical features of hypnotic imagery. 5. During hypnosis, the propositional network may be systematically modified by physiological or external feedback regarding the relative progress of the behavior toward task completion. This processing of response propositions is conceptualized as a negative feedback system. Efferent signals are delivered to the appropriate effector site while afferent signals feed back to the brain in order to modify further neural input, functioning to reduce the error between image and behavior. While the initial feedback is probably physiological, additional feedback may be obtained from the hypnotist's instructions and S's self-observations. 6. If stimulus propositions are simultaneously accessed, S experiences an image" (p. 51).

1989

Alexieva, A.; Nicolov, N.A. (1989). Brain mechanisms in classical conditioning. Behavioral and Brain Sciences, 12, 137.

## NOTES

This is a Commentary on article by J. S. Turkkan (1989), Classical Conditioning: The new hegemony. In Behavioral and Brain Sciences.

Commentators note that the objective of the target article is to show how current thinking about Pavlovian conditioning differs substantially from the historical view; also that this has been recently emphasized by Rescorla (1988). Commentators note that the neural pathways and neural mechanisms

involved in Pavlovian conditioning are of great interest and are investigated by many neuroscientists all over the world (Grigoryan & Tchilingaryan 1988; Kositsyn N.S. & Dorochoy 1986; Onifer & Durkovic 1988; Storzuk 1986; Vartanyan & Pirrgov 1986). Commentators also note the work of Ramachandran & Pearce (1987) and Uryvaev Yu.V. et al. (1988).

They express the opinion that Turkkan's review affords a thorough description and interpretation not only of basic data and new conceptual views, but also of certain key notions in the modern theories of Pavlovian associative learning.

Blum, Gerald S. (1989). A computer model for unconscious spread of anxiety-linked inhibition in cognitive networks. Behavioral Science, 34, 16-45.

Unconscious inhibitory processes, triggered by a potential anxiety reaction, are reviewed in the context of an emerging rapprochement between psychodynamic and cognitive approaches in experimental psychology. Conditions underlying spread of inhibitory action to other cognitive networks are first explored in three tachistoscopic experiments utilizing words posthypnotically tied to a potential anxiety, pleasure, or neutral reaction. Response times of subjects, instructed to ignore those words while naming pictures or solving anagrams as quickly as possible, reveal a highly differentiated pattern of circumstances governing likelihood of inhibitory spread from anxiety-linked words to target stimuli. Next a computer model is constructed to simulate cognitive processes from onset of display to eventual response, and the model is then tested for its fit to the empirical data. Finally, an illustrative study shows that a subset of computer-generated predictions for spread of inhibitory action is verifiable experimentally.

Buss, A. H. (1989). Personality as traits. American Psychologist, 44, 1378-1388.

Personality traits have been challenged as unimportant determinants of behavior, but evidence suggests that traits may carry as much variance as experimental manipulations. Asking whether traits or manipulations control more variance is useless because researchers can plan paradigms that favor one or the other. When traits and manipulations complement each other there are several major kinds of interaction. The trait-manipulation dichotomy is analogous to the person-environment dichotomy, and both are related to active versus passive models of behavior. Trait variance is increased by aggregating across responses, situations, and time. Underlying aggregation are the issues of units and classes of behavior. Individual responses are on a continuum of breadth that extends successively upward to response classes, personality traits, and higher order traits. Broad and narrow traits each have advantages and disadvantages. Recent research has led to novel personality traits and to knowledge about the origin and maintenance of traits. If there is to be a specialty called personality, its unique and therefore defining characteristic is traits.

Gardner, Beatrix T.; Gardner, Allen R. (1989). Beyond Pavlovian classical conditioning. Behavioral and Brain Sciences, 12, 143-144.

## NOTES

This is a commentary on the article by Turkkan (1989) entitled "Classical conditioning: The new hegemony" in Behavioral and Brain Sciences, 12, 121-179. (Pavlov's theory of hypnosis was based on a conditioning model, which is why this material may be relevant.)

"Traditionally, the mechanism of stimulus association proposed by Pavlov early in this century is invoked to account for conditioning that is independent of the positive and negative consequences of responding. ... Pavlov attributed this result to stimulus substitution (i.e., the subject responds to the Sa as if it were the S\*) and this has been the dominant view throughout this century" (p. 143).

'In Pavlov's classical procedure, only increases and decreases in the original consummatory or defensive response are counted as conditioned responses. ... Pavlov's classical procedure is only a special case of a much broader case of a phenomena" (p. 143).

**"Key-pecking by pigeons and lever-pressing by rats are responses that were long held up as prototypes of arbitrary behaviors that could only be shaped by response- contingent reinforcement. In the autoshaping procedure, however, these same responses have been easily conditioned to an arbitrarily selected stimulus (Sa) when the delivery of food was entirely independent of the response of the subjects. Not only that, but robust rates of responding have been maintained when food was withheld if the pigeons pecked the key or the rats pressed the lever, that is, when the contingency was negative (Williams & Williams 1969)" (p. 143).**

**"Turkkan follows a grand tradition when she discusses the similarities between associative conditioning and fundamental aspects of human verbal behavior. Yet an essential characteristic of verbal behavior is the difference between the response to an object and the response to a word for the object. The response to the spoken or written word 'apple' must be distinctly different from the response to an actual apple. Whatever we learn when we acquire vocabulary, it cannot be the simple stimulus-stimulus connection advocated in Pavlov's classical theory. Even the popular Rescorla (1967) design for separating stimulus-stimulus contiguity from stimulus-stimulus contingency only succeeds in comparing two sources of stimulus-stimulus association. Meanwhile, the recently discovered autoshaping experiment does offer us a laboratory model in which associative conditioning can result in a response to the Sa that is different from the consummatory response to the S\*" (p. 144).**

**"The theory of stimulus-stimulus association that Pavlov built upon the results of his special procedure is inadequate to deal with the wide range of phenomena of associative conditioning that have been discovered since his time.**

**"We wholeheartedly agree with Turkkan regarding the enormous theoretical and practical significance of the new discoveries but we are convinced that the terms 'Pavlovian conditioning' and 'classical conditioning' serve us best in their historical usage. ... The new discoveries seem to us to show that a wide range of significant phenomena fall outside the boundary conditions of traditional Pavlovian and Skinnerian theories" (p. 144).**

**1988**

**Baker, Elgan L. (1988). The contributions of Milton Erickson: Reflections on the forest and the trees. International Journal of Clinical and Experimental Hypnosis, 36, 125-127.**

## **NOTES**

**This is the introduction to a special issue of International Journal of Clinical and Experimental Hypnosis, which is devoted to the contributions of Milton Erickson. "The conclusions of these analyses are sometimes surprising. The usual understanding of Erickson's work and the hallmarks of the Ericksonian tradition emphasize such parameters as indirect suggestion; naturalistic or permissive trance induction; confusional strategies; 'unconscious learning'; and the focal use of metaphor, analogy, anecdote, and storytelling. These authors suggest, however, that Erickson's work frequently did not entail the use of hypnotic trance in any conventional sense and attribute many of the crucial variables in his therapeutic work to a variety of nonhypnotic phenomena" (p. 126).**

**Several consistent themes emerge, which Baker refers to as perhaps the "essence" of Erickson's contributions: "(a) the charismatic power of Erickson's personal presentation and style; (b) the marked influence of social variables; (c) consideration of primitive, unconscious relationship variables; (d) the evocative use of language, symbolism, and nuances of communication; (e) the ingenious tailoring of therapeutic interventions to the perceived uniqueness of each patient; and (f) the central influence of nonhypnotic variables rooted in social learning and cognitive-behavioral paradigms" (p. 126).**

**Diamond, Michael Jay (1988). Accessing archaic involvement: Toward unraveling the mystery of Erickson's hypnosis. International Journal of Clinical and Experimental Hypnosis, 36, 141-156.**

The "essence" underlying Milton Erickson's unique style and uncommon technical maneuvers inheres in his uncommon skill at eliciting patients' archaic involvement. Archaic involvement, as characterized by perspectiveless overevaluation, is explicated and America's beloved tale, *The Wonderful Wizard of Oz*, is used to evoke further perspectives. The importance of such regressive object-representations are noted. Erickson's uncanny ability to access archaic involvement and thereby profoundly influence his client is analyzed in terms of his: (a) relationship style; (b) therapeutic "persona"; (c) theoretical orientation; and (d) specific micro-techniques and interventions. Clinical findings derived from a case transcript and videotaped work are employed throughout to substantiate the argument that Erickson fosters regressive interpersonal shifts. Implications of this skill are discussed, and further avenues for investigation are suggested.

## NOTES

Shor (1959, 1962, 1979) introduced the concepts of archaic involvement, trance (fading of the generalized reality orientation or altered state of consciousness) and nonconscious involvement (or fulfillment of the role of hypnotic subject, dissociated role taking) to account for experienced hypnotic depth. Shor (1979) defined archaic involvement as "'the extent to which at any given moment in time there are archaic, primitive modes of relating to the hypnotist that echo back to the love relationships of early life [p. 126]' (p. 143)."

Archaic involvement develops as a hypnotist actively encourages the subject to regard the hypnotist with the role of parent, teacher, guru. Charismatic authority, protector, etc. Erickson fostered these attitudes in his patients, and his apparent magical expertise can be attributed to his ability to tap into these archaic ties, which are 'ubiquitous.' "Freud (1919/1955) long ago noted that human beings' irresolution and craving for authority should never be underestimated. Fenichel (1945) stressed the universal yearning for 'omnipotent beings whose help, comfort, and protection he could depend on [ p. 491].' Kaiser (1965) considered the 'universal psychopathology' of attempting to create in real life the fantasy of fusion. Still others (Kohut, 1971, 1977; Kriegman & Solomon, 1985; Newman, 1983) suggested that the motivation to yield to or to create such charismatic leaders stems from the desire to lose all boundaries and become lost within a greater whole--an experience elsewhere termed a fusional or symbiotic alliance (Diamond, 1987). This 'search for oneness' (cf. Silverman, Lachman, & Milich,, 1982) is engaged by charismatic leaders as we become enticed by our own archaic wishes to avoid uncertainty, ambivalence, and the complexities of maturation, perhaps even creating such leaders to save us from ourselves" (p. 145). There remains the question of how archaic involvement facilitates or impedes psychotherapy.

In addition to archaic involvement, Erickson's behavior as a hypnotherapist during the later years of his career stressed the evocation of nonconscious role-playing, while underplaying the evocation of the trance dimension. He relied on his reputation and interventional skills, stressing 'naturally occurring trance' of everyday life. (In his earlier years he spent more time on developing profoundly altered states of consciousness.)

"Erickson's \_therapeutic 'persona'\_ and style of engaging were consistently parental and authoritative, albeit frequently permissive, supportive, flexible, and benevolent. He always remained in control and typically insisted that his orders be carried out strictly and without question (Hilgard, 1984). ... Archaic wishes are further gratified by Erickson's gentle and soothing parental tone and stance, while control is maintained as he invites his patient to 'enjoy being irritable with me'" (pp. 147-148). To further psychotherapeutic goals, he sometimes assumed the role of surrogate parent, in hypnosis, to supply the patient with needed (childhood) experiences, as in the famous case referred to as the 'February Man.'

Erickson's implicit theory of an autonomous and omnipotent unconscious further encouraged "more primitive modes of perceiving and construing consensual and historical reality" (p. 148). "For

example, he tells his patient in the Lustig (1975) videotape that: 'Your unconscious knows all about it; it will inform the conscious mind when it is ready to know'" (p. 149).

Regarding his technical maneuvers (intonation, wording, nonverbal communication, indirect suggestion, metaphor, and anecdote), "contrary to popular belief, he frequently spent long periods of time thinking about and planning his interventions (Hammond, 1986). In addition to using these patterns to evoke both patient resources and archaic alliances, he adopted an exceptionally confident manner, even when prescribing unusual assignments (McCue, 1984). Thus, patient faith and positive expectation in the efficacy of his interventions were maximized" (p. 149).

Erickson's pacing of his speech was slow, at the same rate as President Reagan's speeches. He was tone deaf, which may have contributed to the arrhythmia and unusual intonation observed in his speech. He used the patient's language, typically, which "undoubtedly provides a narcissistically gratifying identification with a hypnotist felt to be inside one's own psychic system (Diamond, 1987)" (p. 150). When he would say to patients, "My voice will go with you," he was inviting a "bodily-level incorporation" (p. 150). When he created mental confusion through his maneuvers, he increased the likelihood that the patient would "respond to subsequent direction in order to bind anxiety" (p. 150). "Thus, an archaic object relationship is recapitulated by an invoked regression to earlier, primary phases of cognitive processing, and in turn, Erickson provides a safe, 'holding environment' (cf. Winnicott, 1965) for his now regressed patient" (p. 150).

Erickson used what Watzlawick (1978) has called 'the language of change'--puns, metaphors, indirect communication, analogies. He finessed the defensive functions of secondary processes (Kalt, 1986) by allying himself with the patient's secondary processes, as when he used anecdotes and teaching tales in the role of a 'Dutch uncle' giving advice. The teaching tales usually affirmed basic American values (common sense, pragmatism, self-sufficiency, resiliency, achievement; Diamond, 1983). However, this kindly grandfather approach "recreates an archaic relational situation wherein adult-level defenses and secondary processes are realigned while Erickson the storyteller permits expression and oftentimes symbolic gratification of instinctual drives. This archaic recapitulation occurs as a result of the relaxing of defenses through metaphorical communication (cf. Schafer, 1983), in addition to the revival of opportunities for mastery within this safe and often enchanting context (cf. Bettelheim, 1977)" (p. 151).

The author concludes by addressing clinical issues pertaining to an Ericksonian approach that relies on archaic involvement. "An essential question for clinicians concerns the long-term effects on the patient of the therapist's fostering such regressive involvement. There are both pluses and minuses of therapeutic relationships which maximize archaic involvement. Consequently, we need to empirically determine the efficacy of Ericksonian interventions both in offering short-term relief from suffering, and in potentiating developmental maturation in the long run. Not only must we ascertain how much archaic involvement is required for lasting change, but what is done with the regressive involvement (i.e., is it merely evoked, managed, utilized, or ultimately worked through?) is critical in assessing the value of Erickson's contribution" (p. 152).

Gorassini, Donald R.; Hooper, Cynthia L.; Kitching, Kathleen J. (1988). The active participation of highly susceptible hypnotic subjects in generating their hypnotic experiences. Imagination, Cognition and Personality, 7 (3), 215-226.

Hypnotized individuals have traditionally been considered to be detached from the control of their own suggested behavior. We tested this and the alternative notion that hypnotized subjects attempt to self-generate the experiences (i.e., mainly of involuntariness) as well as produce the behaviors thought to be prototypical of high hypnotic ability. In an experimental investigation, highly susceptible hypnotic subjects were found to engage in the kind of imaginative activity that would be expected of individuals who were attempting deliberately to generate their experiences of involuntariness; they

engaged as actively in imagery-generation as did subjects who were specifically instructed to imagine during suggested responding, and they experienced as much involuntariness as subjects in whom suggested movements were produced by an external physical force. The implications of these findings for the neodissociation and social psychological theories of hypnotic responding are discussed.

Hawkins, Russell; Le Page, Keith (1988). Hypnotic analgesia and reflex inhibition. Australian Journal of Clinical and Experimental Hypnosis, 16, 133-139.

The major change in thinking about models of analgesia over the last decade or so may be seen as a shift away from the earlier emphasis on a one-way afferent transmission sequence. Analgesia was effected, according to the older models, by a simple blocking of afferent impulses at some level (as achieved by local anaesthesia). Recent models suggest that there are at least two CNS analgesia control systems, each operating via an active mechanism for the inhibition of nociception which includes reciprocal efferent impulses able to respond to input from lower centres by sending control signals which modify their output. One CNS analgesia system has now been quite well described. This "opiate" analgesia system has proved to be naloxone reversible and seems to be mediated by reciprocal pathways between brain stem structures and the dorsal horn and trigeminal caudalis. This is not likely to be the system responsible for all cases of hypnotic analgesia, since the common experience of continued awareness of some elements of a normally painful stimulus, in spite of a freedom from pain, implicates a higher level involvement such as input from the prefrontal cortex.

#### NOTES

The authors present a surgery case (of a cystoscopy and urethrotomy performed under hypnotic analgesia, with a highly hypnotizable patient) as an illustration of their position. The patient grimaced when the urethrotome was inserted into the urethra and dilated, but she denied discomfort and did not exhibit a reflex adduction of the thighs that is often observed even under standard general anaesthesia. She had spontaneous amnesia for the entire surgery. Later, under hypnosis, the patient could remember "discomfort and a sharp pain" which lasted for "seconds, if that" (p. 134).

The authors refer to Melzack and Wall's (1965) gate control theory as well as Hilgard's (1973) neodissociation interpretation of pain reduction in hypnosis. They review research by Hardy and Leichnetz (1981) with monkeys, in which they "traced the projections of the periaqueductal gray (PAG) to determine the extent of any possible cortical involvement in the endogenous analgesic system. Their work showed that the prefrontal cortex was the principal source of projections to the PAG" (p. 136). They quote the latter as writing that, "Patients who have had prefrontal lobotomies for relief of chronic pain report that while they still feel the pain they are no longer bothered by it ... the prefrontal cortex by virtue of its projections to the PAG may play a role in modulating nociception at the spinal level" (Hardy & Leichnetz, 1981, p. 99).

"Hardy and Leichnetz have also suggested that there may be more than one analgesic system within the CNS. The first system is a naloxone-reversible mechanism which can be activated by opiates (presumably both endogenous and exogenous) and by acupuncture. Since hypnotic analgesia has shown itself not to be naloxone-reversible (Goldstein & Hilgard, 1975) it may have little to do with the opiate reception analgesia system. Instead the mechanism of hypnotic analgesia may lie in Hardy and Leichnetz's second system which is sensitive to affective and cognitive influences" (pp. 136-137).

The authors include a review of the work by Mayer and Price (1976) which established the importance of brain stem structures in analgesia, especially for eliciting stimulation-produced analgesia. They cite Mayer and Price as drawing a distinction between "analgesia achieved by incapacitating a component in a pain transmission system or by activating a pain inhibition system" (p. 137). They also report that Mayer and Price conclude that stimulation-produced analgesia does not result from a "functional lesion" in the brain stem, but results from stimulation of a pain-inhibiting mechanism, suggesting the

dorsal horn and trigeminal nucleus caudalis may be involved. This would be consistent with the inhibition of spinal reflexes (the adductor reflex) observed in their urethrotomy case, and the spinal reflex to nociception has also been reported by Finer (1974).

"The concomitant inhibition of reflexes in humans during hypnotic analgesia can be interpreted as evidence that nociception is probably not ascending to the cerebral cortex and that therefore the source of analgesia can be localized to the brain stem areas. It may be the case, however, that the locus of effect of hypnotic analgesia is not uniform across cases and may be identified by the overall pattern of subjective reports and physiological responses. Hypnotic analgesia may be experienced in more than one way subjectively and these differences may be attributable to differing underlying physiological mechanisms. On some occasions the relevant body part may be experienced as totally anaesthetised and all sensation (not only painful sensation) may be lost. This experience matches well with a brain stem involvement, which presumably inhibits any further afferent action. On other occasions, however, and more commonly, patients are still aware of a variety of sensations, which might include pressure in the case of childbirth or even cutting in the case of surgery, but these sensations are not described as painful. This is reminiscent of the effect of frontal lobotomy and it is tempting to focus on the frontal lobe as the locus of hypnotic analgesia effects in such instances" (p. 138).

Hilgard, Ernest R. (1988). Milton Erickson as playwright and director. International Journal of Clinical and Experimental Hypnosis, 36, 128-140.

Milton Erickson in his therapeutic practice can be characterized as a playwright who plans a little play for each patient and then leads that patient to accept and enact the assigned role. This arrangement permits him to be authoritarian as playwright and director by providing the staging and the strategy, while the patient then provides the tactics by carrying out the assignment in his or her own way. Several examples are given from published cases. The first is a case of enuresis in both husband and wife, selected because in this instance no mention is made of hypnosis as Erickson sets the circumstances and gives direct orders for carrying out the instructions. 3 pairs of cases are described to indicate how differently Erickson has treated cases with similar symptoms. Finally, 1 case is discussed more extensively because the treatment extended over a 6-year period. Its interpretation shows how difficult it is to distinguish what belongs to the strategic drama and what to hypnosis. All cases had successful outcomes.

The essence of Erickson's therapy lay in the unexpectedness of his comments or instructions, the shock element, the surprises, and the tasks that he assigned the patient to carry out in the real space-time world or in fantasy. There was often doubt whether other than light hypnosis was involved" (p. 129).

As an example, Hilgard reports on a published case in which both the husband and wife had enuresis and Erickson treated them in a very authoritarian fashion. Erickson told them that he "would make a bargain with them: If they got well, they would not have to pay; if they did not benefit from the therapy, they would have to take full financial responsibility for the time he gave to them. He obtained their promise that they would do what he told them, and then he proceeded to tell them: 'This is what you are to do.' He then laid out the scenario. The most important part was that they were to take fluids frequently, drink a glass of water 2 hours before going to bed, and then lock the bathroom door. At bedtime, they were to get into their pajamas, kneel side by side on the bed and deliberately and jointly wet the bed. Wetting the bed would then be over for the night, and they could sleep through the night in the wet bed. They must do this every night for 2 weeks; on the Sunday night to follow, they may lie down and sleep in a dry bed. If the bed is wet the next morning, they will have to kneel and wet the bed each night for another 3 weeks.

**"You have your instructions. There is to be no discussion and no debating between you about this, just silence. There is to be only obedience, and you know \_and will know what to do\_. I will see you again in five weeks' time. You will then give me a full and amazing account. Goodbye! [Volume IV, 1954, p. 100, emphasis in original].**

**"When they reported--cured after the first 2 weeks--they asked whether Erickson had used hypnosis. He dodged their question by saying that they were entitled to full credit for what they accomplished" (p. 130).**

**Hilgard makes the point that Erickson's authoritarianism might seem to contradict claims made that he had a high degree of respect for patients, their autonomy, and their responsibility for solving their own problems. "There need be no contradiction, if it is recognized that the planned behavior may not in itself be the cure, but may only be the occasion that leads to patient to reorient and solve the personal problems that led to the seeking of therapy. Another way of putting this is that the \_strategy\_--that is, the plot of the drama--was entirely Erickson's, although the \_tactics\_--that is, beyond the fixed actions required by him, how the part was played--were left to the resources of the patient. This is not the permissiveness of Rogers (1951) with respect to the patient's responsibility for his or her own life, nor does it have the freedom of expression of Moreno's (1946) spontaneity theater" (p. 131).**

**Hobson, J. Allan (1988). The dreaming brain. New York: Basic Books.**

**Hypnosis and Sleep\_ Ramon y Cajal and Freud shared an interest in hypnosis, as an experimental method of inducing an altered state of consciousness, introducing dynamic principles into both neurology and psychiatry (rather than simply static descriptions). The author contrasts the hypnosis "artificially altered state of consciousness" with sleep as a "naturally altered state of consciousness, asking whether similar rules govern the transition of state change in both cases. He notes that induction of both states involve rhythmic stimulation and eye fixation, and both may facilitate gaining control over brain-stem centers implicated in conscious-state regulation.**

**The brain stem is the nightly battleground of warring neuronal factions, and REM sleep and dreaming are the result of temporary domination of one neuronal population over another. Victorious is a troop of reticular-formation neurons concentrated mainly in the pontine portion of the brain stem; owing to their fusillades of firing in association with REM-sleep events, these pontine reticular neurons are likely to play the executive role in the generation of REM sleep and dreaming. Sharing the white flag of temporary surrender is a population of aminergic neurons located in the locus ceruleus, the raphe nuclei, and the peribrachial regions of the anterior pontine brain stem; hardly a shot is fired by this neuronal phalanx during REM sleep. By virtue of this cease-fire, these aminergic neurons are likely to play a permissive role in the generation of REM sleep" (p. 183).**

**The Reciprocal-Interaction Model suggests that "the continuous competition between the excitatory reticular neurons and the inhibitory aminergic neurons is the basic physiological process underlying sleep-cycle alternation" (p. 184). Neurotransmitters (aminergic for inhibition, cholinergic for excitation) are implicated as well. The width of the brain stem correlates with sleep-cycle. The brain seems to "undergo a periodic shift in neurotransmitter ration, from a predominantly aminergic mode in waking to a predominantly cholinergic mode during REM sleep" (p. 192). Thus, there is a major shift in metabolic orientation as we change from waking externally generated information and action to REM-sleep internally generated information and suppressed action.**

**The author proposes an activation-synthesis hypothesis to account for dreaming and envisions the brain as a "Dream Machine." "The recognition that the brain is switched on periodically during sleep answers the question of where dreaming comes from: it is simply the awareness that is normal to an auto-activated brain-mind. This causal inference is continued in the term \_activation\_ in the new**

dream theory's title. The question of why dreams are paradoxically both coherent and strange is in turn suggested by the term \_synthesis\_, which denotes the best possible fit of intrinsically inchoate data produced by the auto-activated brain-mind.

"The original dream theory thus had two parts: activation, provided by the brain stem; and synthesis, provided by the forebrain, especially the cortex and those subcortical regions concerned with memory. The physiology that is now in hand best supports the first part of the theory; much more work needs to be done on the synthetic aspects of the process. But I now add a third major component to the theory, the concept of \_node switching\_, which accounts for the \_differences\_ in the way the activated fore-brain synthesizes information in dreaming (compared with waking): for the twin paradoxes of dream bizarreness and insight failure (where the system has lost self-reference as well as its orientation to the outside world) and for dream forgetting" (p. 204).

The author assumes a formal isomorphism between subjective (dream report) and objective (brain activity) levels of investigation. Thus, the report of experiencing visual images in dreams implicates the brain's visual system.

In terms of psychophysiology, Hobson proposes that "the on-off switch for dream mentation is the reciprocal-interacting neuronal populations comprising the aminergic neurons and the reticular neurons of the brain stem" (p. 205). For sleep (and dreaming) to be maintained, stimulation from the outside world must be minimized. This is accomplished in at least two ways. There is active inhibition of nerves at the pre-synaptic level (e.g. by depolarization by signals coming from the brain stem; Pompeiano, 1978) so that the nerves are less efficient in transmitting information from the environment, as there is less neurotransmitter available. Secondly, there is competition among higher levels of sensory and associative circuits, so that they ignore incoming signals (or incorporate them into internally generated dreaming activity). Hobson refers to these mechanisms as the sensory input blockade.

Hobson also describes the motor output blockade, which prevents us from taking actions based on dream content. There seems to be inhibition of motor-command neurons in the brainstem and spinal cord.

When dreams arise, there seems to be brain activation as evidenced by PGO (Pons, lateral Geniculate, Occipital cortex) waves originating in the brain stem. They are found in association with REM sleep and go via independent pathways to both visual and association cortex. "According to the activation-synthesis hypothesis of dreaming, the now auto-activated, disconnected, and auto-stimulated brain-mind processes these signals and interprets them in terms of information stored in memory" (p. 207).

Hobson states that the activation-synthesis hypothesis can account for five aspects of dreaming: visual and motor hallucinations, the acceptance of these hallucinations as 'real', bizarre spatial and temporal distortion, strong emotions, and amnesia for the events after waking up. The experiences of dreams are accepted as real because there is no concomitant external input.

1987

Bandura, A.; O'Leary, A.; Taylor, C. B.; Gauthier, J.; Gossard, D. (1987). Perceived self-efficacy and pain control: Opioid and non-opioid mechanisms. Journal of Personality and Social Psychology, 53, 563-571.

Subjects who were trained to use psychological coping strategies (e.g. imagery, distraction, dissociation, sensation transformation) had both better pain tolerance on a cold pressor test and higher self efficacy ratings. Those subjects who were given naloxone (which blocks pain reduction effects of beta endorphins) showed more pain tolerance than subjects not given the cognitive training experiences. They attributed much of the pain tolerance increase associated with cognitive

interventions to opiate release, suggesting that cognitive interventions may have physiological mediating effects on pain perception.

Gorassini, Donald R. (1987). Use of concurrent verbalization to assess the dissociation of conscious controls. Journal of Abnormal Psychology, 96 (3), 218-222.

The degree of dissociation of conscious controls that occurred when, according to the neodissociation theory (Hilgard, 1977, 1979), conditions were optimal for such an event was assessed. A task that required subjects to locate specified sentences in a textbook was conducted under these optimal conditions, as well as under conditions that were expected to mitigate against the occurrence of dissociation. The sentence-search task necessitated rehearsal for its successful completion. The correspondence between task rehearsal and task performance did not differ between optimal and mitigating conditions, thus suggesting a failure to dissociate. Nevertheless, search behavior was self-rated as substantially more involuntary under the optimal than under the mitigating conditions. The implications of these findings for the neodissociation and social role theories of hypnosis were discussed.

Hilgard, Ernest R. (1987). Research advances in hypnosis: Issues and methods. International Journal of Clinical and Experimental Hypnosis, 35, 248-264.

There are substantial areas of agreement upon the classical phenomena of hypnosis, illustrated by what we now have learned about hypnotic talent, amnesia, hallucinations, analgesia, and dissociative processes. While genuine advances in knowledge about hypnosis have been made in recent decades, differing orienting attitudes have kept some controversy alive, particularly in the interpretation of empirical findings. Differences of interpretation of the phenomenal and behavioral facts are to be expected in the present stage of developmental, cognitive, and social psychology.

## NOTES

The author writes of the "domain of hypnosis" as within the larger domain of social psychology (because it is usually interpersonal); cognitive psychology (because of alterations in perception, imagination, memory, and thought); developmental and personality psychology (because of individual differences); and physiological psychology (because of neurophysiological aspects).

In terms of what we know about hypnotic talent, he notes that high hypnotizability is not generally associated with psychopathology; that it may however be associated with a personality measure called absorption; and that there may be some inherited ability (Morgan, 1973). In the author's view, hypnosis is no longer considered simply a response to suggestion, since imagination and/or fantasy are very important.

In reviewing evidence of posthypnotic amnesia the author writes, "Subtleties in language require making careful distinctions among concepts such as compliance, suggestion, compulsivity, belief, self-deception, automaticity, the voluntary, the involuntary, and a happening. If these distinctions are glossed over, the choice of words (e.g., substituting compliance for response to suggestion) may give the impression that a finding departs more widely from conventional views than it does. We, too, have found that Ss used varied strategies or skills during amnesia, but this need not deny augmentation by suggestion.

"It takes genuinely high Ss to illustrate truly high posthypnotic amnesia... Many of the truly high hypnotizable individuals cannot break amnesia, no matter how hard they try" (p. 253).

Regarding the evidence for hypnotic hallucinations and trance logic, the author suggests that trance logic is not a clear concept because the Subject is capable of good logic while tolerating some inconsistencies. "It is ordinary logic to assume that if your hallucination is your own construction, it is

you who can influence it by your own wishes. In the rare cases of transparent or diaphanous hallucinations there is still an 'out there' quality. People who report that they see wispy ghosts also see them as 'out there,' so that they qualify as hallucinations. The distinction appears to be one of perception and perception-like experiences within hypnosis rather than of logic" (p. 256).

In reviewing the evidence for hypnotic analgesia, the author acknowledges that pain relief is available with other kinds of interventions, or by using other kinds of psychological processes, but that does not diminish the contribution of hypnosis (which has a long and impressive clinical history). Following laboratory studies, it is noted that "the amount of alleviation of pain through hypnosis is positively correlated with the hypnotizability of the candidate for pain reduction. This result is not universally accepted, because some clinicians are convinced that those unsuccessful in hypnotic pain reduction are resisting hypnosis" (p. 256-257). In the present paper he acknowledges but does not review physiological literature on hypnoanalgesia.

Regarding the concept of dissociation, the author indicates that he considers it a more useful concept than the concept of trance or hypnotic state "when a person is only slightly or moderately involved in hypnosis ... . The advantage is that dissociations, as compared with altered states, can be described according to limited or more pervasive changes in the cognitive or motor systems that are being activated or distorted through suggestion in the context of hypnosis. Perhaps when all-inclusive enough, such changes can justify the use of the term trance or altered state, but I believe that these terms should be used, if at all, only for those for whom the immersion in the hypnotic experience is demonstrably pervasive" (pp. 258-259).

The author goes on to describe his initial discovery of the 'hidden observer' in an experimental context, and to relate the 'hidden observer' to others' earlier observations of a secondary report of an experience previously concealed from S's consciousness (Binet, 1889-1890/1896; Estabrooks, 1957; James, 1899; Kaplan, 1960). "The issues are still being worked on, but as in the case of trance logic the heart of the problem is not whether to speak of a hidden observer, but to recognize that there may be cognitive distortions in hypnosis even while some more realistic information is being processed in parallel, so that everything is not reportable by S" (p. 260).

1986

Goldberg, Benjamin Mark (1986, October). The role of selective attention in hypnotic susceptibility: An empirical study (Dissertation, City College of New York). Dissertation Abstracts International, 47 (4), 1774-1775-B.

This study tested the hypothesis that in hypnotic situations high as opposed to low susceptible subjects evidence a more pronounced restriction of attention to hypnotic suggestions. Also tested was the hypothesis that high susceptible subjects evidence attentional behavior aimed at enhancing the subjective reality of these suggestions. Fifteen high susceptible and 15 low susceptible subjects participated in a hypnotic procedure while ostensibly extraneous phrases emanated from an adjacent cubicle. Hypnotic suggestions coincided with phrases that were consonant, neutral, and dissonant with the theme of each suggestion. In a control condition, high and low susceptible subjects performed nonhypnotic tasks while exposed to the same phrases which were neutral with relation to the theme of each task. Contrary to the present hypothesis, subsequent phrase recognition was equal and poor for all groups. Moreover, all groups showed an identical pattern of differential phrase recognition which consequently precluded thematic value as an organizing factor. The findings suggest that selective attention is not a critical factor, underlying hypnotic responsiveness. Alternatives to attentional conceptions of hypnosis are discussed" (pp. 1774-1775).

1984

**Bowers, Kenneth S. (1984). On being unconsciously influenced and informed. In Bowers, Kenneth S.; Meichenbaum, D. (Ed.), The unconscious reconsidered (pp. 227-273). New York: John Wiley & Sons.**

**Research on confirmatory bias has uncovered additional cognitive processes that are frequently automatic in function and significant in modifying behavior, affect, and cognition. Snyder and Swann (1976, 1978) provided subjects with set inducing hypotheses about the personalities of certain target individuals. Subjects were then asked to test these hypotheses by interviewing the target individuals. It was found that subjects regularly looked for and found evidence that was consistent with their initial hypotheses rather than for evidence which could show these hypotheses to be incorrect. This biased search strategy of the subjects had more profound effects as well, for it also influenced the behaviors of the target individuals in a manner leading them to produce behaviors that seemed to confirm the original mental set of the subjects. Subjects were unaware that their manner of interviewing was producing a biased sample of behavior from the targets. Here too an automatic cognitive process was affecting perception and thinking without conscious awareness" (p. 280).**

**Burnham, John C. (1984, October/1986). The fragmenting of the soul: Intellectual prerequisites for ideas of dissociation in the United States. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 63-84). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)**

**Reductionism was a relentless pursuit of the idea that knowledge of components led to knowledge of causes. In this context, I propose to show how, in the psychological-medical realm, the initial concept was the soul, and the final intellectual product was dissociative phenomena" p. 64.**

**Carlson, Eric T. (1984, October/1986). The history of dissociation until 1880. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 7-30). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)**

## **NOTES**

**Provides summary of the history of associationism. Refers to Beddoes' essays (1802-03) which state that (1) emotions play a significant role in strengthening associations, and a study of emotions would be the 'chief secret for unriddling the inconsistencies of dreams,' and (2) variations could occur in associations (from very strong to very weak).**

**In the 19th century there was an ongoing debate about the role of the reflex in the nervous system, about how high up it could function, and whether it could still take place if it reached areas that subserved consciousness. Dr. William Carpenter postulated three levels: (1) excitomotor reflex (spinal, and maybe lower brain), (2) sensorimotor or consensual (midbrain) which was unconscious, (3) ideomotor (cerebral) - based on evidence from hypnosis in which volition appeared suspended and the subject became 'a mere thinking automaton' whose flow of ideas resulted from external suggestions only. The ideomotor response could be unconscious.**

**In the 1830's and 40's Thomas Laycock brought Associationism together with the concept of reflex. "By bringing the reflex into 'cerebral processes,' he proposed a model that made fast and automatic responses possible in the realm of ideas. Automatic thinking, speaking, writing, and more complex actions became topics of increasing interest to psychologists later in the century. As early as 1868, Prosper Despine had been speaking of 'psychological automatisms.' Laycock proclaimed most of these responses as being unconscious, that ideas could be charged with varying amounts of energy, and that ideas could act as causes of human disturbances, both psychological and physiological" (pp. 25- 26).**

**1860's - 90's saw the rise of hypnotism, with Eugene Azam using it in surgery and psychiatry; Durand de Gros's book on Braid; Liebeault publishing a book; Bernheim launching his career; Charcot**

shifting interest from organic neurological conditions to functional conditions; and Charcot teaching both Janet and Freud.

The author notes that "in July 1880, a bright and educated young woman of 20 started to nurse her dying father. Like the shamans before her, she had to grapple with the spectre of death and in her own fashion, she developed a creative illness. Her symptoms were myriad, but many had to do with changes in her consciousness (including 'absences,' clear-cut trances) and splits in her memory, including the loss of an entire language. At one point her current personality disappeared and another took its place: in this case it was herself but existing a year before in a state in which she lived without any apparent awareness of what had happened to her in the interim. It is this case of Anna O. and her doctor, Josef Breuer, which became important to the next epoch in our review and who had so much to do in inspiring the studies that followed" pp. 27-28.

Critelli, Joseph W.; Neumann, Karl F. (1984). The placebo: Conceptual analysis of a construct in transition. American Psychologist, 39, 32-39.

The placebo in psychotherapy has unfortunately retained the negative connotation of an inert "nuisance variable," a label that it originally incurred in the field of medicine. In addition, the transition toward more cognitive models of psychotherapy, particularly Bandura's theory of self-efficacy, has led to problems in defining the placebo within psychology. This transition has resulted in an awkward interface between certain preferred cognitive metaphors and the negative connotations of a presumably cognitive placebo construct. As a result, suggestions have recently been made to dismiss the placebo construct from psychology and to do away with the use of true placebo controls in outcome research. The present analysis maintains that (a) the placebo can be adequately defined within psychology, (b) the negative connotation of the placebo label is largely undeserved, (c) the placebo retains a continuing conceptual and empirical utility for evaluating psychotherapy, and (d) the therapeutic efficacy of current therapies is well established even though they have not generally been shown to be more effective than nonspecific treatment.

Heide, F. J.; Borkovec, T. D. (1984). Relaxation-induced anxiety: Mechanisms and theoretical implications. Behaviour Research and Therapy, 22, 1-12.

Literature evidence documenting the occurrence of relaxation-induced anxiety is reviewed, and several hypothesized mechanisms to explain the phenomenon are discussed. Possible avenues for circumventing the problem in therapy are offered. Finally, a theoretical model is presented wherein the phenomenon is viewed with a broader framework designed to explain the development and maintenance of the more generalized anxiety disorders. That framework emphasizes the emergence of fear of somatic anxiety cues and fear of loss of control from more fundamental interpersonal anxieties.

Baars, B. J. (1983). Conscious contents provide the nervous system with coherent, global information. In Davidson, Richard J.; Schwartz, Gary E.; Shapiro, David (Ed.), Consciousness and self regulation (3, ). New York: Plenum Press.

## NOTES

We are conscious of some content when there exists an internal representation that is global, stable, and informative.

Author views nervous system as a distributed information. processing system, in which highly complex & efficient processing is performed by specialized processors in a relatively independent way. These processors may be 'data driven'--i.e. they may decide by their own criteria what is worth processing...' p. 41 [See also Gazzaniga's (1985 Psychology Today article) idea that mind/brain consists of modules.]

p.44 gives references substantiating the above, e.g. Geschwind, Hilgard, La Berge, Shiffrin & Schneider.

p. 45 We are in habit of thinking hierarchically about nervous system rather than distributively.

p. 45 "Consciousness seems to be closely associated with a mechanism that permits interaction between specialized, dedicated processors" The 'global' data base' is like a TV station sending out information that can be processed or not by the viewer. It is not an executive, and in fact can sometimes be controlled by the processors. 'Consciousness ...[is] a certain operating mode of this medium, & consciousness can likewise be used by processors acting as executives, without itself being an executive "(p.49).

The global data base is a lingua franca, so that one sense modality can communicate with others. p. 51. [Synesthesia reported by high hypnotizables implicates this system--either the communicating tracks are greased between color and smell, or the name of the destination, in computer language, is lost, or equivalent.]

p. 52 Repression and the dynamic unconscious. explained in terms of controlled access to the global data base, with certain specialized processors given high priority.

Context, taken by itself, is unconscious; & input, taken by itself & in the absence of the appropriate context, is also unconscious. Only when both of these conditions exist- -when there is input that can be organized within a current context--are we conscious of some percept.

Contextual factors become conscious only when they are challenged.

**1981**

Fromm, Erika; Brown, Daniel P.; Hurt, Stephen W.; Oberlander, Joab Z; Boxer, Andrew M.; Pfeifer, Gary (1981). The phenomena and characteristics of self-hypnosis. International Journal of Clinical and Experimental Hypnosis, 29 (3), 189-247.

Self-hypnosis and hetero-hypnosis were compared, and self-hypnosis was studied longitudinally. Results indicated that absorption and the fading of the general reality orientation are characteristics of both hetero-hypnosis and self-hypnosis. The differentiating characteristics lie in the areas of attention and ego receptivity. Expansive, free-floating attention and ego receptivity to stimuli coming from within are state-specific for self-hypnosis, while concentrative attention and receptivity to stimuli coming from one outside source--the hypnotist on whom the subject concentrates his attention--are state-specific for laboratory defined hetero-hypnosis. Attempts to produce age regression and positive or negative hallucinations are markedly more successful in hetero-hypnosis. Imagery is much richer in self-hypnosis than in hetero-hypnosis. Self-hypnosis requires adaptation to the state: in the beginning of self-hypnosis there is a good deal of anxiety and self-doubt. As the subject feels more comfortable in the self-hypnotic state, he spends less time worrying about failures in self-suggestion, his ability to enter trance quickly and easily increases, as does the fading of the general reality orientation, trance depth, and absorption. An attempt was also made in the present study to find personality characteristics related to the ability to experience self-hypnosis.

**1980**

Hilgard, Ernest R. (1980, October). Hypnotic modification of sensitivity and control. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Chicago.

The author presents a factor analysis of several scales in the hypnosis domain: HGSHS:A, Wilson-Barber CIS, Stanford Hypnotic Susceptibility Scale Form C, Questionnaire on Mental Imagery (Sheehan's modification of Betts) and the Tellegen- Atkinson Absorption Scale. Scales were broken down into components first. He didn't report all of the factors, but shows how these tests fall on a

graph defined by Factor 1 (Amnesia/Cognitive) and Factor 4 (Absorption/Imagery). "Capacity for fantasy and amnesia are so different that hypnosis probably includes both."

Hilgard concludes that he doesn't like a state theory for hypnosis or the idea of "trance" because it is unidimensional. He prefers "dissociation" because we think of it as a continuum. Even Highs differ one from another in the nature of their responses. Altered- state-of-consciousness theories don't readily explain partial dissociation (e.g. persistence of a suggestion such as arm rigidity after hypnosis is terminated; or hysterical paralysis).

## **TINNITUS**

Attias J, Shemesh Z, Sohmer H, Gold S, Shoham C, Faraggi D Comparison between self-hypnosis, masking and attentiveness for alleviation of chronic tinnitus. *Audiology* 1993;32(3):205-12 The efficacy of self-hypnosis (SH), masking (MA) and attentiveness to the patient's complaints (AT) in the alleviation of tinnitus was evaluated. Forty-five male patients close in age with chronic tinnitus related to acoustic trauma were assigned to three matched subgroups: SH, AT or MA. The therapeutic stimuli in the SH and MA sessions, recorded on audio cassettes, were given to the patients for use when needed. SH significantly reduced the tinnitus severity; AT partially relieved the tinnitus; MA did not have any significant effect.

Marks NJ. Karl H. Onisiphorou C. A controlled trial of hypnotherapy in tinnitus. *Clinical Otolaryngology* 1985;10(1):43-6 A group of 14 patients with unilateral tinnitus were selected because of the constant nature of their tinnitus, and its resistance to all other forms of therapy. They were subjected to hypnosis in three forms in random order. The induction of a trance state alone formed the control arm of the trial. Compared to this were the effects of 'ego boosting' and active suppression of tinnitus whilst in a trance state. One of the 14 patients showed a highly significant response to the latter treatment as judged by visual analogue scales. Five of the 14 patients (36%) found the induction of a hypnotic state of value.

This seemed to help them tolerate their tinnitus better, although its loudness and quality were unaltered.

Mason JD. Rogerson DR. Butler JD. Client centred hypnotherapy in the management of tinnitus--is it better than counselling?. *Journal of Laryngology & Otology*. 1996;110(2):117-20 The aim of this study was to assess whether client centred hypnotherapy (CCH) which required three sessions with a trained therapist was superior to a single counselling session in reducing the impact of tinnitus. Patients were randomly allocated to receive either counselling (n = 42) or CCH (n = 44). The outcome measures were: tinnitus loudness match, subjective tinnitus symptom severity score, trend of linear analogue scale, request for further therapy and whether the patient had an impression of improvement in their tinnitus after treatment. CCH was no better than counselling in reducing the impact of tinnitus using the three quantitative measures of tinnitus, and requests for further follow up. The only significant difference between the two therapies was that 20 (45.5 per cent) of the CCH group reported a general sense of improvement compared to six (14.3 per cent) in the counselling group, this is significant  $p < 0.01$ . The study did not demonstrate whether this was a genuine hypnotic effect or simply a response to the additional attention from the therapist.

## **U RESEARCH**

### **Ulcers**

1991

Schwarz, Shirley P.; Blanchard, Edward B. (1991). Evaluation of a psychological treatment for inflammatory bowel disease. Behaviour Research and Therapy, 29 (2), 167-177.

Compared the effectiveness of a multicomponent behavioral treatment package, which included inflammatory bowel disease (IBD) education, progressive muscle relaxation, thermal biofeedback, and training in use of cognitive coping strategies, with the effectiveness of symptom-monitoring as a control condition. The treatment group consisted of 11 IBD patients (aged 25-62 yrs); 8 of 10 persons (aged 25-71 yrs) in the control group completed treatment. At posttreatment, the treatment group showed fewer reductions in symptoms (5) than the symptom-monitoring controls (8). However, treated Ss perceived themselves as coping better with IBD and as feeling less IBD-related stress. It is hypothesized that the differences in treatment responses may be related to differences between Ss with ulcerative colitis and Ss with Crohn's disease.

Whorwell, P. J. (1991). Use of hypnotherapy in gastrointestinal disease. British Journal of Hospital Medicine, 45, 27-29.

Recent controlled studies in the field of gastroenterology have shown that hypnotherapy is unequivocally beneficial in conditions such as irritable bowel syndrome and peptic ulceration. There is also some evidence for influence on certain physiological functions. Further research should help to define more clearly the role of this controversial form of therapy.

#### NOTES

This is a summary of work the authors are doing in gastroenterology. The authors are doing pilot work with inflammatory bowel disease and also ulcerative colitis. Patients are given an idea of the pathophysiology. "First subjects are asked to place a hand on their abdomen and feel warmth and then to relate this sensation to the relief of pain, spasm, bloating etc. Second they are asked to visualize a river and imagine that it is their gut. They are then told to modify the flow in order to achieve a more satisfactory bowel habit. For instance it would be suggested to a subject with loose bowels that a fast-flowing river with broken water is changed into a much more slow, smoothly flowing one. To the trainee therapist these suggestions sound very unconvincing but they do seem to work.

Patients often take many weeks to respond and this can be very testing for the resolve of both patient and doctor alike. Some patients seem to adopt a very passive approach to treatment, expecting the therapy to work rather akin to taking a tablet--they attend once a week and wait for something to happen." (p. 29). [They have to be taught that they must make the treatment work for themselves.]

1990

Schwarz, Shirley P.; Taylor, Ann E.; Scharff, Lisa; Blanchard, Edward B. (1990). Behaviorally treated irritable bowel syndrome patients: A four-year follow-up. Behaviour Research and Therapy, 28 (4), 331-335.

A 4-yr longitudinal study evaluated 19 patients (aged 23-60 yrs) suffering from Irritable Bowel Syndrome (IBS) who had completed a multicomponent treatment involving progressive muscle relaxation, thermal biofeedback, cognitive therapy, and IBS education at baseline. 17 Ss rated themselves as more than 50% improved. Six of the 12 Ss who submitted symptom monitoring diaries met the criteria for clinical improvement, (i.e., achieving at least a 50% reduction in primary IBS symptom scores). The means on all measures at long-term follow-up were lower than those obtained prior to treatment. When follow-up symptom means were compared with pretreatment means, significant reductions were obtained on abdominal pain/tenderness, diarrhea, nausea, and flatulence.

1989

Klein, Kenneth B.; Spiegel, David (1989). Modulation of gastric acid secretion by hypnosis. Gastroenterology, 96, 1383-1387.

#### NOTES

The ability of hypnosis to both stimulate and inhibit gastric acid secretion in highly hypnotizable healthy volunteers was examined in two studies. In the first, after basal acid secretion was measured, subjects were hypnotized and instructed to imagine all aspects of eating a series of delicious meals. Acid output rose from a basal mean of 3.60 to 6.80 ... with hypnosis, an increase of 89% ( $= .0007$ ). In a second study, subjects underwent two sessions of gastric analysis in random order, once with no hypnosis and once under a hypnotic instruction to experience deep relaxation and remove their thoughts from hunger. When compared to the no-hypnosis session, with hypnosis there was a 39% reduction in basal acid output ... and an 11% reduction in pentagastrin-stimulated peak acid output ...  $p < .05$ . We have shown that different cognitive states induced by hypnosis can promote or inhibit gastric acid production, processes clearly controlled by the central nervous system. Hypnosis offers promise as a safe and simple method for studying the mechanisms of such central control

Tosi, D. J.; Judah, S. M.; Murphy, M. A. (1989). The effects of a cognitive experiential therapy utilizing hypnosis, cognitive restructuring, and developmental staging in psychological factors associated with duodenal ulcer disease: A multivariate experimental study. Journal of Cognitive Psychotherapy, 3, 273-290.

This study evaluated the effects of a Cognitive Experiential Therapy (CET)--in the past referred to as Rational Stage Directed Hypnotherapy--Cognitive Restructuring (CR), Hypnosis Only (HO), and a no-treatment control condition on the duodenal ulcer syndrome. CET is a systematic, stage-directed therapy that employs hypnosis and the cognitive restructuring of self-defeating cognitive, emotional, physiological, and behavioral tendencies. Seven criterion variables were assessed using two standardized instruments and questionnaire data. The standardized instruments included the Millon Behavioral Health Inventory (MBHI) and the Common Beliefs Survey III (CBS). Twenty-five volunteer duodenal ulcer patients were subjects in a 4 x 3 factorial design with repeated measures consisting of the four treatments and pretest, posttest, and follow-up. There was a significant treatment effect, and effects were observed on personality coping styles, beliefs and locus of control scales, and on gastrointestinal disturbance. CET appeared to have an ameliorative effect on psychological factors associated with duodenal ulcer.

1988

Colgan, S. M.; Faragher, E. B.; Whorwell, P. J. (1988, June 11). Controlled trial of hypnotherapy in relapse prevention of duodenal ulceration. Lancet, 1299-1300.

30 patients with rapidly relapsing duodenal ulceration were studied to assess the possible benefit of hypnotherapy in relapse prevention. After the ulcer had healed on treatment with ranitidine, the drug was continued for a further 10 weeks during which time patients received either hypnotherapy or no hypnotherapy. The two randomly selected groups were comparable in terms of age, sex, smoking habits, and alcohol consumption. Follow-up of both groups of patients was continued for 12 months after the cessation of ranitidine. After 1 year, 8 (53%) of the hypnotherapy patients and 15 (100%) of the control subjects had relapsed. The results of this study suggest that hypnotherapy may be a useful therapeutic adjunct for some patients with chronic recurrent duodenal ulceration.

#### NOTES

The aetiology of duodenal ulceration is poorly understood but it is probably multifactorial. ... Stress, both psychological and physical, has since been shown to affect gastric emptying and the secretion of acid and pepsin, but attempts to causally link stress and peptic ulcer disease have produced conflicting results.

"Hypnotherapy can modify the response to betazole-stimulated gastric acid secretion, although the mechanism by which this is mediated remains unclear" (p. 1299).

"The active [treatment] group received 7 sessions of hypnotherapy and were given an audio tape for daily autohypnosis; the other group were seen as often, but did not receive any hypnotherapy. The ranitidine was then stopped and both groups were reviewed every 3 months for a further year, with the active group receiving hypnotherapy at their follow-up visits. All subjects had an endoscopy at the end of the study, or sooner if a symptomatic relapse occurred.

"Hypnosis was induced as previously described, with attention focused on the abdomen by the use of the patient's hand. They were asked to imagine warmth beneath the hand and to relate this to the control of gastric secretion. Reinforcement by visualization was used if the patient had this ability" (p. 1299).

At the end of a year, on follow up, the patient relapse rate was 53% and controls relapse was 100%, a difference significant at  $p = 0.01$ .

In their Discussion, the authors state, "This study shows that hypnotherapy is helpful in maintaining remission in those patients with duodenal ulceration who are particularly prone to relapse. ... In this model, hypnotherapy might operate at a variety of levels in the disease process: it could act in a nonspecific psychotherapeutic sense increasing 'coping' capacities and decreasing perceived stress. Alternatively, hypnotically induced relaxation may affect gastric acid secretion, and there is some experimental evidence for this.

"The early relapse rate in the hypnotherapy subjects was similar to that of controls, but subsequently the curves showed a much greater separation. This finding could indicate that there is a subgroup of subjects who are particularly responsive to therapy. However, a detailed review of psychological and clinical parameters did not reveal any specific feature that could be used to predict a response to this form of treatment" (pp. 1299-1300).

## NOTES

2:

Current etiology of duodenal ulcers includes the presence of bacteria *Helicobacter pylori* which is important in relapse. In order to compare treatments we must know what is the status of each group regarding the presence of this bacteria. Current treatment of duodenal ulcer includes metronidazole, amoxicillin and tetracycline to kill it. [Editor's Note: This appears to be a critique of the research methodology rather than notes on the article itself.]

1966

Zane, M. D. (1966). The hypnotic situation and changes in ulcer pain. International Journal of Clinical and Experimental Hypnosis, 14 (4), 292-304.

This is a study of internal and external hypnotic conditions associated with changes in pain developed during 5 hypnosis sessions in a patient with an acute duodenal ulcer. The 12 increases and 8 decreases in pain studied were found to be related to the interaction of coexisting reactions directed toward shifting social and private goals. Pain was associated with conflict among these reactions; intensification of pain occurred as a train of self-propagating internal events increased the conflict; relief of pain accompanied a reduction in the conflict. Increasing bodily disorganization resulted as shifts in focus of attention among social and private goals resulted in the rapid growth of conflicting mental and physical processes. An external stimulus, in the form of a highly individualized hypnotic suggestion, was often required to stop the disorganizing processes.

1936

Chappel, P. M.; Stevenson, T. (1936). Group psychological training in some organic conditions. Mental Hygiene, 20, 588-597.

#### NOTES

This article was cited by Stoyva, J. & Anderson, C. (1982) and notes are taken from that article. Stoyva, J. & Anderson, C. (1982) A coping-rest model of relaxation and stress management. In L. Goldberger & S. Breznitz (Eds.) Handbook of Stress: Theoretical and Clinical Aspects. N. Y.: The Free Press. Pp. 745-763:

#### Unconscious

1995

Pribram, Karl H. (1995). Brain in perception: From Kohler's fields to Gabor's quanta of information. In Proceeding of the 39th Congress of German Society for Psychology (pp. 53-69).

[The following material was taken from a paper provided by the author as a replacement for a presentation he made on the same topic at the Annual Meeting of the American Psychological Association, 1994, Los Angeles.]

Pribram presents the view that neuroelectric field theory (similar to theories proposed by Kohler and by Lashley earlier in this century) account for complexities observed in the relationship between awareness/perception and sensation. "Nerve impulse generation and transmission in neuronal circuits is but one of the important electrical characteristics of neural tissue. Another characteristic is the production of patterns of pre- and post-synaptic polarizations in axonal and dendritic arborizations. ... [which] are produced everywhere in the brain cortex when nerve impulses arrive at synapses as a result of the fact that the impulses become attenuated due to decreased fiber size resulting from the branching of axons" (p. 53). The polarizations develop a wave front.

Georg von Bekesy performed experiments on tactile perception that demonstrated the complex relationship between sensation and awareness. We often 'perceive' an object as external to us, even though the immediate specific neural stimulation is of receptors and from there activity is transmitted to the neurons of the brain. Thus we 'see' an object as external to us, even though the light reflected from that object produces an image on our retina. The same kind of externalized projection occurs for hearing. Touch is ordinarily perceived as at the same location as the stimulation (i.e. in the body), except that the von Bekesy experiments demonstrated that touch could also be perceived at a distance, that is, outside the body, if conditions were appropriate.

In the von Bekesy experiments, a pair of vibrators were used to stimulate two fingers, with each vibrator actuated by the same series of clicks and with the delay of time between the clicks varied. "The interesting point in this experiment is that for the condition in which there is no time delay the vibrations are localized between the two fingers where no skin is present" (p. 55). When two vibrators are placed on the thighs, the experimental subject can, by moving the knees apart, experience the vibratory sensation localized in the open space between the knees! Such an externalization of tactile perception is observed in everyday life, as when in using a knife we seem to sense the edge of the knife in order to make the appropriate movements.

Following from von Bekesy's work, it seems that only some neural processes lead to awareness. "In fact, instrumental (often automatized) behavior and awareness are to a large extent opposed; the more efficient a performance, the less aware we become. ... for the neuroscientist, the question becomes: What kinds of neural activity allow awareness to be inversely related to automatized action?"

"Patterns of synaptodendritic polarizations and nerve impulses are two kinds of processes that function reciprocally. A simple hypothesis states that the more or less persistent designs of dendritic field polarization patterns are coordinate with awareness (Pribram, 1971, Chapter 6). This view carries the corollary that circuits of nerve impulses per se and the behavior they generate are unavailable to immediate awareness. Even the production of speech is 'unconscious' at the moment the words are spoken" (pp. 55-56).

Some additional information comes from the experimental work of Ben Libet (1966, 1994), in which direct stimulation of brain tissue in waking subjects yields reports of awareness (of a particular part of the body tingling or being in a certain position). However, the awareness occurs 0.5 to 5 seconds post-stimulus, indicating that "electrical stimulation must set up some state in the brain tissue, and only when that state has been attained does the patient become aware" (p. 56).

The evidence of electrical fields comes from using both high pass filters and low pass filters on the electrical activity generated by the brain and picked up on EEG. There are 'bursts' of spikes, and onset of the field effect precedes the initiation of spikes. "Just as depolarization of axon membranes is a necessary precursor of the generation of action potentials, so also is the local build up of synaptodendritic field potentials a precursor to the recruitment of action potentials in post synaptic neurons" (p. 57).

Maps of the receptive field of an axon can be developed (e.g. using Kuffler's procedure). However, stimulation outside of that receptive field can change that axon's response--a field effect "produced in a more extended field of potentials occurring in neighboring synaptodendritic fields" (p. 58). In this investigation, the relationship between local field potentials of the rat somatosensory system (whisker stimulation) is studied using the Kuffler procedure. Whiskers were stimulated by rotating cylinders which varied in spacing of grooves and speed of rotation. The resulting variation in density of stimulation yielded a map or manifold of cortical bursts/spikes. Pribram's research fits the experimentally generated data to a theoretical model derived from signal processing theory, using "a rectangular window in the spatiotemporal domain to constrain the two dimensional sinusoidal signal" (p. 62). They noted that the manifolds obtained from somatosensory cortex recordings were similar to receptive field characteristics measured at the primary visual cortex, which "suggests that this process is ubiquitous in the cortical synaptodendritic network" (p. 63).

Referring to the Fourier theorem (that "the original pattern can be reconstituted, reconstructed, by performing the inverse transform" p. 65), the author notes that experimental data are more complex than would be predicted. The author suggests that it would be helpful to employ the Gabor uncertainty principal, in which Gabor (1946) described as a fundamental unit a 'quantum' of information. "Gabor became interested in describing a joint spacetime-spectral domain because he noted that there is a limit on the precision to which simultaneous measurement of spectral components and [space]time can be made. ... the Gabor relation describes the composition of a sensory channel, and the residual uncertainty defines the limits of channel processing span" (p. 65). The Gabor relationships are similar to those described in quantum physics by Heisenberg, so Gabor referred to a quantum of information, which he named a Logon.

The author describes his experimental results as exhibiting Gabor elementary functions, which "are composed in dendritic arborizations, receptive fields of the neurons from which we are recording. ... Each logon, i.e. each such receptive field module, is a channel. According to Gabor, the ensemble of such channels is a measure of the degrees of freedom, the number of distinguishable dimensions or features (e.g., spatial and temporal frequency, degrees of orientations, preferred direction, color). The minimum uncertainty relation expressed by Gabor elementary functions sets the limits on the information processing competence of each of these channels" (pp. 65-66).

In a Coda to this chapter, the author notes that there is a discrepancy between fields (composed of arrival and departure patterns of synapto-dendritic polarizations) and perceptual awareness which "occurs within spacetime coordinates." Discussion of the discrepancy may be found in Pribram and

Carlton (1986). Holonomic brain theory in imaging and object perception. *Acta Psychologica*, 63, 175-210; and in Pribram (1991), Lecture 6 of *Brain and Perception*. Basically, there is top-down organization imposed by the cortical system on peripheral sensation/perception. "These various systems not only relate to one another in a hierarchical manner but that the higher order systems operate on lower order systems by interpenetrating. Thus, we ordinarily, immediately perceive named and categorized objects, not just sets of images (though we are capable of 'imaging' by suspending the higher order processes). There is abundant evidence of such top-down penetration in the visual, auditory and somatosensory neural systems" (p. 66).

1994

Erickson III, James C. (1994). The use of hypnosis in anesthesia: A master class commentary. [Comment/Discussion] .

#### NOTES

The author answers questions sent by a reader: "When and how can I use hypnosis or hypnotic principles in preparing patients for surgery and while undergoing surgery? Are there studies or experiential evidence to use as guides for the selection of appropriate cases or types of operations?" (p. 8). SUMMARY "There are unequivocal benefits derived from the use of positive suggestion and hypnotic techniques in all patients who must submit to surgical and obstetrical procedures with modern general or regional anesthesia. We must learn, and we must teach our colleagues, the advantages of consistent use of the semantics of positive suggestion. When we help patients focus on the desired comfort, safety, and satisfaction obtained with well-managed modern anesthesia and surgery, they will enjoy great benefit, especially when we use the auditory perception that often exists during general anesthesia. Rather than regarding hypnotic suggestion as a mere adjunct to anesthesia, it should be regarded as an integral part of surgical and obstetrical care" (pp. 11-12).

Tellegen, Auke (1994, October). Comments on Symposium "Hypnosis Reconsidered". [Comment/Discussion] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Francisco, , as part of Symposium titled: Hypnosis reconsidered.

#### NOTES

I agree that the topography of issues has become more complicated. I would want to look at the distinction between "special process" theories and other views. I still think there is some non-trivial element of difference between the two groups; but it's not one well defined group vs another, with people now distributed across a continuum and to some degree moving around. At the poles of these theoretical positions are real differences (e.g. in favorite hypotheses, research methods). But there has been some closing of the gap between these two poles.

Historically, rapprochement in psychological theories has been the result of hard nosed behaviorism going soft and cognitive in the last 15 years. The behavioral paradigm is the ancestor of the social cognitive view within hypnosis research. You can see the evolution in Ted Barber, and eventually it was carried forward by Spanos. Today all major views of hypnosis have become systems models, requiring flow diagrams. We are comparing more parsimonious (social cognitive) with more surplus meaning positions. Parsimony is a good way to advance knowledge, making a theory more complex only when you have to. The major social psychological positions are widely shared; many are close to common sense. The question is, are they sufficient to the data? The behavioral approach recognizes individual differences but doesn't weight them heavily; it may treat individual differences as a curve fitting issue, or may treat them as training outcome. Associated with the behavioral approach is a tendency not to explore fully individual differences from a naturalistic perspective. The difference in

research approaches between the two poles is loosely aligned with Cronbach's correlational vs experimental approaches to psychology.

The role of individual differences in hypnotizability however may be structural, in which case different flow diagrams may be needed, depending on trait levels, on the eliciting circumstances, etc. Thus we might need different flow diagrams for different levels of hypnotizability.

The role of imagination remains unexplicated across theoretical positions. Everyone since the Franklin committee thinks imagination is important in hypnosis; it is urgent to explore it. Even the most constructivist perspective on perception doesn't equate perception with imagination.

We now must turn the flow diagrams into neurobehavioral models, like Helen Crawford is attempting to do.

#### COMMENTS FROM THE AUDIENCE:

**Kenneth Bowers:** The people flowing out from the neodissociation camp are going in different directions. I think that ideas are directly activated, Helen Crawford and John Kihlstrom would think it involves more effort on the part of the hypnotized Subject. Irving Kirsch agrees that at some level the words have to be processed, but doesn't imply great effort. There is some kind of preattentive processing in hypnosis, the kind of processing which allows you to turn when you hear your name, in normal circumstances. Does it still make sense to talk about the field of hypnosis research or theory in terms of the two camps? I fear a return to the situation when the term "two camps" was justified.

1993

Miller, Mary E.; Bowers, K. S. (1993). Hypnotic analgesia: Dissociated experience or dissociated control?. Journal of Abnormal Psychology, 102, 29-38.

High-hypnotizable subjects were found superior to low-hypnotizable subjects in degree of pain reduction produced by hypnotic analgesia and by a stress-inoculation (cognitive-therapy) procedure. But, stress inoculation and not hypnotic analgesia impaired performance on a cognitively demanding task that competed with pain reduction for cognitive resources. This outcome implies that hypnotic analgesia occurs with little or no cognitive effort to reduce pain, challenging the social psychological theory of hypnotic response, at least in high-hypnotizable individuals. The findings are also incompatible with the concept of dissociated experience wherein the pain and cognitive efforts to reduce it are separated from consciousness by an amnesia-like barrier. But the results do support the concept of dissociated control, which proposes that suggestions for hypnotic analgesia directly activate pain reduction and thereby avert the need for cognitive strategies to reduce pain.

Woody, Erik Z. (1993, October). Factors, facets, and fiddle-faddle. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL.

#### NOTES

The classic suggestion effect implies involuntary behavior. A theory by Norman & Tim Shallice (published in a book on cognitive neuropsychology by Shallice) explains the classic suggestion effect in terms of underlying control processes.

There are 2 complementary systems: 1. contention scheduling (routine acts that don't require conscious control, activating schemas through environmental events and other schemas) for well learned habitual tasks. 2. supervisory attentional system - nonroutine actions in centralized processes, accessing unique information, operating only indirectly by modulating lower level control system, biasing their selection of schemas by system #1.

These two systems permit the sense of behavior being automatic or willed. The theory can be used to explain hypnotic nonvolition. For highs, hypnosis may partly disable System #2, dissociating lower

levels of control and resulting in genuine changes in behavior because System #1 would be more enabled, triggered directly by co-active schemas and environmental stimuli. This increased dependence on a lower level of control would not rule out a wide range of behavior. It's mainly novel or very complex behaviors that would diminish, plus exercise of will.

The model also illuminates our understanding of behavioral rigidity and the tendency for thought/action to be triggered by [suggestions?]. Spontaneous voluntary behavior would be diminished. (See for example Orne's studies of the effect of apparent power outage during an experiment, in which high hypnotizable Ss did not move or leave the room but sat passively, whereas low hypnotizable simulating Ss simply got up and left.)

Also a weaker "supervisor" would lead to disinhibition of inappropriate or peculiar associations or behavior. In labs one sees few such triggers, although Hilgard observed drug flashbacks. The phenomena of hypnosis sequelae appear like a disinhibition of experiences.

Hypnotic analgesia follows this model too, an automatic and controlled processing of perceptual input. Amnesia that follows hypnosis can be explained by this theory. Shallice has a model of how memory is affected: memory is a higher control system, enabling the handling of non-routine situations. Confronted by a nonroutine memory problem, the supervisory system formulates a model of what [the information] should look like, pulls out memories, and compares the model. If hypnosis interferes with the supervisor function it should interfere with memory (the description and verification phases) leading to [hypnotic amnesia?]. [With hypnosis one would predict]: 1. Poor access to memories requiring description (not overlearned material). Recall should demonstrate good cued memory but poor free recall. [It has been observed that] hypnotic amnesia selectively impairs free recall rather than recognition recall. 2. Hypnotized Ss should show poorer verification (the ability to discriminate irrelevant from correct associations). Many studies have shown this, with impoverished verification (e.g. the "discovery" of elaborate previous lives).

A dissociated control theory of hypnosis is thus possible, emphasizing a loss of control of supervisory system processes. It would implicate changes in frontal lobe processing. The essence of hypnosis, according to this approach, is the bypassing of executive control, and the frontal lobe is viewed as a center of executive control.

There are several ways that hypnosis suggests inhibition of frontal lobe functioning: 1. impoverishment of self initiated behavior 2. other-directedness 3. frontal amnesia (unable to distinguish true memories from irrelevant memories; prone to confabulation, especially when probed with false information) 4. poorer in temporal or sequential organization in memory.

How do we proceed to make this theoretical approach useful? We should do more neuropsychological studies, as Helen Crawford does. They emphasize the inhibition of frontal lobe functions.

Testable hypotheses arise: 1. Hypnotizable Ss should show the same kind of problem solving problems as frontal lobe patients. 2. Memory of hypnotized Ss should be like patients with frontal amnesia.

**1992**

Anonymous (1992, May). Studies: Learning can occur while under anesthesia. Daily Breeze (South Bay, Los Angeles County).

Surgical patients can absorb information while they're knocked out, and even learn tips that help with recovery, researchers reported Friday at a symposium on memory and anesthesia.

"Researchers at Papworth Hospital in Cambridge, England, studied 51 cardiac patients, one-third of whom heard a tape of positive 'therapeutic suggestions' during surgery. Another third heard batches of word associations; the rest heard a blank tape.

"Patients who were played the suggestion tape - which told them they were doing well, or wouldn't feel much pain - left the hospital 1 1/2 days earlier on average than other patients.

"Another study, from the University of Arizona College of Medicine, found that surgical patients who heard specific pain-relief suggestions recovered more easily than those hearing vague advice such as, 'Think of being well.'

"These are still early days to invest in every operating suite buying a tape recorder to play for the patients,' said Dr. Sunit Ghosh, a researcher with the Papworth team. 'But this definitely does hold promise.'

"Scholars at the second annual Symposium on Memory and Awareness in Anesthesia said patients rarely wake up recalling - unprompted - something that happened during anesthesia.

"But several studies showed subconscious learning while the patients were out cold.

"Not everyone accepted the findings.

"It shows an enormous sensitivity on the part of the brain, if it can be shown,' said Eugene Winograd, an Emory University psychologist and organizer of the Emory- sponsored conference. 'I'm not confident it has been shown yet.'

"Some researchers in other studies found no association between messages heard during anesthesia and learning.

"Dr. Alan Aitkenhead, professor of anesthesia at the University of Nottingham in England, found no significant difference between patients who heard recuperative suggestions and patients who were treated to a deliberately dull history of the hospital where they were.

"Aitkenhead said his study kept all patients quite deeply anesthetized, and that may be why they might not have learned as much as patients in other studies.

"By far, most likely, it's a difference in levels of anesthesia,' he said.

"The Papworth researchers, in another study, found that some patients showed strong word associations after hearing tapes of groups of words during surgery; but other patients under a different anesthesia didn't.

"There needs to be standardization of our testing,' Ghosh said. 'I think it's partly related to the anesthesia technique and partly related to the way in which material is presented to the patient.'

"Dr. Peter Sebel, an Emory anesthesiologist and conference organizer, said that if patients can retain information about a speedy recovery, they probably retain other information, too - for example, a surgeon's discouraging operating-room assessment of their prognosis."

Blankfield, Robert; Scheurman, Kathleen; Bittel, Sue; Alemagno, Sonia; Flocke, Sue; Zyzanski, Stephen (1992, October). Taped therapeutic suggestions and taped music as adjuncts in the care of coronary artery bypass graft patients. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

18 studies have explored the issue with an experimental design; half used tapes, half didn't; majority of studies found benefits; 2 were of heart surgery patients.

This study used taped suggestions with coronary bypass patients. Used tape recorder rather than person delivering suggestions because it was more convenient; used tape intra-surgery and post-operatively for more impact.

We hypothesized: shorter length of stay, less narcotic analgesia, less anxiety, faster recovery, more positive mental outlook, resume activities sooner, have less symptoms postoperatively, etc.

Used a prospective, randomized, single-blind trial in 2 community hospitals in Cleveland with coronary artery bypass graft surgery patients. Study was done between Dec 1989 - Feb 1992.

3 groups were involved: (1) Suggestion, (2) music, and (3) tape. Control subjects had a blank tape. Tapes were played continuously and repeatedly with headphones. Postoperatively, a different tape was played.

**Excluded:** Patients with emergent surgery, hearing impairment, poor comprehension of English, patients who died in hospital, patients whose hospital stay lasted longer than 14 days (3 of them). 5% of sample were eliminated for last 2 reasons.

**Music:** Herb Ernst, Dreamflight II. **Suggestions:** Music background, permissive, based on Evans & Richardson's study.

**Outcome Measures:** Nurse assessment of anxiety and progress post operatively, Symptom scale, Depression scale.

Mean age 62, 3/4 men, 92% white, 75% married. The groups were same on a variety of preoperative variables (status of heart and arteries). Length of stay was 6.5 in all 3 groups. No difference in narcotics use, in nurse assessment of anxiety or of progress; of depression scale, or activities of daily living.

Recategorized data into patients who said the tapes were helpful (both music and suggestion) N = 33 vs the other patients N = 62. No difference in the variables evaluated.

**Bruner, Jerome (1992).** Another look at New Look 1. American Psychologist, 47, 780-783.

New Look 1 was not initially about the unconscious. It was the new mentalism on its way to becoming the Cognitive Revolution. Its subsequent concern with "unconscious defense mechanisms," although useful, was not its main theoretical thrust. Its principal questions have always been how and where selective processes operate in perception. Obviously, many such processes are unconscious, for consciously guided attention and search become automatized easily in use. And they are fairly flexible as well. So how smart is "the unconscious"? Not very, but a big help anyway.

**Erdelyi, Matthew, Hugh (1992).** Psychodynamics and the unconscious. American Psychologist, 47, 784-787.

The original New Look integrated the constructivist-psychodynamic traditions of Bartlett and Freud. The unconscious (Greenwald's "New Look 3") is a logically different idea, although in practice it is often intertwined with constructivist - psychodynamic approaches. The unconscious is a pretheoretic term with a variety of problems: It has multiple and unsettled meanings; null reports need not signify null awareness; the conscious-unconscious dichotomy implied by the limen may not exist; even "absolute subliminality" (chance-level accessibility) is relative to the time interval of testing, as accessibility can increase to above-chance levels over time (hypermnnesia). Yet, the phenomena that the unconscious sloppily subsumes are not simple or dumb. The capacity of subliminal perception should not be confused with the capacity of subliminal (unconscious) memory and cognition.

**Gravitz, Melvin A. (1992, October).** Historical and legal issues. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

## NOTES

The 1976 Chowchilla kidnaping case in California stimulated interest in using hypnosis for forensic investigation; in the same year, it was used in a case of airline hijacking in the Mediterranean to Uganda. Hypnosis is used for obtaining "leads" and doesn't claim to develop "the truth."

Other uses include: lifting amnesia of witnesses and victims of trauma--including but not limited to crime; obtaining additional information in nonamnesic Ss; evaluation of a subject's mental condition (e.g. multiple personality disorder vs malingering, as in the Bianchi case). In each use, hypnosis is not infallible, is not complete. But no procedure is. Motivation, resistance, transference are all critical.

Historic questions: 1. whether coercion is entailed 2. impact of hypnosis on memory 3. possible harm to subject, physically and mentally

The coercion issue dates to Mesmer, whose procedures led to accusations of immoral suggestions. In the 1880s Charcot said no one could be forced to do anything while the Nancy school (Liebeault) said they could. Since then we have seen laboratory studies using student volunteers, fake "poison," rubber daggers, etc., as well as recent "real life" studies where Ss were induced to violate their morals (see Watkins). Review articles include those by Jacob Conn of Baltimore and the 1985 JAMA article written by a panel headed by Martin Orne.

For impact of hypnosis on memory, see the Orne report which did not fully support using hypnosis for memory enhancement.

Regarding possible harm to a hypnotic subject in the 19th century, a young man's death was attributed to nervousness and exhaustion and diabetes due to repeated hypnosis. Other studies of death (of chickens, of a frog) due to repeated hypnotization were published. Now the consensus is that hypnosis is not dangerous (but incompetence using hypnosis may be dangerous).

#### **LEGAL PRECEDENTS.**

In 1897 a California court refused to accept testimony of a Subject who had been hypnotized. *People vs Eubanks*.

The 1950's Cornell case established that a person can be hypnotized for their own defense.

In 1963 the California supreme court ruled that a lower court made a mistake in not admitting testimony from someone who had been hypnotized.

In *Harding* (a Maryland case), the trauma victim, amnesic, was hypnotized one month later. The testimony was accepted. A 1983 Maryland appeals court overturned it, influenced by the California *Shirley* case.

In 1983 *Hurd* case, a victim, hypnotized, identified her husband as attacker. Lower court didn't permit the testimony; then a higher court reversed it. The court issued what are known as the Hurd rules, governing testimony that is acceptable: 1. hypnotist is licensed psychologist or psychiatrist with training in hypnosis 2. hypnotist must be independent of both the prosecution and defense 3. all information given to the hypnotist about the case must be written 4. hypnotist must obtain a nonhypnotic account of the memory before hypnosis is used. 5. must have taped record of the hypnosis sessions (preferably videotaped) 6. only hypnotist and subject should be present in the room

Soon after, California had the *Shirley* case. The California court ruled hypnosis per se is unreliable because it produces confabulation. This decision had a chilling effect throughout the country for several years.

In 1987 we had *Rock vs Arkansas*, the first and only case involving hypnosis to come before the U. S. Supreme Court. Vicky Rock shot her husband. Under hypnosis, she remembered she did not have her finger on the trigger, and her husband grabbed her and shook her. Lower court wouldn't admit the testimony of the gun expert, who testified the trigger was sensitive to jarring. Supreme Court ruled defendants (not necessarily others) could use hypnosis in their own defense.

Greenwald, Anthony G. (1992). New Look 3: Unconscious cognition reclaimed. *American Psychologist*, 47, 766-779.

Recent research has established several empirical results that are widely agreed to merit description in terms of unconscious cognition. These findings come from experiments that use indirect tests for immediate or long- term residues of barely perceptible, perceptible-but-unattended, or attended-but-forgotten events. Importantly, these well-established phenomena--insofar as they occur without initially involving focal attention--are limited to relatively minor cognitive feats. Unconscious cognition is now solidly established in empirical research, but it appears to be intellectually much simpler than the sophisticated agency portrayed in psychoanalytic theory. The strengthened position of unconscious

cognitive phenomena can be related to their fit with the developing neural network (connectionist) theoretical framework in psychology.

Jacoby, Larry L.; Lindsay, D. Stephen; Toth, Jeffrey P. (1992). Unconscious influences revealed: Attention, awareness, and control. American Psychologist, 47, 802-809.

Recent findings of dissociations between direct and indirect tests of memory and perception have renewed enthusiasm for the study of unconscious processing. The authors argue that such findings are heir to the same problems of interpretation as are earlier evidence of unconscious influences--namely, one cannot eliminate the possibility that conscious processes contaminated the measure of unconscious processes. To solve this problem, the authors define unconscious influences in terms of lack of conscious control and then describe a process dissociation procedure that yields separate quantitative estimates of the concurrent contributions of unconscious and consciously controlled processing to task performance. This technique allows one to go beyond demonstrating the existence of unconscious processes to examine factors that determine their magnitude.

Kihlstrom, John F.; Barnhardt, Terrence M.; Tataryn, Douglas J. (1992). The psychological unconscious. American Psychologist, 47, 788-791.

In response to Greenwald's article on contemporary research on unconscious mental processes, the authors address three issues: (a) the independence of much recent research and theory from psychodynamic formulations; (b) the broad sweep of the psychological unconscious, including implicit perception, memory, thought, learning, and emotion; and (c) the possibility that the analytic power of unconscious processing may depend both on the manner in which mental contents are rendered unconscious and the manner in which they are to be processed.

Lewicki, Pawel; Hill, Thomas; Czyzewska, Maria (1992). Nonconscious acquisition of information. American Psychologist, 47, 796-801.

The authors review and summarize evidence for the process of acquisition of information outside of conscious awareness (covariations, nonconscious indirect and interactive inferences, self-perpetuation of procedural knowledge). Data indicate that as compared with consciously controlled cognition, the nonconscious information - acquisition processes are not only much faster but are also structurally more sophisticated, in that they are capable of efficient processing of multidimensional and interactive relations between variables. Those mechanisms of non-conscious acquisition of information provide a major channel for the development of procedural knowledge that is indispensable for such important aspects of cognitive functioning as encoding and interpretation of stimuli and the triggering of emotional reactions.

Loftus, Elizabeth F.; Klinger, Mark R. (1992). Is the unconscious smart or dumb?. American Psychologist, 47, 761-765.

How sophisticated is unconscious cognition? This is one of the most fundamental questions about the unconscious that has been posed by research psychologists over the past century. Anthony Greenwald takes a contemporary look at this classical problem and concludes that unconscious cognition is severely limited in its analytic capability. In response, other leading scholars agree that the reality of unconscious processes is no longer questionable. Although there is some disagreement about just how sophisticated these processes are, the consensus is that exciting times are ahead for both research and theory concerning the mental processes involved in unconscious cognition.

Merikle, Philip M. (1992). Perception without awareness: Critical issues. American Psychologist, 47, 792-795.

## NOTES

This is the introduction to a group of articles. "To a large extent, this entire controversy over perception without awareness has centered on the issue, What constitutes an adequate behavioral measure of conscious perceptual experience? Depending upon one's answer to this question, the evidence for perception without awareness is either overwhelming or nonexistent.

The distinction is much more significant and interesting if conscious and unconscious processes lead to qualitatively different consequences than if unconscious processes are simply quantitatively weaker versions of unconscious processes. Three different qualitative differences have been established: 1. Groeger (1984, 1988) has demonstrated that words are coded differently depending on whether they are perceived with or without awareness. 2. Stroop effect research showed that prediction based on stimulus redundancy only occurs when subjects consciously perceive the predictive stimuli (Cheesman & Merikle, 1986). The fact that the color word predicted the name of the color patch on 75% of the trials was only used by the subjects to facilitate naming of the color patches when the words were clearly visible. 3. Marcel (1980) showed that conscious awareness is necessary for the selection of a context-relevant interpretation of a stimulus.

The important findings are that performance differs qualitatively across the aware and non aware conditions.

Rondi, Glenys (1992, October). Postoperative impact of information presented during general anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington, VA.

We tried to improve on the methodology in the literature. Thus we included a limited range of surgery procedures; standardized anesthesia; monitoring of anesthesia; suggestions that were only positive (the suggestions did not mention pain or nausea); patient-controlled analgesia in order to have a more accurate measure; and hypnotizability was measured. They do not equate the hypnotic state with the anesthesia state, but there may be an overlap in the ability to perceive and respond to suggestions in these two states.

All hysterectomy and bilateral [missed word ...ectomy] patients were approached, excluding those without English language, etc.

Bowers and she phrased simple, positive suggestions to maximize benefits; Suggestions lasted 3 minutes, and were repeated 3 times on a 60 minute tape. Brief melodies alternated with suggestions or with silence. Conditions included: 1. Suggestions 2. Melody 3. Suggestions + melody 4. Blank tape Half of the tapes contained suggestions; half not. It was a counterbalanced design. Double blind ratings were made by students.

State-trait Anxiety and Profile of Mood States were measured before surgery. Patients were reminded to listen to suggestions for recovery just before they fell asleep. MDs ordered premedication for the surgery "only if very necessary."

Patients rated their own recovery as -3 worse than expected to +3 better than expected; and completed a visual analogue scale. Then 24 hours later the researchers asked them if they remembered the tape, and if they had been given suggestions or not.

On Day 5 post operation they administered the Stanford C hypnotizability scale.

## RESULTS.

None of the patients recalled or dreamed anything that could be attributed to the period of anesthesia. There was a response bias to say "Yes" to "Did you have suggestions?" (34 of Suggestion patients and

28 of non-suggestion patients said "Yes" and there were 48 in each group. Taking response bias into consideration, patients with suggestions were above chance in saying "Yes" to "Did you have suggestions?"

Only 73 of the 96 completed the hypnotizability scale. Duration of the tape (therefore of surgery) was longer for the suggestion group (90 vs 72 minutes). So authors also did a univariate measure.

They divided morphine use by patient weight for each post operative day. The difference in dose for suggestion and no suggestion groups did not reach significance on Day 1 but on Day 2 patients who had suggestions used significantly less morphine.

The correlation matrix showed that patient age was negatively correlated with morphine use; subjected to 1-way ANOVA of covariance; the effect of suggestions remains significant.

Surgery time was covaried out, as it was associated with more negative post operative symptoms; patient age was a second covariate. None of the main effects or 2- way interactions were significant.

Hypnotizability, suggestion group, and their interaction were analyzed. Neither hypnotizability nor its interaction with suggestion contributed to any outcome variable.

Using only highs (13) and lows (12) for another analysis and 2x2 ANOVAS to examine suggestion by hypnotizability. Highs used significantly less morphine in the first hours, whether or not they received suggestions.

Even when weight is taken into account, hypnotizability accounted for significant amount of variance in first 24 hours. Highly hypnotizables' guesses about whether they were played a tape with suggestions was 100% accurate; guesses of lows were 42% accurate.

#### CONCLUSIONS.

Some patients show evidence of hearing, and of responding to suggestions. Hypnotic ability did not mediate the response; but patients with high ability showed 100% accuracy in guessing whether they were played suggestions, in the absence of confidence in their response. They may be particularly sensitive to their environment during general anesthesia.

1991

Block, Robert I.; Ghoneim, M. M.; Sum Ping, S. T.; Ali, M. A. (1991). Efficacy of therapeutic suggestions for improved postoperative recovery during general anesthesia. Anesthesiology, 75, 746-755.

There have been claims that the postoperative course of patients may be improved by presentation during general anesthesia of therapeutic suggestions which predict a rapid and comfortable postoperative recovery. This study evaluated the effectiveness of such therapeutic suggestions under double-blind and randomized conditions. A tape recording predicting a smooth recovery during a short postoperative stay without pain, nausea, or vomiting was played during anesthesia to about half the patients (N = 109), while the remaining, control patients were played a blank tape instead (N = 100). The patients were primarily undergoing operations on the fallopian tubes, total abdominal hysterectomy, vertical banding gastroplasty, cholecystectomy, and ovarian cystectomy or myomectomy. The anesthesia methods consisted of either isoflurane with 70% nitrous oxide in oxygen to produce end-tidal concentrations of 1.0, 1.3, or 1.5 MAC; or 70% nitrous oxide in oxygen combined with high or low doses of opioids. Assessments of the efficacy of the therapeutic suggestions in the recovery room and throughout the postoperative hospital stay included: the frequency of administration of analgesic and antiemetic drugs; opioid doses; the incidence of fever; nausea, retching, and vomiting; other gastrointestinal and urinary symptoms; ratings of pain; ratings of anxiety; global ratings of the patients' physical and psychological recoveries by the patients and their nurses; and length of postoperative hospital stay. There were no meaningful, significant differences in postoperative recovery of patients receiving therapeutic suggestions and controls. These negative results were not likely to be due to insensitivity of the assessments of recovery, as they showed

meaningful interrelations among themselves and numerous differences in recovery following different types of surgery. Widespread utilization of therapeutic suggestions as a routine operating room procedure seems premature in the absence of adequate replication of previously published positive studies. (Key words: Anesthesia, depth: Awareness, Memory, Recall, Learning.)

## NOTES

Patients ages 19-55 were accepted into the study and they were paid for participation. (Older patients were excluded to guard against memory or hearing problems.) Other criteria for exclusion were: ASA physical status 4 or 5 indicating significant systemic disease, visual or hearing problems, middle ear disease (because it increases probability of nausea and vomiting), if their condition might require heavy sedation, if they were currently taking medication that interferes with memory (e.g. benzodiazepines, if there were intolerance to opioids, or if there were a likelihood of using postoperative pain treatment other than opioids.

The Spielberger State-Trait Anxiety Inventory was administered before surgery. Either suggestions (lasting 6 minutes) or a blank tape were played through headphones, starting 5 minutes after the surgical incision. The tape was played once for the first 59 patients, continuously for the remaining 150 patients. The first 139 patients received additional verbal materials on the tape, for memory tests to test possibility of learning under anesthesia. Operating room sounds were recorded by a tape recorder near the patient's head, throughout period of unconsciousness (except when tape was being played).

After the first 25% of cases, the team decided that lack of effect on therapeutic suggestions attributable to type of anesthesia did not warrant restriction to a single anesthetic method; also, multiple presentations of the suggestions on tape did not show an effect different from a single presentation.

After the patient regained consciousness and was reoriented, pain, nausea, retching, and vomiting were assessed every 30 minutes. Pain was rated orally on a scale from 1 to 10 in the recovery room, then on visual analogue scales every 2 hours on the day of surgery and the second day, and every 4 hours on subsequent hospital days during waking hours. Variables that were rated by staff every 24 hours included: opioids, other analgesics, antiemetics, nausea, vomiting, retching, presence or absence of nasogastric tube, passage of flatus, bowel movement, fluid intake, solids intake, urination. Temperature was recorded every 4 hours for the first 2 days after surgery, and after that less often. The anxiety measures were repeated on Day 3 postsurgery, as well as self ratings and nurse ratings on physical and psychological recovery. Staff recorded length of postoperative hospital stay and reasons for any delay of discharge. Separate analyses were performed for patients receiving opioids via patient-controlled analgesia (52%) vs traditional administration (48%), but no differences were found for effects of therapeutic suggestions except on postoperative Day 8.

"The inability to detect beneficial effects of therapeutic suggestions probably was not due to insensitivity of the measures of recovery. These measures were sensitive enough to show numerous significant differences in recovery after different types of surgery" (p. 751). The authors supported their contention that the measures were sufficiently sensitive by demonstrating meaningful correlations among the measures themselves; and by demonstrating adequate statistical power for detecting the effects of theoretical interest--at least 1 day in postoperative hospital stay or one half day in fever.

Discussion: The authors note that a recent investigation that found positive results in a double-blind, randomized design with 39 hysterectomy patients (Evans & Richardson, 1988. Improved recovery and reduced postoperative stay after therapeutic suggestions during general anaesthesia. *Lancet*, 2:491-493) may not have controlled for variables such as presence of malignancy, physical status of patients before surgery, or ethnicity. Authors note that Evans and Richardson observed shorter periods of pyrexia despite there being no relevant suggestions, but no differences in pain intensity, nausea, vomiting, or urinary difficulties despite there being suggestions relating to those symptoms. There also

were no differences in mood and anxiety test scores postoperatively for the experimental and control groups.

The authors note that McLintock, Aitken, Downie, & Kenny (Postoperative analgesic requirements in patients exposed to positive intraoperative suggestions. *Br M J* 301:788-790. 1990) reported a 23% reduction in opioids by patients receiving suggestions, but no reduction in pain, nausea, or vomiting. They contrast the present study with these earlier studies that had obtained positive results.

"We studied patients who had more than one type of surgery to obtain a large sample size and to assess the possibility that beneficial effects of therapeutic suggestions would be restricted to certain types of operations. Had this been the case, interactions of therapeutic suggestions with type of surgery would have been significant in the overall analyses, and follow-up analyses would have indicated that they were attributable to beneficial effects of therapeutic suggestions for certain surgeries. This did not occur. The two types of surgeries involving the largest numbers of patients seemed particularly promising for demonstrating beneficial effects. It has been reported that therapeutic suggestions presented during anesthesia are likely to be less successful with major and extensive surgery. Certainly, surgery on the fallopian tubes and gastric stapling did not involve a great deal of tissue trauma and blood loss. Patients were motivated to have the surgery and to recover quickly; particularly motivated were those having operations on the fallopian tubes, who were very eager to become pregnant, and those having vertical banding gastroplasties, who wanted desperately to lose weight" (pp. 753-754).

"In practice, we observed no beneficial effects of therapeutic suggestions, and there was no hint that anesthesia methods influenced the efficacy of the therapeutic suggestions. Interestingly, anesthetic methods also did not influence learning under anesthesia in the implicit memory tests we have used previously. Patients anesthetized with nitrous oxide and opioids did not differ from those anesthetized only with inhalational agents. In general, implicit or unconscious memory occurs in patients regardless of anesthesia methods or dosages of drugs" (p. 754).

"The few significant effects of therapeutic suggestions in our study did not point toward a beneficial influence of these suggestions. We found, in fact, an increased frequency of retching (but not nausea or vomiting) in the experimental group. The multiple variables examined in this study increased the likelihood of significant differences arising by chance, such that the null hypothesis was rejected when it should have been accepted. This is the way we interpret the effect on retching---i.e., as a type I error. We used in our therapeutic suggestions one negative or exclusionary sentence, 'You won't feel nauseous or have to vomit', among several positive or affirmative statements, e.g., 'You will enjoy eating, drinking...You will swallow to clear your throat and everything will go one way, straight down. . . The food will taste good....Your stomach will feel fine.' We do not think that the negative sentence led to paradoxical results. Evans and Richardson (personal communication) used in their therapeutic suggestions a negative sentence ('You will not feel sick'), which they repeated, yet the reported incidence of nausea and vomiting did not differ between the experimental and control groups" (p. 754).

Brown, Jason W. (1991). Self and process: Brain states and the conscious present. New York: Springer-Verlag.

Author, from the Department of Neurology at New York University Medical School, presents a theory about the genetic unfolding of mental content (mind) through stages, from mental state into consciousness or into behavior. He relates the genesis of mind to brain development but avoids assuming that there is a straightforward correlation between brain development (e.g. myelination) and cognitive development or perception. To some degree, the theory is based on subjective report data and psychological symptoms. The author discusses issues that bear on the phenomena of nonvoluntary responding and dissociation that are reported or described by hypnotized persons.

"The nature of the mental state will determine the relation between self and world, and thus the interpretation given to agency and choice. ... The crossing of the boundary from self to world is a shift from one level in mind to another" (pp. 10-11).

"... if we begin with mind as primary and seek to explain objects from inner states and private experience, the discontinuity between inner and outer evaporates: mind is everywhere, a universe. ... Whereas before we thought to perceive objects, now we understand that we think them" (p. 19).

"The concept of a stratified cognition is central to the notion of a mental state .... This entails an unfolding from depth to surface, not from one surface to the next, a direction crucial to agency and the causal or decisional properties of consciousness" (p. 52). By unfolding from depth to surface, he means from Core, through Subconscious, then Conscious Private Events, and finally Extra-Personal Space.

He goes on to provide a definition of mental states. "A mental state is the minimal state of a mind, an absolute unit from the standpoint of its spatial and temporal structure. ... The state also has to include the prehistory of the organism. ... The concept of a mental state implies a fundamental unit that has gestalt-like properties, in that specific contents-- words, thoughts, percepts--appear in the context of mind as a whole (p. 53).

"The entire multitiered system arborizes like a tree, with levels in each component linked to corresponding levels in other components. For example, an early (e.g., limbic) state in language (e.g., word meaning) is linked to an early stage in action (e.g., drive, proximal motility) and perception (e.g., hallucination, personal memory) .... In sum, a description of the spatial and temporal features of a single unfolding series amounts to a description of the minimal unit of mind, the absolute mental state" (p. 54).

The author's discussion of an individual's physical movement relates to the concept of nonvoluntary movement (or movement without awareness of volition) in hypnosis. "More precisely, levels in the brain state constitute the action structure. As it unfolds, this structure generates the conviction that a self-initiated act has occurred. This structure--the action representation--does not elaborate content in consciousness. ... As with the sensory-perceptual interface, the transition to movement occurs across an abrupt boundary. In some manner, perhaps through a translation of cognitive rhythms in the action to kinetic patterns in the movement, levels in the emerging act discharge into motor (physical) events" (p. 57).

"The self has the nature of a global image or early representation within which objects-to-be are embedded. ... The self is the accumulation of all the momentary cognitions developing in a brain configured by heredity and experience in a particular way (p. 70).

"The deposition of a holistic representation ... creates the deception of a self that stands behind and propagates events. The feeling of the self as an agent is reinforced by the forward thrust of the process and the deeper locus of the self in relation to surface objects. The self appears to be an instigator of acts and images when in fact it is given up in their formation. The self does not cause or initiate, it only anticipates (p. 70).

The foregoing notes cover only the first five chapters, less than half the book. Other chapters relevant to hypnosis would be those titled 'The Nature of Voluntary Action,' 'Psychology of Time Awareness,' 'From Will to Compassion,' and 'Mind and Brain.'

Dennett, Daniel C. (1991). Consciousness explained. Boston: Little, Brown & Co..

Material in this book is relevant to discussions about 'nonvoluntary' behavior and (un)conscious experiencing. It combines information from cognitive neuroscience with the philosophy of mind. The author presents a view that consciousness (the 'mind') is the consequence of the brain's activities which give rise to illusions about their own properties. He presents the Multiple Drafts model of consciousness, which reformulates the concept of a 'stream of consciousness.' This provides a basis for

consideration of concepts central to cognitive neuroscience and phenomena associated with hypnosis, e.g. experiential states and the nature of the self.

The author gives various examples of phenomenology and notes that although these examples are familiar to us, they are totally inaccessible to materialistic science; e.g. the way the sunset looks to someone. He treats people's descriptions of what they experience as a record of speech acts. Thus, observing and interpreting speech acts, inferring from them the speaker's inner states, is like a reader who is interpreting a work of fiction. He gives as examples of how one can scientifically study what does not 'exist' (a) literary theorists who describe fictional entities, (b) anthropologists who study cultural artifacts like gods and witches, and (c) physicists who study a center of gravity.

In Dennett's theory, multitrack processes of interpretation of sensory inputs and elaboration of those inputs amounts to a kind of 'editorial revision' by the brain. For example in the phi phenomenon a red dot is displayed, followed by a green dot in a different location; the first spot seems to begin moving and then change color in the middle of its illusory passage toward the second location. He points out that awareness of the change in color must occur after seeing the green spot, but one consciously experiences a single spot first red, then red-turning-to-green, finally green. In an example that relates directly to the words used for his theory, he cites contemporary publishing practices, in which several different drafts of an article are in circulation even while the author is revising it. Deciding on some specific moment of brain processing as the moment of consciousness is arbitrary, according to his Multiple Drafts model.

"Visual stimuli evoke trains of events in the cortex that gradually yield discriminations of greater and greater specificity. At different times and different places, various 'decisions' or 'judgments' are made; more literally, parts of the brain are caused to go into states that discriminate different features, e.g., first mere onset of stimulus, then location, then shape, later color (in a different pathway), later still (apparent) motion, and eventually object recognition. These localized discriminative states transmit effects to other places, contributing to further discriminations, and so forth. The natural but naive question to ask is: 'Where does it all come together'? The answer is: Nowhere. Some of these distributed contentful states soon die out, leaving no further traces. Others do leave traces, on subsequent verbal reports of experience and memory, on 'semantic readiness' and other varieties of perceptual set, on emotional state, behavioral proclivities, and so forth. Some of these effects--for instance, influences on subsequent verbal reports--are at least symptomatic of consciousness. But there is no one place in the brain through which all these causal trains must pass in order to deposit their content 'in consciousness'" (pp. 134-135).

The author describes the evolution of the brain, along Darwinian lines, and introduces the idea of culture as a repository and transmission medium for innovations (including innovations of consciousness) as a medium of evolution. Through learning, we humans evolve an American or a Japanese brain. Once we have evolved the 'entrance and exit pathways' for language, they become 'parasitized' by memes (entities that have evolved to thrive in such a niche).

Richard Dawkins coined the term memes to describe the smallest idea elements that replicate themselves reliably (e.g. wheel, alphabet, wearing clothes, right triangle). "The transformation of a human brain by infestations of memes is a major alteration in the competence of that organ" (p. 209).

Dennett discusses the similarities and dissimilarities of brains and computers. He suggests that human minds are like serial virtual machines implemented on parallel processing hardware. The stream of consciousness results from our rehearsal of brief experiences, to commit them to memory; language then permits us to describe to ourselves the process of thinking which leads to judgement and action.

The author's discussion of how a verbal expression evolves and becomes manifest is related to how so-called intentional action occurs. [This relates to discussions of nonvoluntary actions in hypnosis.] We assume that because our actions make sense, they are the product of serial reasoning. However, there are multiple channels "in which specialist circuits try, in parallel pandemoniums, to do their various things ... (pp. 253- 254). Bernard Baars has suggested "that consciousness is accomplished by a

'distributed society of specialists that is equipped with a working memory, called a *\_global workspace\_*, whose contents can be broadcast to the system as a whole (p. 42)'" (p. 257). Dennett states that there is no line dividing the events that are definitely in consciousness from those that are outside consciousness. He urges scientists to forgo the concept of the 'inner observer' implied by Cartesian materialism.

Examples of perception that is unaccompanied by consciousness include blindsight (in which the subject does better than chance on visual tests but denies consciousness, and the denials are given credence by neurological evidence of brain damage) and hysterical blindness, which is given less credence because subjects often use the visually provided information in ways blindsight Ss do not. Other behaviors not controlled by conscious thought include blinking when things approach the eye, walking without falling over, regulating our body temperature, adjusting our metabolism, etc. "If I am trying to see a bird that I hear, and stare at the spot but do not distinguish the bird from its background, can I say that it is present in the background of my (visual) consciousness or not?" (p. 336).

The author maintains that if an event doesn't linger and the person is unable to identify and reidentify the effect, it cannot be reported. But such reportability can be improved, as with training the palate of wine tasters. Often, however, we continue disregarding stimuli that impinge on us. There are minor oversights, such as our 'blind spots' or proof reading errors, and major oversights such as a brain-damaged patient's hemi-neglect. In the Multiple Drafts theory, the Observer is replaced by 'coalitions of specialists' that are distributed around in the brain, distributed in both time and space.

Though discrimination or discernment happens, there is no one Discerner doing the work. However, Dennett takes the middle ground on the question of whether a self exists: it is simply a creation like the nest of the Bower bird, or the organized colony of termite ants. "So wonderful is the organization of a termite colony that it seemed to some observers that each termite colony had to have a soul (Marais, 1937). We now understand that its organization is simply the result of a million semi-independent little agents, each itself an automaton, doing its thing. So wonderful is the organization of a human self that to many observers it has seemed that each human being had a soul, too: a benevolent Dictator ruling from Headquarters" (p. 416). The sense of self is a creation, like a physicist's center of gravity.

Thus, multiple personality disorder is viewed as a self that has gaps; and our sense of self might include different aspects from one year to the other. Hence, "selves are not independently existing soul-pearls, but artifacts of the social processes that create us, and, like other such artifacts, subject to sudden shifts in status. The only 'momentum' that accrues to the trajectory of a self, or a club, is the stability imparted to it by the web of beliefs that constitute it, and when those beliefs lapse, it lapses, either permanently or temporarily" (p. 423).

Finally, the author has an extensive discussion of the concepts of 'qualia' and of 'epiphenomena' and seems to have little use for either term in trying to understand Mind.

Dixon, Norman F.; Henley, Susan H. (1991). Unconscious perception: Possible implications of data from academic research for clinical practice. *Journal of Nervous and Mental Disease*, 179 (5), 243-252.

Evidence for the reality of unconscious perception and perceptual defense suggests that the experimental paradigms used to investigate these phenomena might play a role in the understanding and treatment of mental disorders. The literature on applying subliminal stimulation to problems of diagnosis and therapy indicates that data support the view that the meaning of external stimuli of which the recipient is unaware may be responded to and determine emotional responses, lexical decisions, overt behavior, and subjective experience. Data confirm the reality of psychopathology as a substrate of emotionally colored, stored information with a potential for producing somatic symptoms and disorders of thinking, affect, and behavior. To the extent that psychopathology is screened from

conscious scrutiny and thus impervious to supraliminal information, it may be accessed and ameliorated by drive-related stimuli of which the S is not aware.

Jansen, C. K.; Bonke, B.; Klein, J.; van Dasselaar, N.; Hop, W. C. J. (1991). Failure to demonstrate unconscious perception during balanced anaesthesia by postoperative motor response. Acta Anaesthesiologica Scandinavica, 35, 407-410.

Eighty patients undergoing a standardized balanced anaesthesia were randomly assigned to either a suggestion group (N = 38) or a control group (N = 42), in a double-blind design. Anaesthesia was maintained with nitrous oxide, enflurane and fentanyl. Patients in the suggestion group were played seaside sounds, interrupted by statements of the importance of touching the ear during a postoperative visit, by means of a prerecorded audiotape and headphones. Tapes containing these suggestions were played from 30 min after the first incision, for a duration of 15 min. Patients in the control group were only played seaside sounds. There were no significant differences between the groups in either the number of patients touching their ears postoperatively or the number and duration of ear touches.

**NOTES**

This research follows upon other studies in which patients carried out postoperative motor responses while still being amnesia for the source of the suggestions for the action (e.g. Bennett, Davis, & Giannini, 1985; Goldmann, Shah, & Hebden, 1987). The earlier studies used widely varied anesthesia techniques, small sample sizes, and did not measure baselines for those responses or clearly delimit the amount of time for recording the responses postoperatively. This investigation was an attempt to improve on the research design of earlier investigations that had obtained positive results.

Patient assignment to groups was stratified over three levels of estimated intensity of pain stimulation during surgery (based on the type of surgery).

The outcome measure, number of ear touches and their duration, was made by the anesthetist and an observer during the first 10 minutes of the pre- and postoperative interviews. (The observer was blind for the patient group assignment.) 75 of the patients were interviewed on the first postoperative day, and the remainder on the second postoperative day. The interview included questions regarding recall of the intravenous administration of drugs and of events during surgery. The outcome data may be seen in the Table below.

Distribution of ear touches during the first 10 min of the preoperative interview and, after the intraoperative suggestion, during the first 10 min of the postoperative interview. -----

No. of patients with		Total no. of ear touches for		Duration of ear touches				Grp		N		Pre		Post		Pre		Post		Pre	
ear touches for all responders																					
-----		-----		-----		-----		-----		-----		-----		-----		-----		-----		-----	
Post	-----	S	38	2	3	2	9	62													
155	C	42	5	3	8	4	38	23													

S = suggestion group C = control group

In discussing their results, the authors offer several reasons why they might not have obtained the same results as those of previous investigators. "First, our anaesthetic techniques were different from those used in the studies of Bennett et al., 1985, and Goldmann et al., 1987" (p. 408).

"A second reason for the discrepancy between our results and those of the other two studies could be that our suggestion was perhaps less meaningful to the patients undergoing surgery than the one used by our fellow researchers. It has been argued that recollection of perioperative events is influenced by the salience of the stimuli [Dubovsky & Trustman, 1976, Anesth Analg; Goldmann & Levey, 1986 (letter) Anaesthesia]. This salience depends largely on the content of the message. It may be that the requested response, i.e., to touch the ear, is one that in our culture, or environment, has insufficient

emotional impact and is thus ignored. It is interesting to note in this context that the percentage of patients touching the ear postoperatively was significantly lower (Fisher's exact test:  $P < 0.01$ ) in our study than in the study by Bennett et al., both for the suggestion group and the control group. On the other hand, recent findings showed robust effects with emotionally neutral stimuli [Jelicic, Bonke, & Appelboom, 1990, *Lancet*; Roorda-Hrdlickova, Wolters, Bonke, & Phaf, 1990, in Bonke, Fitch, Millar, Eds. *Memory and awareness in anesthesia*. Amsterdam: Swets & Zeitlinger]. Salience also depends on the timbre and strength of the requesting person's voice, the manner in which the response is requested and, possibly, many other subtle factors. We tried to increase the emotional impact of the message by adding reassuring phrases, as had been done in the previous studies. Furthermore, we had the message recorded by the anaesthetist who also conducted the pre- and post-operative interviews, assuming this would make the voice more familiar to the patient. During all interviews, as well as on the tape, the anaesthetist clearly introduced himself to the patient, mentioning his name a number of times. This was done to increase the possibility that the voice was 'recognized'" (p. 409).

Rapee, Ronald M. (1991). The conceptual overlap between cognition and conditioning in clinical psychology. *Clinical Psychology Review*, 11, 193-203.

Given the fact that contemporary theories of conditioning regularly utilize information processing concepts such as memory and expectancies, classifying clinical theories as either cognitive or conditioned appears to be outdated. Yet, this dichotomy is still upheld in many clinical writings. Such a false dichotomy seems to serve more of a political function than a theoretical one and thus is likely to interfere with a complete understanding of psychopathology. While the terms conditioning and cognition are often used to imply unconscious learning on the one hand versus conscious, rational learning on the other, this usage is not consistent. A more empirically useful way to describe pathological behavior may be in terms of the amount of attentional resources utilized.

Van Der Kolk, Bessel; Van Der Hart, O. (1991). The intrusive past: The flexibility of memory and the engraving of trauma. *American Imago*, 48, 425-454.

Describes the work of Janet concerning narrative versus traumatic memory, dissociation, and subconscious fixed ideas. Janet (1904) believed PTSD patients suffer from a phobia for the traumatic memory. Repression and dissociation are distinguished. Contemporary concepts of memory processing and the concept of schemas are then reviewed. Finally, a model is presented about how the mind freezes some memories. Evidence for the involvement of autonomic hyperarousal, triggering, and state dependent learning in PTSD is reviewed. They conclude that helplessness and the inability of the PTSD victim to take action (psychological and physical immobilization) facilitates dissociation. Includes practical ideas for the working through of trauma.

## NOTES

p. 443 "Traumatic memories are triggered by autonomic arousal ... and are thought to be mediated via hyper-potentiated noradrenergic pathways originating in the locus coeruleus of the brain... The locus coeruleus is the 'alarm bell' of the central nervous system, which properly goes off only under situations of threat, but which, in traumatized people, is liable to respond to any number of triggering conditions akin to the saliva in Pavlov's dogs. When the locus coeruleus alarm gets activated, it secretes noradrenaline, and, if rung repeatedly, endogenous opioids. These, in turn, dampen perception of pain, physical as well as psychological (van der Kolk et al. 1989). These neurotransmitters which are activated by alarm affect the hippocampus, the amygdala and the frontal lobes, where stress-induced neurochemical alterations affect the interpretation of incoming stimuli further in the direction of 'emergency' and fight/flight responses" (p. 443).

1990

Bornstein, Robert F. (1990). Critical importance of stimulus unawareness for the production of subliminal psychodynamic activation effects: A meta-analytic review. Journal of Clinical Psychology, **46**, 201-210.

Performed meta-analysis that assessed the magnitude of behavior change produced by subliminal vs supraliminal drive-related stimuli (DRS) on 11 subliminal psychodynamic activation (SPA) studies (published 1966-1989) that employed both types of stimuli. The analysis revealed that subliminal presentation of DRS produced significantly stronger effects on behavior than supraliminal presentation of the same stimuli. Stimulus content, type of outcome measure, and S characteristics influenced the magnitude of subliminal/supraliminal response differences. Results support L. H. Silverman's (1983) hypothesis that DRS must be presented subliminally to produce SPA effects.

Kihlstrom, John F.; Schacter, Daniel L.; Cork, Randall C.; Hurt, Catherine A.; Behr, Steven E. (1990). Implicit and explicit memory following surgical anesthesia. Psychological Science, **1**, 303-306.

Paired associates were presented to 25 surgical patients following the induction of anesthesia by thiopental, vecuronium, and isoflurane. Postoperative testing (immediately or after two weeks) showed no free recall for the list; nor was there significant cued recall or recognition, compared to a matched control list. However, a free-association task showed a significant priming effect on both immediate and delayed trials. At least under some conditions, adequate surgical anesthesia appears to abolish explicit, but not implicit, memory for intraoperative events.

Kunzendorf, Robert G.; Jesses, Michael; Dupille, Leonard; Butler, William (1990-91). Subliminal activation of intrapsychic conflicts: Subconscious realms of mind vs subconscious processes of mentation. Imagination, Cognition and Personality, **10**, 117-128.

## NOTES

Cognitive-state monitoring theory asserts that people perceive subliminal stimulation without self-consciously monitoring its external innervation (as opposed to central innervation). Thus monitoring theory predicts that subconsciously perceived discord, in the absence of any 'external location' cues, should be misinterpreted as centrally generated discord and should disrupt self-generated behavior. Consistent with this prediction, mathematical problem-solving in the current experiment was disrupted after mathematically competitive males repeatedly heard the subliminal message IT'S WRONG TO CRUSH DADDY stereophonically localized in the middle of their heads--but not after they repeatedly heard this subliminal 'Oedipal' message binaurally localized on one side of their heads. A subliminal message binaurally localized on one side of the self should not interfere with problem-solving behavior \_because, even though the message's external innervation is not self-consciously 'monitored,' its external location is inferable from subconscious cues.\_

Monitoring theory asserts that subliminal [perceptions] of 'unmonitored' messages are unaccompanied by any self-consciousness that one is perceiving them (rather than imaging them), and that subliminal or 'unmonitored' messages of distress are mistaken for self-generated distress.

Disruption by the 'internal' subliminal word WRONG seems to us consistent with the fact that disruption was limited to mathematically competent males.

Indeed, 'repression' itself is a mode of processing fearful information: a mode in which subjects suspend their self-awareness that they are perceiving fearful stimulation, as research by Kunzendorf and McLaughlin has demonstrated. This selective suspension of monitoring provides immediate relief from fearful stimuli, Freudian or otherwise, but it does so at the risk of turning self-conscious fear into

subconscious anxiety (into consciously lingering fear without a self consciously perceived source). No subconscious realm full of lurking fears is implicated in this 'unmonitored' mode of self-protection. All that is implicated is an unconscious storehouse of potentially fearful memories--potentially fearful but sensationless memories, which can be 'suppressed' from conscious sensory representation or 'constructed' into conscious memory images or 'subconsciously represented' as unself-consciously imaged sensations.

Roediger, Henry L. III (1990). Implicit memory: Retention without remembering. American Psychologist, 45 (9), 1043-1056.

Explicit measures of human memory, such as recall or recognition, reflect conscious recollection of the past. Implicit tests of retention measure transfer (or priming) from past experience on tasks that do not require conscious recollection of recent experiences for their performance. The article reviews research on the relation between explicit and implicit memory. The evidence points to substantial differences between standard explicit and implicit tests, because many variables create dissociations between these tests. For example, although pictures are remembered better than words on explicit tests, words produce more priming than do pictures on several implicit tests. These dissociations may implicate different memory systems that subservise distinct memorial functions, but the present argument is that many dissociations can be understood by appealing to general principles that apply to both explicit and implicit tests. Phenomena studied under the rubric of implicit memory may have important implications in many other fields, including social cognition, problem solving, and cognitive development.

Weinberger, Joel; Hardaway, Richard (1990). Separating science from myth in subliminal psychodynamic activation. Clinical Psychology Review, 10, 727-756.

This paper reviews subliminal psychodynamic activation (SPA). Eight common criticisms are described and evaluated: (a) SPA data analysis is too liberal; (b) there are enough nonsignificant unpublished SPA studies to offset those showing effects; (c) SPA studies are difficult to replicate; (d) the claims of SPA proponents rely on unpublished studies; (e) SPA stimuli are not really subliminal; (f) experimenter expectancy effects and/or demand characteristics can account for SPA effects; (g) the mediating events said to underlay SPA effects have never been evinced; and (h) alternative explanations for SPA effects are superior to the psychoanalytic ones typically offered. Theoretical and statistical analyses revealed that only the argument concerning mediating events has serious merit. The SPA stimulus for which the most support was found was Mommy and I Are One. Oedipal sanction stimuli were also found to yield reliable effects whereas Oedipal prohibition stimuli did not. Suggestions for future research are offered. Resistance to SPA findings are considered in Kuhnian terms.

Wood, W. E.; Gibson, W.; Longo, D. (1990). Moderation of morbidity following tonsillectomy and adenoidectomy: A study of awareness under anesthesia. International Journal of Pediatric Otorhinolaryngology, 20, 93-105.

In a double-blind study, 67 children, ages 3-10, were randomly assigned to one of three groups: tape recorded therapeutic suggestions repetitively recited in English or in French, and a control of continuous white noise. The English condition was associated with more favorable outcome on all parameters, although statistical significance could not be demonstrated. Favorable outcomes appeared most significant for those patients at highest risk for poor convalescence (i.e., poor status preoperative patients).

1989

Blum, Gerald S. (1989). A computer model for unconscious spread of anxiety-linked inhibition in cognitive networks. Behavioral Science, 34, 16-45.

Unconscious inhibitory processes, triggered by a potential anxiety reaction, are reviewed in the context of an emerging rapprochement between psychodynamic and cognitive approaches in experimental psychology. Conditions underlying spread of inhibitory action to other cognitive networks are first explored in three tachistoscopic experiments utilizing words posthypnotically tied to a potential anxiety, pleasure, or neutral reaction. Response times of subjects, instructed to ignore those words while naming pictures or solving anagrams as quickly as possible, reveal a highly differentiated pattern of circumstances governing likelihood of inhibitory spread from anxiety-linked words to target stimuli. Next a computer model is constructed to simulate cognitive processes from onset of display to eventual response, and the model is then tested for its fit to the empirical data. Finally, an illustrative study shows that a subset of computer-generated predictions for spread of inhibitory action is verifiable experimentally.

Kihlstrom, John F.; Register, Patricia A.; Hoyt, Irene P.; Albright, Jeanne Sumi; Grigorian, Ellen M.; Heindel, William C.; Morrison, Charles R. (1989). Dispositional correlates of hypnosis: A phenomenological approach. International Journal of Clinical and Experimental Hypnosis, 37, 249-263.

Attempted to construct and validate a questionnaire measure of hypnotic-like experiences based on Shor's (1979) 8-dimension phenomenological analysis of hypnosis. Separate item pools were developed to measure each disposition: Trance, Nonconscious Involvement, Archaic Involvement, Drowsiness, Relaxation, Vividness of Imagery, Absorption, and Access to the Unconscious. Based on preliminary testing (total Number - 856), a final questionnaire was produced containing 5 items measuring normal, everyday experiences in each domain. Results from a standardization sample (Number - 468) showed that each of the subscales, except for Archaic Involvement, possessed satisfactory levels of internal consistency and test-retest reliability. Factor analysis indicated that 6 subscales loaded highly on a common factor similar to the absorption construct (Tellegen & Atkinson, 1974), while items pertaining to Relaxation and Archaic Involvement formed separate factors. Validation testing on 4 samples receiving the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and E. Orne (1962) (total Number = 1855) showed that the Absorption and Trance dimensions correlated most strongly with HGSHS:A; the correlations with Drowsiness, Relaxation, and Nonconscious Involvement approached 0. The scales derived from Shor's analysis, however, did not improve the prediction of hypnotizability over that obtained with the absorption scale (Tellegen & Atkinson, 1974).

Pillemer, D. B.; White, S. H. (1989). Childhood events recalled by children and adults. In Reese, H. W. (Ed.), Advances in child development and behavior. New York: Academic Press.

## NOTES

Authors discuss a dual memory theory. The first memory system is prominent in early childhood, and is a system in which are organized and evoked by persons, locations, and emotions. Such memories are not easily "transportable" outside the original experience. These memories are accessed through images of face and place, actions, or feelings. The second memory system begins to develop in early childhood, is verbally mediated, and stores experiences in narrative form. Such memories are accessible through verbal interaction, and can be reviewed and shared with others verbally. For a small child, to access all of a memory one would need to tap into both memory systems. The authors

suggest that the first memory system continues to be available throughout one's life, especially when strong emotion was associated so that verbal cues are not attached. [This has implications for retrieval of "lost" memories using imagery-based approaches like hypnosis.]

Suler, John R. (1989). Mental imagery in psychoanalytic treatment. Psychoanalytic Psychology, 6, 343-366.

Mental imagery techniques may facilitate the therapeutic process by stimulating patients' insight into unconscious dynamics, by helping them uncover and master warded-off affect, and by enhancing the clinician's empathic contact and access to countertransference. The history of imagery techniques in the psychoanalytic movement and the effect of these techniques on the traditional psychoanalytic method are reviewed. A conceptual framework based on the theory of primary and secondary process suggests spontaneity, experiential scope, associative elaboration, and object impact as four dimensions for the clinical evaluation of imagery experience.

Van der Hart, O.; Friedman, B. (1989). A reader's guide to Pierre Janet on dissociation: A neglected intellectual heritage. Dissociation, 2 (1), 3-16.

A century ago there was a peak of interest in dissociation and dissociative disorders. Janet (1859-1947) was the most important scientific and clinical investigator of this period, whose work is reviewed in this article. The evolution of dissociation theory and its major principles are traced throughout his writings. His introduction of the term 'subconscious' and his concept of the existence of consciousness outside of personal awareness are explained. The validity and reliability of dissociation as the underlying phenomenon in a wide range of disorders is presented. It is proposed that Janet's theory and methodology of psychological analysis and dynamic psychotherapy are cogent and relevant for today.

1988

Borgeat, Francois; Rezanowicz, Thaddeus; Chaloult, Louis (1988). La stimulation preconsciente et consciente de l'imaginaire erotique. Revue Canadienne de Psychiatrie, 33, 394-398.

The stimulation of erotic fantasies through the association of relaxation and erotic conscious or preconscious suggestions has been evaluated. This study was attempted following positive results in the stimulation of fantasmatic activity in alexithymic subjects with a similar procedure. Thirty female subjects, allocated into three groups practiced relaxation daily for two weeks including three sessions with psychological measures. During the second week, erotic suggestions, preconscious for one group and conscious for another one were added. The third group (control) received only relaxation throughout. Results have shown an increase of sexual arousal and erotic imagery during the sessions with erotic suggestions. Sexual activities and desire increased in the two experimental groups. There was no difference between the effects of the preconscious and conscious suggestions. Possible clinical applications of such a procedure are discussed.

1987

Boswell, Louis K. (1987). Abstract imaging: Abstract imaging as a mode of personality analysis and adjustment. Medical Hypnoanalysis Journal, 2, 175-179.

Describes the use of abstract imaging during hypnosis to circumvent defense mechanisms and arrive at the initial sensitizing event behind a patient's emotional problems. Case examples illustrate how

abstract imaging is also used to explore how the patient relates to the world on a conscious level and forms an idealized self-image to work toward.

Goldmann, Les (1987, October). Ways of maximizing patient memory for events during anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

#### NOTES

Reported a series of experiments: 1. Under atropine, we did not get an orienting response to things having to do with the operation, but did get an orienting response to jokes, dogs barking, and the name of a polite anesthetist. 2. Replicated the research by Bennett and didn't get ear pulling response. 3. Studied cardiac patients. Gave subjects a pre-anesthesia speech of importance [of hearing under anesthesia? Notes here are not clear.] and a chin touch suggestion that was successful. 7 of 30 subjects gave reports of recall - usually recalled something of particular interest to them. These 7 subjects appeared more anxious postoperatively than previously. 4. Recognition study: Pre-op "IQ" test. Gave subjects answers to the questions while they were under anesthesia, and postoperatively they had better performance than previously. 5. Recall study, double blind. Interviewer learned something about the patient, and told them something about what was learned about the patient during anesthesia e.g., You have a lovely garden. After surgery they were hypnotized by someone who did not know what information was given, and then recall for information "heard" under anesthesia was tested. 6. 10 female patients who were good hypnotic subjects, all received the same statement under anesthesia, that they would believe for a moment that they had green hair. During the interview, one said she was fascinated by green things, one wanted to go home and wash her hair.

Goldmann, Les; Shah, M. V.; Hebden, M. W. (1987). Memory of cardiac anesthesia: Psychological sequelae in cardiac patients of intra-operative suggestion and operating room conversation. Anesthesia, 42 (6), 596-603.

Thirty elective cardiopulmonary by-pass surgery patients were interviewed pre- and postoperatively. A random selection of patients heard a prerecorded audio tape toward the end of surgery after they were rewarmed to 37 degrees C. The tape contained suggestions for patients to touch their chin during the postoperative interview, to remember three sentences, and to recover quickly. The interviewers were blind to the experimental conditions. The experimental group touched their chins significantly more often than the control group ( $p = .015$ ). Sentence recognition did not reach significance, perhaps due to the small numbers and low salience of the stimuli. Seven patients (23%) recalled intraoperative events, five with the aid of hypnosis. Three reports (10%) were corroborated. Preoperative medication ( $p < .01$ ) and postoperative anxiety ( $p < .05$ ) were significant predictors of those patients who reported recall.

Kihlstrom, John F. (1987). The cognitive unconscious. Science, 237, 1445-1452.

Contemporary research in cognitive psychology reveals the impact of nonconscious mental structures and processes on the individual's conscious experience, thought, and action. Research on perceptual-cognitive and motoric skills indicates that they are automatized through experience, and thus rendered unconscious. In addition, research on subliminal perception, implicit memory, and hypnosis indicates that events can affect mental functions even though they cannot be consciously perceived or remembered. These findings suggest a tripartite division of the cognitive unconscious into truly unconscious mental processes operating on knowledge structures that may themselves be preconscious or subconscious.

Stolzy, Sandra L.; Couture, Lawrence J.; Edmonds, Harvey L., Jr. (1987, October). Partial recall of events occurring during general anesthesia. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Los Angeles.

The incidence and causes of awareness during anesthesia are subjects of controversy. It is often assumed that the degree of recall of events occurring during general anesthesia is directly related to the depth of anesthesia. However, patients who are apparently adequately anesthetized have experienced such recall. A randomized double-blind study using a standardized anesthetic protocol was conducted to determine if recall of intraoperative events occurs following deep anesthesia. Fifteen-minute tape recordings consisting of repetitions of either six nonsense words (control) or six uncommon words (target words) were presented to patients under deep surgical anesthesia. Within 48 hours after anesthesia, they were asked to choose the six words that were most familiar from a list of thirty-six uncommon words. When compared with the control group, the patients who heard the six target words selected those words from the list at a rate significantly greater than chance ( $P < 0.04$ ). None of the patients had any conscious recall of an intraoperative event.

1986

Chertok, Leon (1986). Psychotherapeutic transference, suggestibility. Psychotherapy, 23 (4), 563-569.

Discusses suggestion in psychotherapy and defines it as a body-affective process, an indissociable psychosociobiological entity that acts at an archaic unconscious level far beyond that of transference, mediates the influence of one individual on another, and is capable of producing manifest psychological and physiological changes. Present in all types of therapy, indirect (nondeliberate, nonintentional) suggestion is the element that plays an important role in change and can be observed in hypnotic experimentation. It is further argued that transference and suggestion are phenomena that do not altogether overlap. Suggestion is the condition of transference without which transference could not be established.

Kissin, Benjamin (1986). Conscious and unconscious programs in the brain. (1 ). New York: Plenum Press.

## NOTES

Hypnosis is discussed in terms of inhibition/excitation mechanisms in the central nervous system, with both feedback and feedforward controls and lateralizing controls. The author employs a concept of engrams (neural representations of an idea, represented throughout the neocortex) to discuss sensation and perception as well as conscious and unconscious processes. Sensory information is processed serially with encoding of information mostly on the conscious level (but sometimes, less efficiently, on the unconscious level); and it also is processed in parallel. Parallel processing operates almost entirely at the unconscious level and is basic to perception.

Associative phenomena are explained in terms of overlapping engrams, so that two 'related hypercomplex engrams' could be assumed to have at least one simple engram in common. With Premack, he describes three types of engrams: veridical (primary sensory data perceived), abstract (formalized representations of concepts like line drawings of dog or house; Premack's iconic representations), and symbolic (more complex entities that encompass an entire class of objects, actions, or ideas and may have artificial symbols such as words).

With Neiser he suggests that thinking (verbal and nonverbal) involves logical sequential processing of cognitive engrams of external (environmental), internal (visceral), and intracerebral (ideational) origin. Evoked response investigations shed light on the nature of such engrams, their distribution in brain

tissue. John, Bartlett, Slumokochi, & Kleiman (1973) found that an error in choice discrimination learning (cats learning colors) is accompanied by the cortical evoked potential of the stimulus associated with that (erroneous) behavior, not the evoked potential of the true stimulus. In other words, ERPs represented the idea, not the actual visual stimulus provided to the cat.

Emotional/motivational influences are part of every cognition (R. S. Lazarus's position). Interaction of motivational-emotional and cognitive engrams seems to occur primarily in the inferior temporal lobe and the entorhinal cortex. The interaction involves the upper rhinencephalon, the amygdaloid-hippocampal complex, the septal region, the cingulate gyrus, and the inferior and medial aspects of temporal lobe of the cortex. He also explains classical and operant conditioning (on pp. 75-76) in terms of the association of engrams.

The author's position is that consciousness is the subjective equivalent of brain activity in the 'alerting' and 'awareness' systems. Awareness of the environment ('general, vague') appears to involve the limbic area (thalamus and basal ganglia), while more specific awareness of the self entails a system stretching from the basal ganglia through the parietal lobe (posterior aspect).

Normal alert consciousness involves the noradrenergic reticular activating system, as well as associated excitation of the general awareness system in the involved thalamic- basal gangliar nuclei and the self-awareness system in the posterior inferior parietal lobe system. Altered states of consciousness characterized by a relaxed hazy sense of the world involves thalamic activation of the self-awareness system. Dreaming involves activation from cholinergic cells in the pons. "Impaired general awareness occurs with lesions of the thalamic-basal gangliar centers while impaired self-awareness occurs with lesions in the posterior inferior parietal lobes. Finally, in certain physiological states such as sleep, hypnosis, and so on, the entire awareness system--the thalamic-basal gangliar and posterior inferior parietal nuclei--may be activated by different activation systems, such as the cholinergic in the pons or the dopaminergic in the thalamus, to produce different states of consciousness" (p. 82).

Consciousness is described as having seven dimensions: alertness, attention, arousal (heart rate, GSR), activation (EEG, evoked potential), affect, and the two awarenesses. The seven are related, so that changes in any one usually are correlated with changes in others (though dissociation among the seven also can be demonstrated). Motivational-emotional arousal produces electrophysiological activation of the brain, which is translated epiphenomenally into alertness and awareness; awareness is focused through attention onto the cognitively and motivationally significant events in the internal and external environments to determine the final sequence of drive-oriented behavioral responses.

The EEG is useful for diagnosing different states of consciousness: beta and gamma waves alertness, stemming from locus coeruleus and

reticular activating system delta (2-4/sec) waves coma alpha synchronized relaxing influences stemming from

thalamus; low level of awareness as in twilight sleep

or hypnagogic states theta, delta inactivity due to less stimulus from locus coeruleus

reticular activating system influences; associated

with increased inhibitory thalamic and septal-

hippocampal impulses radiating upward to the

cortex.

In some altered states of consciousness there is theta-wave activity, indicating influences from the inhibitory septal-hippocampal circuit.

The reticular activating system (RAS) and thalamus interact in complex ways. The RAS is essential to maintain consciousness, but if destroyed stepwise (in animal research) a low-grade type of consciousness can be maintained by thalamus and basal ganglia. The thalamus has two kinds of influence: it inhibits the cortex, as in sleep; and stimulates the cortex in the form of activating alpha waves. "The median thalamus is also related in a feedforward-feedback circuit with the inhibitory

septal-hippocampal complex which generates theta-wave activity, thus accounting for the close association between alpha and theta wave activity in sleep and in other altered states of consciousness" (p. 86).

Thus there are two different activating systems originating in the lower brain stem: the norepinephrine locus coeruleus system that is associated with normal behavior, and the cholinergic FTG neurone system of REM sleep. The relationship of the latter to consciousness, awareness, self awareness, etc. is unknown, since the only time that it is readily observed is during REM sleep. The author reports that altered states of consciousness (e.g. hypnosis, fugue, alpha state) resemble Stage 1 sleep, rather than REM sleep, physiologically, with the central locus of activation in the medial thalamus rather than the RAS and locus coeruleus.

"It appears then that consciousness may be driven by one or another of three different activation centers: the norepinephrine RAS (emanating from the locus coeruleus), the cholinergic FTG cell system in the pons, and the dopaminergic alpha rhythm system radiating upward from the thalamus (Fig. 6-2). Brain activation by each of these centers is associated with a different state of awareness" (p. 91). The relative contribution from each center determines qualitative aspects of awareness.

The author refers to Mesulam and Geschwind (1978) who traced the self-awareness system from amygdala/hippocampus/midbrain to the inferior parietal lobe where they converge with the body's proprioceptive neural tracts. What results is "a sense of self that was not necessarily present in the sense of general awareness stemming from the median thalamic-basal gangliar complex" (p. 97).

The thalamic-basal gangliar complex is both a center for emotional reception and a relay station for somatosensory events. Both somatic sensory reception and somatosensory elements of emotion are also represented in the parietal lobe. "Affective and somatosensory stimuli, which are constant and persistent even though we are unaware of them most of the time, produce the sense of one's body which is the most basic element in the 'sense of self.'... It is most probable that a major component of the sense of self is produced by the constant barrage of affective and somatosensory stimuli converging from all parts of the body; the majority of these stimuli may not reach consciousness most of the time but they must register a sense of feeling in the thalamus and parietal cortex even though the individual may be unconscious of it" (p. 100).

The author presumes that most of the incoming stimuli that define self are unconscious. "Whether sense-of-self stimuli are unconscious because of constant habituation ... or whether they are unconscious because they are transmitted predominantly to the right hemisphere ..., it appears that the major components of the self-concept are unconscious rather than conscious" (p. 102).

"Even the acutely self-aware component of the self-concept, by definition conscious, varies markedly in different altered states of consciousness. The conscious awareness of oneself in the alert condition is different from (1) that in the twilight state, (2) that in dreams, (3) that in hypnosis, (4) that under the influence of alcohol, (5) that under the influence of other sedatives, (6) that under the influence of stimulants, and (7) that under the influence of hallucinogens. In that sense the acute sense of self is a function of the momentary chemical and physiological state of the brain" (p. 102).

"... the decision-making apparatus of the brain is lodged largely in a consortium of neocortical centers including the prefrontal lobes (integration), the posterior inferior lobes (motivation and emotion), the anterior and posterior associational areas (cognition), the posterior inferior parietal lobes (self-awareness), the left-hemispheric language centers (language), and the precentral frontal lobe motor area (motor). Within the context of this integrated cortical complex, self-awareness functions are somewhat stronger on the right hemisphere while language and decisional activities are somewhat stronger on the left" (pp. 102-103).

The Chapter titled "Attention as directed consciousness" is relevant for investigations of hypnosis but is not included in these notes.

Miller, Mary E.; Bowers, Kenneth S. (1986). Hypnotic analgesia and stress inoculation in the reduction of pain. Journal of Abnormal Psychology, 95, 6-14.

Investigated the influence of hypnotic ability on 3 methods of reducing cold-pressor pain. Following a baseline immersion, 30 high- and 30 low-hypnotizable undergraduates were randomly assigned to 1 of 3 treatment groups: stress inoculation training, stress inoculation training defined as hypnosis, or hypnotic analgesia. Analysis of pain reports indicated a significant hypnotic ability x treatment interaction. Among Ss receiving hypnotic analgesia, high-hypnotizables reported significantly less intense pain than lows. There was no differential response for high- and low-hypnotizable Ss receiving stress inoculation training, whether or not it was defined as hypnotic. Moreover, Ss in the stress inoculation condition (whether or not defined as hypnosis) reported using cognitive strategies to reduce pain, whereas this was not the case for Ss in the hypnotic analgesia condition. The present findings seem inconsistent with the social psychological account of hypnosis and are discussed from a dissociation perspective, which views hypnosis as involving changes in the way information is processed.

1985

Balaam, M. (1985-86). On Crowley's and Mills "The nature and construction of therapeutic metaphors for children". [Comment/Discussion] .

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Eich, Eric; Reeves, John L.; Katz, Ronald L. (1985). Anesthesia, amnesia, and the memory/awareness distinction. Anesthesia and Analgesia, 64, 1143-1148.

Several studies have shown that surgical patients cannot consciously recall or recognize events to which they had been exposed during general anesthesia. Might evidence of memory for intraoperative events be revealed through the performance of a postoperative test that does not require remembering to be deliberate or intentional? Results of the present study, involving the recognition and spelling of semantically biased homophones, suggest a negative answer to this question and imply that intraoperative events cannot be remembered postoperatively, either with or without awareness.

## NOTES

In this experiment, we attempted to apply the distinction between memory and awareness of memory to the question of whether adequately anesthetized and apparently unconscious patients can register and retain what is said in their presence during surgery. Prior research relating to this question has focused, for the most part, on the ability of postoperative patients to recall or recognize a specific item....The inference need not be drawn, however, that 'patients in so-called surgical planes of anesthesia cannot hear' (15, p. 89) or that anesthetized patients cannot encode and store in memory events that transpire during their surgery. The possibility remains that even though the effects of memory for intraoperative events may not--and probably cannot--be revealed in postoperative tests of retention that require remembering to be deliberate or intentional, such effects might be evident in the performance of tests that do not demand awareness of remembering.

"To explore the possible dissociation between memory and awareness of memory for intraoperative events, we modeled our experiment after a recent neuropsychological study by Jacoby and Witherspoon (5)" (p. 1143).

"...it appears that the prior presentation of a word has a substantial impact on its subsequent interpretation and spelling, regardless of whether or not the word is correctly classified as 'old' in a later test of recognition memory" (p. 1144).

"Approached from the standpoint of anesthesia theory and practice, the idea that recognition and spelling tap different memory processes or systems raises an interesting question for research. Specifically, suppose that during surgery, an anesthetized patient listens to a series of short, descriptive phrases, each consisting of a homophone and one or two words that bias the homophone's less common interpretation (e.g., war and PEACE, deep SEA). Suppose further that several days after surgery, the patient is read a list composed chiefly of old and new homophones (i.e., ones that either had or had not been presented intraoperatively) on two successive occasions. On one occasion, the patient is simply asked to spell each list item aloud; on the other occasion, the patient is asked to state aloud which list items he or she recognizes as having been presented during surgery. Given the situation sketched above, might the patient spell significantly more old than new homophones in line with their less common interpretations, and yet fail to reliably discriminate between the two types of items in the test of recognition memory" (p. 1144).

Kaplan, Rosalind (1985). Further data on the effects of subliminal symbiotic stimulation on schizophrenics. Journal of Nervous and Mental Disease, 173 (11), 658-666.

Examined the effects of activating unconscious symbiotic fantasies in 128 hospitalized schizophrenic men (aged 18-65 years) who qualified as relatively differentiated on an adjective rating scale and were randomly assigned to 4 groups. Each group was assessed for pathological thinking, pathological nonverbal behavior, and self-esteem before and after the subliminal exposure of an experimental and control stimulus. The control stimulus for all groups were the messages "Mommy and I are one," "Mommy is always with me," "Mommy feeds me well," and "I cannot hurt Mommy""(one for each group). One-half of each group was subliminally exposed to verbal messages only and one-half to verbal messages accompanied by congruent pictures. The 1st stimulus ("Mommy and I are one") was intended to activate unconscious symbiotic fantasies that in a number of prior studies reduced pathology in groups of relatively differentiated schizophrenics. The other stimuli were intended to activate reassuring unconscious fantasies about "Mommy" that were not specifically symbiosis-related. Only the "Mommy and I are one" stimulus led to more adaptive behavior and did so on all 3 dependent variables. This supported the supposition that it is specifically symbiosis-related gratifications that are ameliorative for schizophrenics. (23 ref.)

Oliver, J. M.; Burkham, Robert (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 644.

Contends that the present authors' (see PA, vol 69:1571) failure to replicate L. H. Silverman's (1976) description of subliminal psychodynamic activation, which was disputed by Silverman (see PA, vol 73:12007), can be traced in part to Silverman's (1978) description of the "symbiotic" stimulus (MOMMY AND I ARE ONE"), 1 of the 2 experimental stimuli used, as a "ubiquitous therapeutic agent". It is suggested that, although Silverman's willingness to modify his theory in light of empirical findings is commendable, modifications that are too frequent and numerous will pose problems for both theory and research. (5 ref)

Porterfield, Albert L.; Golding, Stephen L. (1985). Failure to find an effect of subliminal psychodynamic activation upon cognitive measures of pathology in schizophrenia. Journal of Abnormal Psychology, 94 (4), 630-639.

Replicated the work of L. H. Silverman and colleagues (see PA, vols. 43:14557 and 46:1566) using 30 21-59 year old schizophrenics. Ss were exposed to an aggressive, a merging, and a meaningless lexical stimulus in a within-S design. Dependent variables were inkblot through pathology and form quality, as measured on Rorschach and Holtzman Inkblot Techniques, and performance on the interference task of the Stroop Color-Word Test. Analyses of variance conducted on simple poststimulation scores, rather than on unreliable change scores, revealed no effect of stimulus content. Predicted interactions between stimulus content, Ss self-object differentiation, and temporal position of the assessment tasks did not emerge. Findings do not support Silverman's hypothesis that subliminal tachistoscopic presentations of stimuli with aggressive content temporarily increase thinking disorder in schizophrenics. (44 ref.)

Porterfield, Albert L. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Reply to Silverman. Journal of Abnormal Psychology, 94 (4), 645-646.

#### NOTES

Contends that in defending his nonverbal pathology measure against the claim that it lacks demonstrated validity, L. H. Silverman (see PA, vol 73:12007) painted a misleading picture of its face validity. A correction to that picture is presented, and the impact of the present author and S. L. Golding's (see PA, vol 73:11992) findings on subliminal psychodynamic activation explanations of schizophrenic thought disorder is defended, despite the absence of a nonverbal pathology measure. (5 ref)

Silverman, Lloyd H. (1985). 'Comments on three recent subliminal psychodynamic activation investigations': Rejoinder to Oliver and Burkham and to Porterfield. Journal of Abnormal Psychology, 94 (4), 647-8.

Considers the replies of A. L. Porterfield (see PA, vol 73:11991) and J. M. Oliver and R. Burkham (see PA, vol 73:11985) to the critique of the present author (see PA, vol 73:12007). The original criticisms are seen as valid. A critical deficiency in the design of Porterfield and S. L. Golding's (see PA, vol 73:11992) study is viewed as disqualifying it as a fair attempt at replication. It is suggested that although Oliver and Burkham's (see PA, vol 69:1571) study was well-designed, statements made in their write-up are unwarranted. (12 ref)

Silverman, Lloyd H. (1985). Comments on three recent subliminal psychodynamic activation investigations. Journal of Abnormal Psychology, 94 (4), 640-643.

Contends that unwarranted statements about subliminal psychodynamic activation research by the present author (1976, 1983, 1984) were made in the work of J. M. Oliver and R. Burkham (see PA, vol. 69:1571); K. C. Haspel and R. S. Harris (see PA, vol 69:4952) and A. L. Porterfield and S. L. Golding (see PA, vol 73:11992). Issues considered include the choice of subliminal stimuli, the present author's statistical analyses, and the necessity of a nonverbal measure of psychopathology in this research (17 ref).

Silverman, Lloyd H. (1985). Research on psychoanalytic psychodynamic propositions. Clinical Psychology Review, 5 (3), 247-257.

Discusses a research program in which the present author has been involved that deals with the subliminal psychodynamic activation method. In this method, verbal and/or pictorial stimuli, some of which contain content related to unconscious wishes, fears, and fantasies and other of which are (relatively) neutral, are presented to Ss at 4-msec exposures. A variety of psychoanalytically based hypotheses have been tested on various clinical and nonclinical populations. Two major findings have emerged: (a) a number of clinical groups (e.g., schizophrenics, depressives, stutterers) have shown intensifications of their symptoms after the subliminal exposure of stimuli designed to stir up particular unconscious conflicts; and (b) various clinical and nonclinical groups have manifested enhanced adaptive behavior after the subliminal exposure of the message "Mommy and I are one," conceived as activating unconscious symbiotic fantasies.

Tranel, Daniel; Damasio, Antonio R. (1985, June). Knowledge without awareness: An autonomic index of facial recognition by prosopagnosics. Science, 208 (4706), 1453-1454.

Prosopagnosia, the inability to recognize visually the faces of familiar persons who continue to be normally recognized through other sensory channels, is caused by bilateral cerebral lesions involving the visual system. Two patients with prosopagnosia generated frequent and large electrodermal skin conductance responses to faces of persons they had previously known but were now unable to recognize. They did not generate such responses to unfamiliar faces. The results suggest that an early step of the physiological process of recognition is still taking place in these patients, without their awareness but with an autonomic index.

1984

Bowers, Kenneth S. (1984). On being unconsciously influenced and informed. In Bowers, Kenneth S.; Meichenbaum, D. (Ed.), The unconscious reconsidered (pp. 227-273). New York: John Wiley & Sons.

#### NOTES

Research on confirmatory bias has uncovered additional cognitive processes that are frequently automatic in function and significant in modifying behavior, affect, and cognition. Snyder and Swann (1976, 1978) provided subjects with set inducing hypotheses about the personalities of certain target individuals. Subjects were then asked to test these hypotheses by interviewing the target individuals. It was found that subjects regularly looked for and found evidence that was consistent with their initial hypotheses rather than for evidence which could show these hypotheses to be incorrect. This biased search strategy of the subjects had more profound effects as well, for it also influenced the behaviors of the target individuals in a manner leading them to produce behaviors that seemed to confirm the original mental set of the subjects. Subjects were unaware that their manner of interviewing was

producing a biased sample of behavior from the targets. Here too an automatic cognitive process was affecting perception and thinking without conscious awareness" (p. 280).

Bryant-Tuckett, Rose; Silverman, Lloyd H. (1984). Effects of the subliminal stimulation of symbiotic fantasies on the academic performance of emotionally handicapped students. Journal of Counseling Psychology, 31 (3), 295-305.

Divided 64 10.8 - 19.3 yr old emotionally disturbed residents of a treatment school into an experimental and control group matched for age, IQ, and reading ability. Both groups were seen 5 times/week for 6 weeks for tachistoscopic exposures of a subliminal stimulus. The stimulus for the experimental group was the phrase, "Mommy and I are one," conceived of as activating symbiotic fantasies that in a number of previous studies with varying groups of Ss had led to greater adaptive behavior. The control group was exposed to the phrase, "People are walking." Results show that experimental Ss manifested significantly greater improvement on the California Achievement Tests--Reading than did the controls. On 5 of 6 secondary variables--arithmetic achievement, self-concept, the handing in of homework assignments, independent classroom functioning, and self-imposed limits on TV viewing--the experimental Ss showed better adaptive functioning. It is suggested that activation of unconscious symbiotic fantasies can increase the effectiveness of counseling and teaching. (42 ref)

Crabtree, Adam (1984, October/1986). Explanations of dissociation in the first half of the twentieth century. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 85-108). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

In 1907 Morton Prince, Editor of Journal of Abnormal Psychology, introduced a symposium by listing 6 meanings of subconscious: 1. that portion of our field of consciousness which is outside the focus of attention 2. (Janet's idea) - split off ideas which may be isolated sensations like the lost tactile sensation of anesthesia, or maybe aggregated into groups or systems. The author quotes Janet as stating that "they form a consciousness coexisting with the primary consciousness and thereby a doubling of consciousness results" (p. 87). The primary consciousness is usually dominant, but sometimes is reduced under exceptional conditions (e.g. automatic writing). 3. the subconscious self or hidden self -- a part of every human, not just seen in psychopathology; this is a personalized entity; every mind has a double, with the unconscious self having powerful effects on feelings, thoughts, and reactions of the conscious self 4. extends #3 to include not only ideas that remain active below surface but also those which are inactive -- forgotten or out of mind 5. Frederic Myers' concept of the 'subliminal self' which had 3 functions:

- a) inferior - seen in processes of dissociation
- b) superior - seen in works of genius, arising from 'subliminal rush' of information, feelings, and thoughts which lie below consciousness
- c) mythopoeic - the unconscious tendency to create fantasies 6. physiological meaning, e.g. William Carpenter's 'unconscious cerebration' in which unconscious phenomena are interpreted in terms of pure neural processes unaccompanied by mental activity.

Prince suggested some redefinitions to clarify unconscious and subconscious. He would replace Janet's subconscious with co-conscious and reserve unconscious for physiological processes that lack the attributes of consciousness. Prince noted that co-conscious ideas have been called unconscious (e.g. by Freud) but said that is confusing and to be avoided.

"Coconscious ideas include states we are not aware of because they are not the focus of our attention, and also pathologically split-off and independently active ideas or systems of ideas, such as occur in hysteria and reach their most striking form in co-conscious personalities and automatic writing.

"Prince prefers the term coconscious to Janet's subconscious for two reasons. First, because it expresses the simultaneous coactivity of a second consciousness. And second, because the coactive ideas or idea systems may not be outside the awareness of the personal consciousness at all. They may be recognized by the personal consciousness as a distinct consciousness existing alongside it.

"Thus, through his redefinition of terms, Prince makes simultaneous activity of two or more systems of consciousness in one individual the key element in dissociation. He thereby moves the issue of amnesia or lack of awareness by one system of another into the background, making it a secondary, nonessential element. Prince was one of the few to provide a theoretical framework for dissociation in which any combination of interawareness among the coconscious systems was possible" (p. 91).

Two researchers at the turn of the century came to opposite conclusions about the nature of the Subconscious Self that every human has. Morris Sidis saw it as "a brutelike consciousness with a tendency toward personalization. Frederic Myers held that it included those functions and much more, being the source of all that is human, including the highest intuitive powers" p. 96.

Bernard Hart, in 1910, did an analysis of Janet and Freud. Janet's work is essentially descriptive: "he is always talking about a consciousness which manifests itself in a way we can perceive, whether by listening to it talk, reading its written communications, or watching its movements" (p. 97). However Janet's spatial model of dissociation cannot explain the presence of the same material (e.g. memories) in two or more dissociated systems. According to Hart, Freud offered the conceptualization that Janet lacked, in his idea of the Unconscious .

Freud's Unconscious is not in competition with Janet's subconscious. "Janet's subconscious is the arena of dissociated phenomena which manifest in observable form as elements coactive with the personal self. Freud's unconscious is a conceptual, nonobservable construction put forward to explain certain facts of human experience. In this way Hart equates the unconscious with the atomic theory in physics or the theory of heredity in biology" p. 99. But Hart also thought Freud's theory did not do justice to dissociative phenomena. Not only do psychoanalysts show little interest in double personality or multiple personality, they also neglected dissociation on the phenomenal level.

In 1915 Freud denied the existence of a second consciousness and wrote, "there is no choice for us but to assert that mental processes are in themselves unconscious, and to liken the perception of them by means of consciousness to the perception of the external world by means of the sense organs" (p. 101). Janet claimed that Freud had simply taken over his own system and given it a new terminology, and in 1924 Freud wrote an angry rebuttal. For him, "dissociated systems are simply separate groups of mental but unconscious elements. As our consciousness turns now to one group, now to another, as a searchlight shines now on one object and now on another, the dissociated groups manifest in conscious life. ... There exists no doubling of consciousness" p. 102.

Jung's ideas were closer to those of Janet, and like Janet he made dissociation a key concept in his theory. The complex is unconscious, has an archetypal core clothed in personal experience, is like a self-contained psyche within the big psyche, sometimes called a fragmentary personality dwelling inside us. Dissociation for him meant being cut off from the Ego, which is the center of an individual's field of consciousness. "Dissociated or autonomous complexes are those which have no direct association with the ego" (p. 103). If complexes are charged with enough energy they will become manifest--as a neurotic symptom, as projected into idea of a god or demon, or perhaps as an alternate personality. Therefore Jungian treatment aims at assimilating dissociated complexes into the ego.

Decker, Hannah S. (1984, October/1986). The lure of nonmaterialism in materialist Europe: Investigations of dissociative phenomena, 1880-1915. In Quen, Jacques M. (Ed.), Split minds/split brains (pp. 31-62). New York: New York University Press. (Based on symposium in Bear Mt., N.Y., by Section on the History of Psychiatry of Cornell University Medical Center)

NOTES

**Emphasizes spiritism, hypnotism, and the career of Pierre Janet.**

**Janet's career paralleled an increased interest in dissociation, because he had contact with scientists studying spiritism, used hypnosis, and insisted on a scientific approach. He coined the words "subconscious" and "dissociation." As his sphere of influence declined, so did scientific interest in dissociation--especially multiple personality disorder.**

**Scientific study of dissociation began with investigations into religious exorcism and spirit possession. For example, at the behest of Prince Max Joseph of Bavaria, Mesmer duplicated the exorcisms of Father Gassner (causing convulsions) using hypnosis. Following Mesmer, there were reports of multiple personalities (e.g. an "exchanged personality" in Germany, reported in 1791 by Eberhardt Gmelin).**

**"Partly because of this growth of knowledge of multiple personality, a new model of the mind developed during the early 19th century: the mind was dual; there were conscious and unconscious mental states. Later, it was said that there was a dominant conscious personality with a group of underlying subpersonalities. Eventually it was declared that split fragments of personality could act autonomously" p. 37.**

**The scientific study of these phenomena continued under the leadership of Frederic Myers of The Cambridge Society for Psychical Research. According to William James, Myers was the first to consider the phenomena of hallucination, hypnotism, automatism, double personality, and mediumship as connected parts of one whole subject. The Cambridge Society was involved in the transition from the use of automatic writing by mediums to its use for clinical purposes and experimental research in the 1880's and 1890's.**

**Increasing numbers of multiple personalities reported in the literature in late 19th century led to increased interest in hypnosis and to the concept of dissociation. The author details the contributions of Janet, and then explains how interest declined in dissociation and in hypnosis due to the following:**

**1. Experimental psychologists in Germany (e.g. Wundt) refused to deal with anything that resembled the "unconscious," and neglected the point of view of the experiencing person. 2. Those few psychologists interested in the unconscious found projective tests (Rorschach, TAT) an easier avenue than hypnosis or automatic writing. 3. Many mediums were exposed as frauds, e.g. Flournoy's popular "From India to the Planet Mars". 4. Janet himself was very critical of parapsychology. 5. When Charcot died suddenly, it was discovered that some of his assistants had rehearsed the behavior of hypnotized patients. 6. Hypnotists' extravagant claims (e.g. past life age regression) led to a wave of reaction against them. 7. Questions were raised about the iatrogenic nature of multiple personality. 8. Conscientious hypnotists discovered drawbacks**

**- not everyone could become good hypnotists (e.g. Freud)**

**- not everyone could be hypnotized**

**- some patients faked hypnosis**

**- extreme sensitivity of hypnotized patients to the hypnotist's wishes led to biased results**

**- hypnotist sometimes was conditioned to things in certain way by his first patient**

**9. Janet didn't have the personality of a leader, and he argued with the psychoanalysts about who should get credit for certain ideas**

**Frauman, David C.; Lynn, Steven Jay; Hardaway, Richard; Molteni, Andrew (1984). Effect of subliminal symbiotic activation on hypnotic rapport and susceptibility. Journal of Abnormal Psychology, 93 (4), 481-483.**

**L. H. Silverman's subliminal symbiotic activation paradigm (Silverman, 1982) was used to manipulate unconscious affective factors in hypnosis to determine whether gratification of symbiotic fantasy would enhance hypnotic susceptibility and rapport with the hypnotist. Seventy-two male undergraduates were divided into two groups matched for susceptibility (high, medium, low). The experimental group**

received symbiotic, MOMMY AND I ARE ONE, subliminal stimulation via tachistoscope in a double-blind design. The comparison group received a psychodynamically neutral stimulus, PEOPLE ARE WALKING. Following subliminal stimulation, subjects were hypnotized individually. Projective tasks that indexed rapport with the hypnotist and the mother were administered during hypnosis. Rapport was also measured by rated intimacy of self-disclosure topics and by valence of topics selected to disclose to the hypnotist. A significant multivariate group selected more positively valenced topics to disclose on. The effect for symbiotic activation on hypnotic susceptibility was not quite significant ( $p < .056$ , two-tailed).

## NOTES

2350, Frauman, Lynn, Mare, & Kvaal, 1992 NOTES: [Paper presented by Lynn.] A number of observations and conclusions are based on literature reviews done with Brentar (British Journal of Experimental and Clinical Hypnosis; Chapter in Rhue, Lynn, & Kirsch [Eds.] Handbook of Clinical Hypnosis) and 15 years of training students in hypnotherapy. Some of this may seem elementary to some of you.

For half a century there have been reports of negative effects after hypnosis: minor, serious, transient, and chronic. Clinicians need be as wary (but no more wary) of negative effects in hypnosis as in other therapies. There are more negative effects in clinical situations than non clinical situations.

Therapists must be prepared to recognize negative effects and intervene.

Too often hypnosis is seen as a technique divorced from psychotherapy. The hypnotist must be a competent psychotherapist. What makes you a good therapist will make you a good hypnotherapist.

There should be careful assessment of the client for: 1. those with history of unusual experiences following anesthesia or drugs 2. those with a history of dissociation

People may recapitulate a previous bad experience with anesthesia, based on the unusual physiological feelings. The dissociative client must be stabilized before using hypnosis. Depressed clients may also have problems, with the imagery becoming dysphoric. Those vulnerable to psychotic decompensation, with paranoid or borderline character structures, must be evaluated carefully. A lot depends on your comfort zone in therapy.

Life experiences with parents and authority figures may also play into the reaction.

Many clients, and experimental Ss, are ambivalent about hypnosis. This ambivalence must be acknowledged and one must work with the ambivalence before proceeding. One may: - explain hypnosis - reframe in terms of self hypnosis or relaxation - explain as a state of awareness with full consciousness - offer active induction which is just as effective as the passive induction - do induction with eyes open

Research clearly shows that Subjects can monitor events outside the framework of a suggestion-- especially if you suggest they can do so with ease.

We do not use ideomotor suggestions because they aren't necessary. We tell them to open their eyes and communicate with us during hypnosis.

We always assess their feelings about hypnosis, have them have a fantasy about what hypnosis would be like, do an informal semantic analysis of the descriptors clients use (and then reframe them), inquire about previous experiences with counseling and psychotherapy, and do a mental status. Don't make assumptions. We want to know about early life experiences to know about transference and form an alliance.

Hypnosis procedures employed must have explicit informed consent (cf MacHovic book), which also provides opportunity to demystify the experience. Our research shows the great majority of Ss find it relaxing, invigorating. Even perceptual distortions can be created without hypnosis. Can create confidence by sharing the research information on hypnosis.

Elicit cooperation with easier suggestions, then use graded suggestions. We want to titrate the demands on clients, move at a pace that keeps anxiety low, promote self efficacy and mastery through ... [missed a few words] and graduated tasks.

Carefully monitor clients for frowns, lack of attention, etc. It is important to ask them what they are experiencing. Rarely, a client appears unable to talk, in which case the therapist can offer hypotheses to the hypnotized client.

Don't terminate hypnosis if there is a problem (Orne also says this); instead, offer reassurance to explore/release the feelings. It is beneficial to work through what is being experienced. There is a somewhat higher risk of emotional reactions with age regression or induced dreams. We simply tell people they can tell us at any time about what they are experiencing, without going through any ritual. When we give suggestions about amnesia, we ask what they would like to remember and suggest that they forget what they would like to forget. The usual permissive suggestion doesn't work; find out what it is, exactly, that they want to forget and then devise strategies for it. Follow for 2 weeks after any abreactive experience that may have occurred. Let them know they can contact you.

Forceful suggestions to abandon symptoms can promote resistance and the therapist may generate negative transference. (See their chapter in book edited by Rhue, Lynn, and Kirsch, *Handbook of Clinical Hypnosis*, published by the Amer Psychological Association.)

Palumbo, Robert; Gillman, Irene (1984). Effects of subliminal activation of oedipal fantasies on competitive performance: A replication and extension. *Journal of Nervous and Mental Disease*, 172 (12), 737-741.

Conducted a subliminal psychodynamic activation experiment in which the effects of 5 subliminal stimuli were sought on the dart-throwing performance of 40 male Ss (aged 22-46 years). The stimuli consisted of the following messages, each accompanied by a congruent picture: "beating dad is ok," "beating dad is wrong," "beating him is ok," "beating him is wrong," and "people are walking." The 1st 2 stimuli were intended to activate competitive motives within the context of the Oedipus complex; the next 2, competitive motives outside that context; and the last message was intended as a control stimulus. Findings show that "beating dad is ok" led to greater dart-throwing accuracy than each of the other 4 conditions, which, in turn, did not differ from each other. This finding replicates a result reported by L. H. Silverman et al (1978) and is in keeping with the formulation that the activation of oedipal motives can affect competitive performance (7 ref)

Smith, Mark Scott; Kamitsuka, Michael (1984). Self-hypnosis misinterpreted as CNS deterioration in an adolescent with leukemia and Vincristine toxicity. *American Journal of Clinical Hypnosis*, 26 (4), 280-282.

A thirteen year-old girl with leukemia was taught self-hypnosis techniques for symptom control. She was hospitalized with probable vincristine toxicity and a superimposed hyperventilation syndrome. Her spontaneous use of the self- hypnosis technique was misinterpreted as central nervous system deterioration until her apparently comatose state resolved with suggestions from the therapist.

Zamansky, Harold S.; Bartis, Scott P. (1984). Hypnosis as dissociation: Methodological considerations and preliminary findings. *American Journal of Clinical Hypnosis*, 26, 246-251.

Three criteria are proposed to be met by any experience labeled as "dissociation." A preliminary experiment is described that illustrates one way in which two of these criteria may be operationalized, and that assesses the relationship between successful performance on the two criteria and hypnotic

susceptibility. The results are viewed as consistent with Hilgard's (1977) hypothesis that hypnotic susceptibility and the ability to dissociate are positively related.

## NOTES

The authors propose that for dissociation to be present: "1) The individual must be engaged in two or more cognitive processes concurrently. 2) These processes must occur simultaneously, i.e., without recourse to alternation between them. 3) One of these processes must be perceived (by the subject) to occur below the level of conscious awareness, i.e., must seem to be autonomous or nonvolitional" (p. 247). In this study they focus on the first two criteria, as well as the relationship between ability to perform two cognitive tasks simultaneously and Subjects' hypnotizability.

The authors used a dichotic listening task, with Ss instructed to listen to both auditory inputs at once. One input was a short story that was to be followed with 12 multiple choice questions. The other ear received 3 tones every 2 seconds (the higher tone 60% of the time, lower tone 40% of the time) and S was to press a button in response to the low tones. Speed of presentation of tones was intended to reduce the opportunity for alternating back and forth between tasks.

Of 28 volunteer students, 22 passed criteria for accuracy on both tasks when performed singly: 10 high hypnotizables (Harvard Group Scale of Hypnotic Susceptibility; HGSHS > 8); 10 medium hypnotizables (HGSHS 5-8); and 2 low hypnotizables who were dropped from the data analysis. They were considered 'dissociators' if they met the criterion of passing 9 or more items of the story and simultaneously having fewer than 15% errors on the tones, on two separate trials with two different stories.

"Of the 20 subjects, four scored above criterion on both test trials and were classed as dissociators; these four also scored as highly hypnotizable on the HGSHS. Accordingly, 40% of the highly hypnotizable subjects met our criteria, while not one of the moderately hypnotizable subjects reached this level of performance" (p. 249).

In their Discussion, the authors wrote, "The results demonstrated that highly hypnotizability Ss are significantly better able to attend to two inputs simultaneously than are moderately hypnotizability Ss. These results provide preliminary empirical evidence that dissociative ability, assessed independently of hypnosis, may be an important factor underlying hypnotic behavior" (p. 249).

The authors speculated about why only 40% of the highly hypnotizable people performed successfully, suggesting that it may be because they had misclassified Ss with the HGSHS which may be less demanding than other scales, or that "while dissociation represents an important cognitive factor in hypnosis, the Harvard measures mostly ideomotor performance" (p. 250). They suggest using a hypnotizability scale that uses more cognitive items to select highly hypnotizable Subjects who would demonstrate a high degree of dissociative ability. The other possibility that they mention is that dissociation may be only one of several alternate paths to hypnosis, citing Hilgard (1965).

The Experimenters added two control groups, one given the stories without the competing tones, the other given identical questions but without actually hearing the stories. The first group answered a mean of 9.7 and 8.6 questions correctly; the second control group answered a mean of 2.9 and 3.8 questions correctly.

1982

Chertok, Leon (1982). The unconscious and hypnosis. International Journal of Clinical and Experimental Hypnosis, 30 (2), 95-107.

This paper reviews Soviet approaches to the unconscious and to hypnotic phenomena, before examining psychoanalytic theories of hypnosis which are generally based on transference. The author believes the existing theories are inadequate, arguing that there is a psychophysiological dimension to

hypnosis; but what unconscious processes does this conceal? Psychoanalysis opened one road to the unconscious, but affect, nonverbal communication, and psychophysiological process are still uncharted territories towards which hypnosis may yet prove to be another royal road.

#### NOTES

The author concludes, "hypnosis and the unconscious ... are closely linked. Historically, experiments on posthypnotic suggestion were in fact the starting point for the discovery of the unconscious. Posthypnotic suggestion is in effect one of the most irrefutable proofs that psychical contents can influence behavior, albeit eluding the subject's consciousness.

"In this paper, the present author provides a description of Soviet researchers' conceptions of the unconscious, and of the point of view from which they approach hypnotic phenomena. Psychoanalytic theories of hypnosis are then presented, which are essentially based on transference. It is shown why this notion seems to the present author powerless to account for the specific nature of the hypnotic relationship. There is, in effect, a psychophysiological dimension to hypnosis. It lies at the crossroads between the instrumental and the relational dimension. But nothing is known about what unconscious processes hide at the psychophysiological level. Psychoanalysis has brought to light the laws governing the functioning of unconscious representations. But the realm of the affect, the nonverbal communication, and bodily processes still remain beyond our knowledge. This is a hidden side of the unconscious, in relation to which hypnosis may serve as another 'royal road'" (pp. 104-105).

1980

Fromm, Erika (1980). Values in hypnotherapy. Psychotherapy: Theory, Research and Practice, 17 (4), 425-430.

Hypnosis is an altered state of consciousness characterized by a regression in the service of the ego along with increased access to the unconscious. This makes it possible to achieve lasting therapeutic results faster in hypnosis than in the waking state. Hypnosis is also a state of decreased vigilance, a vulnerability that involves dangers if a patient is in the hands of a poorly trained, incompetent, or unscrupulous therapist. In general, the same human and moral values that guide responsible therapists with patients in the ordinary waking state must guide them with patients in hypnosis, only more so. Contemporary permissive hypnotherapists do not superimpose their own wills or personalities onto patients but provide support, help patients face the frightening parts of the unconscious, and thus aid them in coping with conflicts and gaining full autonomy and freedom from fear. (11 ref).

Shevrin, Howard; Dickman, Scott (1980). The psychological unconscious: A necessary assumption for all psychological theory?. American Psychologist, 35 (5), 421-434.

The notion of complex psychological processes operating outside of awareness has traditionally been associated with the concept of the unconscious used by psychodynamically oriented clinicians; it has never found an equivalent place in the mainstream of American experimental psychology. However, mounting evidence from several rather diverse fields of empirical research (e.g., selective attention, cortical evoked potentials, subliminal perception) provides support for such a concept, and, in fact, explanatory constructs of a similar nature have been embodied in several current models of perceptual processing. While there clearly remains an enormous gap between the clinically based conception and the experimentally based conception of the nature of these unconscious processes, they nevertheless seem to provide an interface between two seemingly disparate approaches to the understanding of personality.

Stam, Henderikus J.; Radtke-Bodorik, Lorraine; Spanos, Nicholas P. (1980). Repression and hypnotic amnesia: A failure to replicate and an alternative formulation. Journal of Abnormal Psychology, 89 (4), 551-559.

In an attempt to replicate and extend a study by S. R. Clemes, 2 groups of 10 undergraduate hypnotic Ss learned a list of 18 words and were given an amnesia suggestion telling them they would be able to remember only 10 of these words. Half of the list words were critical (i.e., considered to be related to repressed conflictual material) and half were neutral (unrelated to conflictual material) as determined by Ss' responses to a word association test. Experimental Ss received their own critical and neutral words and yoked control Ss received the critical and neutral words of experimental Ss. Neither the experimental nor the yoked control group exhibited selective amnesia in favor of critical words, thus constituting a failure to replicate Clemes's result. However, variables affecting the degree to which words were initially learned (e.g., imagery value, serial position) predicted their resistance to amnesia. These findings are inconsistent with a repression hypothesis but congruent with an inattention hypothesis of suggested amnesia. (41 ref).

1979

Bennett, Henry L.; Giannini, Jeffrey A.; Kline, Mark D. (1979, September). Consequences of hearing during general anesthesia. [Paper] Presented at the annual meeting of the American Psychological Association, New York.

A double blind 2X2 study exposed 23 herniorrhaphy and cholecystectomy patients to either a 45 minute suggestion tape or to the actual sounds of the operation. Structured interviews conducted postoperatively assessed hypnotic susceptibility and regressed patients under hypnosis to operative events. Ten patients accurately recalled significant events from surgery but only under hypnosis. Recall was greater and more accurate in patients scoring high on the Stanford Clinical Hypnosis Scale. Fewest number of pain medications were given postoperatively to patients receiving the suggestion tape. Hernia patients showed better recall than gallbladder patients.

Thompson, Kay F. (1979). The case against relaxation. In Burrows, G. D.; Collison, D. R.; Dennerstein, L. (Ed.), Hypnosis 1979 (pp. 41-46). Amsterdam: Elsevier/North-Holland Biomedical Press.

NOTES

One wonders why facilitators continue to talk about and insist on relaxation as a precondition for hypnosis. Do we need to see this relaxation to believe our patients are truly in a hypnotic state?" (p. 43). "The advantages of eliminating relaxation as a precondition for trance include the elimination of the need to re-learn the non-relaxed state, the admission of more natural responses to the therapeutic situation, the recognition of spontaneous trance, and a freer communication between the doctor and patient which should result in a more comfortable use of hypnosis and its more widespread acceptance in medicine" (p. 45).

1978

Bowers, Patricia G. (1978). Hypnotizability, creativity and the role of effortless experiencing. International Journal of Clinical and Experimental Hypnosis, 26, 184-202.

NOTES

Creative people and highly hypnotizable people describe their experience of finding creative solutions or responding to hypnotic suggestions as "effortless." It is suggested that receptiveness to subconscious work accounts for the experience of effortlessness in both tasks. An experiment using 32 high and low

hypnotizable men and women was designed to explore the hypothesis that the aptitude for such effortless experiencing accounts for the relationship found between creativity and hypnotizability. Analyses of variance indicate highly significant effects of level of hypnotizability on composite scores reflecting effortless experiencing of several tasks and creativity. Intercorrelations of these indices are about .60. As predicted, effortless experiencing accounts for much of the relationship between high versus low hypnotizability and composite creativity. The role of imagery vividness and of absorption in both hypnotizability and creativity were also explored.

1977

Avila, Donald; Nummela, Renate (1977). Transcendental meditation: A psychological interpretation. Journal of Clinical Psychology, 33 (3), 842-844.

The authors suggest that Transcendental Meditation offers a great deal of promise for use in helping relationships. They also suggest that the technique might receive wider acceptance if it could be explained in other than a purely philosophical or mystical way. For that reason, in their article they offer a psychological interpretation of the TM process.

Trustman, R.; Dubovsky, S.; Titley, R. (1977). Auditory perception during general anesthesia -- myth or fact. International Journal of Clinical and Experimental Hypnosis, 25 (2), 88-105.

Reports have appeared periodically in the literature indicating that surgical patients can hear and be influenced by remarks occurring while they are under general anesthesia. Much of the evidence has been obtained by postoperatively studying patients under deep hypnosis. The present article discusses the empirical status of this phenomenon, "auditory perception during anesthesia." 14 selected studies regarding auditory perception during general anesthesia were critically reviewed. All were found to have serious deficiencies as evidence for or against the occurrence of auditory perception during general anesthesia. Methodological and theoretical difficulties of conducting research into auditory perception during general anesthesia were discussed, and suggestions for future research were offered.

1974

Galín, David (1974). Implications for psychiatry of left and right cerebral specialization: A neurophysiological context for unconscious processes. Archives of General Psychiatry, 31 (4), 572-583.

A brief review is presented of hemispheric specialization for different cognitive modes, and of the symptoms that follow disconnection of the two hemispheres by commissurotomy. Our present knowledge of the hemispheres' cognitive specialization and potential for independent functioning provides a framework for thinking about the interaction of cognitive structures, defensive maneuvers, and variations in awareness. Parallels are noted between some aspects of the mental processes of the disconnected right hemisphere and some aspects of primary process thinking and repression. The hypothesis is proposed that in normal intact people mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition of neuronal transmission across the cerebral commissures), and can continue a life of their own. This hypothesis suggests a neurophysiological mechanism for at least some instances of repression and an anatomical locus for the unconscious mental contents.

1972

Sacerdote, Paul (1972). The nature of the hypnotherapeutic process. American Journal of Clinical Hypnosis, 15 (1), 1-11.

The author presents several clinical cases where hypnosis was successfully utilized. Through detailed description of what takes place during sessions it is shown how various approaches are adapted to the intellectual, cultural, emotional and hypnotic capabilities of the patient and to the progress of therapy. The author analyzes what takes place during and after hypnotic intervention and draws some conclusions about the nature of the hypnotherapeutic process which, he feels, is essentially a convergence of the patient's and therapist's conscious and subconscious expectations and goals. The importance of the therapeutic ego of the doctor is brought into proper focus. One of the clinical cases illustrates how the therapist can convert a therapeutic relationship that may appear sterile or even hostile into a productive one by utilizing the patient's responses, while avoiding stubborn insistence upon expectations of preconceived hypnotic responses. It is suggested that the hypnotherapeutic model may present, in clearer focus, what takes place in other psychotherapeutic exchanges which do not utilize hypnosis.

1968

**Reyher, Joseph; Smeltzer, William (1968). Uncovering properties of visual imagery and verbal association. Journal of Abnormal Psychology**

21 young males were asked to 'image' or to 'associate' to 10 words from each of 3 categories representing sex, hostility, and family relationships. Imagery was found to produce heightened GSR activity, more primary process, more direct representation of drives, and less effective defense. The superiority of visual imagery over verbal association as an uncovering technique was attributed to the relative ease with which unconscious processes can influence imagery

1961

**Hatfield, Elaine C. (1961). The validity of the LeCron method of evaluating hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 9, 215-221.**

The purpose of this study was to check the relationship between estimations made by the LeCron measure of hypnotic depth and scores secured by the same S on the Stanford Hypnotic Susceptibility Scale. The correlations between the two measures were low, though significant. The mean of estimates requested from the Ss' "unconscious" correlated .84 with those made by the "conscious," suggesting that the 2 judgments may not be independent. From Psyc Abstracts 36:04:4II15H. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

**Pearson, R. E. (1961). Response to suggestion given under general anesthesia. American Journal of Clinical Hypnosis, 4, 106-114.**

Employed a double-blind design with placebo control. Audio tapes containing therapeutic suggestions were played to 43 experimental patients during anesthesia. The main theme of the suggestions was that the patient would cope better and recover faster if he could become relaxed. Placebo tapes (music or blank tapes) were played to the 38 control patients. Only E, who had no contact with the patients, knew which tape was played to a given patient. Three postoperative variables were studied: (a) number of doses of narcotics in the first 5 postoperative days; (b) a numerical rating by the surgeon of the postoperative course; and (c) number of postoperative days until release. Although no significant differences were found between the suggestion group and placebo group on need for narcotics or rated course of recovery, patients receiving suggestions were discharged an average of 2.42 days sooner (p < .05).

Raginsky, Bernard B. (1961). The sensory use of plasticine in hypnoanalysis (sensory hypnoplasty). International Journal of Clinical and Experimental Hypnosis, 9 (4), 233-247. (Abstracted in Psychological Abstracts, 62: 4 II 33R)

Modelling with plasticine under hypnosis (hypnoplasty) allows the patient to give plastic expression to suppressed or repressed material. The author claims that this approach finds the patient quite unprepared to use his usual defenses, resulting in a very rapid and remarkable ventilation of unconscious material. Several clinical cases demonstrating the use of sensory hypnoplasty are presented. From Psyc Abstracts 36:04:4II33R. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1960

Weitzenhoffer, Andre M. (1960). Reflections upon certain specific and current uses of the unconscious in clinical hypnosis. International Journal of Clinical and Experimental Hypnosis, 8 (3), 165-178.

(Author's Summary)

"Three examples of the use of "unconscious" manifestations by medical hypnotists have been examined and questions raised with regard to the interpretation which has been placed upon the results. Certain basic weaknesses inherent in the procedures employed have been pointed out and shown to be a source of confounding. A final question has been raised with regard to the so-called "wisdom" of the "unconscious." The main conclusion derived in each case considered is that there is little justification for assuming that some sort of psychic entity, "the unconscious" has been communicated with or is responsible for the observed phenomena" (p. 177).

1955

Meares, Ainslie (1955). A note on the motivation for hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 222-228. (Abstracted in Psychological Abstracts 57: 1129)

"Summary. The logical reasons of the patient for desiring hypnosis, and of the therapist in advising it, operate on a background of unconscious mechanisms. These mechanisms are important factors in determining whether or not the logical reasons become effective. An understanding of such motivation helps the therapist in the selection of cases and the choice of the particular form of hypnotherapy to be used" (p. 228).

Patient motivations for hypnosis include magical expectations, paranoid belief that one is under the control of a malevolent influence, a (paradoxical) belief that hypnosis will be ineffective with neurotic symptoms and therefore justify continuation of the symptoms, latent aggression ("hypnotize me if you can" attitude) or an excess of passivity ("humiliate me"), erotic motivation or a wish for a more intimate relationship with the therapist, search for new or unusual experiences in life, a last ditch effort to cope with chronic pain and illness, etc.

Patient motivations against hypnosis include fear of being overpowered or the threat of authority, aggressive feelings that would be motivated if the hypnotist seems to be an authority, or association of hypnosis with the erotic. The author has observed "a surprising number of people" with the latter association. "With these people, it is more of an attitude of mind in which any close or intimate relationship is regarded as erotic. They see in hypnosis an intimate relationship with the therapist, and they avoid it without being aware of their reasons for doing so" (p. 226).

Therapist motivations for hypnosis include unconscious mechanisms as well, such as a drive for power (sometimes manifested in desire to demonstrate the technique to a wider audience than simply colleagues in a workshop). When tinged with eroticism the drive can become sadistic. Also, erotic

drives can find vicarious expression as "The intensity of the rapport between patient and psychotherapist in waking psychotherapy, is increased many times in hypnosis" (p. 227).

Therapist motivations against hypnosis include fear of failure (which is more obvious when a patient doesn't follow a suggestion than in lack of response to medicine), fear of erotic involvement, fear of one's own aggression, etc.

Stokvis, Berthold (1955). Hypnosis and psychoanalytic method. Journal of Clinical and Experimental Hypnosis, 3, 253-255. (Abstracted in Psychological Abstracts, 57: 1157)

The author distinguishes between hypnosis/psychoanalysis and 'hypno-analysis' which Hadfield previously described as a combination of hypnotic catharsis and re-educative suggestions.

At the Leyden Clinic the author uses one of several methods to "apply hypnosis together with the utilization of psychoanalytic principles. ... [It] consists in a cathartic-analytic treatment of the patient in the waking state, while endeavouring to re-enact repressed psycho-traumatic events of the past, in the hypnotic state. The experiences in question are subsequently discussed with the patient and elucidated" (p. 253)

1954

LeCron, Leslie M. (1954). A hypnotic technique for uncovering unconscious material. Journal of Clinical and Experimental Hypnosis, 2, 76-79. (Abstracted in Psychological Abstracts, 54: 7497)

"Summary. A technique is given whereby unconscious material and information may be learned under hypnosis through automatic movements of the fingers, or of Chevreul's pendulum. The movements are controlled by the unconscious mind of the patient. Questions are asked which can be answered either 'yes' or 'no.' With most people the movements of the pendulum can even be elicited in the waking state. Essentially, the method is a variation of automatic writing with movements substituted for writing. A brief case history is given wherein knowledge was gained in this way as to the causes for severe menstrual pains" (p. 79).

1953

## NOTES

The author presents a case in which the patient complained of headaches to illustrate a theoretical position, described as follows in the Introduction: "For example, many psychotherapists regard as almost axiomatic that therapy is contingent upon making the unconscious conscious. When thought is given to the unmeasurable role that the unconscious plays in the total experiential life of a person from infancy on, whether awake or asleep, there can be little expectation of doing more than making some small parts of it conscious. Furthermore, the unconscious as such, not as transformed into the conscious, constitutes an essential part of psychological functioning. Hence, it seems more reasonable to assume that a legitimate goal in therapy lies in promoting an integrated functioning, both singly and together, and in complementary and supplementary relationships, as occurs daily in well-adjusted living in contrast to the inadequate, disordered and contradictory manifestations in neurotic behavior" (p. 2).

## VISION

2002

Raz, Amir; Shapiro, Theodore; Fan, Jin; Posner, Michael (2002). Hypnotic suggestion and the modulation of Stroop interference. Archives of General Psychiatry, 59, 1155-1161.

**This study was designed to determine whether a hypnotic suggestion to hinder lexical processing could modulate the Stroop effect. Behavioral Stroop data were collected from highly suggestible and 16 less suggestible subjects; both naturally vigilant and under posthypnotic suggestion. Subjects were urged to only attend to the ink color and to impede reading the stimuli under posthypnotic suggestion. Whereas posthypnotic suggestion eliminated Stroop interference for highly suggestible subjects, less suggestible control subjects showed no significant reduction in the interference effect. This outcome challenges the dominant view that word recognition is obligatory for proficient readers, and may provide insight into top-down influences of suggestion on cognition. (PsycINFO Database Record (c) 2003 APA, all rights reserved)**

**2001**

**Raz, Amir (2001). Hypnotic suggestion and the modulation of Stroop interference. [Paper] Presented at annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, Texas.**

**This study was designed to determine whether a hypnotic suggestion to hinder lexical processing could modulate the Stroop effect. Behavioral Stroop data were collected from highly suggestible and 16 less suggestible subjects; both naturally vigilant and under posthypnotic suggestion. Subjects were urged to only attend to the ink color and to impede reading the stimuli under posthypnotic suggestion. Whereas posthypnotic suggestion eliminated Stroop interference for highly suggestible subjects, less suggestible control subjects showed no significant reduction in the interference effect. This outcome challenges the dominant view that word recognition is obligatory for proficient readers, and may provide insight into top-down influences of suggestion on cognition. (PsycINFO Database Record (c) 2003 APA, all rights reserved)**

**[Abstract taken from the Archives of General Psychiatry 2002 article by Raz, Shapiro, Fan, & Posner.]**

**Kosslyn, S. M.; Thompson, W. L.; Constantini-Ferrando, M. F.; Alpert, N. M.; Spiegel, D (2000). Hypnotic visual illusion alters color processing in the brain. American Journal of Psychiatry, 157 (8), 1279-1284.**

**This study was designed to determine whether hypnosis can modulate color perception. Such evidence would provide insight into the nature of hypnosis and its underlying mechanisms. Eight highly hypnotizable Ss (aged 20-35 yrs) were asked to see a color pattern in color, a similar gray-scale pattern in color, the color pattern as gray scale, and the gray-scale pattern as gray scale during positron emission tomography scanning by means of [<sup>-sup-1-sup-50</sup>]C0-sub-2. The classic color area in the fusiform or lingual region of the brain was first identified by analyzing the results when Ss were asked to perceive color as color vs when they were asked to perceive gray scale as gray scale. The results show that when Ss were hypnotized, color areas of the left and right hemispheres were activated when they were asked to perceive color, whether they were actually shown the color or the gray-scale stimulus. These brain regions had decreased activation when Ss were told to see gray scale, whether they were actually shown the color or gray-scale stimuli. These results were obtained only during hypnosis in the left hemisphere, whereas blood flow changes reflected instructions to perceive color vs gray scale in the right hemisphere, whether or not Ss had been hypnotized. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1996**

**Dane, Joseph R. (1996). Hypnosis for pain and neuromuscular rehabilitation with multiple sclerosis: Case summary, literature review, and analysis of outcomes. International Journal of Clinical and Experimental Hypnosis, 44 (3), 208-231.**

Videotaped treatment sessions in conjunction with 1-month, 1-year, and 8-year follow-up allow a unique level of analysis in a case study of hypnotic treatment for pain and neuromuscular rehabilitation with multiple sclerosis (MS). Preparatory psychotherapy was necessary to reduce the patient's massive denial before she could actively participate in hypnosis. Subsequent hypnotic imagery and posthypnotic suggestion were accompanied by significantly improved control of pain, sitting balance, and diplopia (double vision), and a return to ambulatory capacity within 2 weeks of beginning treatment with hypnosis. Evidence regarding efficacy of hypnotic strategies included (a) direct temporal correlations between varying levels of pain relief and ambulatory capacity and the use versus nonuse of hypnotic strategies, (b) the absence of pharmacological explanations, and (c) the ongoing presence of other MS-related symptoms that remained unaltered. In conjunction with existing literature on hypnosis and neuromuscular conditions, results of this case study strongly suggest the need for more detailed and more physiologically based studies of the phenomena involved. - Journal Abstract

1995

Crawford, Helen J.; Kapelis, Lia; Harrison, David W. (1995). Visual field asymmetry in facial affect perception: Moderating effects of hypnosis, hypnotic susceptibility level, absorption, and sustained attentional abilities. International Journal of Neuroscience, 82 (n1-2), 11-23.

Effects of hypnotic level, affect valence and cerebral asymmetry on reaction time (RT) in the discrimination of Ekman and Friesen (1978) stimuli of angry and happy faces were studied in counterbalanced conditions of waking and hypnosis. Assessed previously on two hypnotic susceptibility scales (Harvard Group Scale of Hypnotic Susceptibility; Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C)], non-depressed subjects were 16 low (0-4 SHSS:C) and 17 highly (10-12 SHSS:C) hypnotizable, right-handed college students. Subjects were required to identify affect of faces, presented tachistoscopically to left (LVF) or right (RVF) visual fields, by using a forced-choice RT paradigm. Highs were significantly faster than lows in angry and happy affect recognition. Hypnosis had no significant effects. For highs only, angry emotional valence was identified faster when presented to the right hemisphere (RVF), but there were no significant hemispheric effects for happy emotional valence. For lows there were no hemispheric differences. Gender was a nonsignificant factor. Significant correlations showed that faster reaction times to angry and happy stimuli, in both LVF and RVF in waking and hypnosis, were obtained by subjects who reported more deeply absorbed and extremely focused and sustained attention on the Tellegen (1982) Absorption Scale and a subscale of the Differential Attentional Processes Inventory (Grumbles & Crawford, 1981). Vividness of Visual Imagery Questionnaire (Marks, 1973) and Affect Intensity Measure (Larsen, 1985), in general, did not correlate with RTs. The potential role of the fronto-limbic attentional system in the recognition of external visual sensory affect is discussed.

1993

Atkinson, Richard P. (1993, October). Shifts in Muller-Lyer Illusion difference thresholds: Are high hypnotizables more sensitive than lows in hypnosis?. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Arlington Heights, IL

## NOTES

Refers to Wallace (1979) finding that hypnotizability correlates with afterimage persistence. Atkinson showed highs perform better than lows in perceptual tasks in hypnosis only. Also studies indicate highs are more susceptible to illusions. Our study showed difference in threshold and point of subjective equality for highs and lows.

32 undergraduates had Harvard and Group Stanford Form C, were 9-12 or 0-3 on both scales. Counterbalanced conditions of waking and hypnosis. Used computer monitor to compare length of lines. Waking condition Ss had to close eyes for 15 minutes before the trials, same length of time as for hypnosis condition.

Significant interaction between hypnotizability and sessions was observed: highs had significantly decreased difference thresholds in hypnosis compared to waking, and significantly decreased difference thresholds compared to lows in hypnosis. Thus they had greater sensitivity than lows.

The point of subjective equality ANOVA did not yield significant effects.

Highs show higher sensitivity to illusion in hypnosis than in waking, and more than the lows.

McCormack, K.; Gruzelier, J. (1993). Cerebral asymmetry and hypnosis: A signal-detection analysis of divided visual field stimulation. Journal of Abnormal Psychology, 102 (3), 352-357.

These authors studied the effect of hypnosis on brightness discrimination with the aid of a signal-detection procedure in three sessions, the second with hypnosis. After two or three training sessions with hypnosis, which involved listening to a taped hypnotic relaxation induction, subjects were subdivided into high- and medium-susceptible groups on the basis of a 'scale inspired by the Stanford Scales.' High-susceptible subjects were found to show increases in perceptual sensitivity in the left visual field (right hemisphere) with hypnosis, whereas medium-susceptible subjects showed bilateral enhancements. The attitudes, or criterion set by the subjects remained invariant in both groups across the three sessions. It was concluded that the results provided evidence of altered brain function with hypnosis and an association of focal right hemispheric changes with high susceptibility, and through the invariance of motivational factors, failed to support the attribution of perceptual changes to attitudinal, non-state factors.

1992

Atkinson, Richard P.; Crawford, Helen J. (1992). Individual differences in afterimage persistence: Relationships to hypnotic susceptibility and visuospatial skills. American Journal of Psychology, 105 (4), 527-539.

To investigate the moderating role of individual differences in hypnotic susceptibility and visuospatial skills on afterimage persistence, we presented a codable (cross) flash of light to 40 men and 46 women who had been dark adapted for 20 minutes. In an unrelated classroom setting, subjects had previously been given two standardized scales of hypnotic susceptibility (Harvard Group Scale of Hypnotic Susceptibility, Shor & Orne, 1962; Group Stanford Hypnotic Susceptibility Scale, Form C, Crawford & Allen, 1982) and the Mental Rotations Test (Vandenberg & Kuse, 1978). The first afterimage interval and the afterimage duration correlated significantly with hypnotic responsiveness, supporting Wallace (1979), but did not show the anticipated relationships with mental rotation visuospatial skills. Individuals in the high hypnotizable group had (a) significantly longer afterimage intervals between its first appearance and first disappearance than did those in low groups, but those in medium groups did not differ significantly from the other groups. Discriminant analysis using the afterimage persistence measures classified correctly 65.2% of high hypnotizables, 37.5% of medium hypnotizables, and 54.8% of low hypnotizables. Hypothesized cognitive skills that assist in the maintenance of afterimages and underlie hypnotic susceptibility include abilities to maintain focused attention and resist distractions over time and to maintain vivid visual images.

NOTES

Because there is no apparent evidence for physiological differences of the visual system between low and high hypnotizables (e.g., Wallace, 1979), cognitive factors are suggested as possible moderators of afterimage persistence.

"Hypnotic susceptibility per se is not the moderator of afterimage duration. Rather, we argue that hypnotic susceptibility represents a constellation of underlying cognitive skills (e.g., for reviews, see Crawford, 1989; Kihlstrom, 1985) that assist an individual to respond to hypnotic suggestions as well as assist in the persistence of afterimages by interacting with more primary casual mechanisms that are physiological in origin. These cognitive skills are thought to include the abilities to focus attention selectively upon both external stimuli and internally generated images, to maintain vivid visual images, to sustain attention over time and remain absorbed in the experience at hand, and to resist distractions. The relationships between these cognitive skills and hypnotic susceptibility are reported in a large body of literature (e.g., Crawford, 1982, 1989; Crawford et al., 1991; Crawford & Grumbles, 1988; Finke & Macdonald, 1978; Grumbles & Crawford, 1981; Mitchell, 1970; Tellegen & Atkinson, 1974)....

"Sustained and selective attention without interference from extraneous stimuli plays an important role in hypnosis. Individuals who are responsive to hypnosis demonstrate greater skills in extremely focused and sustained attention (e.g., Crawford et al., 1991; Tellegen & Atkinson, 1974). Electrophysiological research had found that high hypnotizables often generate substantially more theta electroencephalogram (EEG) power than do low hypnotizables (e.g., Crawford 1990, 1991; Crawford & Gruzelier, 1992; Sabourin, Cutcomb, Crawford, & Pribam, 1990). Such a relationship may be interpreted as further evidence of greater attentional skills in highs, because certain theta waves have been correlated with enhanced problem solving and attentional task performance (e.g., Crawford & Gruzelier, 1992; Schacter, 1977)....

"Hypnosis is seen often as a condition of amplified attention, where attention can be either more focused or diffuse dependent upon set (e.g., Krippner & Binder, 1974). Increases in vigilant performance during hypnosis have been reported, albeit inconsistently (e.g., Barabasz, 1980; Fehr & Stern, 1967; Kissen, Reifler, & Thaler, 1964; Smyth & Lowy, 1983). Fehr and Stern's results suggest that hypnotized subjects devote more attention to a primary task with less available attentional resources for a secondary task. Hypnosis has been found to have an enhancing effect on the imaginal processing of information-to-be-remembered that consists of literal or untransformed representations of pictorial or nonverbal information for high but not low hypnotizables (Crawford & Allen, 1983; Crawford, Nomura, & Slater, 1983; Crawford, Wallace, Nomura, & Slater, 1986). This may possibly be the result of increased attention and/or shifts in cognitive strategies. Supportive of the hypothesis that sustained attention can be enhanced during hypnosis, Atkinson (1991) recently found that high but not low hypnotizables report significantly more persistent afterimages in hypnosis than in waking.

"Although we have argued for a cognitive explanation for individual differences in afterimage persistence and their possible relationship to hypnotic susceptibility and sustained attentional abilities, as has Wallace (1979, 1990), we must point out the possibility that high hypnotizables may be more suggestible to imagery instructions or more willing to discuss or experience imagery than low hypnotizables, particularly in the context of hypnosis and hypnotic susceptibility testing (e.g., Zamansky, Scharf, & Brightbill, 1964). A contextual account of the longstanding relationship between hypnotic susceptibility and absorption was raised by Council, Kirsch, and Hafner (1986), but was not supported by two independent, and more methodologically sound, studies reported by Nadon, Hoyt, Register, and Kihlstrom (1991). The context of hypnosis was not an issue in the present study, because none of the subjects was aware of the investigated relationship between afterimage persistence and hypnotic susceptibility at the time of recruitment or participation" (pp. 533-535).

Kay, L. M. (1992, October). The effects of hypnosis, relaxation, and suggestion on visual acuity (Dissertation, California School of Professional Psychology, San Diego). Dissertation Abstracts International, 53 (4), 2065-B. (Order No. DA 9221587)

Evaluated the relative efficacy of several aspects of the hypnotic process on facilitating change in hypnotic state-dependent visual acuity in myopic student subjects. Five conditions included hypnosis with suggestions, neutral hypnosis, nonhypnotic suggestion, progressive relaxation, and a control (comedy). Visual acuity was assessed as baseline (a task-motivational situation where they were to try to see as well as possible) and after the experimental condition. Results found that hypnosis facilitated a significant improvement in visual acuity ( $p = .002$ ), although no differences were found in the other conditions" (p. 2065).

Spanos, Nicholas P.; Burgess, C. A.; Cross, P. A.; MacLeod, G. (1992). Hypnosis, reporting bias, and suggested negative hallucinations. Journal of Abnormal Psychology, 101, 192-199.

Examined the role of reporting bias in hypnotic negative hallucinations by using a paradigm in which reporting bias was assessed independently of perceptual change. In Experiment 1, highly hypnotizable subjects reported significant loudness reductions when tested for hypnotic deafness. Later, however, these subjects biased their reported loudness reductions in the absence of perceptual change, and their reporting bias scores were almost as large as their hypnotic deafness reports. Subjects also biased their ratings of strategy use. In Experiment 2, ratings of blindness given in response to a hypnotic negative visual hallucination suggestion were significantly correlated with reporting bias scores obtained in this paradigm. Although hypnotic blindness and hypnotic deafness correlated significantly, the partial correlation between these variables was nonsignificant when reporting bias scores were statistically controlled. Results are used to support a skeptical view of hypnotic response as being based on compliance.

1991

Marzi, C. A.; Bisiacchi, P.; Nicoletti, R. (1991). Is interhemispheric transfer of visuomotor information asymmetric? Evidence from a meta-analysis. Neuropsychologia, 29, 1163-1177.

Using a meta-analytic procedure we have analysed 16 studies employing a simple unimanual reaction time (RT) paradigm and lateralized visual stimuli to provide an estimate of interhemispheric transfer time in normal right-handed subjects. We found a significant overall RT advantage of the left visual field over the right and of the right hand over the left. These asymmetries can be explained by a superiority of the right hemisphere for the detection of simple visual stimuli and by a corresponding superiority of the left hemisphere for the execution of the manual response, respectively. Alternatively, they may be interpreted as related to an asymmetry of interhemispheric transmission of visuomotor information, with transfer from the right hemisphere (side of stimulus entry) to the left (side of response generation) faster than in the reverse direction. Although a direct test of these hypotheses is still lacking, we think that the evidence available is more in keeping with the latter possibility.

1990

Wallace, Benjamin (1990). Hypnotizability and the modification of cognitive search strategies. International Journal of Clinical and Experimental Hypnosis, 38, 60-69.

An experiment was conducted to determine if Ss judged to be low in hypnotizability could be taught the efficient search strategies used by high hypnotizable Ss in the performance of a cognitive search task. Ss were requested to find objects embedded within a variety of pictorial scenes. High

hypnotizable Ss were found to be more adept than low hypnotizables at finding more objects correctly. When low hypnotizable Ss were taught the efficient search strategies used by the high hypnotizables, their performance improved and was not significantly different from that of the high hypnotizable Ss. Implications of these results for teaching search strategies are discussed.

Wallace, Benjamin (1990). Imagery vividness, hypnotic susceptibility, and the perception of fragmented stimuli. Journal of Personality and Social Psychology, 58, 354-359.

Two experiments were conducted to determine the role of hypnotic susceptibility level (high or low) and imaging ability (vivid or poor) in the performance of gestalt closure tasks. In Experiment 1, subjects were required to identify fragmented stimuli in the Closure Speed Test and in the Street Test. In Experiment 2, subjects reported on fragmented stimuli that were projected to the right eye and subsequently produced an afterimage. Individuals were asked to identify the composite if possible and to report on the duration of the afterimage. In both experiments, hypnotic susceptibility level and imaging ability affected reports of gestalt closure. The greatest number of correct closures was reported by those who were both high in hypnotic susceptibility and vivid in imaging ability. In addition, in the second experiment, this group also reported the longest enduring afterimage. These results are discussed in terms of the processes required to perform in a gestalt closure task.

1989

Miller, Scott D. (1989). Optical differences in cases of multiple personality disorder. Journal of Nervous and Mental Disease, 177 (8), 480-486.

Nine patients (aged 24-43 years) diagnosed with multiple personality disorder (MPD) and 9 control Ss role-playing MPD were given complete ophthalmological examinations to test whether the MPD Ss would show greater variability in visual functioning across alter personalities than would control Ss role-playing MPD. An analysis of variability of 8 optical measures in 4 prominent areas of vision was performed by comparing 2 covariance matrices for equality. Analyses showed that MPD Ss had significantly more variability across alter personalities than did their control counterparts on measures of visual acuity with correction, visual acuity without correction, visual fields, manifest refraction and eye-muscle balance. Ratings for clinical significance showed that the MPD Ss had 4.5 times the average number of changes in optical functioning between alter personalities of the control Ss.

1988

Sheehan, Peter W.; Donovan, Paul; MacLeod, Colin M. (1988). Strategy manipulation and the Stroop effect in hypnosis. Journal of Abnormal Psychology, 97, 455-460.

When asked to name the ink color of an incompatible color word (e.g., the word red printed in green ink), people show strong interference from the word. This study examined Stroop interference in subjects who were either high or low in susceptibility to hypnosis. Compared with performance in the waking state, the Stroop effect actually increased under hypnosis, a result particularly evident in the high- susceptible subjects. This contradicts the notion that high susceptibility subjects freely select appropriate strategies when hypnotized, a conclusion strengthened by an analysis of reported strategies in the two states. However, when provided with an attentional focusing instruction under hypnosis, high susceptibility subjects sharply reduced the Stroop effect, whereas low-susceptible subjects decreased it only slightly. One role of hypnosis may be to assist the subject in tuning attention, but only when an appropriate strategy is provided.

Wallace, Benjamin (1988). Hypnotic susceptibility, visual distraction, and reports of Necker cube apparent reversals. Journal of General Psychology, 115, 389-396.

Subjects, either susceptible (n = 50) or resistant (n = 50) to hypnotic suggestion, were asked to report on frequency of apparent reversals (ARs) to the Necker cube illusion. Such reports were made in the presence or absence of various types of visual, geometric surrounds (squares, triangles, crosses, or parallelograms). In agreement with a number of previous experiments, susceptible subjects reported perceiving more ARs than did resistant subjects. This difference held whether visual surrounds were present or absent. The presence of surrounds did serve to reduce AR reports regardless of hypnotic susceptibility level. The results are examined in terms of the ability of subjects to selectively attend when confronted with potential visual distractors.

1987

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Monty, Richard A. (1987). Visual information processing speed in hypnotized and nonhypnotized subjects. Journal of General Psychology, 114 (4), 363-372.

Using a backward-masking paradigm with a bias-free and ceiling-free psychophysical task, we tested hypnotized and control subjects for speed of visual information processing. Approximately half of each group received visual imagery suggestions in an attempt to influence attention. Imagery produced no significant differential effect. Although an absence of a hypnotizability-performance relationship was in keeping with findings of a previous study, those subjects in the present study who performed under hypnosis were, as a group, significantly superior to the other subjects in speed of information processing.

1986

Friedman, Howard; Taub, Harvey A.; Sturr, Joseph F.; Church, Katherine L.; Monty, Richard A. (1986). Hypnotizability and speed of visual information processing. International Journal of Clinical and Experimental Hypnosis, 34, 234-241.

Following the determination of the luminance threshold of each S, high and low hypnotizable Ss were tested for speed of information processing using a backward masking paradigm with a bias-free and ceiling-free psychophysical task. No significant relationship between hypnotizability as measured by the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A) of Weitzenhoffer and Hilgard (1959) and speed of information processing was observed. The order of administering SHSS:A, pre- or postthreshold task, was significantly related to luminance threshold. Results were compared to other studies wherein some evidence for a relationship between hypnotizability and speed of visual information processing had been offered.

## NOTES

106 college students were tested using tachistoscopic presentation of stimuli. 52 Ss received the SHSS:A immediately prior to the experimental tasks, 54 immediately after, and testing was terminated for each Subject after they failed 3 successive items. The test flash was set at 0.3 log units above threshold, i.e. double the threshold intensity. A trial consisted of 2 observation intervals, separated by warning tones. The test flash occurred randomly in one of the two intervals. The S indicated which observation interval contained the test flash by pressing a button. Feedback tones gave S information about the correct response.

"The masking experiment was begun with the suprathreshold test flash occurring 250 milliseconds prior to the onset of the larger bright masking stimulus. As before, a two-interval forced -choice

staircase procedure was used, but this time the test intensity was constant, and ISI was changed. If S 'hit' three trials in a row, ISI was decreased by 10 milliseconds. The ISIs continued to decrease in 10-millisecond steps, until S "missed," causing an increase in ISI" (p. 348).

RESULTS were analyzed by 2 x 2 x 2 ANOVA (Hypnotizability, sex, and order of hypnotizability measurement). High hypnotizables = 7-12 on the SHSS:A, and low hypnotizables = 0-6. Ss receiving SHSS:A prior to the tasks had a significantly lower luminance threshold (-1.99 log mL) than did those having it after tasks (-1.93 log mL),  $p < .05$ . None of the other analyses were significant. No significant relationships were observed vis a vis the masking task, and the mean masking thresholds were almost identical for the lows and highs.

DISCUSSION. "Spanos (1982), in studying the effects of hypnotizability and suggestions in altering auditory sensitivity, reviewed the difficulties inherent in the measurement of perceptual accuracy and emphasized the role of response bias in the confounding of results" (p. 239). Secondly, these tasks reflect more fundamental, central processes and use more neutral stimuli than letter recognition used earlier. "Thus, while the masking effects of both the previous recognition tasks (masking by pattern) and the current detection tasks (masking by nearby contours) are presumably mediated through similar high level central processes, the differences in findings could possibly have been related to additional processing cues required in letter recognition" (p. 239). A footnote mentions, "Other studies have shown that with stimulus configurations similar to that used in the present study, there are significant central masking effects (Battersby & Wagman, 1962; Markoff & Sturr, 1971; Turvey, 1973)" (p. 239).

"Quite intriguing is the luminance threshold finding which, although not as robust as one would desire, suggests that a hypnotic induction procedure given prior to a task may significantly affect sensitivity on that task. Speculatively, the relaxation suggestions inherent in SHSS:A may account for the changes in luminance threshold" (p. 239).

Wallace, Benjamin (1986). Latency and frequency reports to the Necker cube illusion: Effects of hypnotic susceptibility and mental arithmetic. Journal of General Psychology, 113 (2), 187-194.

An experiment (N = 32) was conducted to assess latency of first apparent reversal (AR) and AR frequency while observing the Necker cube illusion. Subjects who were either high in hypnotic susceptibility (susceptibles) or low in hypnotic susceptibility (resistant subjects) observed the cube either while performing or not performing mental addition problems. Susceptibles reported perceiving the first AR more quickly and a greater frequency of ARs than did resistant subjects. Also, latency of the first AR was negatively correlated with AR frequency. These results were interpreted in terms of the ability of susceptibles to allocate concentrative or selective attention in a manner that was conducive to faster performance when faced with competing tasks.

1985

Nogrady, Heather; McConkey, Kevin M.; Perry, Campbell (1985). Enhancing visual memory: Trying hypnosis, trying imagination, and trying again. Journal of Abnormal Psychology, 94 (2), 195-204.

Tested visual recall memory of high (n = 24) and low (n = 24) hypnotizable undergraduates (screened under the Harvard Group Scale of Hypnotic Susceptibility and the Stanford Hypnotic Susceptibility Scale) for black and white line drawings of common objects in either hypnosis, imagination, or control conditions. Memory performance in terms of both correct and incorrect items increased appreciably across the recall tests. Neither hypnosis nor imagination enhanced recall beyond that of normal repeated testing. Hypnotizability was not related to the amount of correct material recalled but was related to the amount of incorrect material reported. High hypnotizable Ss in the hypnosis condition were more likely than other Ss to confidently rate the incorrect material as correct. Findings are

discussed in terms of the impact of hypnosis on and the relevance of hypnotizability to enhancing visual memory.

1984

Magnavito, F.; Gaupp, L. (1984, October). Absorption, hypnotic susceptibility, and automatization of visual attention. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, San Antonio, TX.

#### NOTES

Absorption (Tellegen Scale) correlated .62 with SHCS and -.45 with a measure of visual automatization. They conclude that highly absorption-prone individuals attend more to sensory information, processing their environment in a childlike, less automatized manner. The measure of visual automatization, H, was obtained by camera recorded eye movements and fixations as Ss viewed slides in any way they desired.

Venn, J. (1984). The spiral technique of hypnotic induction: A brief communication. International Journal of Clinical and Experimental Hypnosis, 32 (3), 287-289.

The spiral method directs the patient's attention to a sequence of body locations. During 3 years of clinical trials, the method proved valuable in hetero-hypnotic induction and in training patients in self-relaxation. The spiral technique is compared with progressive relaxation, and advantages of this method are discussed. A brief case report is presented.

#### NOTES

The induction is based on a technique published in W. B. Joy (1979), *Joy's Way*. Los Angeles: Tarcher. It guides patient in a (spiral) focused awareness of locations in and around the body, e.g. heart, solar plexus, middle chest, lower abdomen, throat, left shoulder, left hip, base of spine, right hip, right shoulder, center of forehead, left elbow, left knee, right knee, right elbow, center of scalp, left hand, left foot, right foot, right hand, and point in midair several inches above the center of the scalp.

1983

Crawford, Helen J.; Allen, Steven N. (1983). Enhanced visual memory during hypnosis as mediated by hypnotic responsiveness and cognitive strategies. Journal of Experimental Psychology: General, 112 (4), 662-685

To investigate the hypothesis that hypnosis has an enhancing effect on imagery processing, as mediated by hypnotic responsiveness and cognitive strategies, four experiments compared performance of low and high, or low, medium, and high hypnotically responsive subjects in waking and hypnosis conditions on a successive visual memory discrimination task that required detecting differences between successively presented picture pairs in which one member of the pair was slightly altered. Consistently, hypnotically responsive individuals showed enhanced mean number of correct performance during hypnosis, whereas nonresponsive ones did not. Hypnotic responsiveness correlated .52 ( $p < .001$ ) with enhanced performance during hypnosis, but it was uncorrelated with waking performance (Experiment 3). Reaction time was not affected by hypnosis, although high hypnotizables were faster than lows in their responses (Experiments 1 and 2).

#### NOTES

Subjects reported enhanced imagery vividness on the self-report Vividness of Visual Imagery Questionnaire during hypnosis. The differential effect between lows and highs was in the anticipated direction but not significant (Experiments 1 and 2).

Two cognitive strategies appeared to mediate visual memory performance: (a) detail strategy (memorization and rehearsal of individual details) and (b) holistic strategy (looking at and remembering the whole picture with accompanying imagery). Both lows and highs reported predominantly detail-oriented strategies during waking; however the highs shifted to a more holistic strategy during hypnosis. It appears that high hypnotizables have a greater capacity than lows for cognitive flexibility (Battig, 1979).

Results are discussed in terms of Paivio's (1971) dual coding theory and Craik and Tulving's (1975) depth of processing theory. The authors also discuss whether hypnosis involves a shift in cerebral dominance, as reflected by the cognitive strategy changes and enhanced imagery processing.

Nash, John (1983). Negative visual hallucination and concomitant changes in cortical event-related potentials (Dissertation, University of California, Santa Barbara). Dissertation Abstracts International, 45 (2), 716-B. (Order No. DA 8411224)

"The purpose of this investigation was to examine the effects of negative visual hallucination (NVH) on cortical event-related potentials (ERPs), and to compare these effects with those of selectively attending to and ignoring stimuli. Five highly hypnotically susceptible subjects, four female and one male, were trained to block from subjective experience, i.e., negatively hallucinate, a ring of strobe-illuminated circles surrounding a central, independently strobe-illuminated circle. This stimulus array was modeled after part of the Titchener-Ebbinghaus circle illusion, since previous research had shown that subjects could attenuate the effects of the optical illusion via NVH of the outer, illusion-producing circles. "Analysis of the ERP data revealed amplitude and latency changes in various ERP components across the three experimental conditions (Attend, Ignore, NVH) for the four female subjects, a negative result which is explained in motivational terms. "The most noteworthy finding was the selection of the P3 amplitude variable at C2 by stepwise discriminant analysis for the four females, and the fact that this amplitude systematically decreased across conditions from largest in Attend to smallest in NVH. A variety of individual patterns were observed in terms of other ERP components which allowed discrimination (successful classification) among the three conditions. The results suggest that both Ignoring and NVH of a stimulus result in a decrease in the subjective certainty of perception of the stimulus. Individual differences in patterns of ERP changes are interpreted in terms of differing strategies for execution of the experimental instructions. The results support the view that NVH instructions produce distinctive ERP effects and that NVH generally can be viewed as an extreme level of ignoring" (p. 716).

Spanos, Nicholas P.; Dubreuil, Debra L., Saad, Carol L., Gorassini, Donald (1983). Hypnotic elimination of prism-induced aftereffects: Perceptual effect or responses to experimental demands?. Journal of Abnormal Psychology, 92 (2), 216-222.

Two experiments assessed adaptation to displacing prisms in hypnotically limb-anesthetized Ss. Experiment I with 18 college students disconfirmed the hypothesis that the displacement aftereffect is eliminated in limb-anesthetized hypnotic Ss who adapt to prisms in the absence of a visual target. Such Ss showed as large a displacement aftereffect as control Ss who received neither a hypnotic induction procedure nor an anesthesia suggestion. Experiment II with 30 undergraduates demonstrated that under some testing conditions hypnotic Ss complied with experimental demands and eliminated the behavioral but not the perceptual component of the aftereffect.

Wagstaff, Graham F. (1983). Suggested improvement of visual acuity: A statistical reevaluation. International Journal of Clinical and Experimental Hypnosis, 31 (4), 239-240.

This is a re-analysis of data presented by Sheehan, E.P., Smith, H.V., & Forrest, D.W. (1982), A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes. International Journal of Clinical and Experimental Hypnosis, 40, 138-146. "In sum, a more appropriate conclusion to be drawn from Sheehan et al.'s (1982) results is that suggestions for improving visual acuity have little effect, but listening to music actually appears to reduce sensitivity. This reinterpretation of Sheehan et al.'s (1982) result is purely a comment on their conclusions, not their methodology.

1982

Cunningham, Paul V.; Blum, Gerald S. (1982). Further evidence that hypnotically induced color blindness does not mimic congenital defects. Journal of Abnormal Psychology, 91, 139-143.

Six undergraduate women, highly skilled in hypnotic techniques, were trained under hypnosis with a color mixer to experience red, green, blue, and total color blindness and were then programmed for the same responses in the posthypnotic state under conditions of amnesia. After awakening they were shown pseudoisochromatic plates as a preliminary check on the efficacy of the prior hypnotic instructions. The experiment consisted of successive administrations of the Farnsworth-Munsell 100-hue test, initially under normal baseline viewing conditions followed by each of the color-blind conditions in turn. Results indicate that although the observers subjectively experienced the varieties of color blindness as instructed, their responses differed from specimen responses of individuals with congenital defects in color discrimination. Implications for interpreting hypnotic alterations of perception are discussed.

Saccuzzo, Dennis P.; Safran, Deborah; Anderson, Virginia; McNeill, Brian (1982). Visual information processing in high and low susceptible subjects. International Journal of Clinical and Experimental Hypnosis, 30, 32-44.

High and low hypnotically susceptible Ss were compared in their ability to identify a briefly exposed informational target stimulus consisting of a letter when it was preceded (forward masking) or followed by (backward masking) a noninformational mask stimulus. There were 4 intervals between the target and mask and a no mask control for both forward and backward masking. The experiment was replicated in 2 independent sessions. In Session 1 high susceptible Ss were superior to lows in identifying the target stimulus. The superiority was not maintained in Session 2. Implications of the findings and directions for future research are discussed.

Sheehan, Eugene P.; Smith, Howard V.; Forrest, Derek W. (1982). A signal detection study of the effects of suggested improvement on the monocular visual acuity of myopes. International Journal of Clinical and Experimental Hypnosis, 30, 138-146.

2 groups of 8 Ss each, matched for suggestibility and degree of myopia, were assessed by a signal detection method in their ability to make a monocular spatial discrimination, both before and after 15 minutes of listening either to music or to taped suggestions that vision would improve. There was a significantly greater improvement in sensitivity on the part of the group of Ss listening to suggestions, and within this group, but not within the group of Ss listening to music, there was a significant negative correlation ( $r = -.67$ ) between S's initial sensitivity and the amount by which it increased. There was no significant difference between the amounts by which the criterion changed in the 2

groups. In contrast with the results reported by Graham and Leibowitz (1972), there was no evidence in the present study to indicate that the amount of improvement shown by Ss depended upon either their suggestibility as measured by BSS or their refractive error.

#### NOTES

In contrast with the results reported by Graham and Leibowitz (1972), there was no evidence in the present study to indicate that the amount of improvement shown by Ss depended upon either their suggestibility as measured by BSS or their refractive error (p. 144).

Wallace, Benjamin; Fisher, Leslie E. (1982). Hypnotically induced limb anesthesia and adaptation to displacing prisms: Replication requires adherence to critical procedures. Journal of Abnormal Psychology, 91 (5), 390-391.

N. P. Spanos et al. (see PA, vol 66:7289) reported a failure to confirm the results of an experiment on prism adaptation reported by the present authors (see PA, vol 65:6956) that required Ss to adapt to a prismatically displaced environment when their adapting limb was hypnotically anesthetized. The present authors argue that the failure of Spanos et al to replicate their findings is due to their failure to duplicate the critical conditions of the experiment. (7 ref)

#### 1981

Blum, Gerald S.; Nash, John; Jansen, Robert D.; Barbour, John S. (1981, June). Posthypnotic attenuation of a visual illusion as reflected in perceptual reports and cortical event-related potentials. Academic Psychology Bulletin, 3, 251-271.

Highly selected and trained hypnotic subjects, capable of ablating portions of visual stimuli from conscious awareness, showed varying degrees of ability to attenuate the Titchener-Ebbinghaus circles illusion post-hypnotically under a negative visual hallucination instruction. The presence or absence of such inhibitory skill, inferred from perceptual reports, was differentially reflected in changes in cortical event-related potentials not typically associated with shifts in selective attention. These findings point to the cognitive operation of a distinctive mechanism of selective inattention.

#### NOTES

Blum et al. postulate an inhibitory mechanism of the central nervous system with stages of amplification and attenuation. They suggest that individual differences in inhibitory skill may be improved with practice even for very skilled Subjects. They studied this type of inhibition using a visual illusion (the Titchener-Ebbinghaus circles) because the neural locus of such illusions is thought to be more central in the nervous system rather than at the level of the retina.

Experiment 1. Three Ss trained in using hypnosis viewed stimuli in waking and posthypnotic negative visual hallucination (NVH) conditions. All three had previously passed a negative hallucination item (not seeing a playing card of three such cards placed on a table). Training included practice sessions applying NVH to the experimental stimuli. S1 reported immediate success; S2 experienced some initial difficulty ("I have a feeling something's there") but then reported success; S3 required a couple of long practice sessions.

The classic Titchener-Ebbinghaus illusion stimuli were used. Stimuli were ten slides with drawings of a standard 17-mm-diameter black circle on the left and a comparison black circle on the right. The black circle on the right was either 14, 15, 16, 17, or 18 mm in diameter, skewed intentionally around 17, to compensate for the proportion of smaller and larger judgments applied to the comparison figure in relation to the standard. One black comparison figure was surrounded by seven 15-mm diameter white circles; the other by seven 10 mm diameter white circles. The key drawings were both black

circles of 17 mm. The second set of five drawings, used as a control, contained the same black circles but lacked outer rings of white circles.

The Subject was to state whether the black circle on the right appeared larger, smaller, or the same as the standard black circle on the left. Slides were shown for 4 seconds each, with 6 seconds in between slides.

Alternating blocks of trials were given under baseline (B) condition and a posthypnotically programmed negative hallucination condition (NVH). In the NVH condition, "the rings of white circles surrounding the standard and comparison black inner circles were 'ablated' from consciousness. The observers were amnesic in the waking state for their prior hypnotic instructions and were cued in advance of a block of trials simply by the phrases 'This will be a mixed series' (referring to B, in which the stimuli appeared as they really were, some with outer rings of white circles present and others not), or 'This will be a black only series' (referring to NVH, in which all stimuli appeared to the observer as black circles only, whether the outer rings were physically present or not)" (pp. 254- 255). Sessions were spread out over 8-12 months for each observer, interspersed with a variety of other experiments. In one session the Experimenters used a selective attention instruction, with Ss given posthypnotic suggestions to regulate their cognitive arousal to a peak of mental alertness and concentration (+AA) and focus on the inner black circles but not to negatively hallucinate the outer white circles.

Although all three Ss showed the illusion effect, they varied in ability to attenuate the illusion when negative visual hallucination suggestions were given. "S1 showed a very greatly reduced frequency of reports in the illusory direction under the NVH condition, a less marked reduction under +AA concentration, and no reduction at all under a waking instruction to ignore the outer circles; S2 revealed a moderate but significant reduction under NVH but not under +AA; S3 gave no evidence of attenuation in either condition" (p. 258). The response times for the two more successful Ss (1 and 2) with the 17 mm stimuli under NVH conditions were not different when the outer circles were either present or absent.

Experiment 2. The next year S1 and S2 returned but S3 was no longer available as a Subject; S4 and S5 were added and trained in hypnosis skills. EEG evoked response potentials (ERPs) were recorded while Ss made size judgments as in Experiment 1. Averaged ERPs for each block of 100 stimulus presentations were obtained for the first 500 milliseconds following stimulus onset. Judges blind to the experimental conditions evaluated the ERP records.

All Subjects experienced the Titchener-Ebbinghaus illusion, but again there were individual differences in ability to attenuate the illusion: S1 was the most successful; S2 gave significantly fewer responses in the larger category under NVH than B conditions; and both S1 and S2 improved attenuation performance over the previous year. S4 fell between S1 and S2 in ability; S5 was unable to attenuate the illusion in the NVH condition.

Results. "All three observers whose perceptual reports indicated some attenuation of the visual illusion during the NVH condition also showed a consistent reduction of the P2-N2 amplitude during NVH" (p. 262) at the Occipital sites. Median amplitude reduction was 36%, 40%, and 36% for S1, S2, and S4; only 7% for S5. There were no similar reductions for the other electrode sites, though "enhancement of P2-N2 amplitudes occurred in the lateral prefrontal and frontal areas in the two most successful individuals, S1 and S4" (p. 263). There was also a lag in N2 peak latencies for the three best subjects. The Experimenters noted that the N2 peak occurred 50 msec later in the frontal and prefrontal areas than in the occipital area.

In their Discussion, the authors express the view that it is not likely that faking could have occurred, for several reasons: 1. The Subjects were trained to report honestly, and they often had reported failures to experience hypnotic phenomena suggested during training sessions. 2. The task elicited rapid responses, usually in less than 2 seconds, to 10 different slides in randomized blocks of 100 trials, which would make self monitoring of responses extremely difficult. 3. Subjects exhibited a consistency of responses over experimental sessions that were widely separated in time, making conscious or

unconscious deception unlikely. 4. The finding of no difference in latency between 17 mm stimuli with and without outer rings of white circles supports an interpretation of reliable reporting. 5. Differences in ERP data between the B and NVH conditions were obtained only for those Ss who successfully attenuated the illusion.

The authors also state, "In terms of our conceptual model of the mind, inhibitory skill is attributable to the capacity for invoking inhibitory action earlier in the sequence as signals are processed through stages of amplification and attenuation en route to consciousness (Blum & Barbour, 1979). In the NVH condition of the present task, first- stage attenuation ... [Subject 1] ... occurs in time to negate the illusion as well as preventing conscious awareness of the outer white circles, second-stage attenuation takes place too late to disrupt the illusion but still in time to keep the outer circles from consciousness" (p. 265). Note that the unsuccessful Subject 5 had the highest score on the screening hypnotizability tests. The variation among very high hypnotizables casts doubt on the practice of grouping Ss who score between 9 and 12 on the SHSS. "It is perhaps not surprising that many previous hypnotic studies involving alterations in such subtle phenomena as visual illusions have yielded negative results." p. 266.

N.B. None of the Ss was able to eliminate the illusion under a strong waking instruction to ignore the outer circles while judging the inner black ones. "These different results for AA and NVH instructions pinpoint the contrast between selective attention (+AA) and selective inattention (NVH)" (p. 266).

The ERP changes seen in occipital and frontal areas were in opposite directions. Thus "the data suggest an effect which seems to parallel both investment of attention (increases in late components over frontal cortex) and withdrawal of attention (relative decreases in late components over occipital cortex). This parallel leads us to speculate that our occipital decreases may have been due to active inhibition of information-processing in the occipital regions, and that the late component enhancement over frontal areas may have been due to the mobilization of resources in these areas necessary to accomplish the tonic inhibition of visual input. ... Activity in the frontal cortex apparently 'programs' inhibition on the specific sensory nuclei of the thalamus, in a modality specific and topographical way, accomplishing gating of sensory information to primary sensory cortex" (p. 268).

Zakrzewski, Kajetan; Szelenberger, Waldemar (1981). Visual evoked potentials in hypnosis: A longitudinal approach. International Journal of Clinical and Experimental Hypnosis, 29 (1), 77-86.

Visual Evoked Potentials (VEP's) were recorded in 5 healthy 20-24 year-old-females during hypnosis, hypnosis after the suggestion of blindness, and in 3 waking conditions. VEP's were recorded in these conditions 10 times within each S on different days. Both within-Ss and between-Ss analyses showed a tendency of VEP N-250 latencies (and possibly also amplitudes) to increase in hypnosis when compared to the waking state. Overall, these changes tended to be rather small. No changes were found in the earlier VEP waveform components, and some tendencies noted in the later P-300 component were largely nonsignificant. Decrease in N-250 amplitudes after the hypnotic suggestion of blindness was significant for the whole group, but was difficult to interpret, since amplitude in this condition was not significantly different from the wake control condition N-250 amplitude.

The results are considered preliminary, and a few possibilities of confirming and/or explaining them using somewhat more stringent methodology are discussed. The within-Ss approach is recommended for future studies of evoked potentials in hypnosis.

1980

Erickson, Milton H. (1980). Hypnotic alteration of sensory, perceptual and psychophysical processes. (2). New York: Irvington Publishers, Inc..

NOTES

This second volume of four has five sections, with chapters as follows. **I. Visual Processes**

1. The hypnotic induction of hallucinatory color vision followed by pseudonegative afterimages (written with E. M. Erickson)
2. Discussion: Critical comments on Hibler's presentation of his work on negative afterimages of hypnotically induced hallucinated colors (written by E. M. Erickson)
3. The induction of color blindness by a technique of hypnotic suggestion
4. An experimental investigation of the hypnotic subject's apparent ability to become unaware of stimuli
5. The development of an acute limited obsessional hysterical state in a normal hypnotic subject
6. Observations concerning alterations in hypnosis of visual perceptions (written by E. M. Erickson)
7. Further observations on hypnotic alteration of visual perception (written by E. M. Erickson)
8. An investigation of optokinetic nystagmus
9. Acquired control of pupillary responses **II. Auditory Processes**
10. A study of clinical and experimental findings on hypnotic deafness: **I. Clinical experimentation and findings**
11. A study of clinical and experimental findings on hypnotic deafness: **II. Experimental findings with a conditioned response technique**
12. Chemo-anaesthesia in relation to hearing and memory
13. A field investigation by hypnosis of sound loci importance in human behavior **III. Psychophysiological Processes**
14. Hypnotic investigation of psychosomatic phenomena: Psychosomatic interrelationships studied by experimental hypnosis
15. Hypnotic investigation of psychosomatic phenomena: The development of aphasia-like reactions from hypnotically induced amnesias (written with R. M. Brickner)
16. Hypnotic investigation of psychosomatic phenomena: A controlled experimental use of hypnotic regression in the therapy of an acquired food intolerance
17. Experimentally elicited salivary and related responses to hypnotic visual hallucinations confirmed by personality reactions
18. Control of physiological functions by hypnosis
19. The hypnotic alteration of blood flow: An experiment comparing waking and hypnotic responsiveness
20. A clinical experimental approach to psychogenic infertility
21. Breast development possibly influenced by hypnosis: Two instances and the psychotherapeutic results
22. Psychogenic alteration of menstrual functioning: Three instances
23. The appearance in three generations of an atypical pattern of the sneezing reflex
24. An addendum to a report of the appearance in three generations of an atypical pattern of the sneezing reflex **IV. Time Distortion**
25. Time distortion in hypnosis, I (written by L. F. Cooper)
26. Time distortion in hypnosis, II (written with L. F. Cooper)
27. The clinical and therapeutic applications of time distortion
28. Further considerations of time distortion: Subjective time condensation as distinct from time expansion (written with E. M. Erickson) **V. Research Problems**
29. Clinical and experimental trance: Hypnotic training and time required for their development
30. Laboratory and clinical hypnosis: The same or different phenomena?
31. Explorations in hypnosis research (with a discussion by T. X. Barber, R. Dorcus, H. Guze, T. Sarbin, and A. Weitzenhoffer)
32. Expectancy and minimal sensory cues in hypnosis
33. Basic psychological problems in hypnotic research

#### **34. The experience of interviewing in the presence of observers**

**Leibowitz, H. W.; Lundy, R. M.; Guez, J. R. (1980). The effect of testing distance on suggestion-induced visual field narrowing. International Journal of Clinical and Experimental Hypnosis, 28 (4), 409-420.**

The size of the suggestion restricted visual field was determined among 3 groups consisting of hypnotized Ss, simulators and "instructed fakers." Instructions were designed to produce narrowing of the visual field. Visual field size was tested by 3 differently designed perimeters each incorporating a different testing distance. The group data were indistinguishable from each other. Some Ss in each group exhibited field sizes which would have been expected if they were suffering from a true scotoma. Other Ss responded as if the functioning area of the visual field were a real object, while still other Ss produced intermediate functions. Implications for theory and for visual field testing are discussed.

**Wallace, Benjamin (1980). Autokinetic movement of an imagined and an hypnotically hallucinated stimulus. International Journal of Clinical and Experimental Hypnosis, 28 (4), 386-393.**

Autokinetic movement (AKM) of an imagined or an hallucinated stimulus was assessed as a function of hypnotic susceptibility level. 3 groups of Ss were asked to produce an image of a small, pinpoint spot of light and to monitor any activity of the stimulus. The stimulus was produced by imagination for a group of Ss judged high in hypnotic susceptibility and for a second group of Ss judged low in hypnotic susceptibility. A third group of Ss, highly susceptible to hypnosis, was asked to hallucinate the pinpoint spot stimulus with the aid of instructions administered by E. Instructions by which movement reports were elicited were kept equal and open-ended for all 3 groups of Ss. Results indicated that form of the stimulus (imagined or hallucinated) did not affect reports of AKM. Hypnotic susceptibility level, however, was a major factor in influencing resultant reports. The Ss judged high in hypnotic susceptibility reported a significantly greater number of direction changes of AKM than Ss low in hypnotic susceptibility. The data are interpreted in terms of the possible differences in stimulus monitoring ability as a function of hypnotic susceptibility level.

**1979**

**Spanos, Nicholas P.; Ansari, Ferhana; Stam, Henderikus J. (1979). Hypnotic age regression and eidetic imagery: A failure to replicate. Journal of Abnormal Psychology, 88 (1), 88-91.**

Walker, Garrett, & Wallace (1976) reported the restoration of eidetic imagery in hypnotically age-regressed subjects. In an attempted replication of that study, 60 subjects who previously scored high on hypnotic susceptibility were 'hypnotically regressed' to age 7. Before administration of the hypnotic procedures and again after age regression, subjects were tested for eidetic imagery using the random-dot stereograms employed by Walker et al. None of our subjects including those who were age regressed according to standard criteria and who reported having been eidetikers as children, were successful at the stereogram tasks. Although these results fail to replicate those of Walker et al., they are consistent with the available evidence concerning the performance of children on stereogram tasks. Contrary to the impression conveyed by Walker et al., children tested to date, including those classified as eidetikers by Haber and Haber's criteria, have been unsuccessful at stereogram tasks.

**1978**

**Blum, Gerald S.; Porter, M. L.; Geiwitz, P. J. (1978). Temporal parameters of negative visual hallucination. International Journal of Clinical and Experimental Hypnosis, 26, 30-44.**

Negative visual hallucination was investigated by hypnotically programming two highly trained undergraduates not to see the colored lines of consonants while perceiving clearly a set of dots superimposed on the lines in another color. Effects of three temporal parameters were noted in tachistoscopic presentations of the consonants: priming time, i.e., opportunity for the subject to prepare to execute the negative visual hallucination after the posthypnotic cue was flashed and before the consonant appeared; duration of consonant exposure; and intensive practice over protracted periods of time. Signal strength and inhibitory skill emerged as significant variables.

#### **NOTE**

This paper reports 4 experiments with two highly trained subjects. The authors conclude, "From these observations, signal strength and inhibitory skill emerge as major determinants of the outcome in NVH. The stronger the input, the greater the likelihood of insufficient inhibitory action. Differences in skill show up at both the intra- and inter-individual levels of analysis. Even the initially skilled F1 improved her NVH ability with practice, as inferred from the disappearance of undercalling. The lesser skill of F2 was evidenced in her longer required priming time, higher accuracy of color guesses, greater number of color breakthroughs, and reported feeling of mental strain" (p. 42).

Spanos, Nicholas P.; Rivers, Stephen M.; Gottlieb, Jack (1978). Hypnotic responsivity, meditation, and laterality of eye movements. Journal of Abnormal Psychology, 87 (5), 566-569.

Right-handed male subjects were pretested on a number of person variables; they then meditated for eight sessions. Measures of hypnotic responsivity, meditating skill, imaginal abilities, and attitudes toward hypnosis loaded on a common factor that was labeled sustained nonanalytic attending. However, laterality of eye movement (left moving) failed to load on this factor. The implications of these findings for current theorizing concerning hypnosis and meditation are discussed.

t'Hoen, P. (1978). Effects of hypnotizability and visualizing ability on imagery mediated learning. International Journal of Clinical and Experimental Hypnosis, 26, 45-54.

The Ss selected for hypnotizability and visualizing ability were tested for their performance on an imagery-mediated, paired-associates task in which the stimulus materials were varied in imagery and concreteness. Imagery and concreteness showed significant main effects and an additive interaction facilitating learning. Neither hypnotizability nor visualizing ability showed main effects, thereby contradicting the conjecture that those 2 factors would facilitate imagery-mediated learning. However, high hypnotizable Ss learned more high imagery words than the low hypnotizables, and visualizing ability was shown to interact with word concreteness. It is concluded that the effects of hypnotizability and visualizing ability on verbal learning are, at least in part, a function of the content of the words to be learned.

1977

Reyher, Joseph (1977). Spontaneous visual imagery: Implications for psychoanalysis, psychopathology, and psychotherapy. Journal of Mental Imagery, 253-274.

Prolonged free imagery eventually is accompanied by anxiety, symptoms and/or resistance. This is puzzling to clients when these pathogenic images or scenes appear to be innocent. Their curiosity thus piqued, they are invited to revisualize these images. Anxiety and resistance is intensified and symptoms are exacerbated as the underlying strivings become depicted with increasing clarity. This method is called emergent uncovering psychotherapy. The variegated phenomenon produced is relevant to both

Sullivanian and orthodox Freudian constructs. Except for gratification drive discharge, these fare very well. The constructs of psychoanalytic ego psychology did not achieve relevance.

1972

Graham, Charles; Leibowitz, Herschel W. (1972). The effect of suggestion on visual acuity. International Journal of Clinical and Experimental Hypnosis, 20, 3.

In experiment one, all subjects participating attained the maximum score on the BSS. The subjects were hypnotized and post-hypnotic suggestions were given to the effect that the subject really knew how well they could see, and this was contingent upon relaxation. The patient was now given an opportunity to re-read the eye charts. It was found that in this experiment, myopic visual acuity was significantly improved through the use of hypnosis and positive suggestion.

In experiment two, subjects who scored the maximum and the minimum on the BBS were used. The same procedure was used as in number one except that the highly susceptible subjects were told that "various studies had demonstrated that being hypnotized was not a pre-requisite for obtaining improvement." The insusceptibles were told that "acuity improved under hypnosis, but like many other phenomena associated with hypnosis, improvement in vision was also well within the reach of the non-hypnotizable subjects, if they simply learned to relax their eyes." It was found that myopic visual acuity was significantly improved in the absence of a formal hypnotic induction. This improvement was for the highly hypnotizable subjects only, and did not transfer to outside the experimental situation.

In experiment three, subjects were used who scored the maximum on the BSS and the Harvard Group Scale. Testing was done in both the hypnotized and waking state. It was found that the rank order correlation between initial and final acuity levels was .98 ( $p < .001$ ), indicating the effect of suggestion was selective.

Sutcliffe, J. P. (1972). Afterimages of real and imaged stimuli. Australian Journal of Psychology, 24 (3), 275-289.

Tested 45 university students and 15 7-10 yr. olds for after-images of images and of real stimuli. 8 different colored stimuli were used and observations made enabled a check on reliability. Real stimuli typically produced negative afterimages in most Ss. Only half the Ss could project images of the stimuli, only 1/3 reported afterimages of those images, and of those images only 7% were negative. Afterimages of images had a longer latency and a shorter duration than afterimages of real stimuli. Thus qualitatively and quantitatively afterimages of images differ from afterimages of real stimuli. Findings are related to individual differences in general vividness of imagery. (18 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1969

Graham, Kenneth (1969). Brightness contrast by hypnotic hallucination. International Journal of Clinical and Experimental Hypnosis, 17, 62-73.

Tested the veridicality of a hypnotic hallucination elicited by a buzzer through a conditioning procedure. The stimulus to be hallucinated consisted of 2 gray circles, 3 in. in diameter, mounted on a white card. 11 highly susceptible Ss were able to produce this hallucination upon hearing the buzzer during a series of test trials following the training. Following a 2nd training series, a black and white background was provided for the hallucination and Ss tended to report the hallucinated circles as a brightness contrast. A 2nd group of highly susceptible Ss was not hypnotized, but was asked to

respond as if hypnotized. These Ss tended not to report the contrast. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1968

Dittborn, Julio M.; Shor, Ronald E. (1968). A test of the effectiveness of intermittent photic stimulation on hypnotic performance. International Journal of Clinical and Experimental Hypnosis, 16, 165-178.

ATTEMPTED TO CONFIRM THE FINDINGS OF A. G. HAMMER AND W. J. ARKINS (SEE 39:1) OF SIGNIFICANTLY GREATER IMPROVEMENT IN HYPNOTIC PERFORMANCE AS A RESULT OF 11-CPS INTERMITTENT PHOTIC STIMULATION THAN WITH FREQUENCIES OUTSIDE THE RANGE OF EEG ALPHA ACTIVITY. USING THE BRAIN WAVE SYNCHRONIZER, 3 GROUPS OF SS WERE GIVEN STIMULATION AT 5, 11, AND 30 CPS. TESTS OF HYPNOTIC PERFORMANCE WERE MADE DURING AND IMMEDIATELY AFTER STIMULATION, AND A WEEK OR MORE LATER. NO EVIDENCE OF FREQUENCY-SPECIFIC EFFECT WAS OBTAINED, AND THE ORIGINAL FINDING WAS NOT CONFIRMED. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1967

Bowers, Kenneth S. (1967). The effect for demands of honesty upon reports of visual and auditory hallucinations. International Journal of Clinical and Experimental Hypnosis, 15, 31-36.

SS, UNSELECTED FOR HYPNOTIC SUSCEPTIBILITY AND SIMPLY TOLD TO HALLUCINATE, MADE PRETEST RATINGS ON THE REALITY OF VISUAL AND AUDITORY HALLUCINATIONS. ALL SS WERE THEN TASK MOTIVATED TO HALLUCINATE. BEFORE THE RETEST RATINGS WERE MADE, 1/2 OF THE SS WERE CONFRONTED BY A 2ND E WITH DEMANDS FOR REPORT HONESTY. FOR BOTH SENSORY MODALITIES, THE MEAN CHANGE IN RATINGS FROM PRETEST TO RETEST WAS SIGNIFICANTLY GREATER FOR THE TASK-MOTIVATED THAN FOR THE HONESTY-REPORT CONDITION. RATINGS OF THE REALITY OF HALLUCINATIONS ARE EVIDENTLY HIGHLY SUSCEPTIBLE TO THE CONTEXT OF DEMANDS IN WHICH THE REPORT IS MADE. IT IS ARGUED THAT, IN THIS AND PREVIOUS EXPERIMENTS UTILIZING UNSELECTED SS, REPORTS OF HALLUCINATORY ACTIVITY ARE LESS APT TO REFLECT PERCEPTUAL ALTERATIONS THAN RESPONSE MODIFICATION IN ACCORDANCE WITH REGNANT EXPERIMENTAL DEMANDS. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Davison, Gerald C.; Singleton, Lawrence (1967). A preliminary report of improved vision under hypnosis. International Journal of Clinical and Experimental Hypnosis, 15 (2), 57-62.

REPORTS AN ACCIDENTAL FINDING WHICH WAS FELT TO BE PROVOCATIVE AND WORTHY OF FURTHER, MORE CONTROLLED, INVESTIGATION. THE EMPHASIS IS ON DETAILED DESCRIPTION OF THE PHENOMENON, WITH A MINIMUM OF THEORIZING. WHILE IN A VERY DEEP HYPNOTIC TRANCE, S WAS INDUCED TO HAVE BOTH POSITIVE AND NEGATIVE HALLUCINATIONS. ON THE FOLLOWING DAY, HE REPORTED SPONTANEOUSLY THAT HE HAD BEEN STRUCK BY THE CLARITY OF BOTH THE VISIONS AND THE PERCEPTIONS OF ACTUAL OBJECTS WHILE HYPNOTIZED; HE HAD NOT, HOWEVER, BEEN WEARING HIS GLASSES AT THE TIME, THOUGH, UNDER NORMAL CIRCUMSTANCES HE WORE HIS GLASSES AT ALL TIMES. NO SUGGESTIONS FOR IMPROVED VISION OR EXTRA EFFORT HAD BEEN GIVEN. 2 CAREFUL

**OPHTHALMOLOGICAL EXAMINATIONS WERE MADE DURING THE FOLLOWING 2 WK., CONFIRMING THE FACT THAT S'S EYESIGHT SHOWED A SIGNIFICANT IMPROVEMENT DURING HYPNOSIS AS OPPOSED TO THE WAKING STATE. (SPANISH + GERMAN SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**Schneck, Jerome M. (1967). Hypnotherapy for symptoms associated with cataract. International Journal of Clinical and Experimental Hypnosis, 2, 54-56.**

**HYPNOTHERAPY WAS USED TO ALLEVIATE SYMPTOMS IN A PATIENT WITH CATARACT. THEY INCLUDED FEELINGS OF ANXIETY, EYE TENSION, BLURRING OF VISION, AND SELF-CONSCIOUSNESS. HYPNOTHERAPY CAN ASSIST THE DIFFERENTIATION OF THE PSYCHOLOGICAL AND STRUCTURAL BASIS OF A VARIETY OF SYMPTOMS BUT CARE IS REQUIRED TO AVOID MASKING UNDERLYING STRUCTURAL PATHOLOGY. (GERMAN + SPANISH SUMMARIES) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1966**

**Andreasen, A. G.; Singer G. (1966). Hypnosis and hypnotizability: Delusion or simulation?. International Journal of Clinical and Experimental Hypnosis, 14 (3), 257-267.**

**Because Sutcliffe (see 36:4) showed that hypnotic suggestions are not comparable in sensory content with real stimuli, the postulated difference between "pseudoperception" and "simulation" as indexed by reported subjective experiences of hypnotic Ss was tested. From 215 undergraduates, 30 high-susceptibility (HS) and 30 low-susceptibility (LS) Ss made kinesthetic and visual judgments of horizontality. A significant response, not attributable to simulation, was found only for the HS-hypnosis induction group; the effect was not attributable individually to susceptibility, hypnosis induction, or motivation. It is concluded that hypnosis, defined by this significant interaction effect between high susceptibility and hypnosis induction can be interpreted as a pseudoperceptual response to suggestion. (Spanish & German summaries) (28 ref.) (PsycINFO**

**1965**

**Barber, Theodore Xenophon (1965). Physiological effects of 'hypnotic suggestions': A critical review of recent research (1960-64). Psychological Bulletin, 201-222.**

**Recent studies are reviewed which were concerned with the effectiveness of suggestions given under "hypnosis" and "waking" experimental treatments in alleviating allergies, ichthyosis, myopia, and other conditions and in eliciting deafness, blindness, hallucinations, analgesia, cardiac acceleration and deceleration, emotional responses, urine secretion to sham water ingestion, narcotic-like drug effects, and other phenomena. The review indicates that a wide variety of physiological functions can be influenced by suggestions administered under either hypnosis or waking experimental treatments, and direct and indirect suggestions to show the particular physiological manifestations are crucial variables in producing the effects.**

**Jackson, Bill (1965). The autoblink: A technique to explore nonveridical visual perception. International Journal of Clinical and Experimental Hypnosis, 13 (4), 250-260.**

**The Autoblink technique was developed to allow objective, quantitative investigation of perceptual abnormalities found in psychiatric and normal populations under various experimental conditions. A pilot study demonstrated that spontaneous visual percepts could be elicited by this technique in a**

group of psychiatric patients and that wide individual differences were present. A 2nd study found significant differences in Autoblink rate between normal and hallucinating psychotic male Ss and also suggested that sensory deprivation and prestige suggestion are variables related to Autoblink rate. A 3rd study further explored differences between psychiatric patients and normal Ss as well as examining sex differences. The latter 2 studies are reported in detail. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Brady, J. P.; Levitt, E. E. (1964). Nystagmus as a criterion of hypnotically induced visual hallucinations. Science, *146*, 85-86.

Hypnotized Ss who report hallucinating a visual situation which would ordinarily elicit optokinetic nystagmus demonstrate nystagmus under these conditions. They and control Ss are unable to feign nystagmus in the waking state, either by imagining the situation or by direct efforts to simulate the eye movements. Thus an objective criterion is provided for the presence of visual hallucinations. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Hammer, A. G.; Arkins, W. J. (1964). The role of photic stimulation in the induction of hypnotic trance. International Journal of Clinical and Experimental Hypnosis, *12*, 81-87.

The relative effectiveness of the ordinary verbal method of trance induction is compared with 2 forms of induction utilizing mechanical photic stimulation, and with methods combining the personal and mechanical features. The criterion of trance adopted was the compulsive carrying out of a difficult suggestion. Results show that mechanical procedures alone are ineffective. On the other hand, the addition of a particular sort of photic driving probably improves trance induction, which suggests that induction is a complex matter involving both social interactions and relatively nonmeaningful impacts on the brain. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Karmanova, I. G. (1964). Fotogennaia katalepsiia [Photogenic catalepsy]. Moscow, USSR: Leningrad Izd. Naule. (Reviewed in American Journal of Clinical Hypnosis 1966, 3, 228)

#### NOTES

The author analyses the phenomenon of photogenic catalepsy from the evolutionary phylogenetic approach, including the phenomenon as demonstrated in the cock, frog, guinea-pig and dog. The following points of view are discussed: the physiological changes, electroencephalography and electromyography in animals, and clinical narcolepsy in man. (Review in AJCH.)

1961

Barber, Theodore Xenophon; Deeley, Douglas C. (1961). Experimental evidence for a theory of hypnotic behavior: 1. 'Hypnotic color-blindness' without 'hypnosis'. International Journal of Clinical and Experimental Hypnosis, *9* (2), 79-86.

Barber hypothesizes that a formal hypnotic induction procedure is unnecessary in eliciting alterations in sensory functioning ordinarily thought to characterize hypnotic behavior; similar performances can be elicited from normal persons by instructing them to remain inattentive to visual or auditory stimuli. Substantiating evidence is presented in the area of "hypnotic color-blindness." From Psyc Abstracts 36:02:2II79B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

#### NOTES

## Conclusions

1. Normal persons who have been instructed to concentrate away from red and green give as many "color-blind" responses on the Ishihara as "deeply hypnotized" subjects who have been given elaborate suggestions to induce color-blindness.

1. Further experiments are necessary to determine if other behaviors which are considered as characteristic of "deeply hypnotized" subjects and which supposedly involve "sensory-perceptual alterations" -- e.g., "hypnotic deafness," "hypnotic blindness," "negative hallucinations" -- can be performed by persons who are simply asked to try to remain in-attentive to visual or auditory stimulation" (pp. 84-85).

1960

Sukhakarn, Khun Vichit (1960/1962). Extra ocular vision [Letter]. British Journal of Medical Hypnotism, 14 (2), 41-47.

## NOTES

The article is in the original form of a letter to Herbert Spiegel, M.D. The author describes experiences training subjects, both blind and with normal vision, to 'see' through the skin of their cheeks. Training involved concentrative meditation (Buddhist) and hypnosis. Simple tests were performed, apparently independently, by two other scientists.

"From information available from our subjects, the Extra Ocular Vision gained through the cheek-skin is different from those through the eyes as best explained here below:-- (1) The vision through the cheek-skin first takes a form of a series of spots somewhat like the image of coarse gain prints. Only after further training the spots are transformed into a clear object, so clear that needle threading is possible. (2) Objects seen through the cheek-skin are as clear as through the eyes. Distant objects can be magnified by the subject's wish, just like looking through an opera glass. (3) The vision gained through the cheek-skin is first 'seen' in black and white, and the 'colour picture' is achieved only after further training. But the colour 'seen' through the cheek is more intense than those through the eyes. (4) The field of vision 'seen' through each side of the cheek is more narrow than those seen through each eye. (5) There is a sign indicating that the vision through the cheek is only two-dimensional, the subjects find it difficult at first to stand the finger to another finger test" (p. 42).

1954

Erickson, Milton H. (1954). The development of an acute limited obsessional hysterical state in a normal hypnotic subject. Journal of Clinical and Experimental Hypnosis, 2, 27-41.

## NOTES

The 25 year old female graduate student in psychology had often been used in hypnosis experiments and as a demonstration subject, and had witnessed induction of hypnotic deafness, blindness, and color-blindness though she had not been given those suggestions herself. Scientific curiosity appeared to be the motivation for volunteering to experience hypnotic blindness, but she was skeptical about her ability to experience it. The author gave a series of "exceedingly tedious" suggestions to develop somnambulism (passively responsive and receptive) followed by suggestions leading gradually to development of "blindness" with the intention of concealing it from the hypnotist, with attendant strong and mixed emotions.

The initial attempts failed because the subject ostensibly was deceiving herself into thinking she had developed hypnotic blindness, but the author also was of the opinion that she was seeking to meet unconscious personality needs. The author then covertly changed the goal of the experiment "to develop in the subject an acute hysterical obsessional compulsive mental state which would be accompanied by hypnotic blindness and which would parallel or resemble the obsessive compulsive

hysterical mental disturbances encountered in psychiatric practice" (p. 32). The author developed a monologue of suggestions based in part on the utterances of hospitalized obsessive patients and in part on trauma relating to traumatic blindness in a kitten and a friend of the subject. In a slow but directed manner the author built up a double-bind situation which eventually led to the experience of hypnotic blindness as well as heightened emotional reactivity, crying etc.

1953

Naruse, Gosaku; Obonai, Torao (1953). Decomposition and fusion of mental images in the drowsy and post-hypnotic hallucinatory state. Journal of Clinical and Experimental Hypnosis, 1 (4), 23-41.

#### Summary of Part I

"From the above we can conclude the following main facts.

- 1) When one sensory stimulus is given to a subject in a drowsy state, images of other objects associated with it often appear.
- 2) These images sometimes have forms, and sometimes are devoid of forms, only light and color being present. This phenomenon resembles the experience of color-hearing, and is called a new type of synaesthesia [sic] by Bachen.
- 3) These images are sure to disappear when they are observed attentively, a passive attitude being necessary for the image observation.
- 4) The remarkable character of these images are such that elements of forms and colors of various objects have been disjointed and connected with each other in different relationships which construct new images.
- 5) The longer and stronger persistence of stimulus, the more easily and clearly conditioned images appear. Conversely if the stimulus is momentary, the recalled images appear also momentarily.
- 6) Not only the visual images but also the sensory images can be elicited in a similar way" (p. 25).

#### Summary of Part II

"The chief results of Naruse's experiments with the various subjects are as follows:

1. When one stimulus (C.S.) is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in deep hypnotic trance, a mental image corresponding to the other stimulus (U.C.S.) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears.
2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images.
3. Such images tend to disappear when subjects try to observe them attentively.
4. Images which are broken into elements of the original figure appear as distinct images.
5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image.
6. When two C.S.'s, which were already conditioned individually to two U.C.S.'s are presented at the same time, the images corresponding to each stimulus appear to overlap. This is the composed image.
7. In image composing, which involves the strong-weak stimulus relationship or the spatial positions of two C.S.'s, the clear-vague or positional relationships of the composed images are changed.
8. In the complex of meaningful images, there are two types, primarily. The one grasps the image as a whole, the other observes it in many mosaic elements. The latter can recall the original figure more correctly in an image form than the former.
9. Some positive and negative reports on sensory conditioning in the normal waking state are reviewed" (p. 36).

#### NOTES

The investigators do not show that hypnosis enhances imagery, compared with the waking state. They studied sensory-sensory conditioning under hypnosis, with amnesia suggestions, followed by testing for the conditioning effect. This study is relevant to studies of amnesia, "repression." In some studies they paired sound of a buzzer or metronome (the Conditioned Stimulus) with images (the Unconditioned Stimuli) as in [Oo, X]; other studies compared a color patch (CS) with an image (Oo, X). Some studies presented both CS's together, in different spatial arrangements (in the instance of the color patch CS). Results (partial) included: "1. When one stimulus (CS.) Is given in the normal waking state after a conditioning procedure in which a conditioned bond is formed between two sensory stimuli in a deep hypnotic trance, a mental image corresponding to the other stimulus (UCS) appears with amnesia for the conditioning situation. When the stimulus is removed, the image also disappears. 2. The images attained have various degrees of clearness which may be classified on a continuum from hallucinations to memory images. 3. Such images tend to disappear when Ss try to observe them attentively. ... 5. Modifications of images may be made by distortion, vagueness of the image, and by decomposition of the image. 6. When two CS's, which are already conditioned individually to two UCS's, are presented at the same time, the images corresponding to each stimulus appear to overlap. ..." (P. 36).

## Volunteers

1992

Brentar, John P.; Lynn, Steven J. (1992, August). The Post-Hypnotic Experience Scale: Validity and reliability. [Paper] Presented at the annual meeting of the American Psychological Association, Washington, DC.

This paper describes the development of the Posthypnotic Experiences Scale (PES), a 57-item scale comprised of four subscales labeled Pleasant, Somatic- Kinesthetic, Irritability/Anger, and Anxiety. It was derived by way of an initial factor analysis using 444 subjects and refined by a second factor analysis using 288 subjects. In three data collection phases, the subscales were found to be internally consistent and to exhibit low to moderate test-retest reliabilities. The PES was also found to evidence excellent content, convergent, and discriminant validity, as measured by indices of hypnotizability, positive affect, depression, anxiety, hostility, sensation seeking, dysphoria, social desirability, perceptual aberration, absorption, and physical symptomatology. Behavioral validity was demonstrated in so far as subjects who were willing to volunteer for a second experiment, without reimbursement, scored higher on the Pleasant subscale than did nonvolunteers. (ABSTRACT from the Bulletin of Division 30, Psychological Hypnosis, Fall, 1992, Vol. 1, No. 3.)

1989

Sanders, Glenn S.; Gansler, David A.; Reisman, Stephen Jr. (1989). The effects of hypnosis on eyewitness testimony and reactions to cross-examination. American Journal of Forensic Psychology, 7, 33-60.

Investigative hypnosis has been a widely used and valuable police technique, but recent court rulings have expressed reservations about the admissibility of hypnotically related testimony. The proposed research is the first directly relevant evaluation of the most serious of the courts' reservations: the allegation that hypnosis produces excessive and unshakable levels of confidence in witnesses, thereby effectively denying opposing counsel the right of cross-examination. Volunteers from the community witnessed a simulated crime, and were then interviewed by a professional police investigator to obtain evidence and testimony. Two-thirds of these witnesses were randomly assigned to have their memory refreshed by one of two hypnotic induction techniques. All witnesses were subsequently examined and cross-examined by a pair of practicing criminal lawyers, and their videotaped testimony was evaluated

by another volunteer sample of community residents serving as jurors. On both objective and subjective measures, hypnotized witnesses provided more complete and internally consistent testimony. However, neither form of hypnotic induction led to greater witness confidence, credibility, or resistance to cross-examination. Our results generally replicate previous findings in a more realistic investigative simulation. The discussion considers artifactual explanations of the confidence null effects, and explores theoretical and policy implications of the data.

#### NOTES

People responding to a newspaper ad asking for volunteers who would be paid for participating in psychology research at the State University were later asked to undergo hypnosis. Of 45 who responded to the ad, six (13%) declined to have hypnosis. This rate of refusal has relevance to research on clinical hypnosis that requires paid volunteer participants.

1987

Gibson, H.B. (1987). Discussion commentary on Imagery and response expectancy as determinants of hypnotic behaviour by Kirsh, I.; Council, J.R. & Mobayed, C. [Comment/Discussion] .

#### NOTES

Discussion of paper by Steven Jay Lynn in same issue. Author criticizes use of random sample of students, as some would be unsusceptible to hypnosis, and calls for a larger sample size. Mentions but does not discuss a great number of other methodological issues.

1986

Hendler, Cobie S.; Redd, William H. (1986). Fear of hypnosis: The role of labeling in patients' acceptance of behavioral interventions. Behavior Therapy, 17, 2-13.

One hundred and five outpatient cancer chemotherapy patients were interviewed to assess their attitudes toward hypnosis and relaxation as well as to determine their beliefs in and willingness to try a behavioral procedure. Patients were randomly assigned to groups receiving identical descriptions labeled "hypnosis," "relaxation," or "passive relaxation with guided imagery." The description stressed the behavioral components of hypnosis and relaxation rather than the nonbehavioral techniques often associated with hypnosis such as age regression and posthypnotic suggestion. Patients believed hypnosis to be a powerful process that involved loss of control and altered states of consciousness. When compared with a group of college students, patients held significantly more fearful, conservative views about hypnosis. Patients who received a description of an intervention labeled "hypnosis" were significantly less likely to believe the procedure would effectively control their nausea and vomiting and were significantly less likely to state they would try the procedure than patients in the other two label conditions. This reaction to the label occurred independently of patients' degree of nausea, vomiting, and pain due to their chemotherapy treatments.

Lambe, R.; Osier, C.; Franks, P. (1986). A randomized controlled trial of hypnotherapy for smoking cessation. Journal of Family Practice, 22, 61-65.

242 patients who were smokers (49% of all patients in this group family practice) were contacted, and 180 (74%) who were interested in hypnosis as a method of helping them quit were included in the study. These 180 were randomly assigned to control and hypnosis groups. Of the 90 assigned to hypnosis: 50% 45 had at least 1 hypnosis session

McConkey, Kevin M. (1986). Opinions about hypnosis and self-hypnosis before and after hypnotic testing. International Journal of Clinical and Experimental Hypnosis, 34, 311-319.

Before hypnotic testing, Ss completed a questionnaire on their opinions about hypnosis and self-hypnosis. Approximately 1 week later, they completed a similar questionnaire that included questions about their experiences of hypnotic testing. Data are presented concerning Ss' agreement with statements about hypnosis and self-hypnosis. Findings are discussed in terms of their generality and in terms of whether Ss' opinions are consistent with scientific evidence.

Sweeney, Carol A.; Lynn, Steven Jay; Bellezza, Francis S. (1986). Hypnosis, hypnotizability, and imagery-mediated learning. International Journal of Clinical and Experimental Hypnosis, 34, 29-40.

The relationship between hypnotizability, imagery utilization ability, and hypnosis was examined in a study described to Ss (N = 157) as an 'imagery experiment.' In Session 1, the Tellegen Absorption Scale (Tellegen, 1976) was completed and the imagery-mediated paired-associate learning task was administered as a baseline measure. In Session 2, either hypnosis, task motivation, or no treatment instructions were administered and the learning task was repeated with a different word list (each 15 high, 15 low imagery pairs). In Session 3, the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & E. C. Orne, 1962) was administered. Overall, recall was superior for high imagery words. Hypnotizability was not associated with imagery-mediated recall. Recall performance, however, was correlated with Tellegen Absorption Scale scores. Interestingly, learning and recall performance decreased between Sessions 1 and 2 for hypnotized Ss but remained the same for task motivated and control Ss. The decrease in performance was mediated by less concern for performance and diminished anxiety. Self-reports of imagery utilization did not differ among groups of Ss.

## NOTES

The authors review literature on the relationship between hypnotizability, hypnosis, and imagery abilities, noting that results are conflicting. One reason for differing results may be that imagery scales are self-report measures, subject to reporting bias of varying types. The imagery-mediated paired-associate learning paradigm, using high and low imagery paired associates, may address that reporting bias issue.

This investigation used 157 Ss grouped into high (9-12), medium (5-8), and low (0-4) hypnotizability levels on the basis of the Harvard Scale. Given the fact that high imagery words are usually recalled more easily than low imagery words (Paivio, 1971), a relationship observed between hypnotizability and imagery-mediated recall would elucidate the role of imagery utilization for memory functions.

The experimental conditions included hypnosis, task motivation, and a no treatment control condition, in order to evaluate the possible enhancement effects of hypnosis on imagery utilization for memory functions. The task motivation group was included to control for motivational factors, and the no treatment control condition to control for the practice effects of repeated testing.

The word pair stimuli were from Paivio et al (1968): 30 pairs consisting of 15 high and 15 low imagery noun pairs. Each Subject participated in three experimental sessions.

Session 1. Ss were told that they were in an experiment on imagery to remember pairs of words. They completed the Tellegen Absorption Scale, then were given instructions for using imagery for recalling words, and for rating vividness and clarity of each image immediately after it was formed. Finally they performed the learning task.

Session 2. Ss received either hypnosis, task motivation instructions ("try to form good interacting images of the word pairs" with exhortation to score as high as possible), or control (Like Session 1). No one in hypnosis group refused the induction (despite the fact that they were not forewarned in Session 1 that the experiment might involve hypnosis). Ss completed a questionnaire on the percentage of word

pairs they used images to remember, how easy it was to block out or ignore distractions, how vivid and clear were images of words during recall, how concerned they were about their performance, and how much anxiety, if any, they experienced during the experiment.

Session 3. The Harvard Scale was administered. Three Ss declined to participate in the Harvard Scale administration.

The results were analyzed with a 3 x 2 x 2 x 2 repeated-measures ANOVA: hypnotizability, instruction (hypnotic induction, task motivation, no treatment), session (1 and 2), and pair imagery (high and low). The expected enhanced memory performance of high hypnotizables with high imagery words in the hypnosis condition did not emerge in the results. However, the expected stimulus-imagery effect was observed (a higher proportion of high imagery words than low imagery words recalled). The expected higher imagery ratings for hypnotized high hypnotizable Ss also was not found. Furthermore, there was a significant interaction effect for recall session by hypnotizability: low hypnotizable Ss rated imagery less vivid in Session 2 than in Session 1, while highs rated it more vivid in Session 2 than in Session 1. Thus, low hypnotizable Ss' imagery ratings actually decreased between Recall Session 1 and 2, while high hypnotizable Ss' imagery ratings increased between Recall Session 1 and 2.

While the Absorption Scale correlated with the Harvard (.28,  $p < .001$ ) and with various measures of recall, hypnotizability did not correlate with any of the recall measures. The questionnaires administered during Session 2 suggested that hypnotized Ss were less concerned and anxious than the no treatment control Ss, and less concerned than the Ss receiving task motivation instructions.

In their Discussion, the authors speculate that the strong stimulus-imagery effects might have made it unlikely for them to find differences between high, medium, and low hypnotizable Ss in imagery-based paired associate learning. They suggest including word pairs that range across the continuum of imagery ratings in future research. They also speculate that differences between hypnotizability levels might be found (as 'T Hoen reported in 1978 publication) if Ss were required to respond in a shorter time interval, or if hypnotizability were measured by a scale with more cognitive items than the Harvard Scale--both conditions in 'T Hoen's research protocol.

"The most striking finding of the present research is that instead of facilitating performance in an imagery-mediated recall task, hypnosis resulted in a decrement in recall relative to control conditions. In the hypnotic condition, the amount of learning actually decreased from one session to the next (waking-hypnosis) but remained equivalent in the task motivation (waking-task motivation) and no treatment groups (waking-waking)" (p. 37). The authors note that it is not possible to determine from their research design whether hypnosis interfered with the learning task, the retrieval task, or both.

"The findings suggest that hypnotizability may be related to reported vividness and clarity of imagery but unrelated to the actual ability to utilize imagery in an imagery-mediated paired-associate learning task. ... Although high hypnotizables' self-report ratings of imagery and vividness increased, their recall performance was not accordingly enhanced. The disparity between subjective and objective measures underscores the importance of including both types of measures in studies of imagery abilities" (pp. 37- 38).

To a considerable degree, this study controlled for Ss' expectancies regarding hypnosis better than some earlier studies. This study differs from earlier research in that (1) Experimenters didn't test hypnotizability prior to the imagery-mediation task; and (2) the study was defined as an experiment on imagery, and hypnosis was not mentioned until just before the induction in Session 2.

"In conclusion, the present results indicate that, under certain conditions, hypnosis may decrease Ss' motivation and performance. No support was provided for the ability of hypnosis to facilitate imagery utilization and performance on an imagery-mediated task. The results are compatible with the views proffered [sic] by theoreticians who have emphasized the importance of expectancies and the experimental context (e.g., Barber, 1979; Coe & Sarbin, 1977; M. T. Orne, 1951, 1959; Spanos, 1982)" (p. 38).

1984

Brodsky, Annette M.; McNeil, Daniel W. (1984). Hypnotizability and volunteering for hypnosis experiments. American Journal of Clinical Hypnosis, 26, 206-211.

A class of 145 college students was given Barber's Creative Imagination Scale (CIS) and Spiegel's Eye Roll Sign, and later given several opportunities to volunteer for research projects, some of which specified hypnosis was involved. Those S's who volunteered for the hypnosis experiments took the Harvard Group Scale of Hypnotizability (HGSHS). Hypnosis volunteers differed from the non-hypnosis volunteers by significantly higher grades and more total experimental volunteerism, but were no significantly different on the CIS or Eye Roll Sign. In general, nonwhites scored higher on the CIS. Among hypnosis volunteers, there was a low negative correlation between the Harvard Consciousness scale and volunteering for experiments other than hypnosis.

1982

Friedman, Howard; Taub, Harvey A. (1982). Accessibility: A necessary control for studies of essential hypertension. International Journal of Clinical and Experimental Hypnosis, 30, 4-8.

A study which was planned to compare the relative effects of relaxation and hypnosis upon essential hypertension also offered the opportunity to replicate some of the findings of a previous investigation. A failure in such replication led to consideration of the effect of accessibility to the laboratory, a variable not typically controlled. A significant differential effect of easy versus hard access was observed.

1969

Timney, Brian N.; Barber, Theodore X. (1969). Hypnotic induction and oral temperature. International Journal of Clinical and Experimental Hypnosis, 17, 121-132.

Measured oral temperature in 19 Ss under hypnotic and control conditions. Confirming a study by A. F. Reid and G. Curtsinger (see 42:10), the hypnotic induction procedure gave rise to a significant increase in oral temperature ( $p < .01$ ). This significant rise was due to the data of 10 of the 19 Ss, 6 did no change and 3 dropped in temperature. The temperature change was not related to Ss' responsiveness to suggestions or to their testimony that they were or were not hypnotized. Although good and poor hypnotic Ss manifested the same degree of temperature rise, there was a tendency for those who had the least previous hypnotic experience to show the greatest rise. Data suggest a hypothesis for further research: oral temperature rises during hypnotic induction to the extent that Ss perceive the hypnotic situation apprehensively, i.e., as mysterious or foreboding. (Spanish & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Goss, Allen; Morosko, Tom (1968). Stanford Hypnotic Susceptibility Scale, Form A: Score distribution of volunteer subjects. International Journal of Clinical and Experimental Hypnosis, 237-242.

Investigates the applicability of the reported norms of the Stanford Hypnotic Susceptibility Scale, Form A to a population which differs from the normative sample. 40 "true volunteer" dental students were found to score well above the 533 "volunteer" normative sample due mainly to the reduced percentages of low hypnotic susceptibility Ss. The effects of schooling, volunteering, and implications concerning the relationship between personality and hypnotic susceptibility in the volunteer sample are discussed. (French & German summaries) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1965

Cooper, Leslie M.; Pedersen, Darhl M. (1965). A note on the failure to find personality differences between volunteers and nonvolunteers for hypnotic research. International Journal of Clinical and Experimental Hypnosis, 13 (4), 274-278.

Personality measures were administered to 136 students in an introductory psychology class at Brigham Young University. 30 Ss subsequently volunteered to have their hypnotic susceptibility assessed. There were no significant differences found between the means of the resulting 23 variables for the 30 volunteers and 106 nonvolunteers. 2 variables (age and ego strength) showed significantly different variances for the 2 groups, but these may be attributed to chance because of the number of significance tests made. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Zamansky, H. S.; Brightbill, R. F. (1965). Attitude differences of volunteers and nonvolunteers and of susceptible and nonsusceptible hypnotic subjects. International Journal of Clinical and Experimental Hypnosis, 13 (4), 279-290.

A form of the Semantic Differential, containing 9 concepts related to hypnosis and research, was administered to 96 hypnotically inexperienced male Ss. The Ss were later asked to volunteer for a hypnotic experiment, and the hypnotic susceptibility of all volunteers (N = 51) was then determined. Semantic Differential responses of volunteers and nonvolunteers and of highly susceptible and un hypnotizable Ss were compared. Differences between groups, in both comparisons, were generally not statistically significant, a finding which suggests that there is no simple relationship between paper-and-pencil measures of attitudes and volunteering for hypnotic experiments or hypnotizability. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1964

Anderson, Milton L.; Sarbin, T. R. (1964). Base rate expectations and motoric alterations in hypnosis. International Journal of Clinical and Experimental Hypnosis, 12 (3), 147-158.

Degree of responsiveness to "suggestion" in an experiment which did not utilize hypnotic induction (the Berkeley Sample) was comparable to that obtained in an experiment which did utilize hypnotic induction (the Stanford Sample). Procedural differences between the 2 experiments--self-scoring vs. objective-scoring, and group vs. individual testing--were regarded as not crucial in making a comparison of the 2 experiments. The distribution of responses in the Berkeley Sample may be taken as the base rate. The slightly higher degree of responsiveness over the base rate in the Stanford Sample (on some tests) may be attributed to the "degree of volunteering" that characterized the sample. The importance for experiments in the future to create equal levels of motivation and expectation to perform well under both the hypnotic and the nonhypnotic conditions is stressed, and brief mention is made of a new metaphor to be used in the conceptualization of the problems of hypnosis. (25 ref.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Melei, Janet P.; Hilgard, Ernest R. (1964). Attitudes toward hypnosis, self-predictions, and hypnotic susceptibility. International Journal of Clinical and Experimental Hypnosis, 12, 99-108.

Correlation of questionnaire results from a sample of 1326 students with hypnotic susceptibility scores of 340 of these later hypnotized showed (a) that those volunteering for hypnosis were more favorable in attitude than those who did not volunteer; (b) attitudes toward hypnosis were predictive of susceptibility for females, not for males; and (c) self-predictions yielded significant low positive correlations with actual susceptibility for both sexes. Other findings concern differences between those

having prior experience with hypnosis and those without such experience. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

Rosenhan, D. L.; Tomkins, S. S. (1964). On preference for hypnosis and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 109-114.

44 male and 44 female coerced volunteers, who either preferred or did not prefer to participate in hypnosis experiments, were compared with regard to (a) scores on the EPPS, (b) birth order, and (c) performance on the Harvard Group Scale of Hypnotic Susceptibility. Sex-specific personality differences were obtained between Ss who preferred and did not prefer hypnosis, but these personality differences were not apparently relevant to hypnotizability. However, for females, preference for hypnosis correlated .41 with hypnotizability; for males no relationship was obtained. Some theoretical and methodological implications of these data are discussed. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1962

Levitt, Eugene E.; Lubin, B.; Zuckermann, M. (1962). The effect of incentives on volunteering for an hypnosis experiment. International Journal of Clinical and Experimental Hypnosis, 10 (1), 39-42.

The data indicated that neither education about hypnosis nor payment for participating in an experiment are likely to bias a student volunteer group for an hypnotic experiment. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

London, Perry; Cooper, Leslie M.; Johnson, Harold J. (1962). Subject characteristics in hypnosis research. International Journal of Clinical and Experimental Hypnosis, 13-21.

Items of experiences, interests, and attitudes, in London's Survey, tended to cluster among themselves, suggesting a separate factor for each. The items were compared to several objective tests, but correlations were low. The Survey and Shor's Personal Experiences Questionnaire combined, correlated .64 with Stanford Scale A, suggesting the possible development of a paper-and-pencil predictor of hypnotic suggestability. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1961

London, Perry (1961). Subject characteristics in hypnosis research: Part I. A survey of experience, interest, and opinion. International Journal of Clinical and Experimental Hypnosis, 151-161.

Questionnaire measuring (a) direct and observational experience with hypnosis, and (b) stereotyped attitudes towards hypnosis was administered to 645 undergraduate students of psychology. Results indicate hypnosis considered in generally favorable light. Girls were less willing than boys to be hypnotic Ss. Items regarding the nature of hypnosis reflected a rather sophisticated attitude. From Psyc Abstracts 36:01:3II51L. (PsycINFO Database Record (c) 2002 APA, all rights reserved)

1957

Martin, R. M.; Marcuse, F. L. (1957). Characteristics of volunteers and non-volunteers for hypnosis. Journal of Clinical and Experimental Hypnosis, 5 (4), 176-180.

103 introductory psychology students were tested with the Taylor Manifest Anxiety Scale, the Levinson Ethnocentrism Scale (score already on file), and the Bernreuter Personality Inventory. Later a request for volunteers for an experiment dealing with hypnosis was made (with no reward

promised). A week later the same experimenter informed the class that due to a redesign of the experiment, it was necessary to go through the request for volunteers again (a reliability check for volunteering).

**"Discussion and Conclusion.** There were significant differences between volunteers and nonvolunteers on the variables of intelligence, anxiety, ethnocentrism, dominance-submission, and sociability. Volunteers for hypnosis as a group were found to have a higher mean intelligence score and to be less ethnocentric than nonvolunteers. Male volunteers for hypnosis were more and not, as commonly supposed, less dominant in face-to-face relations and less and not, as commonly supposed, more anxious than nonvolunteers. Female volunteers tend to be more solitary and independent. The very fact that no significant differences were found in any comparison between volunteers and nonvolunteers for hypnosis in self-sufficiency and introversion-extroversion is considered important in that popular belief suggests the contrary.

" ... The data from this study, far from supporting the popular image of the hypnotic subject in terms of inferiority, might be argued to suggest superiority" (p. 178).

## **Vomiting**

**2002**

**Edser, Stuart J (2002, March).** Hypnotically-facilitated counter-conditioning of anticipatory nausea and vomiting associated with chemotherapy: A case study.. *Australian Journal of Clinical Hypnotherapy and Hypnosis*, 23 (1), 18-30.

Presents an account of a cancer patient who suffers from severe anticipatory nausea and vomiting in the lead-up to chemotherapy treatment. The paper briefly contextualises the symptomatology of the presenting problem in the behavioural and hypnotic literature and recounts the rationale and methods that the writer used in assisting the patient to overcome the problem. Counter-conditioning was used to desensitise the patient to the aversive stimuli and hypnosis used to enhance this effect and to facilitate the final outcome.

**1993**

**LaGrone, Randy G. (1993).** Hypnbehavioral therapy to reduce gag and emesis with a 10-year-old pill swallower. *American Journal of Clinical Hypnosis*, 36, 132-136.

10-year-old child experienced severe nausea and psychogenic vomiting that resulted in refusal to take oral medication in pill form. The youngster was treated with hypnbehavioral therapy consisting of mental imagery, relaxation, direct suggestion, adaptive self-talk, self-monitoring, and self-reinforcement. The child's parents were instructed to reinforce approximations of successful pill swallowing while withdrawing attention for avoidance, whining, gagging, and vomiting. A one-year follow-up revealed successful pill swallowing without significant distress.

**1992**

**Levitan, Alexander A. (1992).** The use of hypnosis with cancer patients. *Psychiatric Medicine*, 10, 119-131.

Hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.;

psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

Walker, Leslie G. (1992). Hypnosis with cancer patients. American Journal of Preventative Psychiatry & Neurology, 3, 42-49.

Overviews the uses of hypnosis with cancer, for example to ameliorate side effects of treatment, help patients adjust to having cancer and its symptoms, reduce the distress caused by painful procedures, and to attempt to alter mechanisms of immunity with a view to improving prognosis. Studies in these areas are reviewed.

1991

Burish, Thomas G.; Snyder, Susan L.; Jenkins, Richard A. (1991). Preparing patients for cancer chemotherapy: Effect of coping preparation and relaxation interventions. Journal of Consulting and Clinical Psychology, 59 (4), 518-525.

60 cancer chemotherapy patients were randomly assigned to 1 of 4 treatments: (a) relaxation training with guided relaxation imagery (RT), (b) general coping preparation package (PREP), (c) both RT and PREP, or (d) routine clinic treatment only. All patients were assessed on self-report, nurse observation, family observation, and physiological measures and were followed for 5 sequential chemotherapy treatments. Results indicate that the PREP intervention increased patients' knowledge of the disease and its treatment, reduced anticipatory side effects, reduced negative affect, and improved general coping. RT patients showed some decrease in negative affect and vomiting, but not as great as in past studies. The data suggest that relatively simple, 1-session coping preparation intervention can reduce many different types of distress associated with cancer chemotherapy and may be more effective than often-used behavioral relaxation procedures.

Madrid, Antonio D.; Barnes, Susan v.d.H. (1991). A hypnotic protocol for eliciting physical changes through suggestions of biochemical responses. American Journal of Clinical Hypnosis, 122-128.

We employed brief hypnotherapy to effect physical changes in patients suffering from medical disorders including allergies, rectal bleeding, systemic lupus, hyperemesis, headache, asthma, and chronic pain. We present, in language appropriate to the individual patient, considerations and suggestions to effect the release of healing biochemicals. Ideomotor signals indicated the patient's awareness of the healing. We hypothesize that the technique triggered novel state-dependent memory, learning, and behavior.

## NOTES

They hypothesize that the technique they use triggers novel state-dependent memory, learning, and behavior (See for example Rossi, 1987, and Rossi & Cheek, 1988).

Hypnotic Protocol: "1. Tell the patient that he can heal himself by allowing his body to supply its own biochemicals needed to make him well. If a specific biochemical is known, such as cortisone or endorphins, name it. "2. Hypnotize the patient. Resistant or hard to hypnotize patients need not be deeply hypnotized because the patients, using this protocol, will automatically go into trance while accomplishing the next task of accessing and using ideomotor signals (Erickson, 1980; Rossi & Cheek, 1988). "3. Tell the patient that his index finger will automatically and involuntarily twitch and float

when his body releases the biochemicals he needs. This ideomotor response (Rossi & Cheek, 1988) is the sole physical response required of the patient. Rossi hypothesizes that the ideomotor response correlates with biochemical changes (Rossi & Cheek, 1988). "4. Next, ask the patient to consider some things (as described below). Present the considerations one after another until one of them triggers the ideomotor response. "5. In some instances, ask the patient to practice on his own. Many patients who have dramatic emotional reactions during or at the completion of the task may not need to practice on their own" (p. 123).

They present several 'considerations' to the patient, one after the other, tailored to the patient's specific case, until his finger twitches or floats, indicating a biochemical response. For example, the following 'considerations' have been used: "1. Psychodynamic: 'Consider that you are not blamed for anything; that you are in fact perfect just the way you are; that you are loved by those you care about.' 'Consider that you can forgive whoever needs forgiving for hurting you.' 'Consider that there are no longer any threats; everything is better; everything is as it used to be.' "2. Autosuggestion: 'Tell your body to heal. It knows what to do; so ask it to do it.' 'Tell your adrenal glands to produce the steroids that your body needs.' 'Allow a glowing light to permeate that injured back, filling it with healing energy.' "3. Incompatible responses: 'Cover yourself with a cool breeze, cooling the injured leg.' 'Imagine your back getting slack and limp and relaxed.' 'Imagine your stomach lining becoming smooth and moving with easy, ocean-like waves.' "4. Emotion calling: 'Consider yourself feeling very happy with everything, for no reason at all.' 'Consider yourself getting angry at someone--your mother, your wife (husband), your boss, your lawyer.' "5. Bargaining: 'Tell yourself that you will heal if you agree to stay away from that job.' 'Tell yourself you will heal by allowing your right arm to begin to hurt when you are over- exerting yourself.' 'Tell yourself that you will heal in exchange for something else, not so serious, to replace this disease and to serve the same function'" (pp. 123-124).

They present seven cases involving, respectively, allergies, rectal bleeding, systemic lupus, hyperemesis of pregnancy, adult onset asthma, chronic pain, and cluster headaches. Two cases were particularly interesting because they represented patients who did not respond initially.

Their procedure involves reframing the state or emotion originally associated with the onset of disease using considerations, and then giving a suggestion that it is within the power of the person, rather than factors outside, to heal the body. First they instruct the patient that the body can heal itself; then they give the list of suggestions for the patient to consider, persisting with different considerations until they get an ideomotor response. Incorporation of the patient's psychodynamic issues appears to be very important.

The authors regard it as unimportant if the patient cannot be hypnotized; "As Cheek (Cheek & LeCron, 1968; Rossi & Cheek, 1988) points out, the patient's inability to be hypnotized may be synonymous with his disease. It is actually beneficial if the patient cannot achieve ideomotor responses at first because both he and the therapist then trust the validity of the response when it does occur after the appropriate consideration" (p. 127).

Zeltzer, Lonnie K.; Dolgin, M. J.; LeBaron, Samuel; LeBaron, C. (1991). A randomized, controlled study of behavioral intervention for chemotherapy distress in children with cancer. *Pediatrics*, 88, 34-42.

Subjects were randomly assigned to hypnosis, nonhypnotic distraction/relaxation, or attention placebo control. children in the hypnosis group reported the greatest reduction in both anticipatory and postchemotherapy symptoms. Distraction/relaxation kept symptoms from getting worse, but they did not get better, and the control children's symptoms became much worse.

Morrow, Gary R. (1984). Appropriateness of taped versus live relaxation in the systematic desensitization of anticipatory nausea and vomiting in cancer patients. Journal of Consulting and Clinical Psychology, 52 (6), 1098-1099.

Investigated the suggestion that the relaxation part of systematic desensitization--an effective treatment for the nausea and vomiting experienced by approximately 25% of cancer patients in anticipation of chemotherapeutic treatments-- could be learned from a prerecorded audiotape prior to meeting a psychologist for treatment. 10 cancer patients who had developed anticipatory nausea or vomiting were assigned to either a live-relaxation or a tape-relaxation group. Results show that 4 of 5 Ss assigned to the tape-relaxation group experienced nausea while listening to the prerecorded audiotape, while none of the patients in the live-relaxation group reported nausea when subsequently listening to an audiotape made during the live presentation of relaxation.

1982

Hoffman, Mark L. (1982/83). Hypnotic desensitization for the management of anticipatory emesis in chemotherapy. American Journal of Clinical Hypnosis, 25 (2-3), 173-176.

A hypnotic treatment employing systematic desensitization was used to alleviate anticipatory nausea and vomiting in a middle-aged man undergoing chemotherapy for Hodgkin's Disease. After four treatment sessions, all nausea associated with chemotherapy was eliminated. Results of this treatment are compared with those of another hypnotic treatment recently reported by Redd et al (1982), and reasons for differences are discussed. [Redd, W. H., Andersen, G. V. & Minagawa, R. Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50, 14-19.]

LeBaron, Samuel; Zeltzer, Lonnie (1982, October). The effectiveness of behavioral intervention for reducing chemotherapy related nausea and vomiting in children with cancer. [Paper] Presented at the annual meeting of the Society for Clinical and Experimental Hypnosis, Indianapolis, IN.

Eight children (nine to seventeen years, Mean age 12.1) with cancer received behavioral intervention for chemotherapy related nausea and vomiting. Within three to five days after the administration of each course of chemotherapy, patients rated (1-10 scale; 1 = none, 10 = all the time or maximal amount) their nausea and vomiting and the extent to which chemotherapy bothered them and disrupted their daily routine. After a pre-intervention assessment of 2.5 courses of chemotherapy, patients received intervention (Mean = 2.6 courses). Significant reductions following intervention (Wilcoxon matched-pairs signed ranks test) were found in nausea ( $Z = 2.37, p < .02$ ), vomiting ( $Z = 2.52, p < .01$ ), bother ( $Z = 2.24, p < .02$ ), and disruption of activities ( $Z = 2.38, p < .02$ ). This preliminary study indicates that chemotherapy side effects can be reduced through behavioral intervention.

Redd, William H.; Andrykowski, Michael A. (1982). Behavioral intervention in cancer treatment: Controlling aversion reactions to chemotherapy. Journal of Consulting and Clinical Psychology, 50 (6), 1018-1029.

During the protracted course of cancer chemotherapy, approximately 25% of patients develop aversion reactions to treatment by becoming nauseated and/or vomiting before their chemotherapy treatments. This phenomenon has been conceptualized as a result of respondent conditioning. Since commonly used antiemetic drugs do not reliably control anticipatory nausea/emesis, behavioral techniques of control have been studied. They include hypnosis used in conjunction with guided-

relaxation imagery, progressive muscle relaxation with guided imagery, and systematic desensitization. (67 ref)

Redd, William H.; Andresen, Graciela V.; Minagawa, Rahn Y. (1982). Hypnotic control of anticipatory emesis in patients receiving cancer chemotherapy. Journal of Consulting and Clinical Psychology, 50 (1), 14-19.

#### NOTES

Deep muscle relaxation hypnosis controlled nausea, gagging, retching in all cases. Anticipatory emesis recurred when hypnosis was not used. During subsequent sessions in which hypnosis was reinstated, anticipatory emesis was again controlled.

Redd, William H.; Rosenberger, Patricia H.; Hendler, Cobie S. (1982-83). Controlling chemotherapy side effects. American Journal of Clinical Hypnosis, 25 (2-3), 161-172.

Severe nausea and vomiting are commonly experienced by cancer patients after receiving chemotherapy treatments. Moreover, approximately 25% of these patients develop conditioned aversions to treatment and become nauseated before they receive their chemotherapy injections. The use of deep muscle relaxation hypnosis in conjunction with guided imagery to control pre- and post-chemotherapy nausea and emesis is discussed. Theoretical and clinical issues raised by this application of hypnosis in cancer treatment are also addressed.

#### 1980

Fuchs, K.; Paldi, E.; Abramovici, H.; Peretz, B. A. (1980). Treatment of hyperemesis gravidarum by hypnosis. International Journal of Clinical and Experimental Hypnosis, 28 (4), 313-323.

Nausea and vomiting are the most common complaints in the first trimester of pregnancy. Hyperemesis gravidarum presents a unique challenge to the obstetrician trained in medical hypnosis. Between the years 1965-1977, 138 women suffering from extremely severe vomiting in the first trimester of pregnancy were successfully treated by medical hypnosis. 87 patients were treated in groups and 51 received individual therapy. The results with patients in group hypnotherapy were markedly better than those with patients in individual hypnotherapy. With group hypnotherapy, hospitalization was not necessary; treatment [sic] was given to a number of patients simultaneously and the women felt safer and less lonely. The common motivation of the patients consolidated the psychotherapeutic effect. This made treatment easier and more efficient.

#### 1955

Dorcus, Roy M.; Goodwin, Phillip (1955). The treatment of patients with the dumping syndrome by hypnosis. Journal of Clinical and Experimental Hypnosis, 3 (4), 200-202.

#### NOTES

Psychological tests (MMPI and Manifest Anxiety Scale) were administered to 20 duodenal ulcer patients with successful outcome following subtotal gastrectomy and 20 with an outcome characterized by "one or more of the following symptoms: lack of appetite, aversion to food, aversion to particular kinds of food, nausea, vomiting, dizziness, sweating, cardiac palpitation, weakness, and weight loss" (p. 200). Since the symptoms are supposedly due to food passing more rapidly through the digestive tract the syndrome is called "dumping."

In the unsuccessful outcome group, four patients with symptoms persisting 8-26 months, received hypnosis (2 to 9 sessions). "The suggestions were directed towards reducing tension (production of

relaxation), removal of fear of this condition, enhancing the olfactory qualities of food, and the feeling of comfort with food or liquid intake" (p. 201). All four patients responded with remission of symptoms.

## **W RESEARCH**

### **Warts & Viruses**

**2002**

**Shenefelt, Philip (2002). Complementary psychotherapy in dermatology: Hypnosis and biofeedback. Clinics in Dermatology, 20 (5), 595-601.**

Hypnosis has been used for millenia to treat medical and dermatologic problems. The use of biofeedback is more recent, being dependent on instrumentation to measure such parameters as galvanic skin resistance (GSR) and skin temperature.

Numerous dermatological disorders may be improved or cured using hypnosis as an alternative or complementary therapy. Examples include acne excoricee, alopecia areata, atopic dermatitis, congenital ichthyosiform erythroderma, dyshidrotic dermatitis, erythromelalgia, furuncles, glossodynia, herpes simplex, hyperhidrosis, ichthyosis vulgaris, lichen planus, neurodermatitis, postherpetic neuralgia, pruritus, psoriasis, rosacea, trichotillomania, urticaria, verruca vulgaris, and vitiligo. Dermatologic procedure anxiety can also be reduced using hypnosis.

Skin problems that have an autonomic nervous system component can be assisted by biofeedback with or without hypnosis. Examples include biofeedback of GSR for hyperhidrosis and biofeedback of skin temperature for Raynaud's syndrome. Hypnosis may enhance the effects obtained by biofeedback.

**2000**

**Shenefelt, Philip (2000). Hypnosis in dermatology.. Archives of Dermatology, 136 (3), 393-399.**

**Background:** Hypnosis is an alternative or complementary therapy that has been used since ancient times to treat medical and dermatologic problems.

**Objective:** To describe the various uses for hypnosis as an alternative or complementary therapy in dermatologic practice.

**Methods:** A MEDLINE search was conducted from January 1966 through December 1998 on key words related to hypnosis and skin disorders.

**Results:** A wide spectrum of dermatologic disorders may be improved or cured using hypnosis as an alternative or complementary therapy, including acne excoricee, alopecia areata, atopic dermatitis, congenital ichthyosiform erythroderma, dishydrotic dermatitis, erythromelalgia, furuncles, glossodynia, herpes simplex, hyperhidrosis, ichthyosis vulgaris, lichen planus, neurodermatitis, postherpetic neuralgia, pruritus, psoriasis, rosacea, trichotillomania, urticaria, verruca vulgaris, and vitiligo.

**Conclusion:** Appropriately trained clinicians may successfully use hypnosis in selected patients as alternative or complementary therapy for many dermatologic disorders.

**1998**

**Felt, Barbara T.; Hall, Howard; Olness, Karen; Schmidt, Wendy; Kohen, Daniel; Berman, Brad D.; Broffman, Gregg; Coury, Daniel; French, Gina; Dattner, Alan; Young, Martin H. (1998). Wart regression in children: Comparison of relaxation-imagery to topical treatment and equal time interventions. American Journal of Clinical Hypnosis, 41 (2), 130-137.**

Relaxation mental imagery (RMI), standard topical treatment (Top Tx), and equal time-control interventions were compared on measures of wart regression in sixty one, 6-12-year-old children. Subjects chose one common ("index") wart and attended 4 visits over 8 weeks. At each visit, total and "index" extremity wart number were counted and a photo was taken of the "index wart" for later measurement. On average, total wart number decreased by 10% and "index wart" area decreased by 20% with no significant group differences during the first eight weeks. Phone follow [sic] was conducted 6 to 18 months from study entry. At phone follow up, there was a trend for more RMI and Top Tx subjects to report complete wart resolution ( $p = 0.07$ ) with a majority of RMI children reporting use of RMI or no specific treatment pursuit. We conclude there was no significant short-term benefit for RMI in this randomized controlled trial of wart regression in children. However, longer term benefits for RMI and Top Tx groups are suggested.

1995

Holroyd, Jean (1995). Handbook of clinical hypnosis, by Judith W. Rhue, Steven Jay Lynn, & Irving Kirsch (Eds.) [Review]. International Journal of Clinical and Experimental Hypnosis, 43 (4), 401-403.

#### NOTES

"This is a book for the thinking clinician" (p. 401). "The editors are to be congratulated for making this volume much more coherent than most edited books" (p. 402). "My impression is that the book is best suited for an intermediate or advanced course on hypnotherapy, or for people who are already using hypnosis in treatment. Although there is some material on the basics of hypnotic inductions and a few introductory sample scripts for inductions, a beginners' course should probably use a different book, or this book could be accompanied by an inductions manual. ... I recommend it very highly" (p. 403).

1992

Ewin, Dabney M. (1992). Hypnotherapy for warts (*verruca vulgaris*): 41 consecutive cases with 33 cures. American Journal of Clinical Hypnosis, 35, 1-10.

Published, controlled studies of the use of hypnosis to cure warts are confined to using direct suggestion in hypnosis (DSIH), with cure rates of 27% to 55%. Prepubertal children respond to DSIH almost without exception, but adults often do not. Clinically, many adults who fail to respond to DSIH will heal with individual hypnoanalytic techniques that cannot be tested against controls. By using hypnoanalysis on those who failed to respond to DSIH, 33 of 41 (80%) consecutive patients were cured, two were lost to follow-up, and six did not respond to treatment. Self-hypnosis was not used. Several illustrative cases are presented.

"I do not consider self-hypnosis necessary, and I believe it may be contraindicated. Once the change in sensation has been acknowledged by an ideomotor signal, I suggest that the subconscious will take care of healing the warts and that the patient should ignore them and get interested in other things. Self-hypnosis would require regularly giving attention to the warts, and a high rate of cure is obtained without it. In their controlled study using DSIH with adults, Johnson and Barber (1978) included daily self-hypnosis and got cures in only 3 of 11 (27%) of the hypnotic group. This is the poorest result in the published literature. Their control group of 11 patients was given waking suggestions to 'practice imagining that the specified wart(s) were tingling for a few minutes each day until they were gone' and got no change in 3 months. Hellier (1951) got remission in 27 of 74 (36%) patients just using sham x-ray, (waking suggestion without any self-hypnosis). Spanos et al. (1988) instructed their hypnotic group to 'count their warts every day, and after each counting to close their eyes and spend 3 to 4 minutes imagining the warts on their target hand disappearing.' Only 2 of 8 patients (25%) with a

single wart cleared, while 9 of 14 (69%) with multiple warts lost one or more warts at 6- weeks' follow-up. My impression is that conscious daily attention to the lesion is contrary to normal body healing of injuries such as cuts, burns, sprains, in which healing progresses best when ignored while undue attention increases suffering" (pp. 3-4).

All Ss were private patients referred for hypnotherapy; most were diagnosed clinically.

"...I found that there were sexual implications in 7 of the 16 miscellaneous warts in patients over 13, so I separated the cases into pre- and postpuberty to evaluate the results" (p. 4).

"An early success was with a medical student (Case 28) with whom I used suggestions of warmth, with the blood vessels dilating and bringing in antibodies, leukocytes, opsonins, etc. Changes were visible in 3 days. This biased me toward using 'warm,' but two of the children (Cases 6 and 9) got no result until I gave them a choice. Using ideomotor signals they chose cold. Only two healed with 'warm,' while five did with 'cold.' All of them had either had the warts cauterized or frozen previously and had a personal feeling about heat and cold. I've learned to give the patient a choice on the first visit" (p. 5).

"Three... were first treated using DSIH without result and later responded to hypnoanalysis. After obtaining an ideomotor signal that there was no more subconscious value to the warts, the suggestion was given that the body's healing processes would take over without any more conscious attention by the patient. No self-hypnosis was prescribed" (pp 7-8).

Gildston, Phyllis; Gildston, Harold (1992). Hypnotherapeutic intervention for voice disorders related to recurring juvenile laryngeal papillomatosis. International Journal of Clinical and Experimental Hypnosis, 40 (2), 74-87.

Recurring juvenile laryngeal papillomatosis is resistant to cure, and thus usually requires multiple operations which may lead to the extensive proliferation of vocal fold scar tissue. Severe hoarseness, sharply lower pitch, and weak loudness levels are common sequelae. Adjunctive hypnotherapy can increase motivation for change, speed up the acquisition of vocal skills, and possibly even facilitate or sustain remission of growths in selected patients. An 8-year-old girl with severe active eruptions went into remission after 16 sessions, and a 12-year-old boy, already in remission at the beginning of the intervention period, remained free of neoplasms throughout the regimen. Whether or not hypnosis contributed significantly to the sanguine results, it is probable that, at the least, the hypnotic intervention facilitated the achievement of certain technical objectives in voice therapy.

1990

Spanos, Nicholas P.; Williams, Victoria; Gwynn, Maxwell I. (1990). Effects of hypnotic, placebo, and salicylic acid treatments on wart regression. Psychosomatic Medicine, 52, 109-114.

Subjects with warts on their hands and/or feet were randomly assigned to a hypnotic suggestion, topical salicylic acid, placebo, or no treatment control condition. Subjects in the three treated groups developed equivalent expectations of treatment success. Nevertheless, at the six-week follow-up interval only the hypnotic subjects had lost significantly more warts than the no treatment controls. Theoretical implications are discussed.

Study involved 15 females, 25 males (18-35 yrs old) with warts on at least one hand or foot, recruited through posters and newspaper ads; N = 10 in each condition. Hypnotic treatment consisted of 10 minute induction (modified from T. X. Barber's 1969 book) and a suggestion for wart regression that was 2 minutes in duration (the skin around warts was 'beginning to tingle and grow warm'; 'vividly imagine the warts shrinking and dissolving away'; 30 second break; repeated the suggestions). For Ss with warts on more than one limb the complete suggestion procedure was repeated for each wart-infected limb.

Results indicate psychological factors can influence course of some virally produced disorders; that self-medicating with over-the-counter products doesn't explain suggestion-induced wart regression; that expectation of treatment success is the most important variable in psychologically induced wart regression. "Hypnotic subjects attained significantly higher CURSS:S scores than did control subjects. Nevertheless, it is unlikely that between group differences in hypnotizability accounted for the group differences in wart regression. Two previous experiments (3) that used the CURSS found that hypnotizability failed to predict wart loss in either hypnotic suggestion, nonhypnotic suggestion, or placebo treatments, and even in the present study the hypnotic treatment failed to differ from either the real or placebo treatment on CURSS:S scores, and none of the treatments differed significantly on the CURSS:O scores. Our finding and earlier findings that hypnotic subjects reported more intense suggested sensations than placebo subjects is consistent with the hypothesis that vivid suggested imagery facilitates wart loss (7, 8) .

"An alternative hypothesis emphasizes that only our hypnotic suggestion treatment encouraged subjects to see themselves as developing cognitive control over their own wart regression. This hypothesis suggests that subjects' subjective sense of cognitive involvement in and control over treatment outcome (as opposed to the vividness of their suggested imagery) may have been the important psychological factor in wart regression. It would be of interest in a future study to manipulate subjects' sense of cognitive involvement in their treatment independently of suggested imagery in order to assess the relative contributions of these variables to wart regression" (pp. 113-114).

1989

Reid, S. (1989). Recalcitrant warts: Case report. British Journal of Experimental and Clinical Hypnosis, 6, 187-189.

NOTES

Recalcitrant warts which persisted for 5 years despite treatment cleared in 51 days with hypnotherapy. A cause/effect relationship between hypnotherapy and resolution was shown by at first excluding and then including the left hand from the suggestions given.

1988

Noll, Robert B. (1988). Hypnotherapy of a child with warts. Journal of Developmental and Behavioral Pediatrics, 9 (2), 89-91.

Child with 82 warts was treated using hypnosis; suggestions for removal from face only resulted in 8 of 16 facial warts disappearing after one treatment and two weeks. (Child had previous experience with hypnosis for pain and anxiety associated with lumbar punctures and bone marrow aspirates.)

Spanos, Nicholas P.; Stenstrom, Robert J.; Johnston, Joseph C. (1988). Hypnosis, placebo, and suggestion in the treatment of warts. Psychosomatic Medicine, 50, 245-260.

Two experiments assessed the effects of psychological variables on wart regression. In Experiment 1, subjects given hypnotic suggestion exhibited more wart regression than those given either a placebo treatment or no treatment. In Experiment 2, hypnotic and nonhypnotic subjects given the same suggestions were equally likely to exhibit wart regression and more likely to show this effect than no treatment controls. In both experiments, treated subjects who lost warts reported more vivid suggested imagery than treated subjects who did not lose warts. However, hypnotizability and attribute measures of imagery propensity were unrelated to wart loss. Subjects given the suggestion that they would lose warts on only one side of the body did not show evidence of a side-specific treatment effect.

1984

Gould, Sol S.; Tissler, Doreen M. (1984). The use of hypnosis in the treatment of herpes simplex II. American Journal of Clinical Hypnosis, 26, 171-174.

Hypnosis training was used to treat the painful lesions and emotional symptoms associated with Herpes Simplex II in two females, ages 32 and 26. Three weekly sessions of hypnosis and daily practice sessions were initiated in the first case. During this time, the patient experienced a decline in the subjective level of pain and severity of the lesions, as well as an elevation in mood level. On three-month followup, she reported no pain or skin eruptions and significantly less feelings of stress and anxiety. The second case utilized two sessions of hypnosis and daily practice sessions, and similar results were obtained. A traumatic event caused a relapse in the latter patient, but she was again able to use hypnosis to bring the virus back under control and to experience an elevation in mood level as well. A seven-month follow-up indicated no eruptions and an improvement in self-esteem.

In the first case the tape included ego-strengthening suggestions (Hartland, 1971); another tape used the patient's fantasy of water and snow skiing. The patient felt that hypnosis helped her acquire a more positive attitude toward herself and relief of guilt and blame, as well as an improved ability to cope with the unpleasant sensations.

In treatment session, ego strengthening suggestions were followed by 2 minutes of quiet for integration of suggestions, then visualization used in cancer therapy (Simonton): suggestions of a strong cell structure, perfect skin, hormonal balance, cleanliness, and a cooling refreshed feeling in the area of the vagina and perineum; imagery of internally controlled friendly white sharks was used to "devour" the virus; of water and snow skiing, imagery of cool breezes, white refreshing snow, clean fresh water; visualized herself forgiving and releasing her previous boyfriend of guilt, thereby allowing her anger to abate.

For second patient it was similar, plus visualization of being bathed in white lights and traveling through concentric circles radiating peace and protection, being purified as she traveled through the circles until she emerged as flawless as a diamond, reflecting only clarity and light. Both patients scored 4 on Spiegel's Hypnotic Induction Profile (HIP).

## Witchcraft & Voodoo

1994

Mulhern, Sherrill (1994). Satanism, ritual abuse, and multiple personality disorder: A sociohistorical perspective. International Journal of Clinical and Experimental Hypnosis, 42 (4), 265-288.

During the past decade in North America, a growing number of mental health professionals have reported that between 25% and 50% of their patients in treatment for multiple personality disorder (MPD) have recovered early childhood traumatic memories of ritual torture, incestuous rape, sexual debauchery, sacrificial murder, infanticide, and cannibalism perpetrated by members of clandestine satanic cults. Although hundreds of local and federal police investigations have failed to corroborate patients' therapeutically constructed accounts, because the satanic etiology of MPD is logically coherent with the neodissociative, traumatic theory of psychopathology, conspiracy theory has emerged as the nucleus of a consistent pattern of contemporary clinical interpretation. Resolutely logical and thoroughly operational, ultrascientific psychodemonology remains paradoxically oblivious to its own irrational premises. When the hermetic logic of conspiracy theory is stripped away by historical and socio/psychological analysis, however, the hypothetical perpetrators of satanic ritual

abuse simply disappear, leaving in their wake the very real human suffering of all those who have been caught up in the social delusion.

Spanos, Nicholas P.; Burgess, Cheryl A.; Burgess, Melissa Faith (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. International Journal of Clinical and Experimental Hypnosis, 42 (4), 433-446.

People sometimes fantasize entire complex scenarios and later define these experiences as memories of actual events rather than as imaginings. This article examines research associated with three such phenomena: past-life experiences, UFO alien contact and abduction, and memory reports of childhood ritual satanic abuse. In each case, elicitation of the fantasy events is frequently associated with hypnotic procedures and structured interviews which provide strong and repeated demands for the requisite experiences, and which then legitimize the experiences as "real memories." Research associated with these phenomena supports the hypothesis that recall is reconstructive and organized in terms of current expectations and beliefs.

1992

Morse, Donald R.; Martin, John; Moshonov, Joshua (1992). Stress induced sudden cardiac death: Can it be prevented?. Stress Medicine, 8, 35-46.

Previously, psychosomatically induced death relative to stress, hypnosis, mind control, and voodoo was discussed. In this article, emphasis is on one aspect of that - stress induced sudden cardiac death (SCD). A brief review is presented of the sympathetic aspects of the acute stress response and stress induced SCD. Findings from previous studies are presented to highlight sympathetic aspects of the acute stress response. This is followed by a presentation of various strategies to prevent or decrease the possibilities for stress induced SCD. These include long-term measures (e.g. diet control, smoking control, hypertension control, stress management strategies) and immediate measures (e.g. calm, controlled approach, elicitation of the relaxation response, selected use of drugs, and heart rate variability monitoring). Relative to prevention strategies, findings are presented both from previous studies and new investigations.

1991

Morse, Donald R.; Martin, John; Moshonov, Joshua (1991). Psychosomatically induced death: Relative to stress, hypnosis, mind control, and voodoo: Review and possible mechanisms. Stress Medicine, 7, 213-232.

A common denominator in psychosomatically induced death is stress. Death can occur slowly, as from the preponderance of chronic stressor, or it can come on suddenly, as from an acute stressor. Sudden death is more likely in an individual with preexistent serious medical conditions, which were outlined. Seven types of individuals more prone to sudden death were outlined. Most cases of sudden death are related to the presence of a severely stressful situation in which there appears to be no means of control or escape. With mind control, hypnosis, and voodoo curses, circumstances can be manipulated to achieve severe stress and uncontrollability.

1984

Suryani, L. K. (1984). Culture and mental disorder: The case of bebainan in Bali. In Culture, medicine and psychiatry. D. Reidel Publishing Company.

NOTES

Bebainan is a form of dissociation which is culturally associated with Bali. Thought to be caused by sorcery, a bebainan attack lasts up to an hour and is manifested by confusion, crying, screaming, and shouting, with inability to control one's actions. However, it seems most victims maintain awareness of their own behavior and are not amnesic for it afterwards.

In this study, the author interviewed 27 people, mostly female, most of whom experienced their first attack between 16-30 years of age. The author concluded that the attacks permitted release of feelings of frustration and anger without stigma. Author concluded it is not a form of psychosis, is not organic, and is not a neurosis

1979

Spanos, Nicholas P.; Gottlieb, Jack (1979). Demonic possession, Mesmerism, and hysteria: A social psychological perspective on their historical interrelations. Journal of Abnormal Psychology, 88 (5), 527-546.

Provides a social psychological interpretation of the interrelations among demonic possession, mesmerism, and hysteria. It is argued that the reciprocal role relationship of mesmerist and magnetized S in the 18th and 19th centuries involved the secularization of the role relation that had existed between exorcist and demonically possessed. The commonalities between these 2 sets of social roles are delineated, some of the variables leading an individual to learn and enact the possessed role are outlined, and several lines of historical evidence pertaining to the influence of the exorcist-demonic relationship on the mesmeric relationship are outlined. The influence of the possessed role in shaping the role of the hysterical patient is also discussed. The use of hysteria as a modern explanatory concept in histories of possession and mesmerism, however, is criticized. (198 ref).

1977

Brown, Daniel P.; Fromm, Erika (1977). Selected bibliography of readings in altered states of consciousness (ASC) in normal individuals. International Journal of Clinical and Experimental Hypnosis, 25, 388-391.

The bibliography is divided into the following sections:

I. General Works

II. Reference material on personality in relation to altered states

III. Social and cultural determinants of altered states

IV. Cognition, information-processing, and ego-functioning

V. Methodology in the study of altered states

VI. Differentiation of hyperaroused states

VII. Shamanistic states

VIII. Possession-trance

IX. Psychedelic states

X. The meditative states

XI. Personality differences and meditation

XII. Affective and cognitive change in meditation

XIII. Ordinary Buddhist meditation, concentration, and insight meditation

XIV. The variety of Buddhist meditation traditions

1966

Devereux, G. (1966). Cultural factors in hypnosis and suggestion: An examination of some primitive data. International Journal of Clinical and Experimental Hypnosis, 14, 273-291. (Abstracted in American Journal of Clinical Hypnosis, 1967, 4, 294)

**SOCIOCULTURAL FACTORS, USUALLY RELATED TO SUPERNATURALISTIC ATTITUDES AND PRACTICES, GREATLY ENHANCE THE HYPNOTIZABILITY OF THE PRIMITIVE BY INCREASING THE PRESTIGE ("POWER") OF THE HYPNOTIST, WHO IS USUALLY A MAGICIAN. AN ANALYSIS OF PRIMITIVE CULTURAL DATA MAY SHED NEW LIGHT UPON PSYCHOLOGICAL PHENOMENA IN OUR OWN SOCIETY. (SPANISH + FRENCH SUMMARIES) (27 REF.) (PsycINFO Database Record (c) 2002 APA, all rights reserved)**

**1961**

**Bowers, Margaretta K. (1961). Hypnotic aspects of Haitian voodoo. International Journal of Clinical and Experimental Hypnosis, 9, 269-282.**

**The voodoo ritual is analyzed within the framework of hypnosis and hypnotically induced secondary personalities. The author contends that "If the hypnotic nature of voodoo and similar religious rites were better understood the problem of discarding the evil and nurturing the good in the cultural life of people would be facilitated." From Psyc Abstracts 36:04:4II69B. (PsycINFO Database Record (c) 2002 APA, all rights reserved)**





































